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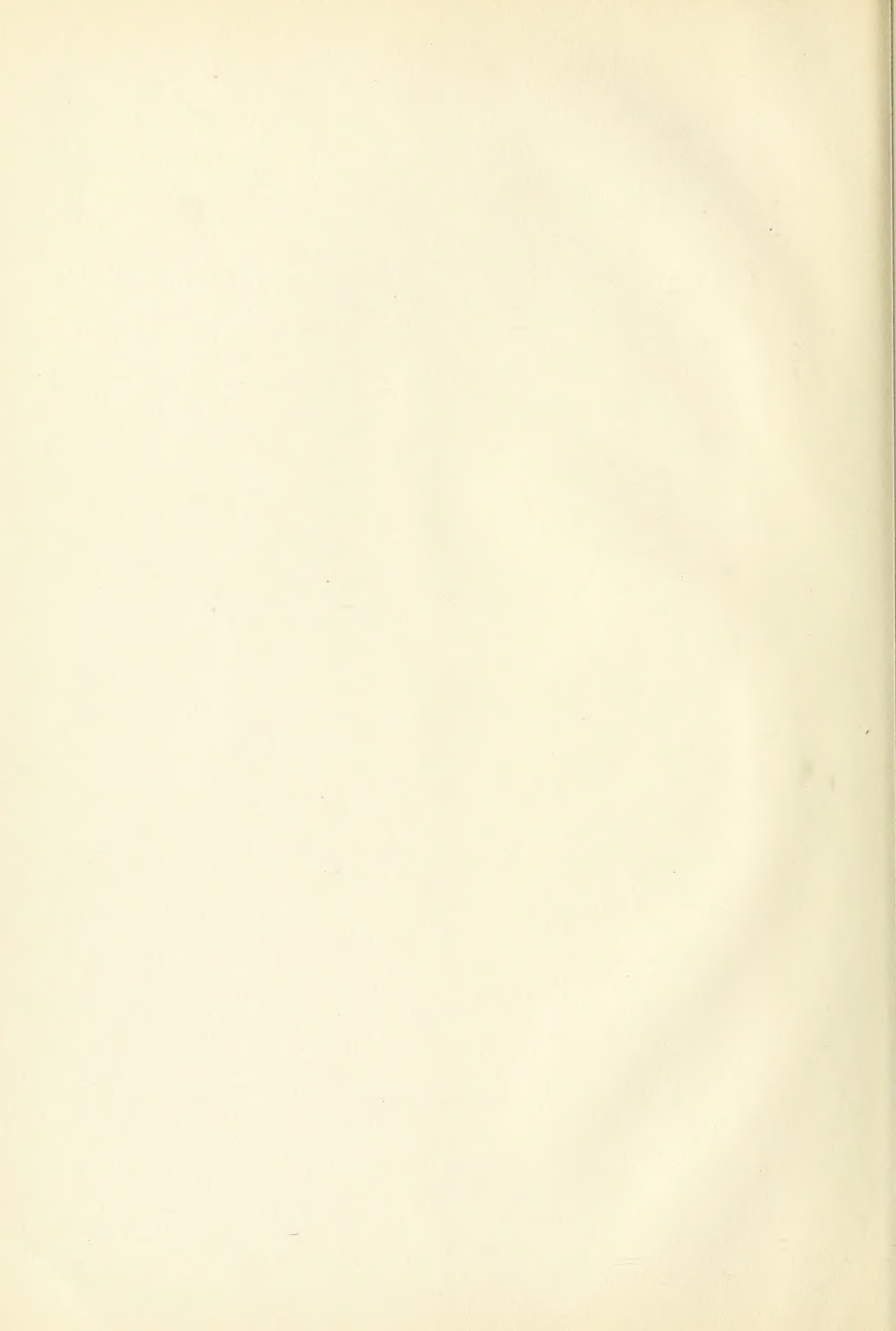














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# THE PHILADELPHIA MEDICAL JOURNAL

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# The Philadelphia Medical Journal

A Weekly Journal Owned and Published by The Philadelphia Medical Publishing Company and Conducted Exclusively in the Interests of the Medical Profession

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**Suggestions to Writers. No. 7: Misuse of the Word "Case."**—According to the dictionaries and common usage, "a case" is the instance or history of a disease, the series of symptoms, circumstances and treatment, constituting the special occurrence of a disease. Plainly and undoubtedly therefore the "case" is very different from the "patient." And yet in every page of medical writings one sees an utter disregard of the distinction, a usage not only inelegant and incorrect, but often misleading and ludicrous. How in the world can a case "be taken ill," "put to bed," "have a fever," or "die"? The patient may thus be spoken of, but it is absurd to speak of the case having a pulse-rate or temperature, of being comatose or delirious, dead, or posted. "A case" thus reported is quite likely to suffer cremation.

**Medical Heroes of War.**—Though nominally considered non-combatants, medical men have ever shown, in times of war not less than those of peace, that they are not wanting in the qualities of courage and heroism. In the accounts of the battle of La Quasina, participated in by the First Cavalry, including Col. Wood's Rough Riders, among the deeds of valor related was that of Surgeon Church, who "with bullets pelting all around him" went to the side of a desperately wounded man "lying squarely between the lines of fire, . . . calmly dressed the man's wound, bandaged it and walked unconcernedly back, soon returning with two men and a litter. The wounded man was placed on the litter and brought into our lines." It is worthy of mention that Colonel Wood is himself a physician, who gave up a distinguished civil position to enter the active volunteer service. Such acts as we have cited are not exceptional, and we may say without exaggeration that medical men can by reason of their training and the traditions of their profession always be depended upon to prove (as they have always shown themselves to be) equal to the occasion, no matter how momentous or how great the sacrifices demanded.

**Polar Scientific Expedition.**—Just at the beginning of June a German North Pole Expedition started out fully equipped for a series of scientific observations during next winter. The region of perpetual ice, despite its dangers, has its charm and draws men irresistibly toward it. The hope of finding an available

northwest passage, with its promised commercial advantages, has long since died out, but still explorers continue in their hazardous undertakings. The attainment of the farthest North has in it all the attractions of the accomplishment of the unique, and it has become, besides, the lofty aim of enthusiastic patriotic effort. In the recent expeditions the scope of scientific observations has been widened so as to especially include studies of the temperature of man and animals, under the influence of the intense cold, and in general the reaction of the human organism to the extremely low temperatures. Some of the most valuable of Nansen's observations were the careful records of his own and his men's temperatures during the winter's inactivity. The amount to be accomplished, however, is not great, and we cannot help but agree with Prof. Koch that the time and effort and money would be much better expended in the effort to open up the tropics and make them habitable than in this comparatively fruitless effort to reach the poles that only a certain sentiment in the matter keeps up.

**Hoky-Poky.**—The ice-cream that is sold out of barrows during the summer months is known to the juvenile population as hoky-poky and they are devoted to its consumption. But several London medical officers of health, following in the wake of the *Lancet*, have made exhaustive analyses of the so-called cream and have found it loaded with the products of animal and vegetable decomposition. Attention has just been called to the matter again by the death of a lad of acute intestinal poisoning having its probable origin in a feast of hoky-poky, and a number of the London vestries are contemplating an immediate appeal to the government to introduce a bill dealing with the present system of selling ice-cream in the streets. If any legislation is to do good it must include an inspection of the premises where ice-cream is made. These are nearly all situated in the squalid courts where the Italian colonies by preference make their homes, and the most casual glance at the condition under which the street-boys' delicacy is compounded would warrant any sanitary officer in saying that nothing eatable should emanate therefrom. It is no exaggeration to say that in many cases the house-refuse and even the ordure of these terrible slums is intermixed with the ice-cream. Like conditions prevail also in Philadelphia and probably in



other large American cities as well, and, as pointed out, active measures should be instituted to remove the obvious dangers. Cases of serious disease, some terminating fatally, have been reported in the United States from the use of hoky-poky, and of so-called snowballs, and like toothsome morsels.

**Koch's Views on Malaria.**—A French medical man remarked not long ago, with a grace of style that we fear cannot be rendered into English: "Every new discovery carries with it a certain coefficient of the incredible, a paradoxical unlikelihood, that makes its acceptance a distinct effort on the part of those especially who have been occupied with the same subject." In no department of science is this, perhaps, better illustrated than in medicine; so that we may, perhaps, be only yielding to the dictates of some such feeling in expressing a few thoughts that arise in connection with Prof. Koch's views on malaria, as reported by our Berlin correspondent.

The impression gathered from the report is certainly that Prof. Koch has not found tropical malarial fever as serious a disease as it has hitherto been considered. True, remittent forms of the disease he has not seen, and does not believe in; hematuria during malaria he considers due to quinin-intoxication; and he finds that the disease, even without treatment, has a tendency to spontaneous recovery and immunization. Some of these propositions are direct contradictions of the opinions of others, gained by long years of exact and patient observation. As to remittent malaria, malarial hematuria, and malarial cachexia, surely the almost numberless conservative English medical men of India, and our own countrymen in the South and Southwest, can scarcely have been deceived. May we venture to suggest, despite the distinguished authority of the present observer, that further observations in substantiation of his more favorable views as to malaria are necessary before those who have had long and practical experience with the disease will be ready to accept them in place of those that are at present in vogue.

**The English Army Medical Department in War.**—Some of the questions that have been recently asked in the House of Commons point to a widespread and not ill-founded belief that in the late field-operations in the Soudan the arrangements of the Army Medical Department were faulty and inadequate. No one has a word to say against the officers of the Department, but it is suggested that the blame lies at headquarters, that not enough medical men have been sent, and that there is no proper supply at the front of litters, light ambulance-wagons, awnings, etc., and that, speaking generally, proper provision for the care of the sick and wounded throughout the campaign has been wanting. "This is a matter," writes a correspondent, "that should touch you in the United States closely just now;

and in one particular at any rate you might take warning by English experience. It seems reasonable to believe that the lives of several officers and men, who were wounded at the battle on the Atbara, would have been saved if a Röntgen-ray apparatus had been taken to the front. It would certainly be well if the medical department of the United States army were well supplied with these apparatus. They are costly and they are inconvenient to carry about; but their drawbacks should weigh nothing against their possible utility in the field-hospital."

The suggestion of our correspondent has been anticipated, for the hospital-ship *Relief*, which will probably have sailed for Santiago before these lines are printed, is well equipped with X-ray apparatus, which will be under the charge of that most accomplished photographic expert, Dr. Wm. M. Gray, of the Army Medical Museum; and it is reported that Surgeon-General Sternberg has sanctioned the purchase of 18 X-ray outfits for use in the field and hospital services, two of which are intended for Manila. We feel assured that no resource or means for the alleviation of the sufferings of the wounded or for the preservation of life will be neglected by the medical departments of our public services, under the intelligent direction of their respective surgeons-general.

**The London Hospital-Sunday Fund.**—One Sunday every year is set apart by most of the London churches, chapels, synagogues and other places of worship, for the consideration of the needs of the metropolitan hospitals. On that day ministers of all denominations plead the cause of the hospitals to their congregations and ask for subscriptions to enable the holy work of giving medical aid to the sick poor to be carried on. Hospital-Sunday in London was held this year on June 12th, and by June 18th some £17,000 had been collected, in the form almost entirely of offertories made in places of worship. Of this sum the congregation of Christ Church, Lancaster Gate—a wealthy district lying just north of Hyde Park and possessing some of the biggest residences in London—contributed £1,367; and the congregation of St. Michael's, Chester Square—a fashionable church in the southwest of London, presided over by a very popular preacher—contributed £1,258. For some years the aggregate annual receipts of the Metropolitan Hospital-Sunday Fund have reached over £40,000, which is a large sum, and one that, given yearly, is of great assistance to the hospitals in their desperate endeavor to make both ends meet. But London grows, and the receipts of the Fund do not grow, or at any rate do not grow in proportion, so that its managers are a little anxious as to the future. It is too early yet to judge what the truth may be, but many people say that the Prince of Wales Hospital Fund, founded in honor of his mother's jubilee, and consequently as yet only in its

second year of life, is already detaching subscribers from the older charity, and will in time do so to a more marked extent. It will be a poor compliment to the Prince and the Queen if the success of the newer charity should mean the decadence of the older; nor is it necessary yet to take so gloomy a view. Even in the year of the Jubilee, when subscriptions were demanded from everybody, upon the slenderest grounds, for jubilee-celebration, this Hospital-Sunday Fund maintained its average total, while the promise of this year is good.

**The Forcible Removal of the Insane.**—It occasionally happens that an insane patient requires, for personal or domestic reasons, to be taken from home to an asylum against his or her will. In proportion to the number of commitments such cases are rare, and hence the rules, of both law and expediency, that should govern them are not always clear. A physician can scarcely assume a greater responsibility than to assist in such forcible removal. It might, in fact, be laid down as a good general rule that he is wiser not to lend his personal aid in such cases. His province is to advise and plan, not to take direct part in what may be a public commotion.

The law governing such cases is not as clear as might be wished. Much is left to the option and judgment of the patient's natural guardians, who are the nearest relatives and friends, and the medical attendants. Unfortunately, however, differences of opinion may arise among these, or, what is more common, one or more relatives will hold back and decline to assume responsibility, or will even side with the patient. These persons may afterward make trouble. We believe the law in Pennsylvania requires the presence of a woman-nurse or attendant in case the patient is a woman. This is a wise provision and should be scrupulously obeyed.

In cases in which the physician consents to take part in the removal (and he is usually expected or importuned to do so) he should protect himself by obtaining a written and signed request from the patient's legal guardian. If violent resistance is expected, or even only mild opposition, a policeman or legal officer of some sort should be employed. Finally, every care should be advised and taken to avoid bodily harm and public scandal.

These cases are sometimes extremely embarrassing. We have known of the case of a woman advanced in years and suffering with mania and delusions, with great physical prostration, living in her own house, without adequate means of support or responsible near relatives, offer such opposition to removal, which would have been greatly to her advantage in both health and pocket, that the attempt had to be abandoned for fear of injury to the patient and legal consequences to the attendants. In such cases a small estate is usually quickly wasted. We have known a near relative stand

at the door and threaten violence to those who wished to remove an insane sister to the much-needed shelter of a hospital, while all the time he himself had neither the means for, nor the intention of, helping to support her. In such instances the physician should retire from the case. No professional or moral obligation can bind him to jeopardize his own interests to the extent involved. In our judgment the physician makes a grave mistake who relies upon the *quasi* protection of the law in cases in which that law is controlled by 12 ordinary men.

We think the law should more distinctly recognize these cases, and provide a form of procedure for the removal of such patients. Our asylums, as a rule, will not lend their assistance, and very properly, as it is their duty to care for the patients only after proper committal to their custody. In the meantime, in the light of some recent experiences, we would caution members of the profession about their own risks in these cases.

## Reviews.

**Essay on Bacteriology and its Relation to the Progress of Medicine.** By THEODORE POTTER, M.D. The Indiana Medical Journal Publishing Company. Indianapolis. 1898.

We expected to find in this little book of 161 pages a superficial presentation of the subject of bacteriology, such as any one with a reference-library at his command could prepare. To our pleasurable disappointment, however, the volume, instead of being a borrowed summary, is a collection of most charming essays, characterized by a marked individuality and an admirable simplicity of diction. Dr. Potter exhibits a mastery, almost to the degree of a Tyndall or a Huxley, of the important facts of a subject and a faculty of presenting them in an entertaining style, and we do not wonder that the State Medical Society of Indiana avails itself year after year of his skill. The essays, which were read before that Society by request, comprise, among others, the following subjects: the germ-theory, self-limitation and immunity, antitoxic serum-therapy, vaccination, non-bacterial factors in infectious diseases. What a pity that Dr. Potter's happy faculty of striking a mean between the ultrascientific and the ultra non-original is so rare.

**Atlas of Legal Medicine.** By DR. E. VON HOFMANN. Authorized Translation from the German. Edited by Frederick Peterson, M.D., assisted by Aloysius O. J. Kelly, M.D. Price, \$3.50. Philadelphia: W. B. Saunders. 1898.

This work is one of the series of medical hand-atlases which the publisher is introducing to the medical public. The series is translated from Lehmann's hand-atlases, which are well known in Germany, and have appeared in several other languages. Hofmann's atlas of legal medicine is a unique work. It is composed of a series of illustrations, many of them colored, taken directly from the original subjects, and including one or more specimens from almost every branch of medical jurisprudence. They are exceedingly life-like (or death-like), and, while they repel by reason of their realism, they are all the more valuable, on that very account, to both the medical and the legal expert. The pathology of medical jurisprudence is shown here in great wealth of illustration. This is the distinct field covered by the book, which is, in no sense, intended to be a text-book of legal medicine. It is simply the work of an expert in one special field of forensic medicine. It is, therefore, of more value to coroners' physicians (who should not be without it) than to toxicologists and alienists. To the latter, in fact, the book is not addressed at all.



Each plate is accompanied by a brief descriptive text which, in most instances, is full enough. The subjects respect, by illustrated are malformations and wounds of the genitalia, the hygienic, pregnancy, puerperal sepsis, suffocation, the mad (homicidal and suicidal), and the anatomic changes caused by the various poisons. This immense field finds in this book a pictorial presentation that far excels anything with which we are familiar in any other work.

**Text-Book of Medical Jurisprudence and Toxicology.** By JOHN J. REESE, M.D. Fifth Edition. Revised by Henry Leffmann, A.M., M.D., Ph.D. Philadelphia: P. Blakiston, Son & Co. 1898.

A glance over the table of contents of this admirable book suggests the thought that if in any department of the medical sciences there is reason for a division of labor, it is in medical jurisprudence. The old idea of the medico-legal expert, as of one who was necessarily a specialist in every specialty in its relations with the law, is certainly out of date. With the growth of specialism the whole theory and practice of medical jurisprudence must undergo, if it has not already undergone, a radical change. There can be no such thing as a distinct specialty of legal medicine, although there may be, and will be, systems of legal medicine that comprise the work of many specialists. The reason for this is obvious in the simple fact that every man is an expert only in his own field. There is no reason why an expert chemist should write on insanity, or a toxicologist give an opinion on pregnancy or rape. It is the province of a coroner's physician to study and know the signs and causation of death, but it is not his place to testify as to the past testamentary capacity of a decedent or the value of the tests for arsenic.

Dr. Reese's book is fairly open to the line of criticism indicated in what has been said. It is a good book in many ways, and has been well revised and supplemented by Dr. Leffmann, but it impresses us as not being equally good in all parts. As would be expected, the parts devoted to toxicology are carefully done; and many other parts, as on the various modes of death, are clear and reliable, although somewhat conventional. The chapter on insanity, on the other hand, does not convey the impression that it is written with the clear and broad grasp of the subject that would be expected of an alienist of acknowledged authority and modern attainment. It inclines too much to the view and flavor that are observable in law-books rather than in up-to-date text-books on psychiatry. As to the subjects of rape, pregnancy, abortion, feticide, and infanticide, we confess that we cannot approach the chapters on these subjects with just the same confidence that we should feel if they were written by a gynecologist or obstetrician.

After all said, however, the book has many points in its favor as a working manual or text-book. It already has a good reputation, and this will be maintained by Dr. Leffmann's skilful revision, and his sympathy with and respect for the author. It is thoroughly reliable in those fields which Dr. Reese and Dr. Leffmann have made their own, and in other fields it has been conscientiously done and will not mislead. Its size, compactness and admirable style are all much in its favor as a book of ready reference.

**Yellow Fever.** Clinical Notes by JUST TOUATRE, M.D. (Paris), former Physician-in-Chief of the French Society Hospital, New Orleans; Member of the Board of Experts, Louisiana State Board of Health. Translated from the French by Charles Chassignac, M.D., President New Orleans Polyclinic; Editor New Orleans Medical and Surgical Journal; etc. Pp. 206. New Orleans: New Orleans Medical and Surgical Journal, Ltd. 1898.

This monograph, written but not published in French, faithfully depicts the clinical observations of one who has treated 2,000 cases during nine epidemics of yellow fever. It is replete with clinical charts, illustrating the two signs considered pathognomonic of the disease—the fall in the pulse-rate, and the divergence between the pulse-rate and the temperature. An instructive chapter is devoted to the consideration of yellow fever in children. Diagnosis, prognosis and therapeutics are carefully discussed. The last has, in the hands of the author, yielded most gratifying results. The book is well worthy diligent perusal.

## War-Correspondence.

[From our Special War-Correspondent.]

### The Destructive Effect of Bullets at Short Range.—Culinary Department for the Army.—Ambulance-Corps.—Description of the Hospital-Ship, "Relief."

BEFORE commenting in my last letter upon the widely published statement that the bodies of the marines killed at Guantanamo had been mutilated, I asked an official in charge of the Naval Code if the words used by Admiral Sampson were surely to be construed as meaning "horribly mutilated by the enemy." "Without doubt," was the reply.

In the face of this statement comes the report of Surgeon Van Reyden, that "the appearance of mutilation was due to the character of the bullets in the Mauser rifles used by the Spanish," and the report from the Admiral, "that a careful investigation has been made, and it is reported to me that apparent mutilation was probably due to the effect of short ranges, and I withdraw the charge of mutilation."

And so it seems that this terrible charge, so indignantly denied by the Spanish, is utterly false. Surely we owe them an abject apology. It goes without saying, that the "careful investigation" spoken of in this later message should have been made before and not *after* the original accusation. However, let us hope that this episode may be a lesson to us not to be so ready to attribute any and all possible villainy to the Spaniards.

In calling attention last week to the general effect of small-caliber bullets, I said that there need be no difficulty in deciding whether the mutilation in any given case was from within outward, such as results from these arms, or whether the wounds had been made from the outside with a machete, bayonet, or other weapon.

I was gratified to see that my statements about the food, water, sanitary arrangements, hospitals, and the general condition of the soldiers at Camp Alger have been corroborated by General Howard Carroll in his unofficial report on the various camps, which has been given wide publicity in the last week.

I think I alluded in my last letter to the bill to provide a culinary department for the army—an important and much-needed innovation. I have just learned that a regular ambulance-corps is to be added to the medical service.

On the field of battle the first ambulance-station will be established immediately in the rear of the battle-line, and here the wounded will be brought. If the wounds are dangerous, a hurried application of compresses and bandages is made, and these, with the less urgent cases, are hurried to a second or dressing-station, where, having received a more careful dressing, they are sent on to the ambulance-station, and so on to the division-hospital.

We are all very much interested in the preparation of the hospital-ship *Relief*, which is now rapidly nearing completion. I gave a partial account of her several weeks ago, but at that time I had no idea of what a really magnificent floating hospital she was to be. As she represents a new and immensely important departure, and is really the first perfectly appointed hospital-ship, I am tempted to give a complete description of her. She cost the Government some \$450,000 in the first instance, and about \$150,000 are being expended upon her, which will give an idea of the scale upon which she is being fitted.

She is a new ship, having been launched only a year ago. She has a tonnage of 3,700, and she is 321 feet over all and 45



feet beam. The staterooms and other interior fixings fore and aft have been torn out and 5 wards constructed which are within a few feet of the entire breadth of the ship. Extra doors have been cut so that with the windows and other openings the wards are delightfully bright and airy. They are painted in pure white, which while an ideal color in theory for a sick bay is exceedingly trying to the eyes of the sick. Especially is this the case at sea; the glare from the water of course making matters worse. I am surprised that a dull yellow, now generally approved as the best for hospital-walls, was not used. This, however, is the only criticism that one can make upon the arrangement and fittings of the *Relief*.

The 5 wards are situated as follows: Ward No. 1, 60 feet in length, containing 40 cots, is on the upper deck forward; it has no less than 12 single and 6 double windows, in addition to 4 large doors. There are in this, as in all the wards, innumerable electric fans, with which, indeed, the ship is everywhere fitted. In the center of the space is a large bath with hot and cold fresh and salt water. On the port and starboard are ample closets.

The nurses' quarters and mess for this and Ward No. 2 are immediately adjacent on either side amidships.

Ward No. 2 is aft and has about the same size and arrangement as Ward No. 1.

Ward No. 3, for officers only, is on the main deck forward, with space for 15 cots. In one corner of this ward is the general clerical (medical) office—an unfortunate situation, for it is sure to be a busy place night and day; it is separated from the ward only by a wire partition, and will surely prove a menace to the rest and quiet so necessary to the wounded and sick.

As on the upper deck, the nurses' quarters and mess are amidships, between this and Ward No. 4. This, known as the surgical, is the most elaborate ward on the ship. It is some 60 feet in length by 35 in breadth. It has 30 windows, and 8 or 10 doors, and it contains 35 cots, arranged in 5 rows running fore and aft.

On the port side at its upper end is a large open bath fitted, as are all the bath-rooms, for a shower and hot or cold salt or fresh water. There is still another (enclosed bath) on the port side and aft on the right of this ward, and immediately adjacent are the closets.

As for the plumbing generally, it is pretty safe to say that no such work has ever been put into a ship. Rubber tiling is used as a flooring in the bath-rooms, closets and operating-room.

The operating-room adjoins Ward No. 3; it is a large, airy chamber, with enameled walls, and it contains every known appliance for rapid and efficient work.

A static electric machine stands at the head of this ward as part of an X-ray outfit, of which there are two on board—the second being in Ward No. 1. There is close at hand a dark-room for photographic work. This department is under the charge of Dr. Wm. M. Gray, the well-known photographic expert of the Surgeon-General's Library at Washington. He tells me it is his intention to take a photograph of the entrance and exit of the bullet in all cases of bone-injuries, as well as a skiagraph, and so preserve a complete series of plates for future study. He has also in his laboratory an electric drill and saw and small lamps for the illumination of cavities, etc., as well as microscopes and other necessary instruments for the study of the blood, bacteria, etc.

Finally Ward No. 5 is aft on the berth deck, with space for

15 cots. As I mentioned some weeks ago, the cots are double, of white enameled iron piping, with a wire and hair mattress.

Three hundred and fifty sick and wounded can be comfortably provided for in the five wards described. In case of necessity the hurricane deck can be turned into a ward, being splendidly fitted for such use and divided only by the smoke-stack and the pilot-house.

In case yellow or other contagious fever has to be taken or develops on board, the patients will be placed on this deck and here they may be safely treated, for there is no direct connection between this and the lower ship.

A special apparatus devised by the naval constructors for hoisting or lowering the sick and wounded will be employed. On the forward side of the mainmast, a steam boom has been fitted, which can be trained dead at a war-ship and so deposit patients on any deck or in any ward desired. The same boom is also used to hoist and lower the steam-launches.

This floating palace hospital is, moreover, supplied with every possible appliance that experience and science can suggest. There are refrigerating, disinfecting, carbonating and distilling plants, stationary and movable electric fans, a 7,000 candle-power search-light, etc., etc., and the stores embrace everything medical, surgical and otherwise that can conceivably be needed.

It is but just to say that to Dr. George H. Torney, the Chief-Surgeon of his notable ship, is due the entire credit. From first to last the designing and equipment have been done under his initiative and direction.

The members of the medical staff are exceedingly well taken care of. They have ample quarters on the the main deck forward, their mess-rooms adjoining their staterooms. The servants of the staff are Japanese, and their neatness and alertness are noteworthy. The members of the staff are: Dr. Torney, Major, and director of the ship; Dr. L. P. Williamson, Dr. R. M. Myers, Dr. Ernest C. Schultze, Dr. William M. Gray, Dr. Francis Metcalfe, Dr. W. C. Gorgas, Dr. George H. Torney, Jr., with Dr. F. M. Hartsock—Regular Army—and myself as volunteers.

The nurses will number 18,—10 male and 8 female. The former are from the Mills Training School of New York, and the women from the Johns Hopkins Hospital Training School at Baltimore.

FRANK DONALDSON, B.A., M.D.

## CAMP NOTES.

**Bayonet-wound.—Stingeree-bite.—Ear-bite.—Pocket-sterilizer.—Lightning-stroke.**

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL.*

At the camp of the Second Infantry, regulars, on a rainy night under a horse-fly, I had the following run of cases:

A man was brought to me with a laceration of a bayonet which had just grazed the femoral vein, and the wound had to be sewed by the light of only a candle.

A man came who had been stung by a stingeree. A free incision was made and the man was treated as though he had been struck by a moccasin. The small punctured wound was, as it generally is, in the base of the heel.

A man had his ear bitten by a negro and the piece taken out conformed to the biter's dental arch.

My instruments were sterilized with the aid of a telescoping pocket-sterilizer, including a spirit lamp.

Sixteen men of the Second New York Infantry were struck

by lightning and one killed nearly outright. They were hurried to my tent and soon we were in an emergency-confusion. Artificial respiration failed to restore one man, and many were paralyzed. Some had much pain in their limbs; 2 were unconscious, 1 in convulsions. I had *Corynebacterium* respiration. I had his teeth loosened. All were wet and lying on the ground till our hospital-corps straightened out matters. There were no decided marks on most of the men.

Yours sincerely,

HENRY EMERSON WETHERILL, M.D.

Acting Assistant Surgeon, U. S. Army.

Tampa Heights, Fla.

## Correspondence.

### LETTER FROM BERLIN.

#### The Diseases of the Tropics.—Rinderpest.—Malarial Fever.—Texas Fever.

In thanking Prof. Koch at the close of his talk on a **physician's observation in the tropics**, on the evening of June 9th, before the German Colonial Society, department of Berlin-Charlottenburg, Prof. Gerhardt said that "the thoroughly practical, eminently scientific talk of Prof. Koch was what might have been expected from the man who solved the two medical problems of the century, who discovered the cause and made possible the prevention of the great epidemic disease that has afflicted mankind for centuries, Asiatic cholera, and who has laid bare the true character, made possible the early and exact diagnosis and opened the way to what the future surely holds for us, the natural therapy of the greatest scourge of mankind, tuberculosis." In addition, I need only repeat the statement made by Löffler to me, just after the address: "That was a classic lecture—a true, calm, scientific exposition of observed phenomena, in Koch's best style—a model to be imitated by those who have observations to publish," in order to indicate the interest that was manifested in the lecture, and the comments that were heard on it afterward. Prof. Koch has been in German East Africa a year for the German Government, studying **Rinderpest**. He has not succeeded in isolating the parasite of the disease, and this has been a source of considerable disappointment, but he has been able to demonstrate experimentally that immunization of animals against the disease is possible, and he has made it possible to effect this practically. All this was known, and so the talk was on other subjects. Koch is an acute observer, and he has had his eyes open for the study of diseases peculiar to the tropics. With the solution of the cholera and tuberculosis riddles behind him, what was more natural than that he should devote himself to **malaria**, for which the tropics furnish so rich a field; and this subject formed the burden of his observations. He found that 90% of the malarial fever in the tropics is not like the malaria that is seen in the temperate zone. Only 10% of the cases ran the typical course of a tertian or quotidian fever. Instead of the sharp decline of the fever after 4 or 6 hours, as is usual in an attack of malaria as we know it, in the tropical form the temperature remains at the acme for 36 hours, sometimes longer, and then descends rapidly, to remain about normal until the next paroxysm, which may take place from 24 to 48 hours afterward. This is the characteristic course of the tropical fever, which occurs, almost without exception, in the tropics when the patient is kept for

some time without quinin. The seeming exceptions are due to the fact that, in the tropics, almost any disease that causes fever and is somewhat obscure is diagnosticated malaria, and the use of quinin has become so universal that it is extremely difficult to find cases absolutely uninfluenced by the drug in their regular evolution.

Koch has never seen the remittent form of malaria in the tropics, and he seems to consider that the continuance of a febrile temperature between the malarial paroxysms is due to some complication and not to the malaria itself. As to the "**black-water**" form of malarial hematuria, Koch considers it a symptom of quinin-poisoning, and he does not think that the malarial parasite is ever virulent enough to lead to the disintegration of the red blood-corpuscles and the consequent appearance of blood-pigment in the urine. Koch did not see a single case of the hematuric form in which quinin had not been administered and usually in large doses. As the idiosyncrasy of certain individuals for quinin is well known, it would not be surprising if in certain cases these intense toxic symptoms should develop, though the drug had been given in what would ordinarily not be toxic doses. On this point of quinin-intoxication, producing serious symptoms usually attributed to malaria, Prof. Koch insists, and he is sure that he has good grounds for his opinion. On the other hand he found the prophylactic value of quinin in *proper doses* infallible. He never saw malaria develop in Europeans exposed to the disease who were taking 1 gram (15½ grains) daily of quinin in almost any form. Quinin has, however, been used most injudiciously in the tropics for malaria. When fever developed, quinin was given at once without relevance to the stage of the paroxysm, and ordinarily it was given in increasing doses until signs of quinin-intoxication developed. There is a special stage of the life of the parasite of malaria that is influenced by quinin, while at other times it seems to be unaffected. The time for the administration of the drug can be best judged with the aid of the microscope. For the tropical form it is curiously enough the so-called sporulation-time. The little bodies are really not spores, in the true sense of the word, and consequently they are not more resistant, but they are young and therefore delicate embryonal forms. Before they have reached the size of the corresponding forms of ordinary tertian fever they may be seen in the blood. In the roset-shaped forms, however, Koch has seen them only in the spleen and then they are only about one-third the size of the sporulation(!)-form of tertian. At other stages of the parasite in the red blood-corpuscle it seems to be much smaller than those of the extra-tropical parasite. For instance, at the end of an attack there is a signet-ring form of the parasite that corresponds to the signet-ring parasite of tertian, but it is much smaller.

As to the manner of conveyance of malaria, Koch considers that it cannot be by means of either water or air. He feels sure that it is due to mosquitos. Mosquito-nets were as effective in protecting his party as quinin, and they tested the efficiency of the nets in this respect thoroughly. Malaria is most rife on the coast and at the foot of the mountains where mosquitos are thickest. It usually infects the islands most virulently, but on one of the islands off German East Africa there is no malaria and there are no mosquitos.

The infection is probably not direct from one individual to another through the mosquito, but it has a stage of evolution in the insect. It may be virulent for man only after several generations in the insect. To illustrate this phase of the question Koch detailed his experience with **Texas fever**, which he found in Africa, where tradition seems to show



that it has been endemic for several generations, and it is therefore not an importation from America. He repeated the experiments of Prof. Theobald Smith, in Texas, on the "ticks," the insects that convey the disease from animal to animal. He substantiated Smith's observations as to the possibility of young ticks that had never been on affected animals, though raised from the eggs of insects that had been, conveying the disease. He sent a young brood to a distant part of the country where Texas fever was unknown, and, under precautions that would absolutely preclude all possibility of *coincidental infection*, had them placed on animals. He waited a week, then two, but there was no result. At the end of three weeks there was still no sign and he gave up hope, considering his experiments a failure. On the twenty-second day the first symptoms of the disease developed. The substantiation of Prof. Smith's patient, brilliant observations was received with signs of interest that scarcely needed Prof. Koch's cordial words of approving admiration to break into applause. Some such state of affairs Koch considers may exist for malaria also.

As to the therapy of malaria, of course, quinin is a specific, but there would seem to be a hope of immunization, too. Untreated, in healthy individuals, the fever dies out. The next attack is milder, the next still milder, and so on; so that immunity is acquired. The negroes of the mountains know that when they go down to the coast, they will have the fever. The coast-people have acquired immunity. Even without knowing the cycle of the parasite's existence, Koch considers it not impossible that a method of immunization should be found. For rinderpest, though he could not find the parasite, he did show the possibility of immunity being produced. In smallpox, vaccination was effective, and for rabies a complete method of therapy had been found, though the cause of neither was known.

This Prof. Koch considers to be the future of malarial investigations; for, with the discovery of a process of immunization for malaria, colonization could go on in the rich, fertile South African domains undisturbed. The task is worthy of human effort, and opens up a future of much more scientific and utilitarian importance than anything that polar investigation can hope to disclose.

## American News and Notes.

Unsigned Items and those not otherwise credited are generally Original Contributions furnished by Physicians acting as Special Resident Correspondents of the PHILADELPHIA MEDICAL JOURNAL.

**The Government** has hospital-accommodations at the present time for 1,000 soldier-patients.

**Small-pox** has been reported to exist in Fredonia, a small town three miles from Dunkirk, New York.

**Dr. William Osler** will succeed **Dr. William H. Welch** as Dean of the Johns Hopkins Medical School in October.

**The American National Red Cross Association** has purchased the steam yacht *Admiral* for use as a supply-boat.

**Jubilee of the Red Cross Society.**—The Senate has passed the joint resolution authorizing the President to invite certain Governments to participate in the military jubilee to be given by the Red Cross Society, beginning next December.

**Surgeon-General Sternberg** has expressed himself as thoroughly satisfied with the appearance and equipment of the **naval hospital-ship *Relief***, which he has recently inspected.

**The Department of War** is completing arrangements for the dispatch of a **field-hospital to Manila**, with accommodations for 600 beds. It will be in charge of Major W. D. Owens.

**Milk-Inspection in Washington.**—Prosecutions in the police-courts for violation of the milk-ordinances relative to adulteration and skimming, are becoming numerous in Washington, D. C.

**The New York Hospital and the Roosevelt Hospital** are to be enlarged and improved. A two-story accident building will be added to the latter, while the improvements to the former comprise three buildings, to be erected at an estimated expense of about \$500,000.

**The Memphis Hospital Medical College** has decided, for the future, to postpone the regular commencement of the work of the curriculum until November 1st,—for the reason, that this date better suits the convenience of the students, whose tuition-fees are only forthcoming after the harvesting of the cotton.

**A Hospital-Ship for Manila.**—The Red Cross Society has undertaken the collection of \$300,000 for the purchase of a hospital-ship for the troops at Manila. The plan is to raise this sum by popular subscription in all the States west of the Rocky Mountains, and to present the ship to the United States Government.

**Harlem Medical Association.**—The following officers were elected at a meeting held June 13th: President, Dr. Philip Arthur Malleon; vize-president, Dr. Henry W. Mooney; secretary, Dr. Joseph E. Lombard; treasurer, Dr. Charles A. Clinton; Trustees, Dr. David Franklin, Dr. Samuel E. Gibbs, Dr. Henry J. Wolf.

**Hospital on Jekyl Island.**—Mr. David H. King, Jr., of New York City, has offered to the Government the use of his residence and estate on Jekyl Island, off Brunswick, Georgia, as a military hospital until the close of the war, and has, in addition, offered to defray the expenses attendant upon fitting up and maintaining it.

**The District of Columbia Appropriation Bill** provides \$6,000 for the enforcement of the act to prevent the spread of contagious diseases in the District, which was approved March 3, 1897. The sum of \$6,000 for the erection of a nurses' home has been appropriated, and \$1,000 for repairs and furniture for Columbia Hospital.

**The new Memphis City Hospital** has just been completed at an expense of \$70,000. It is first-class in every respect, being provided with enameled bedsteads, electric elevators, indoor telephones, a handsome and thoroughly sterilizable operating-room, etc. There will be a Training School for Nurses attached to the hospital.

**The Oregon State Medical Society** held its 25th annual meeting at Portland, June 2d and 3d. The meeting was quite well attended and the papers presented, although small in number, were of a high order. The officers elected for the coming year were: President, C. H. Hall, M.D., of Salem; secretary, William F. Amos, M.D., of Portland; treasurer, Mae H. Cardwell, M.D., of Portland. The next meeting will be held at Portland in June, 1899.



**Drs. Austin Flint**, professor of physiology; **Frederic S. Dennis**, professor of principles and practice of surgery, and **Samuel Alexander**, professor of genito-urinary surgery, who recently resigned from the faculty of the Bellevue Hospital Medical College, have been appointed to similar positions in Cornell University Medical College.

**The Convocation of the Medical Faculty of McGill University** was held on June 17th, 72 men receiving the M.D. degree. This was the first graduating class under the rule of the 9 months' session. The Dean, Dr. Craik, pointed out that in spite of the change there had been no falling off in numbers, there being 429 students registered in the Faculty.

**The Massachusetts Volunteer Aid Association's Hospital-Ship.**—The Secretaries of the Navy and War have accepted the offer of the Massachusetts Volunteer Aid Association to furnish a fully equipped ambulance-ship, to be called the *Bay State* which will provide comfortable accommodations for 150 patients. The association has already secured an appropriation of \$50,000 from the State legislature to defray the cost of equipment and maintenance.

**Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army.**—From June 19, 1898, to June 25, 1898:

Captain CHARLES E. B. FLAGG, Asst. Surgeon, is ordered from Columbus Barracks, Ohio, to Fort McPherson, Ga., for duty in the General Hospital.

Major W. FITZHUGH CARRIER, Surgeon, U. S. Army, is ordered from Nashville, Tenn., to Tampa, Fla., for duty with Fourth Army Corps.

Acting Asst. Surgeon EDWIN P. HAYWARD, U. S. Army, is ordered from Kansas City, Mo., to Leiter General Hospital, Chickamauga, Ga.

Acting Asst. Surgeon C. F. DE MEY, U. S. Army, is ordered from Louisville, Ky., to San Francisco, Cal., for duty with Philippine Expedition.

**The Dispensary-Question in Baltimore.**—It seems, from the *Maryland Medical Journal*, that, contrary to its predecessors, the present municipal administration of Baltimore has refused to appropriate a certain sum of money to each hospital for the free maintenance and treatment of a certain number of city-patients and for the supply of drugs in the dispensary to the city-poor. The administration contends that the hospitals abused these moneys, and while their wards were not always full, they took care that the city-beds always had pay-patients in them, and that the city paid the full amount for all the beds contracted for. As a result of the loss of the city revenue, the dispensaries have established a uniform rate of ten cents for each treatment or dressing. Thus the dispensary secures funds, "the poor person, paying for what he receives, feels that he is no longer a charity-case, and the sick man, who formerly abused the public dispensaries, now boldly pays his ten cents and thus cheats some young doctor out of a small fee." Comment is unnecessary.

**Obituary.**—DR. EBEN JACKSON, who gained the title of the "fighting doctor" for meritorious services during the civil war, at Somerville, Mass., June 22d, aged 73 years.—DR. SAMUEL GRAHAM, at Butler, Pa., June 21st, aged 62 years.—DR. J. A. MCCOY, at Tacoma, Wash., aged 71 years.—DR. W. W. BEACH, at Tekoa, Wash., aged 50 years.—DR. RICHARD H. LANDSDALE, of Olympia, Wash., aged 87 years.—DR. JOHN S. MCGUIRE, at Seattle, Wash., aged 65 years. Dr. McGuire had the honor of being one of the famous 600 whose deeds are told in the "Charge of the Light Brigade." He also received medallions and marks of honor for brilliant

services at Inkerman in the Crimean War. In 1871 he resigned his commission in the British Army and after a short residence in Australia went to San Francisco, where he practised for a short time. He came to Seattle in 1889, where he resided until the time of his death.—DR. WILLIAM H. BAILEY, ex-president of the New York State Medical Society, at Albany, June 24th, aged 73 years.—DR. CHARLES A. WADE, at Morgantown, W. Va., June 19th.—DR. JAMES F. DOUGHERTY, at Princess Anne, Maryland, June 21st, aged 28 years.—DR. RICHARD POTTS, in King George county, Virginia.—DR. P. M. CHADWICK, Omaha, Neb., June 11th.—DR. S. H. CHESTER, Jackson, Tenn., June 10th.—DR. J. B. COLE, Wabasha, Minn., June 19th.—DR. F. H. ALLISON, Kittanning, Pa., June 11th, aged 78 years.—DR. J. H. DONNELL, Clarkfield, Minn., June 11th.—DR. CYRUS K. KELLEY, Plymouth, N. H., June 21st, aged 77 years.—DR. J. R. REID, Thomasville, Ga., June 13th.

**The Montreal Medico-Chirurgical Society** held its 18th regular meeting in the rooms of the Natural History Association on June 20th.

DR. WYATT JOHNSTON reported several **medico-legal cases** in which he had been interested. He pointed out that there was a material difference in the English and French laws as to the definition of murder. In English law, if a man committed an illegal act and by inadvertence killed another, it was regarded as murder. In France the element of premeditation and malice was necessary if the act were to be construed as murder.

DR. D. P. ANDERSON showed a **liver** that presented the combination of **cirrhosis and carcinoma**. Clinically the case was one of atrophic cirrhosis with jaundice and some ascites. There had been no suspicion of carcinoma. At the autopsy the liver was very large and coarsely granular, with diffuse carcinomatous infiltration. A secondary nodule was found in the abdominal wall. The omentum was carcinomatous and formed a hard band crossing the abdomen. DR. J. G. ADAMI pointed out that the condition was a very rare one in America. A few years ago he and Dr. Finley had recorded the first case in America, in which the atypical course had suggested a carcinomatous condition in addition to atrophic cirrhosis.

DR. J. M. ELDER reported 8 cases of **osteomyelitis**, in which he had operated, the youngest in a boy of 8. He was of the opinion that free drainage was necessary in these cases and removal of all sequestra. He did not advocate packing the cavity with bone-chips or plaster. In one of the cases the disease was so extensive that the whole tibia and fibula were removed, the ankle and knee-joints being also involved, so that amputation had to be performed some distance above the knee. This all took place in 18 months.

DR. J. G. ADAMI read an important note on his discovery of a **microorganism in atrophic cirrhosis of the liver**. While working on the Pictou cattle-plague, in which cirrhosis of the liver occurs, he had been able to find in the fibrous tissue of the liver and in the lymphatic glands a small diplobacillus that only stained with difficulty. This he had been able to isolate from cultures, and it proved fatal to guinea-pigs in about 6 weeks. In 4 or possibly 5 cases of human atrophic cirrhosis he had found a similar organism. This varied in shape, sometimes resembling a diplococcus, and often a diplobacillus. This was very small and surrounded by a halo. It could only be made out with an  $\frac{1}{4}$  in. oil-immersion lens. Dr. Adami had been able to stain the organism by placing sections in weak acetic acid, then in absolute alcohol and from this into a half-saturated solution

of methylene-blue in aniline-oil. The sections remained in this for an hour. They were then washed out in xylol and mounted in balsam. The bacteria were stained well by this method and were of a slight brownish hue. On one occasion he had been able to get a growth of this organism from an atrophic liver. It produced an invisible growth on agar, but it died out before it could be properly studied.

The paper of the evening was read by DR. W. I. BRADLEY on the so-called *struma suprarenalis sarcomatodes aberrans*. His observations were based upon a case that had occurred in the Royal Victoria Hospital. A fairly large tumor was found in the lower part of the kidney and was soft, showing fatty streaks. Microscopically fat was abundant and it gave the appearance of a glandular carcinoma, with an attempt at the formation of irregular acini and ductules. Dr. Bradley was inclined to throw some doubt on the occurrence of such tumors as a development from suprarenal "rests," and he thought that Grawitz's theory needed further support. As both the suprarenal and the kidney are derived from the same embryologic elements it would naturally be difficult to be sure as to which of them a given tumor was derived from. In the case recorded there was a history of renal calculus and hematuria. DR. ADAMI thought that many of the so-called suprarenal "rest" tumors of the kidney were really carcinomata that had developed from simple adenomata, which were particularly prone to occur in cirrhotic kidneys. There was an analogy to this in the liver. DR. A. G. NICHOLLS said that such cases were of interest to him as tending to throw light upon a much vexed question. The few cases of kidney-tumor that were regarded as arising from suprarenal "rests" differed from Dr. Bradley's. They involved the suprarenal and the kidney together, and naturally affected the upper portions of the kidney. It was often impossible to say whether they were derived from the suprarenal itself or a suprarenal "rest" in the kidney. While some of these tumors might be true adenocarcinomata arising from suprarenal inclusions, others were made of a sarcomatous type, being derived from the perithelial cells about the vessels. Such tumors were also very fatty and vascular, and gave rise to hematuria. They might be benign or malignant and could give rise to metastasis in the form of pulsating tumors in various parts of the body.

DR. T. D. REED brought up the matter of the adoption of the British Pharmacopoeia for 1898, and it was decided to recommend October 1st as the date when it would come into force.

## Foreign News and Notes.

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**Dr. Uschinski**, Extraordinary Professor, becomes Ordinary Professor of Pathology at the University of Warsaw, Russia.

**Dr. Anton Dohrn**, Director of the Zoological Station at Naples, has been elected an honorary member of the Stockholm Academy of Sciences.

**The Berlin Doctors' Club** was formally opened on June 18th. Great hopes are expressed that the organization will do much to make the relations of physicians, to each other more friendly and lessen the friction almost necessarily incident to practice in a large city. This attempted German solution of a difficult problem will be watched with interest.

**Lord Lister** was presented, on June 15th, with the freedom of the city of Edinburgh. He has also been elected an honorary Fellow of the Faculty of Physicians and Surgeons of Glasgow, Scotland.

**The Otto Vahlbruch Prize**, of the value of \$2,250, has been awarded by the University of Göttingen, to Professor Roentgen, of Würzburg, for the greatest scientific advancement during the past two years.

**The French Surgical Association** will hold its twelfth Congress at the Faculty of Medicine, Paris, from October 17th to 22d. The subjects for discussion will include nephrotomy and the treatment of goiter.

**Professor T. Clifford Allbutt**, Regius Professor of Physic in the University of Cambridge, is said to be meditating an early visit, for lecturing purposes, to the United States. Professor Allbutt has just issued a circular-letter appealing for donations and subscriptions to provide buildings for the proper housing of the Medical School of the University.

**Tetanus-serum** bearing the control number 13, made by Farbwerke, formerly Meister Lucius & Bruning, of Höchst-am-Main, is announced as withdrawn from the market, owing to the contents having deteriorated in immunizing units. As some of the firm's products find their way to America, and delay in the use of a proper tetanus-serum would be serious, the notice seems worth calling attention to.

**The London University Bill.**—The Bill for the reform of London University and its conversion into a teaching university has at length been read a second time in the House of Commons. There was practically no opposition, and a remedial measure, upon which two Royal Commissions have sat, and columns of newspaper-war have been waged, is now fairly and peaceably on its way to become law.

**Illness of the Russian Czarina.**—According to a German paper the Czarina never fully recovered from the severe attack of measles she had last year and it is feared that tuberculosis, which so often follows that disease, is insidiously developing. So far the best-directed medical efforts have not succeeded in keeping her from running down in health and strength, until now her condition has alarmed her husband and friends.

**Microbes in the French Chamber of Deputies.**—A distinguished scientist and fellow-worker with Pasteur is quoted as making the statement that he had analyzed the air in different localities—on the boulevards, hospitals, and theaters; that he had counted the microbes found in it and ascertained their comparative virulence; and that, as shown by the analyses, the most dangerous air breathed is that of the Chamber of Deputies.

**A French Congress of Gynecology, Obstetrics, and Pediatrics**, will be held at Marseilles from October 8th to 15th. Professor Pozzi, Professor Pinard, and Professor Broca will preside over the three sections in the order named. The gynecologic and obstetric sections will combine to discuss the following questions: (1) The diagnosis and treatment of extrauterine pregnancy; (2) auto-intoxications in gravid women. In the Pediatric Section the principal questions discussed will be: Congenital abdominal herniæ; microbic associations in diphtheria; the dyspepsia of schoolboys; the treatment of infantile heart-disease; the purpuras of childhood; the diplegias of childhood; colitis in childhood; and the treatment of paralytic clubfoot.



**Sanatoria for Consumptives in Sweden.**—The Swedish Parliament has voted the sum of 850,000 kroner for the establishment of a public sanatorium for lung diseases in South Sweden. Two other sanatoria, one for Central, the other for North Sweden, have been established with the help of the fund of 2,200,000 kroner presented by the nation to King Oscar on the occasion of his jubilee not long ago.—[*British Medical Journal*.]

**The Goldberger Prize** of the k. k. Gesellschaft der Aerzte in Vienna, valued at 750 florins (\$300), will be awarded October 28, 1900, for the best essay entitled: Ueber digestive Wirkungen von Mikroorganismen mit Rücksicht auf die Verdauung des Menschen (The digestive activities of microorganisms with reference to human digestion). Essays in competition must be submitted to the president of the Gesellschaft before May 15, 1900.

**The General Medical Council of Great Britain and the Penal Cases.**—*The Medical Press and Circular* observes that "the penal cases were few in number and, with one exception, uninteresting in character. The exception was the erasure of the name of Mr. Joshua Hamilton Hart, of Morley, near Leeds, for aiding and abetting one Munyon in the sale of certain quack remedies, in connection with which his name and qualifications were advertised as consulting physician."

**Chronic Gonorrheal Hydrarthrosis.**—At the meeting of the Société médicale des Hôpitaux de Paris, June 10th, M. Milian exhibited a patient who presented chronic hydrarthrosis of the metacarpophalangeal articulations of the knee, and of the tarsus, and in addition, inflammation of the tendinous sheaths of the muscles of the thumb. The affection had persisted two years, and had followed gonorrheal inflammation of the vagina. The case was, therefore, considered an infectious hydrarthrosis.

**Notification of Lead, Phosphorus, and Arsenical Poisoning, and of Anthrax.**—Every medical practitioner of Great Britain attending on or called in to visit a patient whom he believes to be suffering from lead-poisoning, phosphorus-poisoning, arsenical poisoning, or anthrax, contracted in any factory or workshop, is required by the Factory and Workshop Acts, 1895, under penalty, to notify the case forthwith to the Home Office, unless it has already been so notified; and he is entitled to a fee of 2s. 6d. for so doing.

**Busts of Skoda and Rokitansky** were unveiled in the Arcades of the University of Vienna at the beginning of June. Prof. Nothnagel and Prof. Weichselbaum delivered the memorial addresses on the occasion for the respective representatives of their specialties. Of Skoda, Nothnagel said: "He was the Lessing of clinical medicine; at once an originator and a critic, of untrammelled clearness of comprehension, of untrammelled devotion to truth for its own sake, and of judicial mental acuity. He was the introducer into clinical medicine of exact scientific methods."

**Chancres from Shaving.**—At the meeting of the Berlin Dermatological Society, held on June 14th, Dr. Joseph presented the third case of chancre of the cheek contracted from a razor-wound that he has seen this year. He spoke of the increasing frequency of this mode of transmission and others agreed with him. Prof. Lesser, considered, however, that not so much the instruments are directly infectious as that the cut afforded the opportunity for inoculation. Barbers and barbers' assistants are by no

means immune from syphilis, and the favorite method of stanching the blood consists in rubbing and pressure. The barbers' towels were considered the most likely medium for conveying disease from one to the other of his patrons and their boiling each time after use was deemed absolutely necessary to afford even a modicum of protection against infection.

**X-rays and Acute Articular Rheumatism.**—Seokoloff, of St. Petersburg, reports 4 cases of acute articular rheumatism in children in whom marked improvement took place after the use of the Röntgen-rays. The child was placed from 50 to 60 cm. from the tube, and the time of exposure was from 16 to 20 minutes. In one girl of 9 years the pain and swelling of the joints, which were very great, disappeared after two treatments, while one girl of 14 recovered after the first seance.—[*La Rev. Méd.*, January 19, 1898. *American X-ray Journal*.]

**The Obstetric Statistics for 100 Years of the Charité**, the public hospital of Berlin, were published some time ago and develop some interesting points. At the beginning of the century the mortality of confinement-cases at the Charité was under 20%; for several years during the first two decades it was *nil*. Then after 1830 began the modern era of interest in pathology and the mortality ran up. Between 1840 and 1850 it was always above 10% and one year it was 18%. Then came antiseptics and the mortality lessened once more. In recent years it has been about  $\frac{1}{4}$ % and last year 0.2%.

**Zeitschrift für diätetische und physikalische Therapie** is the name of a new medical journal that has just made its appearance. It is edited by Profs. Leyden and Goldscheider, of Berlin, and published by Thieme, of Leipzig, the publisher of the *Deutsche medicinische Wochenschrift*. Its avowed object is to rescue dietetic and physical therapeutic methods from the hands of non-physicians and half-physicians (*sic*)—this is a genus we are not familiar with in America. Among the contributors to the first number are Profs. Gerhard, Weber (Halle), Fürbringer, Winternitz and Grawitz (Berlin), and the new journal promises to find a place for itself.

**The first Scientific Congress held in South America**, organized by the *Sociedad Científica* of Buenos Ayres, was opened in that city on April 11, 1898. The members numbered about 600 and included delegates and visitors from every republic in South America, and several delegates from Mexico. The Congress was divided into 7 sections, as follows: (1) Exact Sciences—(a) Pure and Applied Mathematics and (b) Astronomy, Topography, and Land Surveying; (2) Engineering Sciences, Civil and Military, including Architecture; (3) Physical and Chemical Sciences; (4) Natural Sciences, including Biology, Geology, and Paleontology; (5) Medical Sciences; (6) Anthropology; and (7) Sociology. In the Medical Sciences section many of the subjects discussed were of local interest, other subjects of more universal interest discussed were Leprosy, Tuberculosis, Vaccination and Smallpox, Infectious and Contagious Diseases in Relation to Sanitary Works, Subsoil Drainage and Changes in Atmospheric Pressure, Inoculation in Carbuncle and the Preparation of Anticarbuncular Serum, the Microbiology and Therapeutics of Whooping-cough, the X-Rays in Surgery, Suicide and Mental Diseases, and Gonococcus—its Toxin and Serum, etc. The President of the Medical Sciences section was Dr. R. Wernicke, the Secretary was Dr. Arocz Alfaro.

**Hysterectomy by Means of the Angiotribe.**—At a recent meeting of the Académie de Médecine de Paris, M. Tuffier spoke of his method of performing hysterectomy, which he has now practised 23 times, with but 2 deaths—one from septicemia, the other from pulmonary congestion. The method consists in the employment of an instrument that he designates an angiotribe, and which obviates the necessity of leaving forceps *in situ* for any length of time. The removal of the organ is effected in the ordinary fashion, but instead of applying forceps, the broad ligament is grasped in the teeth of the angiotribe, and the instrument is immediately withdrawn. In the performance of the operation by this method but two precautions are considered necessary—to close the instrument perfectly, and to hold it directly in the axis of the vagina. If the operation presents special difficulty because of the size of the uterus, the ordinary forceps is to be applied first, and when the organ is completely removed either piecemeal or otherwise, the angiotribe is used as in ordinary cases.

**Prize for a Method for the Purification of Distillery By-Products.** The North of Scotland Malt Distillers offer a prize of \$10,000 for a successful method for the purification of waste products that polluted the streams of the North of Scotland until the Government interfered with the industry. The following is the offer open to chemists of the world: "Distillery By-Products.—The North of Scotland Malt Distillers Association offer a premium of £2,000 sterling to anyone devising and handing over to them for their sole use and behalf, such a scheme for treating the by-products of distilleries, as will effectually purify them and be adopted by the association. Samples of the by-products will be furnished and facilities given on application to the secretary, D. Mustard. The by-products consist of: (1) The spent-wash or "burnt ale" after distillation of the spirits. It usually has a specific gravity of about 1004. It contains a sediment of exhausted yeast, fine particles of malt-dust, also mineral salts, acids, etc. (2) The spent lees from spirit-stills contain fusel-oil, etc. (3) The washings of fermenting vats, washings of casks from the cooperage.

**Prevalent Diseases Among the Goorkhas.**—In a recent article in the *Indian Medical Gazette*, Dr. Andrew Duncan, Surgeon-major, states that he was much impressed with the great prevalence among the second battalion of the Goorkha Rifles, of ophthalmia, pulmonary tuberculosis, measles and mumps. The married men especially were affected. The chief factor was determined to lie in the ill-ventilated condition of the married lines, and the fact that the men cooked in their huts was held to be largely accountable for this. Referring to the fevers prevalent among the men, Major Duncan states: "Shortly after taking over charge, I was at once struck with the inveterate character of the fever in many cases. The cases may be divided under two heads: In the first class, we meet with cases of an irregular type occurring daily for a month or six weeks. Repeated examination of the lungs shows not the slightest physical sign. Suddenly there appears at one apex a few subcrepitant rhonchi and the case rapidly goes down hill as one of rapid phthisis. . . . In the second class occur those cases of malarial fever which in Goorkhas have, as far as my experience has shown, proved to be peculiarly resistant to the usual antimalarial remedies." It is further stated that cases "in which for 3 or 4 weeks the men have been taking 30 grains of quinin by the mouth daily have yielded at once on the administration of 20 grains by the rectum."

**Diffuse Lipomata.**—At a recent meeting of the Société Médicale des Hôpitaux de Paris, M. Launois and M. Ben-saude presented a communication on diffuse lipomata, of which they have been able to collect accounts of 65 cases. They regard the term lipoma a misnomer, as the growths are truly local hypertrophies of the subcutaneous adipose tissue and may be regarded as a form of obesity. The lymphatic glands, however, seem to be in some way especially concerned in their production, as they are very prone to develop in regions occupied by lymphatic glands. To the objection that the growths form sometimes in regions where no lymphatic glands are supposed to exist, reply is made that glands have been described in such regions—for example, in the external aspect of the deltoid, on the internal surface of the forearm, on the thorax, and on the abdominal wall. A more important argument than the situation is the presence in the growths of more or less voluminous glands. Further, lymphangitis and splenic enlargement have been found and also alterations in the number of leukocytes in the blood. Virchow has already stated that the lymphatic glands may be the starting-point of lipomatous formations. The perirenal accumulation of fat that may occur with renal disease is considered an analogous condition. But slight reference is made to the etiology, although alcohol has been held answerable for the development of the disease in many of the reported cases.

**Subacute and Chronic Rheumatic Myositis.**—At a recent meeting of the Edinburgh Medico-Chirurgical Society, Mr. A. G. Miller pointed out that acute myositis might be, and probably frequently is, mistaken for articular rheumatism, especially in cases in which the affected muscle covers a joint—as in the case of the deltoid. Of importance in the diagnosis are: (1) The pain is in the muscle itself and can be made out by careful palpation; (2) All movements of the limb do not cause pain, but only voluntary contractions of the muscle affected and movements that stretch it. Internal medication is of little avail, the myositis usually subsiding of itself in a few days. Later, dry heat is efficacious. Chronic myositis, with stiffness, the result of muscular contraction and atrophy, is often mistaken for adhesions the result of synovitis; but this ankylosis is more apparent than real, being the result of muscular fixation of the limb—partly voluntary, partly involuntary—to prevent painful movements of the limb. The treatment should consist in exercise of the limb, both passive and voluntary, the latter being the more important. The well-known susceptibility of rheumatic persons to barometric changes, more particularly the occurrence of pain before rain or change of weather, was suggested as due to a combination of cold and damp before rain. Cimicifuga has been found of singular utility in the treatment of muscular rheumatism, and a single full dose (one dram) has been found to relieve lumbago and pleurodynia.

**Psittacosis.**—Dupuy has recently described in *Progrès Médical*, an epidemic of psittacosis that he had observed. Two bird-dealers imported 500 parrots from Buenos Ayres. Of these half died during the journey. Soon after the reception of the parrots both of the dealers (brothers, living in different parts of Paris) became ill with an inflammation of the lungs; one of them died, the other recovered. From the residence of each, as a focus of infection, the disease spread throughout the neighborhood. Those who nursed the patients first became ill, then others in the same house, and finally others in the same and adjoining streets. In addition, those who purchased the birds also became affected. Dupuy



alone detected in all 70 cases, of which 34 proved fatal. Investigation showed that all the birds were ill, manifesting loss of appetite, general depression, malodorous diarrhea, convulsions, and death in from 8 to 20 days. Nocard, Gilbert, and Fournier discovered a bacterium, morphologically allied to the typhoid and the colon bacillus, which, when cultivated and injected into other animals, produced manifestations similar to those that the parrots had presented. Necropsies on the bodies of the dead animals revealed inflammation, hemorrhage, and ulceration of the mucous membrane of the gastro-intestinal tract. Infection from the birds to man, and from man to man occurred by way of the respiratory tract. The affection in man was characterized by a prodromal stage, and the marked typhoid character at the height of the disease. In the severe cases a diffuse bronchitis and pneumonia develop, but these are to be looked upon as secondary. The fever is similar to that of recurring or relapsing fever. The affection is thought to be a specific infection, and to thus merit the attention of sanitarians.

**The cure of pulmonary tuberculosis** by the establishment of an artificial pneumothorax is not a new one. At the International Medical Congress held at Rome in 1894, (*Transactions*, Vol. III, Section on Internal Medicine, page 134) Professor C. Forlanini, of Turin, reported several cases of pulmonary tuberculosis in which cure resulted after the development of pneumothorax, and acting upon this suggestion he produced this condition artificially in a certain number of cases. He then pointed out that nitrogen is the preferable gas for introduction, because of its slow absorption, and he added that the therapeutic results are entirely local, being overpowered by the serious general condition and that of the other lung. His report was especially intended to demonstrate the practicability of the procedure and the endurance of the lung.

**Obituary.**—The late HENRY LEE, who recently died in London at the advanced age of 81, was a surgeon of mark in his day, and one, moreover, whose work in several directions will live in English medicine. His first original paper to gain him any attention was an attempt to put the knowledge of the many conditions then known as "phlebitis" on a sound basis. All the pathology in his excellent paper, which was read before the Royal Medical and Chirurgical Society in 1852, might not pass unquestioned nearly half a century later, but he had the great merit of first calling attention to the large part that coagulation of the blood from any cause, local or general, played in cases of so-called "phlebitis," it having been previously assumed that the obstructive material was secreted by the lining membrane of the vessel. The differences in prognosis and treatment that resulted from this view are obvious. But Henry Lee was chiefly known in England, and only known out of England as a syphilographer. Here the value of his work is incontestable. He made many experiments by inoculation, and was consequently able to write more clearly and conclusively than any other surgeon of his time upon the great and essential differences between local and constitutional syphilis. It may be that to-day we do not wait to have these differences pointed out to us with such particularity, as it seems to us that a surgeon is almost born knowing such things, but 40 years ago much doubt prevailed as to the real nature of soft chancres; and Henry Lee was mainly instrumental in making matters clear. At the time of his death he had only recently retired from practice in spite of his age, and

he enjoyed the title of consulting surgeon to St. George's Hospital.—**PROF. FRIEDRICH MÜLLER**, of the University of Vienna, an eminent ethnologist and philologist, May 25th, aged 64 years.—**DR. THOMAS FITZPATRICK**, Dublin, aged 92 years.—**MR. WILLIAM ILIFFE**, M. R. C. S. England, Medical Officer of Health of the Borough of Derby, England, June 3d, aged 54 years.

## Philadelphia News and Notes.

**Infectious Diseases in Philadelphia** for the week ending June 25th:

Disease.	Cases.	Deaths.
Diphtheria.....	67	15
Scarlet fever.....	23	1
Typhoid fever.....	91	7
Pulmonary tuberculosis.....		34

**Philadelphia County Medical Society.**—At a stated meeting, held June 22d, DR. J. M. FISHER presented a specimen of **ectopic gestation**. DR. JAMES K. YOUNG exhibited a number of **cured orthopedic cases**. These comprised two boys, 8 years old, who when 4 years of age had been operated on for lumbar abscess; a case of lumbar Pott's disease; two cases of hip-disease; a case of injury to the hip, and two cases of excision of the hip.

DRS. F. SAVARY PEARCE and H. D. BEYEA presented a paper entitled: **Neurasthenia—its relation to the physiology and pathology of the female generative organs**. Reference was made to the relationships existing between gynecologists and neurologists, to the anatomy, especially the nervous supply, of the female generative organs, to the physiologic functions that they subserve, and to their disturbance in disease. In the presence of neurasthenia and gynecologic disease, the importance of distinguishing between essential and symptomatic neurasthenia was insisted upon. The conclusion was reached that in the absence of distinct disease of the female generative organs, gynecologic treatment was not called for in cases of neurasthenia.

**Pathological Society of Philadelphia.**—At a stated meeting held June 23, 1898, DR. F. A. PACKARD presented a specimen of **rupture of the aorta**. The patient, a tailor, while sitting quietly, was suddenly seized with severe epigastric pain and evidences of shock. The pulse, however, was slow, and it was thought, as aneurysm could be excluded, that embolism of the superior mesentery artery had occurred. At the autopsy the aorta was found ruptured in the ascending portion of its arch. Some old scars in the mesentery suggested the possible occurrence, at a former period, of mesenteric embolism, but there was no recent process. Microscopic study of the aorta showed it to be the seat of fatty degeneration. DR. JOS. SAILER recalled cases of mesenteric embolism in which the intestines were very dark in color, a feature of diagnostic value. DR. PACKARD also exhibited **vegetable fibers** from the stool of a child, which presented themselves as little threads looking like parasites. He believed they were particles of spinach. DR. D. RIESMAN showed a mass of seeds (probably raspberry) that had been passed in the feces; and DR. PACKARD also presented a collection of such seeds. DR. C. W. BURR presented a large **brain-tumor** springing from the base, probably from the infundibulum. The patient, a woman, had shown, beyond total

blindness from optic atrophy following choked disc, no unequivocal signs of cerebral tumor, and the only significant features, in the light of the post-mortem discovery, were drowsiness and an occasional peculiar jocoseness and lewd ribaldry. A diagnosis of brain-tumor was made, but localization was not attempted. The tumor, as large as a mandarin, had flattened the optic tracts and hollowed out the sella turcica. It proved to be an alveolar spindle-cell sarcoma, and had attached to it a small remnant of pituitary body. Signs of akromegaly had been entirely wanting. DR. W. G. SPILLER called attention to the frequency of drowsiness in association with pressure at the base of the brain as well as with lesions of the Sylvian aqueduct. The tendency to joking was considered a sign of frontal tumor by Bruns. This tumor illustrated what had been observed a number of times recently in Philadelphia, namely, that tumors of the pituitary body need not be associated with akromegaly.

DR. DAVID RIESMAN presented a brain from a boy, 6½ years old, who had died of general miliary tuberculosis, showing **bridging of the top of the longitudinal fissure** by bands passing through defects in the falx near its attachment to the dura. These bridges, it was thought, were possibly nervous tissue, and were compared to the middle commissure of the third ventricle. There were adhesions of the mesial aspect of the hemispheres in the region of the frontal lobes and over the corpus callosum. An acute miliary tuberculosis existed at the base and in the Sylvian fissures. Of interest was also the great weight of the brain—1,480 grams, or about 49 oz., which must be considered abnormal for a boy of 6½ years. Macrencephaly is generally associated with idiocy, but it was not so in this case. Attention was also directed to the possible relationship between the macrencephaly and the tuberculous family taint. DR. JOS. SAILER recalled some cases of adhesion of the hemispheres, but all were accompanied by failure of development, such as cyclopia. DR. J. M. SWAN thought that if the bands were the result of congenital adhesions, they were due to defective formation of the falx, which had not properly bisected the forebrain vesicle. He had seen nothing like the specimen, although he has examined over 100 brains annually. DR. W. G. SPILLER thought that the bands looked like adhesions; if they were bands of nerve-fibers, they were probably aberrant bands of the corpus callosum. DR. RIESMAN, in closing, said that the bands might be due to adhesion, but if so, they were much older than the fatal meningitis of the base. He thought that, if they were brain-tissue, they would be more like the middle commissure between the optic thalami.

DR. JOSEPH SAILER read a paper on the **pathology of the choroid plexus**, dwelling first upon the origin of this structure and then upon the various lesions that have been noted. Sections of the choroid plexus of an amphiuma and of a papillary epithelioma of the plexus of a horse were shown. The latter tumor was an accidental discovery in an animal that had died of meningomyelitis. DR. WM. G. SPILLER described a peculiar growth found in the brain-substance which he thought might have sprung from the choroid plexus, although it had no connection with the latter. DR. D. RIESMAN had seen the sections from this tumor and believed that it had sprung from the perithelium and was a perithelioma, a type of sarcoma. Similar growths had been described by Besold, from two sisters. DR. SPILLER also thought his tumor was sarcomatous in nature.

DR. W. M. L. COPLIN showed a **liver**, the seat of innumerable nodules of **carcinoma**. As no primary growth had

been found on careful search, he was inclined to consider the liver the primary seat. Histologically, two types of carcinoma were found—one composed of cylinderic cells and one closely resembling pancreatic tissue. Attention was called to the opportunity afforded by metastasis of studying the distribution and course of the lymph-channels. DR. COPLIN also presented a specimen and sections of **primary miliary tuberculosis of the testicle**. The disease seemed to have followed trauma. The opinion was expressed that the distribution of the testicular blood-vessels rendered miliary tuberculosis of the organ possible. DR. H. L. WILLIAMS recalled a case of tuberculosis with a large central cavity in the testicle, and DR. J. M. SWAN one in which the testicular substance was completely obliterated.

DR. H. L. WILLIAMS presented a **carcinomatous polyp of the cervix** of the uterus, and referred to the various polypoid tumors of that region.

DR. A. A. ESHNER exhibited **cystic kidneys, hypertrophied heart and pontine hemorrhages** from a case of **uremia**. There were two hemorrhages in the pons, one in the substance, and one near the surface. There had been some muscular twitching and some delirium, but the temperature was not elevated—in fact for several days was subnormal. DR. F. A. PACKARD also showed a specimen of pontine hemorrhage, likewise from a case of uremia, and unattended with symptoms.

DR. J. P. ARNOLD exhibited a specimen of **colloid carcinoma of the stomach**, and one of **obstruction of the ureter** with atrophy of the kidney-substance.

DR. D. RIESMAN showed the heart and bone-marrow from a case of probable **pernicious anemia**. The heart presented well-marked "tabby-cat" striation; the bone-marrow was splenified.

DR. F. A. PACKARD showed a specimen of **multiple abscesses of the liver**.

**Serum-treatment of Snake-poisoning.** C. J. Martin (*Intercolonial Med. Jour. of Australasia*, April 20, 1898) in reply to a criticism of A. Calmette on the unsuccessful results that he obtained in a series of experiments testing the value of Calmette's antivenomous serum in the treatment of inoculations with the poisons of Australian snakes, states his belief that it will soon be possible to procure a serum of greater potency that will give successful results.

In discussing **parasitic diseases in South Africa**, Chew (*South African Med. Jour.*, May, 1898) describes a severe form of ringworm called Burmese ringworm, contracted probably from cattle, horses, and even dogs. It begins as a small papule, increasing by marginal extension, the margins being pink and raised, whilst the center remains flattened and dark. If seen later, there are papules, pustules, and even blisters, arranged in circular form or irregularly, in appearance strongly resembling lupus verrucosus, but the true nature of the disease is easily ascertained by microscopic examination. Tapeworm is said to be very common in the colony, both *tænia solium* and *tænia mediocanellata*. He has found tapeworm, sometimes 2 or 3, the intestines being blocked with them, in 70% of the necropsies that he had made of kafirs. Another parasite, *Bilharzia hæmatobium*, gives rise to hæmaturia and dysentery. There is considerable doubt as to its primary localization in the body and its mode of entrance. It has been found in the renal, portal, and mesenteric veins and in the heart, but the most common situation for the worm is the wall of the bladder, where it lies in a small cavity, probably a transformed bloodvessel, and is covered by the mucous membrane of the bladder. It has been suggested that the ova of the worm pierce the mucous membrane of the bladder by means of their spine and are then expelled by muscular contraction. The trouble occurs more frequently in children and in boys, the infection perhaps occurring through the urethra in bathing.



## Society Proceedings.

### AMERICAN MEDICAL ASSOCIATION.

Forty-ninth Annual Session, Held at Denver, Col.,  
June 7, 8, 9, and 10, 1898.

(Special Report for THE PHILADELPHIA MEDICAL JOURNAL)

(Continued from Vol. I, p. 1183.)

#### FIRST DAY.

#### Section on Physiology and Dietetics.

**Chairman's Address.**—DR. RANDELL HUNT, of Shreveport, La., read a paper on **Physiologic Law**. He spoke of the universal range of fixed law in every department of nature. Whether it be in physics, astronomy or in natural creation, the sway of law is supreme. Nothing occurs by chance; and if varying forces are brought to bear and seem likely to disturb the equipoise of natural law, other laws of adjustment appear, whereby order and harmony are preserved. Applying the thought to man as the highest type that nature presents, it is found that here law likewise reigns supreme. Unerring rules exist for the guidance of all physiologic processes. Digestion, absorption, circulation, respiration, all follow definite lines laid down for man's comfort and guidance in the maintenance of conditions of health. These laws are not to be accounted for in the limited line of physical or chemical effect. In closing, the need was urged of a thorough study of physiologic law and the natural workings of the body as a prerequisite to any successful practice of the healing art.

**Physiologic Development of Vital Force.**—DR. AUGUSTUS P. CLARKE, of Cambridge, Mass., took up the development of unicellular organisms and maintained their gradual unfolding from a lower to a higher type. The acquisition of new form and function with the constant evolution of higher types was undoubted. DR. HENRY SEWALL, of Denver, said that the great question is as to the meaning of life. Chemistry and physics cannot fully explain vital force. Dead animal membranes and dialysis cannot replace living vessels and vital actions. A living element must always be taken into account in any explanation of bodily phenomena.

**Principles Governing the Dietary of Infancy.**—DR. R. O. BEARD, of Minneapolis, emphasized three especial factors: (a) The quality and the preparation of food; (b) the quantity of food; (c) the intervals of feeding. The mortality among infants artificially reared in one New York institution was 92% below the first year of age. Taking the country over, 37% of children under 3 years of age die from gastro-intestinal disorders. In view of these facts, extreme care was urged in the observation of the factors mentioned. As to the quality of nourishment needed by the infant, the ready infantile digestion of dextrins, lactose, and proteids was referred to, with the difficult digestion, on the other hand, of carbohydrates, cane-sugar and fats. In artificial feeding, growth as well as repair must be taken into account, and the food-stuffs accordingly selected. The differences between caseinogen and the lactoprotein of cow's and human milk are marked, although the same chemically to all appearance. As the serum-albumin of one animal differs from that of another, even at times showing toxic properties, so do the albuminoids of human and cow's milk. Scientific chemistry must ever be evoked in the prescription of a proper food quality. Thoughtlessness often lies back of the lamentable and scandalous directions for infant-feeding given by the general practitioner. Modified, pure cow's milk is the essential. The day will come when municipal laboratories for the preparation of a proper aseptic, modified food will be the rule. As to quantity, the average infantile capacity at different ages is to be studied. This is usually greatly overestimated. Too much food is the rule. Excessive quantity of food does not, in Dr. Beard's opinion (contrary to that of Rotch), lead to stomach-dilatation. It is the chemical irritation of undigested food that brings this about, as has been found by animal experimentation. As to intervals of feeding, great stress was laid on the less frequent giving of food. This matter is often one of careless thought. The entire length of digestion ought to be deter-

mined in the infant (usually 3 hours for milk) and a proper interval of rest allowed. Activity ought to alternate regularly with rest of the stomach and intestines. From 3 to 6 feedings a day have been found sufficient to maintain good nourishment and growth, and yet conserve the digestive tract. This infrequency of feeding is one of the most important features in the rearing of infants. DR. C. B. VAN ZANT, of Denver, and DR. LEE KAHN, of Leadville, spoke of the marked modification of infantile disorders in Colorado. Gastro-intestinal inflammation is less common and less severe than in lower sections, probably owing to the presence of fewer microorganisms productive of fermentative changes at higher levels. From this view DR. HENRY SEWALL, of Denver, expressed dissent.

**Nature's Therapy.**—DR. C. F. ULRICH, of Wheeling, W. Va., traced the differences in the health of savage and of civilized communities. Modern civilization entails a violation of many or all of the ordinary laws of health. No cognizance is taken of nature's index. Spurs are applied when overtaxed or violated nature rebels. A plea was made for the careful correction of all faults of diet, work and rest, and natural methods of cure were extolled. DR. RANDELL HUNT emphasized the great importance of following the physiologic indications in the treatment of all cases.

**Diet in the Uric-acid Diathesis.**—DR. DANIEL R. BROWER, of Chicago, stated that Fothergill and Garrod taught that uric acid was the cause of gout; that this uric acid was the result of nitrogenous waste; that it represented a lower degree of oxidation than urea; that, being insoluble, it was not readily eliminated and hence accumulated in the system; that it forms as an incomplete waste product, on account of some defect in the action of the liver in its urea-forming function. Haig accepts this theory. As the liver is at fault, and peptones, probably to a large degree, are the antecedent products upon which it acts to form urea, the withholding of proteids from the diet is advocated. This origin of uric acid cannot be maintained to-day. It is now an accepted fact that uric acid comes from the oxidation of the nuclein of the blood-corpuscles and that uric acid is not the sole cause of gout, but the uric-acid group of leukomains as well. The defects in tissue-metabolism producing gout are of neurotic origin, and gout is a neurosis. The diet must be adjusted to suit the patient, and not according to arbitrary rule. A much more liberal allowance of the proteids was insisted on than the dietaries of Haig, Garrod, and Fothergill allow. In the formation and repair of tissue, proteids are exceedingly necessary. They regulate the absorption and utilization of oxygen and contribute to muscular and nervous force and to heat. Hence the importance of this class of foods. If the nervous tone in gout is lowered the danger is increased. The amount of animal food must of course be less than that ingested by one in health, but it will vary with the peculiarities of the case. A man of sedentary habits will thus require less proteids than one leading an active life. An exclusively vegetable diet should be advised for gouty subjects only exceptionally. The consumption of foods of all kinds should be decidedly restricted. Franklin's rule to always leave the table with an appetite is one full of wisdom for these cases. Simply enough food to nourish the body and maintain its functions is the desideratum. As a man gets older and less active, the quantity of food should be curtailed. Sugars are as detrimental to the gouty as to the diabetic. Saccharin may be substituted for sugar. Starch is equally objectionable, causing intestinal indigestion and autointoxication. Fats are also hurtful. Eggs are to be taken in moderation, cheese sparingly, fruits likewise, especially those containing oxalates. Milk constitutes the best diet. Water is to be taken very freely, hot, and before meals and at bedtime. Alcohol is bad in many cases; in others, beneficial. If used, whisky, gin, brandy, light hock, and Hungarian wines are the best, especially if diluted with alkaline table-waters.

**Dietetic Causes of Inebriety.**—DR. T. D. CROTHERS, of Hartford, Conn., contended that inebriety is a complex neurosis and anything that depresses the nervous system will be a predisposing cause. Deficiency or bad quality of food, mental strain, obscure indigestion, all have their effect in making inebriety more likely. What is needed, therefore, is plenty of rest, especially of mind; a building up of nutrition and digestion; and the elimination of all intestinal toxins. DR. DANIEL R. BROWER, of Chicago, emphasized the statement



that inebriety is a neurosis; and that it is only of recent years that it has come to be recognized as such. His experience corroborates the thought of a previous degeneration, of "nervous stigmata," in these cases. He endorsed the importance of nutritional and environing conditions. Failure in not recognizing in children a tendency to alcoholism and applying proper means to ward off this trend is but too common. The conditions in adult life, after the full development of inebriety, are much harder to successfully meet. DR. MARY E. GREEN, of Charlotte, Mich., spoke of the nutrient effects of different foods. The use of fats ought to be increased, especially in children.

**Some of the Inconsistencies in Prevalent Dietetic Practices.**—In the absence of DR. N. S. DAVIS, of Chicago, his paper was read by the Chairman. He dwelt upon the importance of a thorough supply of oxygen to the body as a requisite to good health. Anything that lessens this will be detrimental to child or man. Ill ventilation, tight clothing, the use of alcohol and tobacco, in this way all prove injurious. In a study in France of the effects of smoking on students, it was found that the smokers showed a lessened physical growth and mental vigor. The use of these agents is especially hurtful in childhood and youth. All ingesta, whether solid, liquid, or gaseous, ought to be carefully used, forming, as they do, the basis of physiologic vigor and growth. Digestion ought always to alternate with gastric repose. Three meals a day, 6 hours apart, are usually best. Artificial aids are often a disappointment and are to be discarded for a rational prophylaxis and removal of causes. Mental cheerfulness and good ventilation while eating, with a quiet hour afterward, are great helps to health.

**Milk, Its Absorption versus Its Digestion.**—DR. L. D. BULKLEY, of New York, showed that milk alone is sufficient to meet the needs of the body. Intravenous injection of fresh milk has been safely practised, showing that the economy can assimilate it without previous digestion and absorption. Working on this theory, Dr. Bulkley has adopted the following plan for the rapid absorption of milk without previous curdling and digestion: A number of hours after a meal (usually 3 or 4) the food disappears from the stomach, with all gastric juice, and the mucous surface becomes alkaline. This is the "alkaline tide" of the stomach. If at this time milk, free from fat, fresh and alkaline, and at the temperature of the body, be taken, it will excite no secretion of gastric or pancreatic juice on account of its freedom from all irritant qualities, and it will, therefore, pass at once in an unaltered state into the absorbents and system. This saves nature much work and avoids the disturbances of coagulation. It enters the blood current more quickly, and in no way disturbs the appetite for regular meals, even increasing the latter. Milk can thus be taken by patients who cannot take it with their meals.

**The Importance of Physiology and Dietetics to the Surgeon.**—DR. C. G. PLUMMER, of Salt Lake City, dwelt on the importance to the surgeon of watching physiologic pointings. The bodily processes should be watched and be kept regular. Physiologic forewarnings are very helpful to physician and surgeon alike. All physiologic details in surgical work should be attended to. The matter of dietetics is of extreme importance to the surgeon. The diet after abdominal section was referred to. Feeding by night as well as by day, at regular and frequent intervals, was commended. Cases of abdominal section should not be starved. Easily assimilable food should be given and the patient should be got in good condition for the operation. Physiology often gives the surgeon contra-indications for operations. The test-tube and the microscope are often the surgeon's best friends. Renal, cardiac, and pulmonary conditions of a prohibitive kind are often thus revealed. Intestinal flatus is one of the greatest dangers in abdominal surgery. It is to be prevented by a proper dietary before operation.

**Influence of Mind on the Body and its Relation to Education.**—DR. RANDELL HUNT, of Shreveport, La., gave careful psychologic consideration to the relations of mind to body and the need of knowledge of these relations on the part of teachers was emphasized; so that they may be taken advantage of in the child's training and development.

**Coloring Matter and Ferments.**—DR. J. F. PEAVY, of Atmore, Ala., elaborated a theory with reference to the action of chlorophyl in vegetable life and hemoglobin in

animal life. Iron and manganese are distinctly magnetic and in their presence in the pigments named lies the explanation of the wonderful vital phenomena that they cause.

**The Food-Value of Alcohol.**—DR. E. STUVER, of Rawlins, Wyo., contended that alcohol is not a true food, is injurious to digestion, mind and body,—a "nerve-fooler,"—and has no proper place among physiologic aliments.

**Dietetics of Heart-Disease.**—DR. R. H. BABCOCK, of Chicago, referred to the "vicious circle" established between digestion and heart-disease. Venous stasis of stomach, intestines, pancreas, gall-ducts, and liver intensify the difficulties of nourishment under these conditions. Not only is digestion impaired, but the glycogenic, urea-forming, and protective functions of the liver are impaired and add to the problem. Anemia is thus added, also uric-acid accumulation in the system, and deficient general oxidation. Two classes of cases are to be considered: (a) those in which compensation is present; (b) those in which compensation is lessened or lost. In the second class the dietary must be restricted. The "gone" feeling and thirst in these cases are no indication for food. Food should not be given too often, but at an interval of 5 or 6 hours. The stomach is to be spared and the symptoms will improve. If necessary, somatose, nutrose, or even nutrient enemata may be given. Hot water before meals is useful. The amount of fluid taken with meals should be restricted. In the presence of edema it should be reduced to a minimum. This includes milk also. Starch, sugars, and fat are bad, owing to their tendency to cause flatulence and post-prandial pressure. Proteids are best. Apples, peas, beans, meats, oysters, are all good. When nephritis complicates it, milk is to be used, when arteriosclerosis, no food containing much calcium-salts.

**Diet in Disease.**—DR. CHAS. H. SHEPARD, of Brooklyn, N. Y., made a plea for more moderate eating, for purer foods, and especially for a vegetable diet. He believes that the use of coffee and tea by children has much to do with producing the vast army of neurasthenics in this country. He pleaded for a much greater use of fruits and nuts. In old age one ought to return to childhood's diet. In the discussion, the exclusive use of a vegetable diet was deprecated by those present, and the fact held up that vegetarian races have never shown the highest type of physical vigor or mental power.

(To be continued.)

## AMERICAN PEDIATRIC SOCIETY.

Tenth Annual Meeting, held at Cincinnati, O., June 1, 2, and 3, 1898.

FIRST DAY—JUNE 1.

**Congenital Sacro-coccygeal Tumor in an Infant 34 Days old; Operation; Recovery.**—DR. FRANCIS HUBER, of New York, presented the tumor and photographs of the patient. At the meeting of the Association in Boston, 1892, Dr. Huber had presented a much larger tumor of a similar character removed from a child a few weeks old. That child had recovered, as did the one in the case reported at this meeting. The only treatment for these patients is operation, and the point to be remembered is that many of the tumors are connected with the spinal cord. Therefore, the work of enucleation is necessarily slow. In this case it was necessary to remove all of the coccyx and part of the sacrum. The rectum was exposed for a distance of about an inch. The paper was discussed by DR. A. JACOB, of New York, who expressed the opinion that the tumor was a teratoma. It contained cartilage, fluids, intestinal mucous glands and respiratory organs, in fact, with the skin, all such tissues as come from the different germinative layers. The ectoderm, mesoderm and endoderm were all represented. As there is one point at which all these meet early in life, it was thought that an abnormal connection between the three might be considered the original cause of the tumor. These cases being usually attributed to the implantation of another fetus, it looked as if this might have been a case of arrested development at an early period when the three germinative layers are closely packed together.

**The Enanthem of German Measles.**—DR. F. FORCHHEIMER, of Cincinnati, O., described as characteristic an en-



antherm that he first studied in one of his own children attacked by German measles, but which he has since been led to believe must be present in all cases. It consists of a macular, distinctly rose-red eruption upon the velum of the palate and the uvula, extending to, but not upon, the hard palate. The spots are arranged irregularly, not crescentically, are the size of large pinheads, not larger, are very little elevated above the level of the mucous membrane, and do not seem to induce any reaction in it. The eruption was studied in 22 cases. In no case was the enanthem seen when there was not present a suggestion of the enanthem. The enanthem is very short-lived. It fades away within the first 24 hours, and then come certain results of involution, not present in the majority of the cases. It is the same eruption that is found upon the skin, characterized by the size of the efflorescence, its arrangement, the absence of great infiltration, and, above all, by its color, which is a pure pink rose-red, almost exactly the same as the roseola of typhoid fever. During the process of involution there are sometimes left pigmented deposits, usually of a yellowish or yellowish-brown color, in the form of either spots or streaks. The contention that this exanthem is distinctive can be defended by comparison with the exanthem of those two diseases with which rubella is confounded. The enanthem of scarlet fever appears from 12 to 24 hours before the eruption, usually on the pillars of the fauces in the form of the characteristic puncta. It then rapidly spreads over the mouth in the form of a scarlet-red, coalescing eruption, which finally ends in desquamation, producing the strawberry tongue and lasting well into the second week of the disease. The enanthem of measles begins upon the soft palate from 36 to 48 hours before the cutaneous eruption, in the form of purplish or bluish papules, arranged crescentically, extends over the cheeks, and is accompanied by a blue tongue. It is at its maximum with the beginning of the eruption, and may take as long as 3 to 4 days to disappear. The enanthem of rubella thus differs from that of scarlet fever and of measles, and when seen it can be utilized with certainty for differential diagnostic purposes. The studies upon which the statements made were based included only one epidemic, and their verification must rest with the study of other epidemics before the enanthem can be accepted as belonging to all classes of rubella, under all circumstances. DR. J. P. CROZER GRIFFITH, of Philadelphia, said that two facts had been mentioned that help to explain something of the convictions of writers who have referred to the occurrence of this enanthem, one being the multiform character of the eruption, which characteristic may be applied to the throat, as well as to the skin. He thought that none of the eruptive diseases had a greater multiformity of rash than rubella. The other point was the fleeting character of the eruption. Sometimes patients will be found with a persistent rash seemingly well developed at one time, but in many cases it acts like a wave over the body. In that case it may probably be in the throat only a short time, which may account for the fact that it is frequently overlooked. Dr. Griffith was not quite ready to go so far as to say that a diagnosis could be made from the eruption in the throat, because he had seen an eruption on the skin that he could not tell from that of measles; but he thought it quite correct to describe the average case with a pale and fleeting rash on the palate in one case, and a much more distinct red eruption of the throat in the other case. DR. W. P. NORTHRUP, of New York, asked the definition of enanthem, and Dr. Forchheimer replied that it is a term that has been introduced, meaning simply an eruption on the membrane, while the exanthem was an eruption without. DR. JACOBI reminded Dr. Northrup that he had made a similar distinction himself in the use of epithelia and endothelia. DR. E. M. BUCKINGHAM, of Boston, stated that in studying a large number of cases of measles, by drawing a line with pen and ink around the individual spots, he has shown conclusively that the same spot is not always of the same size and thus making a distinct division between the two. DR. S. S. ADAMS, of Washington, said his experience coincided with that of Dr. Forchheimer so far as the spots were concerned, and particularly with reference to the rapidity with which they disappeared. He thought that the character of the eruption in the throat was to a great extent an index; if the eruption in the throat was severe, the eruption on the skin would be severe. DR. T. M. ROTCH, of Boston, stated that diagnostic points are always brought out in discussions on R  theln and measles and that those who

attribute diagnostic value to some symptoms of R  theln should at least allow that measles is very varying and that it may be possible the same symptoms are found also in measles, but if the sign referred to was proved in coming epidemics it would be a point of value. DR. JACOBI considered the paper a valuable addition to the means of diagnosis. Two such additions had come in the last year; first the diagnostic enanthem referred to by Dr. Forchheimer, and second the enanthem described by Koplik in measles. In the Berlin Children's Clinic every case of measles was examined for the latter sign and of 26 cases it was found constantly in 25 cases—96%. Dr. Jacobi added that if Koplik's enanthem was confirmed for measles and other enanthem is recognized as characteristic of rubella, the mucous membrane would be more reliable for purposes of diagnosis than the external integument. DR. A. CAILL  , of New York, did not like the general use of the term enanthem. He said there was no visible rash where there was endothelium, but where there was skin and mucous membrane. He had been trying for the last 10 years to tell one form from the other early, and had come to the conclusion it would be possible to make a differentiation in the majority of cases, but in some it could not be done until a culture-test was made. DR. J. H. FRUITNIGHT, of New York, had found the sign described in more than 70% of cases and was inclined to think it a diagnostic test. In some cases the patients had gone through attacks of measles several weeks before the attacks of rubella and the appearance in the mouth was entirely different from that during the attack of rubella. In an epidemic of measles in one section of New York the symptom was found in 90% of the cases. The symptoms on the part of the mucous membrane are much more aggravated in rubeola than rubella. In rubella there is often a total absence of these symptoms, and the rapidity with which the eruption disappears is another diagnostic point. In closing, DR. FORCHHEIMER said he had not referred to Koplik's enanthem because he had not verified it himself, though he had no doubt of its existence. He thought the two conditions so absolutely characteristic and distinct that he was always prepared when he saw the condition in German measles or genuine measles to be willing to make a diagnosis before the eruption appears, in genuine measles sometimes as long as 36 hours. In regard to the objection of Dr. Buckingham to the description of the average spot as the size of a large pin-head, he stated that he had seen some smaller, but none larger. Above all, the color of the enanthem was different from that of measles, and altogether different from that of scarlatina. In the enanthem of German measles the spots did not increase in size. When they came out they did so in their largest circumference, and then there took place a process of involution that sometimes in very pale mouths led to pigmentation, just as pigmentation may take place in the skin.

**The Urine of Healthy Infants and Children.**—DR. FRANK S. CHURCHILL, of Chicago, exhibited a table showing the results of urinary examinations in infants and children. The daily amount was much less than that recorded by most authorities, except Herz, with whose analyses upon 60 cases, 30 girls and 30 boys, between 6 and 14 years of age, those presented corresponded approximately. A comparison with those cited by Rotch and Holt, however, shows a marked and unaccountable discrepancy. There might be some suspicion that the whole amount had not been obtained if especial care had not been taken in this direction. Moreover, the specific gravity confirms the correctness of the amount. The specific gravity reached a higher average than that given by the authorities already cited, a condition that would naturally be expected in the urine of children passing but a small amount. If the total amount had not been collected a lower specific gravity would have been expected, inasmuch as even those cases that have been thrown out had a fair admixture of night and day urine. Reliable as are the observers cited, is it not to be expected that the urine of children of this age should have a comparatively high specific gravity at a period of great physical activity, with consequently greater elimination of urea? The specific gravity of one young infant is low, coinciding with the well-known observation at this period; it ranged from 1001 to 1005, from the twelfth day to four weeks. It is, however, generally higher during the first two days of life, before the establishment of the breast-milk. It drops after this, and continues



low throughout the first year, owing to the fluid character of the infant's food. During the second year, solid food being added to the diet, the specific gravity rises, and in four cases, aged respectively 12, 13, 18 and 20 months, it ranged from 1026 to 1030, the urine being a mixture of the day and night eliminations. The estimation of urea is most important, being an index of general metabolic activity. As is to be expected from the greater activity, and as Purdy and Foster state, the excretion of urea in children is relatively higher than that in adults. The low percentage noted during early infancy is, of course, due to the quiescent state of the child. Martin and Ruge, however, report wide variations in single specimens during the first 10 days of life, ranging from 0.6% to 1.9%. Schiff also gives wide variations, placing the average at from 0.28% to 1.7%, during the first 14 days. Why there should be such a wide range in the excretion of this substance at a time of such quiescence, it is difficult to see. Possibly greater metabolic activity after nursing may account for it. Dr. Churchill has no statistics upon the relative amount of urea in urine passed just before, and in that passed just after and some time after feeding. The few observations at this age showed, without exception, very low percentages. from 0.05% to 0.4%—lower than those cited. After the first year it rises, and from 3 to 12 years 133 specimens show a higher general average than that usually given. Vierordt's percentage, based on only 7 cases, seems too low. He records it as from 1.1% to 2%, in 4 being below 2%, in one 2% and in one 2.6%, and in one it is not given. This represents the adult average, whereas, so great is the physical activity of the growing child, so active is its metabolism, that a large amount of urea is formed, and while it may be argued that most of its nitrogenous food goes to the building up of the rapidly growing body, and thus the amount of urea formed in the urine would naturally be less, it would seem more rational to expect a greater elimination of this substance. Not only are the average percentages higher than the average given for adults, but individual cases show a remarkably high percentage of elimination of urea: 8 children having over 3%, the highest being 3.7%. The amount of urea per kilogram of body-weight, while slightly higher than the ratio given for adults, is lower than that given by other observers, as would be expected from the smaller amount of urine. The chlorids were found quite constant at about 11% up to 7 years, after which they were about 9%. The phosphates were found to be from 8% to 11% from 3 to 5 years; 5% to 7% from 6 to 12 years—the adult range being about 8%. It has been suggested that the smaller amount of phosphates found in the urine of children is due to the fact of the phosphoric acid being retained in the body for the growth of bone. One specimen from a year-old boy showed 16%, and as he was somewhat slow in teething, though otherwise perfectly healthy, the question suggested itself as to whether substances that normally go to build up the teeth were being eliminated as phosphates, and if so, why; digestion was absolutely normal. No conclusion, however, can be drawn from a solitary instance; the observation is merely of speculative interest. The percentage of sulphates was from 1% to 1.2%, slightly higher than in adults—0.8% being their average. Purdy states that the sulphates run parallel with the urea. Neither albumin nor sugar was detected in any specimen. So much has been said about a physiologic albuminuria that it was expected that albumen would be found in one or more specimens. It must be remembered, however, that the cases were examined but two or three times, and some only once, and that therefore a transient temporary albuminuria might have come and gone between the examinations. No deductions can be made on this point. Examinations of the sediment showed nothing of especial interest in any case. The reaction was acid in all cases, though of course varying in intensity in different specimens. The color in most cases was pale, in the rest normal. Looked at as a whole the records show three factors of chief importance; the small amount of urine, the high percentage of urea, and, a natural result of these two, a high specific gravity. In other words, these children are passing a comparatively concentrated urine. They are all healthy, robust children, eating, sleeping and digesting well, and of average weight. Do these records of their urine represent the urine of average American children, or of average children living under American customs and regime? Does the difference in nationality account for the

difference in the results? The cases examined were in American children, though mostly of foreign parentage and living in an asylum. Or, is it merely a coincidence, happening among this small number of children, that they all pass a urine, small in amount, concentrated in character? The number of cases is too small to draw conclusions as to the effect of race, national habits and customs of life. An interesting feature in the table presented was a diminution in the excretion of urea per kilogram body-weight at the seventh year to 0.296. During the other years, from 3 to 12, the amount of urea per kilogram varied from 0.468 to 0.655. Dr. W. S. CHRISTOPHER, of Chicago, expressed interest in the column in the table showing the urea per kilogram. He had been in the habit of estimating the amount per kilogram to be 0.5 gram, or  $\frac{1}{2000}$  part of the weight of the individual. He called especial attention to the apparently abnormal figure of 0.296 at 7 years of age, which was about one-half the quantity at every other age. Dr. JAS. TYSON, of Philadelphia, said that a good deal of the matter of the paper was new to him, as far as the discussion of details of the different proportions of the constituents of the urine was concerned, but that there were two points with which he had had some experience. The first was the albuminuria of children. He had not found it at as early an age as any of the ages recorded, but commonly at from 12 to 14 years, and lasting until 21 or 22 years of age, when the condition disappeared. The second point was the quantity in adults. He thought it more often below 1,500 cu.cm. than above it, and from his own observations would put it at from 1,200 to 1,500 cu.cm. Dr. J. H. FRUITNIGHT asked if any consideration of the compensating action of the skin was taken in regard to the season of the year. Dr. Churchill replied that the observations were begun in September and carried on until the last of March. Dr. T. M. ROTCH considered the work valuable and one that was needed. It was difficult to get information that could be relied upon. Dr. J. P. CROZER GRIFFITH asked if there was any limitation in the amount of water the children were allowed to have. Dr. CHURCHILL replied that he had inquired about that of the attendants and was told the children were allowed water whenever they wished it, and as far as had been observed they drank as much as children in private practice. They were also permitted to drink as much milk as they wanted. In closing, Dr. Churchill said that even in cases in which casts were found there was no albumin in any, except in that of a child that developed an attack of acute nephritis a month after his first examination. When the urine was collected the second time the patient was in the midst of the attack. The specific gravity was always taken from the 24-hour urine.

**Acute Nephritis of Malarial Origin in Early Childhood.**—Dr. CHARLES G. KERLEY, of New York, read a paper on this subject.

**Albuminuria Accompanying Lithemic Attacks.**—Dr. B. K. RACHFORD, of Cincinnati, expressed the belief that the albuminuria in these cases can only be due to the irritation of the delicate kidney-structures of the child, which results from the attempt at elimination from the blood of the poisonous and irritating products that are the cause of the lithemic attacks. He has not infrequently found a small quantity of albumin in infants and children suffering from attacks of acute lithemia. These cases may be considered analogous to the transient albuminurias that occur as a result of lithemic paroxysms in later life. Autointoxication is responsible for lithemic albuminuria, whether it occurs at the beginning or at the end of life, and its prevalence in middle and later life is due to the arteriosclerosis that this same autointoxication has developed, and its prevalence early in life is due to the fact that the kidney at this time is more delicate of structure and less resistant than later. The comparative infrequency of lithemic albuminuria in late childhood and early adult life is due, on the one hand, to the better developed and more resisting structure of the kidney, and on the other to the fact that the arterial changes found in old lithemics have not yet had time to develop. Dr. A. CAILLÉ had seen a limited number of cases such as had been described and thought them of great interest. Malaria, however, had to be eliminated before a diagnosis of lithemia could be made. In one of his own cases he found that after the plasmodium was destroyed the attacks disappeared. Dr. RACHFORD said there was no examination made for the plasmodium in his case, as there was nothing to indicate



malaria. It belonged to a type of cases so distinct there could be no question of malaria.

**Report on the Classification of the Anemias of Infancy, with a Report of a Severe Case.**—Dr. JOHN LOVETT MORSE, of Boston, considered the following modification of Monti's classification of the anemias fairly satisfactory:

Secondary.—Mild anemia; mild anemia with leukocytosis; severe anemia; severe anemia with leukocytosis.

Primary.—Pernicious; leukemia.

The case reported was regarded as an example of severe secondary anemia with leukocytosis. The cause of the anemia was undoubtedly to be sought in the general malnutrition resulting from improper food. The case presented splenic enlargement, but that this was not an essential feature was shown by the fact that it became smaller as the case progressed, probably finally disappearing entirely. Dr. A. JACOB thought that if it were not for the poikilocytosis in the case he would have considered it one of Hodgkin's disease, but the poikilocytosis characterized it as a pernicious anemia. Dr. R. G. FREEMAN, of New York, said that he had seen a case a year ago in which the appearance of the child was much like that described. There was considerable emaciation, enlargement of the liver and spleen and considerable anemia with leukocytosis. The diagnosis was not made until autopsy, when an abscess of the left kidney was found, which had resulted in the development of waxy liver and waxy spleen. Tuberculosis was also present. Dr. MORSE, in closing, thought that in the light of our knowledge of the different forms of white corpuscles shown by differential staining, it was too late to speak relatively of the proportions of white and red in making the diagnosis of leukocytosis and leukemia. The number of red blood-corpuscles depends on one factor and the number of white blood-corpuscles on another. The points corresponding to those of pernicious anemia were the large number of white blood-corpuscles and the reduced amount of hemoglobin. The presence of irregular poikilocytosis in the blood of children is not of as much diagnostic value as in adults.

#### SECOND DAY.—JUNE 2.

**Short Reports on Some Unusual Cases.**—Dr. T. M. ROTCH, of Boston, reported (a) two cases of progressive lenticular melanosis, (b) two cases of intussusception, and (c) a case of cerebro-spinal meningitis. A girl  $3\frac{1}{2}$  years old gave such a history that no diagnosis of any special disease could be made. Lumbar puncture was made and the diplococcus intracellularis was found and the diagnosis of chronic cerebro-spinal meningitis made. The subsequent course of the case confirmed the diagnosis. The case was reported to show the value of lumbar puncture when the diagnosis is obscure. At the time the lumbar puncture was made the child seemed to be failing fast, but it soon became to improve after a number of remissions of the symptoms, which are so characteristic of the chronic form of cerebro-spinal meningitis in children. In the first case of intussusception, while preparations were being made for celiotomy, hydrostatic pressure was employed by means of a fountain-syringe with the usual nozzle, at a height of 4 feet, and almost instantly the tumor disappeared; and from that time there were no more symptoms of intussusception. This case was reported as showing how under very rare circumstances a pronounced intussusception can be reduced with very slight pressure, provided, of course, as was probably in this case, the axis of the invaginated portion was in a direct line and no adhesions had formed. In the second case, hydrostatic pressure at a height of 5 feet by means of a fountain-syringe was tried, and the tumor immediately disappeared. Twelve hours later a mass could be felt in the same location as before, but not so large. Hydrostatic pressure again caused the disappearance of the tumor, but the same condition returned a few hours later, and the child was looking so badly that he was transferred to the surgical ward, where he was operated upon. An intussusception of the ileum into the cecum was found, which had apparently existed for a long time, as the layers of intestine were firmly adherent. There was also a smaller intussusception, apparently recent, which was easily reduced. The larger one resisted all attempts at reduction and was accordingly resected and an artificial anus made. The child died 4 hours later. This case was reported as illustrating the

possibility of an old and a fresh intussusception occurring in combination, and in order that the giving of a too favorable prognosis should be avoided when a recent intussusception had been reduced. The two cases of progressive lenticular melanosis were in sisters, aged 6 and 7. The lesions appeared in the older sister at the age of 3 months, and in the younger at the age of 5 months. The disease is exceedingly rare and was first described by Kaposi in 1870, since which time only about 75 cases have been recorded up to 1897. The predominance of the lesions is in the exposed parts of the body and they consist of freckle-like spots of pigment, followed by atrophic degeneration of the skin, and telangiectases. These are the primary lesions and may be followed later by more serious ones of the skin. The lesions may be single or many; may be confined to the skin or develop in the viscera, and usually lead to fatal results in a few or many years. In both of these cases plastic operations, skin-grafting, and cureting had been performed, but without effect. Various other forms of treatment were tried, the result showing that nothing was of any permanent benefit, and in fact there is no known curative treatment for the disease. According to Hyde, most of the patients succumb to marasmus in from 10 to 20 years.

Dr. F. HUBER, expressed especial interest in the cases of intussusception, having seen two cases since October, both with tumors and both reduced with the fountain-syringe. The first patient was 17 weeks old and was seen about 12 hours after the initial symptoms. No tumor could be found. A high rectal enema allowed a good deal of water to enter, showing the seat of the trouble to be high up. The water escaped, but the symptoms did not improve. Celiotomy was performed, and an intussusception, 3 inches in length, found at the ileo-cecal valve. The patient recovered from the immediate effects of the operation, but died 6 weeks later of some secondary cause. The second patient, a child of 5 months, was seen about 15 hours after the initial symptoms. Reference was particularly made to the slight amount of blood sufficient to warrant a diagnosis of this condition. No tumor could be located, yet, on celiotomy, it was found that the intussusception started at the ileo-cecal valve, and extended along the ascending and transverse colon into the descending colon. The high rectal enema had also been tried in this case without results. Dr. J. H. FRUITNIGHT said that, last fall, he saw a child, about 3 years old, in whose case a diagnosis of intussusception had been made by several physicians. Operation revealed indications of intussusception, which had become reduced. In another case, with tenesmus and bloody discharge, the child was relieved by hydrostatic pressure. Dr. J. E. WINTERS, of New York, spoke of a case, in which a diagnosis of intussusception was made and operation prepared for. Distention was first tried, with complete relief. In another case, hydrostatic pressure was tried about 10 o'clock in the morning, and the relief was immediate. In the evening there were symptoms of a return, and the child went into a collapse and died. Some doubt may, therefore, be felt as to the permanency of the result. Dr. W. P. NORTHROP agreed that, in some cases, the intussusception could be reduced by injections, while in others it could not, and in some harm was done. Dr. P. S. CONNER, of Cincinnati, said that some cases were reducible without difficulty, some reducible with difficulty, and some were absolutely irreducible. He thought special care should be observed in the use of injections, or more harm would be done than good. An operation had frequently to be performed after harm had been done in this way, and the individual was worse off than if nothing had been done. Dr. A. JACOB, in speaking of the height of the water, said a practitioner in New York insisted upon having the water run through a tube exactly 14 feet long, calculating the hydrostatic pressure as though the baby had an iron-pipe in its abdomen. The injection should be made from a height of a foot or a foot and a half, which, with gentle massage, would accomplish the purpose. The intestine was not in a normal condition, there was often peritonitis, and sometimes perforation of the gut. Dr. A. CAILLÉ thought the best rule in cases with tumors was found in Dr. Holt's book. One attempt under anesthesia should be made with inflation, and, if unsuccessful, an operation should be resorted to. In closing, Dr. ROTCH said that he did not advocate the hydrostatic method of reducing intussusception, and he expected everybody to take exception to it. He thought it should be adopted with the greatest care, and in some cases would un-



doubtedly be followed by rupture. If the intussusception could not be reduced by slight pressure, increased pressure should not be used, because adhesions have then occurred. A small intussusception might be reduced in that way, but he would not advocate it at all as a routine treatment. His case had simply been one in which the axes of the two pieces of intestine were the same.

(a) **Tuberculous Pylitis.** (b) **Death from Pulmonary Hemorrhage in an Infant aged 2 Years.**—DR. G. N. ACKER, of Washington, D. C., read a paper dealing with these subjects.

**Sarcoma of the Kidney in an Infant aged 9 Months.**—DR. FRANK S. CHURCHILL, of Chicago, reported the case of a child that had been apparently well up to the third month of life, when it was noticed that the abdomen on the left side was beginning to swell. The enlargement continued steadily, being especially rapid in the last few weeks. A diagnosis of sarcoma of the left kidney was made. The prognosis was absolutely unfavorable, but at the earnest solicitation of the parents an operation was performed. The tumor after removal weighed over 3 pounds. The chief interest of these malignant tumors of the kidney in children of course centers in their etiology. The view generally accepted at present is that of Cohnheim, that they are of congenital origin and due to misplaced embryonic tissue. He supposes that in the development of the kidney embryonic cells from the surrounding structures are incorporated in its capsule and subsequently give rise to new-growth. DR. C. G. JENNINGS, of Detroit, had seen a case in which a tentative diagnosis of sarcoma of the kidney was made, although it had been impossible to find evidence by the presence of leukocytes of splenic enlargement and to detect the notches of the spleen. The case proved, however, to be one of splenic enlargement. DR. A. JACOBI considered the case of interest for several reasons. The tumors, or rhabdomyomata, containing striated muscular fibers, are very rare. The first case was published 20 years ago. Between that time and 1884, when he presented a paper on the subject before the Copenhagen Congress, 5 or 6 such rhabdomyomata had been observed. At that time he had collected some 40 cases. That was the first time a differential diagnosis between sarcoma and carcinoma of the kidney had been made. One diagnostic point of importance was that in sarcoma the urine in 80% of the cases did not contain any blood or any kidney-elements. There was no nephritis. There is blood in a large percentage of cases of carcinoma. Another point of interest in this case was that the child died so early. Life is usually prolonged for 3 or 4 years. In 1884 Dr. Jacobi collected cases that had lived 9, 11 and 13 years respectively. The abdominal glands are generally not affected, and it is for this reason the cases could live so long.

### THIRD DAY—JUNE 3.

**The President's Address** was delivered by DR. L. EMMETT HOLT, of New York.

**The Fatigue-Period in Child-Life.**—DR. W. S. CHRISTOPHER, of Chicago, presented a chart intended to represent graphically the readiness with which children at different ages become fatigued. The chart, devised by Dr. Krohn, was based upon the measurements and tests of 32,800 children between the ages of 6 and 17, examined by the following tests: A grip-test with the hand-dynamometer; a test for voluntary motor ability; muscular-sense test; a visual comparison test; meter-rule test, and an auditory memory test. Dr. Christopher had been struck with the frequency of dilatation of the heart between the ages of 7 and 10 years. The chart indicates that at about this period of life there is a definite tendency to fatigue. Dilatation of the heart is probably most common at the age of puberty, when the fatigue-curve is high. No reason was offered for the existence of the fatigue-period. Its causes seem extremely obscure. DR. A. JACOBI thought there were more changes taking place between 7 and 10 than the changes in the heart. The subject was first studied by a sculptor who measured very carefully, and from his statements it appeared evident that the bones were liable to grow considerably out of proportion to the growth at any other period. The low urea-figures might also have something to do with the fatigue-period. DR. F. FORCHHEIMER said it had been worked out

that cerebral inhibition begins to manifest itself between 6 and 8 years of age, as compared with the lack of inhibition during the years before, and he thought possibly that might have something to do with the working out of the tests. He was interested in the tests given, but was a little afraid of the physiologic psychologist and more afraid of the psychologic physiologist. In answer to a question by DR. ROTCH as to what his rule for dilatation was at the given age, Dr. Christopher said he called the heart dilated when the area of dulness can be made out first with great distinctness, when it extends above the border of the third rib and when the apex-beat is in or to the left of the mammillary line and is associated with the clicking sounds on the part of the heart itself, there being of course no lesion of the valves. Dr. Rotch thought 7 years a little early, but he believed that during that period of childhood there was a physiologic hypertrophy, with relative dulness along the middle third of the sternum. According to his examinations the appearance of dilatation Dr. Christopher spoke of was of exceedingly rare. He thought perhaps the rapid growth of the heart and its corresponding weakness at that period might account for the fatigue at that age. In closing, DR. CHRISTOPHER said he did not quite agree with Dr. Forchheimer, that physiologic psychology was to be distrusted altogether.

**A Report of Seven Cases of Laryngeal Diphtheria Treated with Antitoxin; One Death.**—DR. C. G. KERLEY, of New York, read a paper with this title.

**Three Cases of Amaurotic Idiocy.**—DR. A. JACOBI, of New York, read a paper on this subject.

**Irrigation by Submersion in the Treatment of Empyema.**—DR. SAMUEL S. ADAMS, of Washington, D. C., gave an interesting account of the discovery of this method by Zeman. His reasons for preferring it are: (1) It is simpler, cleaner, easier, and in the 10 to 15 minutes that the patient is sitting in the bath he will be washed out from 200 to 300 times—not 3 or 4 times. (2) Much economy is effected in dressings, as by removing the thickened matter from the pleural surfaces there will be less irritation and the production of much less pus. (3) The baths improve the general condition of the patient, causing better metabolism. In irrigation fresh water is constantly used; but as the pus and other products are heavier than water they fall to the bottom of the tub, while the upper portion of the water remains unpolluted. Dr. Adams reported the case of an Italian girl, aged 8 years, whose family-history showed no transmissible taint. Five months ago she was said to have had pneumonia of the right side, after which she never recovered her health. The appetite was fair; the patient was constipated; cough had been almost incessant; there was occasional fever and night-sweats. An abscess on the anterior aspect of the chest at the third interspace, to the right of the sternum, had appeared within 5 days. Emaciation was marked; the features were pinched; there was slight icteric discoloration of the skin; the cutaneous veins were distended; the pulse was weak and thready. An abscess about 4 inches in diameter was situated just to the right of the sternum between the second and fourth ribs. Its covering was thin and its walls relaxed with each inspiration and became tense with expiration. Respiration was accelerated but there was no dyspnea. There was flatness on percussion over the entire chest anteriorly and posteriorly. Vesicular breathing was absent. Bronchial breathing and voice were present anteriorly and posteriorly, but feeble and distant. Vocal fremitus was almost absent. There was bulging of the intercostal spaces on the right side. The diagnosis was clear. A free incision was made into the abscess, and more than a pint of greenish pus escaped and continued to do so with each expiration. A dressing was applied and the child was transferred to the surgical service for operation. Four days later about 2 inches of the seventh rib were resected in the right axillary line. A large quantity of pus escaped. The pleural cavity was thoroughly irrigated through the upper and lower openings, a drainage-tube having been inserted into the latter. The child's condition improved slowly and the physical signs of the normal chest were returning, but the profuse discharge continued in spite of thorough daily irrigation. After 12 days it was determined to place the patient in a bath of boiled water at 100° F. for 15 minutes, after the method of Zeman. The cleansing was complete. With every inspiration the water would run into the two openings and, with expiration, it would return laden with



pus, which would sink to the bottom. The entire body was kept under the water until expiration expelled clear fluid, the time varying from 10 to 20 minutes. At first a bath was given daily, and then one every other day until the child recovered after 2 months, and was discharged 6 weeks later. She preferred the baths to irrigation with the syringe. Sixteen baths were given, extending over 3 weeks. At the time of discharge the patient was a rosy, robust girl, with a normal chest and normal chest-sounds. Having witnessed the thoroughness of this method of irrigation and the comfort of the child while reposing in the warm bath, Dr. Adams was ready to recommend it in cases of empyema in which an opening of sufficient size to enable free ingress and egress of the water is made. It is a matter of choice which antiseptic, if any, is to be used, but care should be exercised in employing those that are easily absorbed. Boiled water or a saturated solution of boric acid will be sufficient in most cases; the latter, however, would add greatly to the expense. The bath is prepared in the same manner as it is in the Brand method, and the water should be kept at a uniform temperature of 100° F. by adding warm water from time to time. There is no chilling; so the patient may remain in the bath several minutes after the water is returned perfectly clear. DR. J. E. WINTERS thought one feature of the method suggested was its simplicity and the fact that it did away with the resistance of the child to irrigation. DR. A. CAILLÉ considered it a very pleasant way of cleansing in cases that required irrigation. DR. ADAMS said that the method was tried in cases of tuberculous disease, but there was so much contraction of the chest that the water did not go in with any effect whatever.

**Two Cases of Insolation in Infants.**—DR. IRVING M. SNOW, of Billerica, read a paper on this subject.

B. B. Davis (*Med. Times*, May 1898) reports the performance of **oophorectomy for severe cyclic stomatitis occurring as a menstrual phenomenon.** The patient, a woman of 35, had suffered severe menstrual pain as a girl and had never been strong. She had given birth to 4 children with no miscarriages. Several times before the birth of the last child she had attacks of stomatitis in coincidence with menstruation, not regularly and never very severe. But during the last 3 years each period had been accompanied by severe ulcerative inflammation involving the tongue and entire buccal mucous membrane. The first symptom of an approaching molimen was soreness of the mouth, which usually manifested itself from 5 to 7 days before the menses appeared. Inspection of the oral cavity at this time revealed general redness with many small punctate spots of deeper red which marked the site of breaking down of the mucous membrane and ulcer-formation a little later. The attack reached its acme at about the close of menstruation, when the cavity was studded with myriads of small, dirty ulcers. Healing began at the cessation of the flow, the integrity of the mucous membrane not being restored until a week before the beginning of the next cycle. During the continuance of the stomatitis no solid food could be eaten; even liquids had to be taken lukewarm and with much discomfort. Hot or cold fluids were intolerable. But the inability to masticate was of little moment, for loss of appetite was complete. During the week between the menstrual cycles the appetite was never good and there was constant falling off in weight and strength. Every means of treatment employed had been without avail. As the stomatitis was a regular complication of menstruation, oophorectomy seemed to offer the only means of effecting a cure. The operation was easy and the recovery uneventful. The soreness of the mouth had entirely disappeared one week after operation and did not return. The patient gradually gained strength and excellent health.

In concluding a paper on **streptococcal serotherapy**, T. J. Bokenham (*Treatment*, June 9, 1897) states that if properly prepared antistreptococcus-serum is quite harmless; in cases of erysipelas its use greatly shortens the course of the disease and renders recovery permanent; in septic infections generally, the chance of success depends on the early exhibition of the remedy, and it is also in a measure proportionate to the degree of localization of the infective agent; as a prophylactic it may prove of great value and is worthy of trial.

## The Latest Literature.

### British Medical Journal.

June 11, 1898. [No. 1954.]

1. Circumstances which Influence the Effectiveness of Climatic Treatment. G. V. POORE.
2. A Method of Operating for Ectropion of the Lower Eyelid. D. ARGYLL ROBERTSON. (*Illustrated*.)
3. The Pathology of Antenatal Life. J. W. BALLANTYNE.
4. A Frozen Section of the First Stage of Labor. WILLIAM C. LUSK. (*Illustrated*.)
5. The Temples and Ritual of Asklepios at Epidaurus and Athens. RICHARD CATON. (*Illustrated*.)
6. Complete Atrophy of the Deltoid with Vicarious Restoration of Function. ROBERT KENNEDY. (*Illustrated*.)
7. Acute Rachitic Curvature of Tibiæ Backwards. JOHN POLAND. (*Illustrated*.)
8. Unilateral Retinal Changes in Cerebral Hemorrhage, Embolism, and Thrombosis. R. T. WILLIAMSON. (*Illustrated*.)
9. Elephantiasis of Both Lower Limbs. PATRICK F. MACGREGOR. (*Illustrated*.)
10. The Use of Pumice-Stone Soap in the Disinfection of the Surface of the Body. GEORGE THOMAS BEATSON.
11. Intestinal Obstruction; Evacuation of the Gall-Stone; Recovery. JOHN H. DEWHURST.
12. An Overdose of Exalgin. E. A. LERMITTE.
13. A Case of Cesarean Section. T. M. BARTLETT.
14. A Case of Cerebellar Hemorrhage. WILFRED HADLEY.
15. A Case of Elevated Fracture of the Skull and Laceration of the Brain. R. M. CONNOLLY. (*Illustrated*.)

1.—The first circumstances interfering with the effectiveness of **climatic treatment** is the lack of knowledge on the part of the physician of the places to which the patient is to be sent. This knowledge should be, if possible, of a practical character. It is also advisable that the patient should have the benefit of a local knowledge of the places. Another very important consideration is the ability of the patient or his family to bear the expense necessary to secure a change of climate. Furthermore, the change should, if possible, be agreeable to the patient. The question of suitable amusement, with generally acceptable surroundings, should be well considered. Especially difficult is it to agreeably occupy the hours between the evening meal and bedtime. The possibility is suggested of dancing being done under proper conditions of dress and ventilation. The house occupied by the patient has a great influence upon the effectiveness of climatic treatment. The majority of hotels are lacking in proper light and ventilation. The food should be simple and the best of its kind. The small quantities of wine and beer needed by the chronic invalid should be sound and freshly drawn at each meal. The patient should always be placed under the care of a medical attendant, and this should be done intelligently.

2.—Argyll Robertson recommends the following **operation for ectropion of the lower eyelid.** An incision is made through the skin of the outer third of the lower lid, parallel to and about a line distant from its margin. When the incision is carried as far as the outer canthus, the knife is directed a little more upward and the incision continued for about  $\frac{1}{2}$  inch. It is then continued horizontally outward for about 6 m., and lastly downward and inward nearly parallel to the outward incision, and diverging a little from it below for a distance of about  $1\frac{1}{2}$  inches. After reflecting back the flap of skin thus outlined, a suitable V-shaped portion of the whole substance of the lower lid is removed from the outer canthus. The reflected flap of skin is then drawn upward and outward till the edge of the lid is brought up to its natural position and the skin that it then overlaps is outlined by bringing the knife along the edge of the flap and the portion thus outlined dissected off. Lastly the flap is replaced and fixed in position by several sutures.

3.—Ballantyne divides the **physiology of antenatal life** into 3 periods: (1) *Germinal life*, about which little is known in the human subject. It is the period that ends in the mysterious phenomena of germ and sperm maturation, of the expulsion of the polar globules from the ovum, of the atrophy of the female element of the sperm-cell, and of the



impregnation of the ovum by the spermatozoon, with the resulting formation of the morula mass. (2) *Embryonic life*, the period beginning with the differentiation of the blastoderm and ending about the end of the second month, the period of evolution or development during which the lines of future growth are laid down. (3) *Fetal life*, the period in which the organism shows its vitality chiefly by growth along lines that had been already definitely laid down.

4.—Lusk has made an interesting series of studies on a frozen section of septipara, aged 37, who died suddenly during the **first stage of labor**. His investigations have some bearing upon the changes exerted upon the uterus by the forces of labor.

6.—Kennedy reports a case of complete **atrophy of the deltoid** in which a considerable amount of function was restored by the vicarious action of neighboring muscles. The atrophy followed an injury to the circumflex nerve, the patient having fallen into the hold of a ship, and sustaining at the same time a subcoracoid dislocation of the right shoulder-joint and a fracture of the right radius. After removal of the splints, the man was unable to use his arm for about 6 months, and although practising daily with dumb-bells, was unable to elevate his arm at the shoulder-joint to any appreciable degree for 11 months, at the end of which time he returned to his work. From this time on improvement was progressive and the range of movement and power at the shoulder-joint is now such that only careful inspection detects any abnormality. The 3 factors that took place vicariously of the atrophied deltoid were (1) the supraspinatus, (2) the muscles rotating the scapula, and (3) torsion and curvature of the vertebral column.

7.—**Acute rachitic curvature of the tibia** more commonly involves the lower than the upper epiphysis. In the case reported by Poland the acute curvature occurred directly below the line of junction of the upper epiphysis with the shaft, and was so pronounced that the limbs presented an appearance not unlike a backward dislocation of the knee. Section of both bones of each leg was performed with satisfactory results. The skiagraphs of the two limbs afforded an interesting comparison, before and after the correction of the deformity, showing the epiphyseal lines of both the femora and tibiae to be unaltered from their normal direction.

8.—Williamson gives brief abstracts of the **ophthalmoscopic examination** in 13 severe cases of **cerebral hemorrhage, embolism, or thrombosis**. In 11 of these the diagnosis was confirmed by autopsy, and in the other 2 there was no doubt of its correctness. In 5 of the cases (4 hemorrhage, 1 embolism) there was a large retinal hemorrhage on the same side as the brain-lesion, while the retina of the other eye was practically normal. In one of the cases the retinal vessels were markedly dilated and tortuous on the side of the brain-lesion—thrombosis of the middle cerebral extending into the middle carotid—while the other retina was normal. In 2 cases of cerebral embolism the retinal vessels were dilated on the side of the lesion. Thus, in 8 out of 13 cases, there were unilateral retinal changes on the same side as the brain-lesion, the other retina not being affected. It is concluded that in cases of hemiplegia from cerebral hemorrhage that terminate fatally, large hemorrhages are not infrequently found in the retina on the same side as the brain-lesion, while no hemorrhages are present in the opposite retina. In cases of cerebral embolism, the same retinal condition is occasionally met with, and also occasionally the retinal vessels are slightly dilated on the side of the brain-lesion. In cases of thrombosis of the middle cerebral artery, when the thrombosis extends down into the internal carotid, the vessels of the retina on the side of the brain-lesion may be markedly dilated and tortuous, while the retinal vessels of the other eye are normal.

9.—The patient was a woman, aged 87 years, who had always resided in England. She exhibited bilateral extra-tropical **elephantiasis** that developed 7 years ago, after an attack of erysipelas.

10.—**Pumice-stone soap** is recommended for the **mechanical disinfection** of the surgeon's hands and the patient's skin. It has no disinfecting qualities, but it helps to remove the dirt and effete epidermal cells in a way that no other soap does, and for this reason it is to be regarded as a valuable aid in the preparation of the skin for surgical operations.

11.—The patient was a woman, aged 71 years, who was suddenly seized with vomiting and acute pain in the abdomen. There was a history of an attack of similar pain without vomiting, attended with **intestinal obstruction** lasting 4 days, a year previously. In the present attack the abdomen was tender, especially to the left of the umbilicus. The temperature was normal. Calomel was given, but was vomited. Various purgatives and copious enemata were given without result. On the fourth day the vomiting ceased. The bowels were not moved until the tenth day. In the first movement there was found a smooth, round **gallstone**, 1½ inches in diameter, and weighing 130 grains. Recovery was complete.

12.—A mixture containing 2 grains of **exalgin** to 2 fluidrams of water was ordered in 2-dram doses. By mistake, 2 tablespoonfuls were given, or 8 grains of exalgin. Shortly afterward, the patient experienced pain in the stomach, felt very faint, but had no vertigo. She lost her sight, felt paralyzed, but all the time was conscious and able to understand all that was said. These symptoms disappeared gradually in about 20 minutes.

13.—Bartlett records a case of **Cesarean section** performed on a primipara, 22 years of age, for pelvic contraction. Both mother and child survived.

14.—The case reported is interesting on account of the association of coma with glycosuria, rendering the diagnosis between **cerebellar hemorrhage** and diabetic coma difficult. The absence of the conjunctival reflex on one side and its presence on the other, the slight paresis, and the condition of the fundi, showing the buried condition of the vessels on the upper margin of the right disc, led to a correct diagnosis. The autopsy showed the right cerebellar hemisphere to be converted into an upper and lower layer by hemorrhage. This had extended throughout the whole of the lobe, and had forced its way into the fourth ventricle, but had not crossed the middle line elsewhere. The right restiform body was lacerated, the inferior peduncle completely torn across, but the middle peduncle was little injured. The implication of the fourth ventricle accounted for the physiological glycosuria.

#### Lancet.

June 11, 1898. [No. 3902.]

1. A Public Lecture on Pharmacology: its Aims and Methods. Delivered at Oxford. WILLIAM J. SMITH JEROME.
2. Some Results of Open-air Treatment of Phthisis at Bournemouth. ARTHUR RANSOME.
3. An Improvement in Colotomy. F. T. PAUL. (Illustrated.)
4. The Value of Certain Drugs in the Treatment of Gout. ARTHUR P. LUFF.
5. Obstructive Laryngeal Affections and their Influence upon Chloroform-Anesthesia. H. BELLAMY GARDNER.
6. Clinical Remarks on some Advanced Forms of Urethral Stricture Treated by a Combined Urethrotomy and Perineal Section. REGINALD HARRISON.
7. A Case of Recurrent Cancer of the Breast Treated by Oöphorectomy and Thyroid Extract. G. ERNEST HERMAN.
8. The Loss of Sexual Power in Tabes Dorsalis. R. CUNYNGHAM BROWN.
9. Vitality: an Appeal, an Apology, and a Challenge Addressed to Brother Practitioners. LIONEL S. BEALE. (Continued.)
10. An Object-lesson on the Necessity for the Education, Registration, and Control of Midwives. WILLIAM ALEXANDER.
11. Rupture of the Liver; Formation of Cystic Swelling Containing Bile-stained Fluid. A. RUSSELL ALDRIDGE.
12. Genu Recurvatum. ARTHUR S. TAYLOR.
13. Two Cases of the External Ear Completely Cut Off and Successfully Replaced. F. A. PURCELL.
14. A Case of Vesico-uterine Fistula; Closure by Turning Cervical Canal into Bladder; Subsequent Oöphorectomy. (Under the care of WM. DUNCAN)
15. Two Cases of Filarial Disease. (Under the care of F. J. CRAWFORD.)

2.—The open-air treatment of tuberculosis involves for many of the patients (1) rest in a recumbent posture during most of the day, generally in open verandas or



shelters, sometimes in the open air; (2) careful full feeding; (3) massage in some cases; (4) in others carefully graduated exercise; (5) a judicious use of baths or cold sponging; (6) the provision of suitable amusements; and (7) appropriate medicinal treatment. In most cases after the first few weeks the fever disappears, the night-sweats are arrested, the cough lessened, and the weight increases. In the beginning the patient must be gradually acclimatized to the open air. In the daytime, he must be in the open air or lying down in an open veranda or kiosk for as long a time as possible. During the night, fresh air is obtained through widely opened windows, the patients being protected from drafts. Patients learn to bear the exposure well and to thoroughly enjoy it. Ransome reports 17 cases of tuberculosis treated by the open-air method, tubercle-bacilli having been found in 15 of these. Two patients gained 28 pounds in weight, one 19, nine from 5 to 12 pounds, one was stationary, and in four the weight was not taken. In 7 cases the disease had been quiescent for periods of from 1 to 2½ years; in 5 others from 4 to 6 months; 1 improved; 3 improved for a time and then relapsed.

**3.**—Paul has applied the Frank method of performing **gastrostomy** to the operation of **colotomy**. A portion of the colon is withdrawn from the abdomen through a direct wound, passed under the superficial tissues and opened on the surface at a distance. Though there is no natural control of defecation, the escape of feces may be prevented by the application of a truss with a horse-shoe pad. This method is not applicable to all cases, but to those in which the mesentery is sufficiently long and the operation is performed in the sigmoid region.

**4.**—Luff demonstrates by experimentation the negative value of the alkalies and salicylates in the **treatment of gout**. This treatment has been based on the supposition that uric acid is present as such in the fluids and deposits of gouty subjects, and the belief that it was rendered soluble and therefore removed from the system by both alkalies and the salicylates. Uric acid, however, is always present in the form of sodium quadriurate or biurate. The only way in which alkalies could beneficially affect the quadriurate would be to delay its conversion into the biurate. In order to determine if any such process occurred, 10 milligrams of sodium quadriurate were well rubbed up with 10 drops of a 0.1% solution of the drug in artificial blood-serum. The mixture was then placed in a small, corked tube, and kept at 100° F. Every half-hour a small quantity of the mixture was removed, examined under a high-power microscope, and the time at which crystals of sodium biurate first appeared was noted. The same experiment was made, for purposes of comparison, with the quadriurate and artificial blood-serum alone. Separate experiments were made with potassium bicarbonate, potassium citrate, lithium carbonate, lithium citrate, sodium bicarbonate, sodium phosphate, piperazin and lysidin. The results showed that none of these drugs had the slightest effect in delaying the conversion. Experiments were undertaken to compare the solubility of sodium biurate in artificial blood-serum and in artificial blood-serum containing various proportions of the drugs mentioned at a temperature of 100° F. The results showed that sodium bicarbonate would slightly decrease the solvent power of the blood for gouty deposits. With all of the other drugs there was no increase in its solvent power. Further experiments were made to determine the solvent action on gouty deposits of artificial blood-serum impregnated with quantities of potassium bicarbonate and lithium carbonate respectively. The quantities of the drugs used were in excess of those that could be present in the fluids of the human body when full doses are being administered. A piece of cartilage well and uniformly infiltrated with sodium biurate, which had been removed from a gouty joint at a post-mortem examination, was divided into three equal pieces, each of which was suspended in a bottle containing 100 cu. cm. of artificial blood-serum, of the serum impregnated with potassium bicarbonate, and impregnated with lithium bicarbonate respectively. The bottles were kept at blood-heat, and every 24 hours fresh supplies of fluid were introduced. The solution of the sodium biurate from the cartilage proceeded at the same pace in the three pieces, and was in no way aided by the potassium and lithium salts. The net result of these experiments is that the treatment of gout with alkalies, piperazin or lysidin does not increase the solu-

bility of the biurate deposited in the joints and tissues. It is shown that the alkalinity of the blood is very little, if at all, diminished, in gout; that there is no ground for the assumption that the treatment of gout by alkalies tends to neutralize the so-called general acidity of the system, thereby making the blood a better solvent of gouty deposits. By experimentation it is shown that sodium salicylate has no direct action either in delaying the decomposition of sodium quadriurate or in affecting the solvent action of deposits of sodium biurate, and it is therefore not solvent for gouty deposits. Increased elimination of uric acid by the kidneys occurs during the administration of sodium salicylate, as salicylic acid unites readily with glycocin and an increased amount of which is conveyed to the kidneys, where by its combination with urea, an increased amount of uric acid is necessarily formed. This increased formation of uric acid is directly detrimental to gouty subjects, and on that account salicylates are contraindicated.

**5.**—Not only is the anxiety usually entertained in **anesthetizing patients with obstructive laryngeal affection** unfounded, but there is reason to believe that the element of asphyxia, produced by a partial mechanical obstruction, may, by maintaining the blood-pressure and increasing respiratory activity, be of positive value to the anesthetist in producing narcosis. This increased respiratory activity not only prevents the stagnation of chloroform-vapor of increasing strength in the lungs, but it adds considerable impetus to the venous circulation by augmenting the suction-action of the thorax.

**6.**—In the advanced forms of **urethral stricture**, those too contractile to dilate or too tough or extensive to divide from within the urethra, especially if they be complicated with perineal or scrotal fistulae, Reginald Harrison treats by combined **urethrotomy and perineal section**. He first performs internal urethrotomy with Teevan's modification of Maisonneuve's instrument; after passing a full-sized grooved staff into the bladder, with the patient now in the lithotomy-position, the remaining contracted tissues are divided, and a full-sized gum-elastic drainage-tube is inserted into the bladder. The advantages claimed for this method are the greater ease with which the tissues can be divided upon a fairly large staff, and the prevention of any constitutional symptoms by the drainage established.

**7.**—Hermann records a case of inoperable recurrent **carcinomatous growth of the heart** that was apparently cured by the operation of **oophorectomy** followed by a course of **thyroid-extract** treatment. There was a nodular growth above the clavicle surrounding the subclavian vein, while the axillary vessels were surrounded by a carcinomatous mass. On recovering from the anesthetic the patient was placed on from 10 to 15 grains of thyroid extract daily. After 6 months examination showed that the carcinomatous nodules had entirely disappeared, and 14 months after the operation the patient is apparently well.

**8.**—Brown considers the **loss of sexual power in tabes** to be due to a diminution or loss of the afferent impulses involved. The explanation of this is probably to be found in the early peripheral-nerve changes, which interfere with the proper transmission of afferent impulses.

**12.**—A woman who gave birth to a child with **genu recurvatum** had in the fourth month of pregnancy a bad fall over a rope, and injured her knee. The case is believed to be one of arrested development rather than malformation, offering the following explanation: The result of the fall was to extend the legs on the abdomen, the hip joints being flexed. The quadriceps being relaxed, the stimulus necessary to development of the sesamoid bone was removed, and the posterior crucial ligaments would become too short and limit flexion. At birth both legs were hyperextended on the thigh, the right at about 10°, and the left at 30°, while flexion was limited in one and absolutely arrested in the other. The patellæ were absent. About 3 months later, the condition of genu recurvatum had disappeared, neither leg could be hyperextended and both could be flexed until the heels touched the buttocks. The improvement that manifested itself without interference points to the advisability of postponing any active method of treatment for a few months at least.

**14.**—The method employed in closing a **vesico-vaginal fistula** in the case reported is at least unique; the anterior lip of the cervix being absent, the posterior lip was brought



forward and united to the bladder-wall, thus deflecting the uterine canal into the bladder. In order to avoid the annoyance and possible risk attending the menstrual discharge into the bladder oophorectomy was subsequently performed.

**15.**—In Madras it is considered sound surgery in the treatment of **filarial disease** to operate when local manifestations present themselves. Though the disease is not a local one and though various glandular regions may be successively attacked, the relief afforded by operation and its comparative simplicity, justify this mode of treatment. Local recurrence is practically unknown. In some cases the disease is manifested by lymph-scrotum, filarial hydrocele or abscesses in the course of the lymphatic vessels; the glands and main lymphatic vessels not exhibiting any pathologic changes; in others the lymphatic vessels become dilated and thickened and the neighboring glands enlarged. The femoral and inguinal regions are the most common seat of the attacks.

### New York Medical Journal.

June 25, 1898. [Vol. lxvii, No. 26.]

1. A Contribution to the Study of Melancholia, with a Table showing the Results of an Examination of the Blood in 57 Cases. B. C. LOVELAND.
2. Mycosis Pharyngis Leptothricia. MAX TÖPLITZ.
3. The Use of Pyoktanin in the Treatment of Cystitis. R. E. GRAHAM.
4. When and Why shall we Operate in Insufficiencies of the Ocular Muscles? ALEXANDER DUANE. (Concluded.)
5. Nuclein in Surgery. C. E. IDE.
6. Peripheral Neuritis, including Optic Neuritis, following Lavage of a Dilated Stomach. J. C. CLEMESHA.

**1.** Loveland reports 57 cases of **melancholia**, in all of which the hemoglobin was estimated and the red corpuscles counted. He finds that in the early stages instead of anemia being present, there is actually anhydremia. The deficiency of liquids in the body is also indicated by the condition of the urine, which is of high specific gravity, scanty and very dark. The number of corpuscles varied from 4,320,000 to 8,760,000, and the highest hemoglobin-estimation was 120%, by Fleischl's instrument. This inspissation of the blood continues while the general health of the patient is deteriorating. Finally, the nutritive elements of the tissues are absorbed in an effort to sustain the physical condition, and a relative hydremia occurs, in the course of which the retained excrementitious substances are eliminated. Often at this period spontaneous recovery ensues. The most essential element in the treatment is, therefore, considered to be careful feeding, particularly with liquid diet. This form of treatment has two advantages: it supports the health of the patient, and it favors elimination. Loveland considers this extremely important, and urges that the food be prescribed with the same care and attention that is usually paid to the prescribing of drugs. He does not, however, give any description of the diet that he would employ, excepting in so far as he details very briefly the treatment of a particular case. This patient was given milk and vegetable food, and 15 grains of sodium phosphate in hot water before each meal. Of the 57 cases, 45 were under observation for a long time, and of these 35 recovered, 8 were improving and 2 unimproved. No case of melancholia was found in patients suffering from profound anemia.

**2.**—Töplitz reviews briefly the subject of **mycosis pharyngis leptothricia**, adding a report of 3 cases.

**3.**—Pyoktanin possesses all the requirements of a germicide in the treatment of cystitis. It is only a slight irritant, even in concentrated solution; its antiseptic power is marked in very dilute solutions; and its action is continuous for quite a period of time. The treatment is applied in the following manner: After drawing off all the urine with a catheter and irrigating the bladder with sterile water, 2 drams of a saturated solution of pyoktanin are instilled into the bladder. The solution is allowed to remain for a minute or two and irrigation of the bladder with sterile water is repeated until no trace of the pyoktanin appears in the solution. Usually the patient will suffer considerable pain, for several hours, at least after the first treatment, but this may be controlled with a grain of codein. This method

has been used with considerable success, especially in shortening the duration of treatment.

**5.**—The indications for the employment of **nuclein in surgery** are almost unlimited. The principle upon which it acts is the same in each case; it stimulates cellular activity and thereby fortifies the system against any invading disease or it improves the vitality of tissues already the seat of disease. For these reasons it may be employed by the surgeon as a prophylactic against shock, suppuration or septicemia. It may avert the performance of some operations that have been considered necessary in the past, and it becomes therefore an aid to the practice of conservative surgery; it renders the functions normal and active, putting the patient in the best condition for operative procedure and afterward for a speedy convalescence; and finally it is a valuable substitute for many remedies that, because of their undesirable after-effects, are administered usually with protest.

**6.**—Clemesha reports the case of a man, 46 years old, who had had a poor appetite and some discomfort after eating for about 6 months. Occasionally he vomited a sour, brown-colored liquid. There was some dilatation of the stomach, but otherwise physical examination yielded negative results. A mixture of carbolic acid and strychnin was prescribed and lavage of the stomach commenced. Two days after the first washing the man's feet began to swell, and this was followed by bloating of the face and the backs of the hands. Subsequently there appeared numbness and tingling of the extremities, blurring of vision and persistent drowsiness. Ophthalmoscopic examination revealed the presence of optic neuritis in the left eye, with recognition of fingers at a distance of 3 inches. The nervous symptoms gradually progressed, optic neuritis developing also in the right eye, although the general condition improved decidedly. At the end of about 2 months improvement in the neuritic symptoms commenced and vision gradually returned, and in the course of a month the patient was better in all respects. Clemesha eliminates all forms of extraneous poisoning and is obliged to fall back upon the hypothesis of gastro-intestinal auto-intoxication. [A more detailed description of the clinical symptoms would have been interesting.]

### Medical Record.

June 25, 1898. [Vol. liii, No. 26.]

1. A Clinical Synopsis of the Diagnosis and Treatment of Chronic Renal Diseases. WILLIAM H. MCENROE.
2. The Blood-Count in Anemia and Certain Nervous Affections. MARY PUTNAM-JACOBI.
3. Bacteriological Diagnosis of Typhoid Fever. JAMES H. REILLY.
4. The Advantages of Vaginal Section for Pelvic Suppuration and Circumscribed Hemorrhage. EDWARD NICHOLAS LIELL.
5. Gonorrheal Pyelitis and Pyelo-nephritis. J. HENRY DOWD.

**1.**—McEnroe classifies the various conditions of the **kidneys** as (1) parenchymatous nephritis, (2) amyloid or lardaceous degeneration, (3) interstitial nephritis and renal cirrhosis. He details the clinical manifestations of each of these, and considers individually the following symptoms: Albuminuria, dropsy, secondary inflammations, cardiovascular changes, albuminuric retinitis and uremia, after which he takes up the subject of treatment. For the condition of arterial sclerosis, he advises the use of mercuric chlorid, which he considers almost a specific. For prolonged use he administers it in a mixture with tincture of iron chlorid, sweet spirit of niter, water, and simple elixir.

**2.**—In making the **blood-count** of a patient affected with **hysterical vasomotor neurosis**, Jacobi found that the red cells numbered 8,084,444, and the white 102,222. The results of similar examinations in the same patient had been very different and in accordance with the anemic appearance. On further investigation microscopic proofs of anemia in a number of nervous patients were found lacking. The primal symptom in the first case referred to at the time of the observation was an extreme vasomotor irritability manifested by frequent chills. There were also hysterical nervous attacks that seemed attributable to vasomotor spasm of the cerebral blood-vessels. There was also marked



contraction of the visual field. These symptoms had been particularly marked at the time the blood-count in question had been made. The inference was drawn that the richness of the blood was only apparent and was due to its concentration through narrowing of the lumen of the superficial blood-vessels as a result of vasomotor tonicity or spasm. After 2 weeks' sojourn at the seashore, and when the patient was feeling perfectly well, all the vasomotor symptoms having for the time disappeared, the white cells numbered 4,400. This condition of things diminishes the reliability of examinations of the blood in neurasthenics, as in them vasomotor irritability is so common. Observation of the contemporaneous sphygmogram may serve to correct the blood-count. If this instrument shows high-pulse tension in an individual with clinical symptoms of anemia, the high blood-count may be attributed to vasomotor irritability, which is itself an expression of marked anemia. The marked improvement in the blood that follows treatment may sometimes be attributable to the increased tension, and not to a real increase in value of the blood.

3.—Reilly believes that it is just as inconsistent to say that one may have **typhoid or enteric fever**, according to the accepted pathology of this disease, **without a bowel-lesion**, as to say one may have meningitis with no involvement of the meninges. He contends that a diagnosis should not be made on the discovery of the bacillus typhosus in the absence of intestinal lesions. In cases of this nature that have been reported, it is thought the organism was really the bacillus coli communis, and it is advised that in all cases this should be excluded by bacteriologic investigation. The Widal reaction is considered as of doubtful value, and investigations are urged that tend to demonstrate definitely the difference between the typhoid bacillus and the bacillus coli communis.

4.—Liell has performed **vaginal section** in 8 cases for the purpose of breaking up adhesions, and thus removing vague pelvic pains, with complete success in 6, adhesions with consequent pain recurring in 2. As an exploratory measure and as a means of differential diagnosis—the character of the neoplasms with accompanying adhesions making the diagnosis otherwise uncertain—vaginal section was performed 6 times. The adoption of the Trendelenburg position in operating through the vagina has facilitated and rendered possible results that could not otherwise have been secured. The chief advantage of vaginal incision and drainage is that it lessens the seriousness of operation by abdominal section, and when the indications are such that the operation can be done thoroughly there is no question that it is much to be preferred to the abdominal route.

5.—It is not usually understood that **pyelitis or pyelonephritis secondary to gonorrhea** may develop through the lymphatic system, without the bladder having been previously affected; or, in other words, that an inflammation of the bladder must not necessarily precede an inflammation of the pelvis of the kidney. Pyelitis or pyelonephritis may develop insidiously and exist for some time unrecognized. There are two varieties; one, in which the onset is scarcely noticeable, and the other, in which severe local and constitutional disturbances are present. In the latter instance the diagnosis is not difficult, but when the subjective symptoms are not pronounced, the diagnosis must depend upon microscopic examination of the urine, which will be found to contain casts or mucous cylinders, pelvic epithelium, in shingle-like form, with clumping of the pus-cells, and occasionally blood. If the condition is discovered sufficiently early, recovery is possible. As a routine measure it is advisable to apply a dry cup to each loin, and insure free evacuation of the bowels daily. The drugs indicated are those that lower arterial pressure, increase the quantity of urine, and act as astringents on the pelvic and renal mucous membranes. Aconite, lithium citrate, hamamelis, in large doses every 3 or 4 hours, will meet these indications well.

### Medical News.

June 25, 1898. [Vol. lxxii, No. 26.]

1. Enlargement of the Lymph-nodes; Their Pathology and Treatment. CARL WEIDNER.
2. Hematuria. L. J. HARVEY.

1.—Weidner describes the anatomy of **lymph-glands** and their action as filters of infectious material, in which mechanical action they are aided by the albuminous bodies given off by the cells—the mycosozins of Hankin. In the treatment of infective lymphadenitis, Weidner advises the use of injections of antiseptics about the point of infection, both for the local effect and for the secondary action in the infected lymph-glands.

2.—In discussing the differential diagnosis of renal and vesical **hematuria**, Harvey reports a case of malignant disease of the kidney, in which profuse hemorrhages occurred with attacks of renal colic and with the occasional passage of a calculus, a tumor soon forming and the disease lasting for 2½ years, finally killing the patient through exhaustion.

### Boston Medical and Surgical Journal.

June 23, 1898. [Vol. cxxviii, No. 25.]

1. The Relation of Pathology to Medicine. (Concluded.) W. T. COUNCILMAN.
2. Remarks on the Pathology of Epithelioma of the Uterus with Reference to Operative Interference. CHARLES GREENE CUMSTON.
3. A Consideration of the Professor Gartner Mother-Milk. JOHN LOVETT MORSE.
4. Pulmonary Tuberculosis Treated with Koch's New Tuberculin. C. D. NELSON.
5. Post-Operative Neurasthenia. S. A. LORD.

1.—The study of bacteria in relation to disease must form an integral part of pathology, as it permits an appreciation of many important primary lesions that would otherwise escape attention. It has been learned that certain lesions are due to the direct action of the organisms on the tissues, and that others are due to soluble chemic substances produced either by the bacteria directly or indirectly by their action upon the tissues. Those alterations of function that result from anatomic changes come under the subject of general pathology. There should be no separation between pathology and pathologic anatomy. Pathology separated from pathologic anatomy on the one hand or the clinic on the other cannot progress, from lack of knowledge of the character of the problems presented by disease. Many of the most important advances in pathology have been made by those entering upon the study from the clinical standpoint. The combined study of clinical symptoms with pathologic anatomy broadens the clinician. All great clinicians have made important contributions to pathology. Experimental pathology, as applied to the elucidation of symptoms, has yielded as important results to the clinician as to the pathologist. The pathologic laboratory comes first as a means of studying the subject of pathology. It should be associated with a hospital and should render aid in the diagnosis of cases; it should offer opportunity for research and should be utilized for teaching-purposes. The work should be done by the young men in the hospitals, who come in contact with the sick, under the supervision of one skilled in the methods of investigation. Laboratory-investigations are as valuable to the surgeon as to the physician. Next in the relation of the laboratory to the hospital comes post-mortem examination. Cultures should be made from every organ to determine the cause of the disease and the extension of the organism throughout the body. Post-mortem investigations should be made with a knowledge of the symptoms and all that can be learned from the clinical course of the disease, and especially from the objective methods of clinical investigation. All laboratory-work should be carefully recorded and the records be made easily accessible. The pathologic research may extend much beyond this. Pathology is the study of life under abnormal conditions, and as such, and regarded simply as a branch of biology, is as worthy of study without any relation to the clinic or to man as is physiology. The laboratory should be provided with aquaria, and with the means for the study of vegetable pathology. Comparative pathology should also be carefully investigated in the well-equipped laboratory. Pathology serves to connect the so-called theoretic branches of medicine with the so-called practical. It establishes a basis for the reasoning of the student, and he learns in the study of pathology the methods of investigation of disease. The student should be capable of



making a post-mortem examination, and of appreciating the relationship between the anatomic lesions and the symptoms. Laboratory-instruction combined with experiments and symptoms should form the basis for the teaching of pathology.

2.—According to Cumston, **epithelioma of the cervix** presents several anatomic types owing to the fact that this portion of the uterus is lined by two different types of mucous membrane; one being of the pavement variety, which is in the vaginal portion, while the second is the cylindric epithelium found in the cervical canal. Two classifications may be made: the first is based on the histologic structure of the neoplasm, and the second on its anatomic form. Pavement-cell epithelioma develops on the cervix and easily invades the vagina and the bladder; its evolution is perhaps a little less rapid than that of cylindric-cell epithelioma. The cylindric-cell epithelioma is more malignant, but its seat in the beginning, which is in the center of the cervix, will necessitate its destroying the uterine neck almost entirely before it can reach the vagina or the parametrium, and consequently the disease may be present for some time and still be in a proper condition for radical operation. There are three anatomic types of carcinoma encountered here, namely, the vegetating, the ulcerating, and the interstitial type. Epithelioma of the isthmus is, so to speak, situated in both the neck and the body of the uterus and gives rise to characteristic symptoms. The onset is sudden and attended with intense expulsive pains, which gradually increase with the expulsion of the neoplastic mass, and after a certain time an abundant, fetid, glairy mass is expelled, after which the patient is much relieved.

3.—Morse gives the method of preparation of **Gartner milk**, and the claims made by its manufacturers. After a critical comparison with modified milk, he reaches the conclusion that Gartner-milk contains only the constituents of cow's milk, present in approximately the same proportions as in human milk, which, however, are not constant, and are unknown to the consumer, and which are insusceptible of modification. It is not a fresh food; it costs as much as or more than modified milk, which is freshly prepared and whose proportions can be varied.

4.—Nelson reports two cases of **pulmonary tuberculosis** in which he used Koch's new tuberculin. The treatment was carried out according to the dosage and intervals recommended by Koch. Both patients improved somewhat.

5.—Of the two cases of **post-operative neurasthenia** reported the first had undergone a ventrofixation to relieve pain in the back and in the left hip and thigh. The pain disappeared, but there developed gnawing, stretching and tugging sensations in the scar. The patient developed severe dizziness, beginning with a sensation as of a blow on the head, and followed by a fall. At other times the primary symptom is a feeling as of a great wave coming from the stomach and then spreading all over the patient. There are nausea, feelings of intense oppression and suffocation, and disturbed sleep. In the second case there developed, after a gynecologic examination, odd ideas regarding the presumed entrance of a pin into the patient's head and the existence of a clot on her brain. These were closely associated with various peculiar and more or less exactly localized cephalic sensations of pressure and the like. The expression of the face showed a condition of hopelessness and unwillingness to admit improvement in her condition.

#### Journal of the American Medical Association.

June 18, 1898. [Vol. xxx, No. 25.]

1. The Essential of the Art of Medicine. J. H. MUSSER.
2. Some Disorders of Digestion of Frequent Occurrence. J. H. MONTGOMERY.
3. Cerebro-Spinal Meningitis, with Report of Cases. J. F. SHELLEY.
4. Observations upon the Specific Treatment of Tuberculosis. P. S. ROOT.
5. Tuberculosis of the Mammary Gland. ALBERT H. FREIBERG.
6. Nephrectomy. J. H. CARSTENS.
7. Dermoid Cyst of the Ovary, with Report of Two Cases. J. F. FOX.

8. A New Combination-Chart for the Examination of School-Children's Eyes and Ears by Teachers. FRANK ALFORD.

2.—The disorders of digestion are divided into 2 classes, gastric and intestinal, whose causes and symptoms are discussed and appropriate treatment is suggested.

3.—After considering the bacteriology, symptoms and treatment of **cerebrospinal meningitis**, Shelley reports an epidemic of 4 cases occurring in one family, with illness in 2 other members of the family, of such indefinite nature as not to be included. A girl of a neighboring family was also ill with the same symptoms. All were attacked with headache, pain in the back, chill, fever, vomiting and petechial and herpetic eruptions. In one case there was a discharge of purulent matter in large quantities from the nose at the beginning of the second week. Although 2 of the patients were very seriously ill, all recovered.

4.—Root discusses the various tuberculins, nucleins, anti-phthisins, etc., relates his experience with **oxytuberculin** in 3 cases, and expresses the belief that it possesses wonderful curative power.

5.—**Tuberculosis of the mammary gland** is a comparatively rare affection, less than 50 cases having been reported, of which about 10 were operated upon by American surgeons. Freiberg records a case in a woman of 31, with a family-history of tuberculosis and with some symptoms of pulmonary involvement. The patient first noticed a painful swelling in the axilla, which was poulticed but failed to suppurate and finally disappeared. Two weeks after its disappearance a swelling appeared in the upper and outer quadrant of the left breast. Gradually swelling and hardening appeared around the nipple, softening seemed to have occurred, and fluctuation was made out in the region of the areola. Aspiration yielded a small quantity of fluid in which tubercle-bacilli were demonstrated. On incision into the mass thick, cheesy pus was evacuated and it was decided to remove the entire breast. The patient made a good recovery and has remained entirely well.

6.—Carstens reports 4 cases in which **nephrectomy** was performed, in 3 for hydronephrosis and in 1 for tuberculosis of the kidney; with recovery in all.

7.—The first patient was 31 years of age and had for some months noticed a slowly growing abdominal tumor and had suffered from attacks of severe abdominal pain. On operation a **dermoid cyst of the ovary** was removed containing about 2 quarts of fatty substance, in which were found short hairs, bone, and a switch of hair 2½ feet long. The second patient was 28 years old, weighed 235 pounds and was suffering from abdominal pain, with loss of appetite, chills and an irregular temperature of from 101° to 102.5° F. A diagnosis of suppurating ovarian cyst was made, and on operating 2 gallons of gray matter containing hair and balls of fat were removed. Recovery followed in both cases; in the second case after the evacuation of a small abscess in the culdesac.

#### Bulletin of the Johns Hopkins Hospital.

May, 1898. [Vol. ix, No. 86.]

1. Typhoidal Cholecystitis and Cholelithiasis. HARVEY W. CUSHING.
2. The Presence of the Bacillus Typhosus in the Gall-bladder Seven Years after Typhoid Fever. G. BROWN MILLER.
3. The Transplantation of the Rectus Muscle in Certain Cases of Inguinal Hernia in which the Conjoined Tendon is Obliterated. JOS. C. BLOODGOOD.
4. Hydraulic Pressure in Genito-Urinary Practice, Especially in Contracture of the Bladder. HUGH H. YOUNG.
5. A Case of Carcinoma Metastasis in Bone from a Primary Tumor of the Prostate. SYDNEY M. CONE.
6. Glossitis in Typhoid Fever, with Report of a Case. THOMAS MCCRAE.

1.—The occurrence of **post-typhoid cholecystitis** is explained by Cushing as follows: 1. The bacilli during the course of typhoid infection quite constantly invade the gall-bladder; 2. The organisms retain their vitality in this habitat for a long period; 3. In the course of time the bacilli are invariably found to be clumped in the bile, suggesting the occurrence of an agglutinative reaction; 4. These clumps presumably represent nuclei for the deposit of biliary salts,



as microorganisms may with regularity be demonstrated in the centers of recently formed stones; 5. Gall-stones being present in association with the latent, long-lived, infective agents an inflammatory reaction in the viscus of varying intensity may be provoked at any subsequent period. Cushing has collected 6 cases of post-typhoid cholecystitis, associated with gall-stones, which have been operated upon and the bacillus typhosus isolated; and 5 cases in which the bacillus coli communis has been isolated. A case of cholecystitis is reported associated with gall-stones, in which, though there was no history of previous typhoid fever and the gall-bladder infection seems to have been primary, the bacillus of Eberth was found.

3.—In a certain number of cases the conjoined tendon is completely obliterated, a condition that Bloodgood holds responsible for a large percentage of recurrences following the operation for the **radical cure of hernia**. With the view of correcting the lack of support resulting from this obliteration he has devised and in 8 cases has performed a **plastic operation on the rectus muscle**, bringing it down and suturing it with other available tissues to Poupert's ligament and the aponeurosis of the external oblique from the arch of the pubes to the position of the transplanted cord.

4.—Young has experimented, and with some success, upon the **effect of hydraulic pressure in genito-urinary diseases**, more especially in cases of cystitis associated with contracture of the bladder. The improvement that followed was quite marked in some cases, the frequency of micturition being very much diminished and the capacity of the bladder greatly increased.

5.—The subject of **carcinoma metastases in bone from a primary tumor of the prostate** has been comprehensively studied by von Recklinghausen, who recorded 5 cases of his own and 1 of Sir Henry Thompson's. Cone reports an accidental case occurring in a patient aged 75. The autopsy revealed, in addition to a carcinomatous prostate, involvement of the second rib, the second, third and fourth lumbar vertebrae, and the ilium. In reviewing all the recorded cases certain conclusions may be drawn: 1. Tumors, like carcinoma in bone, without an evident primary focus, lead one to suspect prostate or thyroid; 2. The new bone-formation and the location of metastases are significant of carcinoma of the prostate; 3. Metastases occur by the veins; 4. Endothelioma and carcinoma are not readily distinguishable from one another; 5. The pelvic lymph-glands may not be involved and the organs are rarely the seat of metastasis.

6.—**Glossitis as a complication of typhoid fever** is exceptionally rare. In the case reported, it occurred during convalescence from the original attack and ushered in a relapse.

### Deutsche medicinische Wochenschrift.

May 12, 1898. [24. Jahrg., No. 19.]

1. Reports from Behring's Institute for Experimental Therapeutics. E. BEHRING.
2. Forced Artificial Respiration with the Aid of O'Dwyer's Apparatus.
3. The Etiology of Pertussis. ROBERT BEHLA.
4. The Location of Foreign Bodies at a Depth by Means of the Roentgen-rays. SEHRWALD.
5. The Specificity of the Streptococcus Erysipelatis. ALBERT SIPPEL.
6. Death Due to the Thymus Gland. HELM.
7. A Lithopedion 18 Years Old, with Partial Extrusion After Spontaneous Rupture into the Rectum. ALBERT NIEWERTH.
8. Points in Photography. FERDINAND BÄHR.
9. Bacteriologic Investigations into Whooping-cough. CZAPLEWSKI.
10. A New Aperiodic Vertical Galvanometer. A. EULENBURG.

1.—Behring reviews the work on a **tuberculosis-antitoxin** and lays some stress on the fact that Ransom has found some birds more suitable to the production of such antitoxins than mammals. He hopes a useful antitoxin may be produced from such a source. He describes his own method of producing a very virulent toxin by glycerin extraction at 150° C. He further thinks Schütz's results in the treatment of tuberculosis of cattle of striking importance.

Ransom has found that, by increasing the coagulability of the blood of some animals and birds with sodium citrate, the amount of antitoxin necessary to render **tetanus-toxin** harmless in a mixture of these two is much increased, while the toxins are not converted into toxoids. Ransome and Kintoshima have found that by mixing a small amount of serum from a horse rendered artificially **immune to cholera** with a bouillon-culture of cholera-vibrio the resulting culture reacted to cholera-serum only in very much increased concentration of the serum, and they consider that this may be of importance in differential diagnosis.

2.—The efficiency and usefulness of **forced artificial respiration with the aid of O'Dwyer's apparatus**, which consists of an intubation-set, a rubber tube and bellows, is well illustrated in this series of cases. In three cases it was employed when asphyxia occurred during the course of chloroform-anesthesia, and in each the patient was rapidly restored. It was employed also in the case of an infant suffering from asphyxia due to spasm of the glottis, after all other previous attempts at restoration had failed. It is further found useful in operations in the cavity of the mouth; in one case an atheromatous cyst was removed from the left side of the tongue, and in another staphylopyorrhaphy was performed. Chloroform was administered through the rubber tube, thus preventing the entrance of blood or saliva into the air-passages, a complication to be avoided in this class of operations.

3.—Behla has studied the highly refracting, small bodies and the protozoa with ameboid movement found in **pertussis-sputum**, and as he has been able to see those first mentioned swell, become granular and finally give forth ameboid bodies, he decides that they are the spores of the amebæ. He has also seen the second generation produce new spores and new amebæ. This parasite is, he believes, the cause of pertussis. It does not belong clearly to the amebæ because of its manner of reproduction, but it stands midway between the amebæ and the mycetozoa. He finds it already present in the beginning stage of pertussis, but in much greater numbers in the paroxysmal stage, declining in number as the paroxysms grow fewer, until it disappears with the disappearance of the disease. The parasites should be looked for in fresh sputum, on a warm stage, without staining. They are killed by a 1:3000 quinin-solution. Behla also makes the interesting statement that he has produced a paroxysmal cough associated with a whoop by injecting pertussis-sputum into a dog's trachea, while injection of the catarrhal secretion of measles into a dog's trachea caused a cough without the whoop.

4.—Sehrwald describes a method of definitely locating **foreign bodies by the use of the Roentgen-rays**. In trying to locate, for example, a bullet in the thorax, with the aid of the fluoroscope one marks a point on the posterior thoracic wall exactly in the middle of the shadow cast by the bullet, and another point on the anterior wall in the line of continuation of this shadow. The patient is then turned through an angle of from 45° to 90°, and this procedure is repeated, care being taken that the fluoroscope is kept in the same horizontal plane. As the bullet lies at the intersection of these 2 lines it is possible, by a simple mathematical problem, to determine its exact distance from the surface.

5.—Sippel believes that Petruschky's statement that he has produced typical **erysipelas** by inoculation with the exudate from a case of puerperal parametritis is no argument against the specificity of the streptococcus erysipelas, as the same organism may cause erysipelas when inoculated in the skin and peritonitis when it gains access to the peritoneum through the genital organs. As proof of this he cites the case of a woman, who acquired puerperal peritonitis from a midwife who had been dressing a case of erysipelas before attending the parturient woman. Two days after being operated upon for her peritoneal sepsis she had a widespread eruption of erysipelas, starting from the abdominal wound. Recovery ensued.

6.—Helm reports the case of a child, 2 years old, found dead in bed after previous fairly good health. On post-mortem examination the thymus gland was found much enlarged, congested and filled with old, small abscess-cavities. There were numerous small hemorrhages in other organs; the bronchial glands were swollen; and the mitral and tricuspid valves of the heart were somewhat adherent and the



edge of the mitral was swollen and dense. The cause of death was not quite clear, but it seemed due to an acute swelling of the old diseased thymus.

7.—Niewerth reports an interesting case of a **lithopedion** of 18 years' standing, which was partially expelled after spontaneous rupture into the rectum. The patient was 47 years old, very anemic and weak, and suffering from severe pain in the abdomen, difficulty in micturition and rectal tenesmus. Palpation revealed a distended condition of the abdomen, with greater resistance in the left groin. The woman stated that for 18 years following her first pregnancy the abdomen had been hard and swollen. She confessed to have felt fetal movements at that time. Weak pains had occurred in the ninth month; the liquor amnii had not escaped, but only a slight flow of blood had taken place. The fetal movements soon ceased and menstruation had been regular afterward. There had been no subsequent hemorrhage. The abdominal tumor had persisted for 18 years without causing any great inconvenience. Emollient treatment not availing to reduce the pain and temperature, an operation was suggested but refused. The tumor filled the pelvic cavity, the upper part of the abdomen being free. The uterus lay in front of the mass, the sound entering for a distance of 7 cm. Rupture had taken place into the rectum, and a piece of the skull and the humerus had escaped through the anus. Gradual discharge of other fetal parts followed. When last seen (in February, 1898) there had been no further escape of fetal bones since November 1st.

8.—Bähr protests against the acceptance for diagnostic purposes of photographs and radiographs taken by inexperienced photographers and especially by men not physicians or without, at least, a good knowledge of anatomy. He believes all such reproductions are useless.

May 19, 1898. [24. Jahrg., No. 20.]

1. A Contribution to the Pathologic Anatomy of the Central Nervous System in Cases of Acute Anemia. G. SCAGLIOSI.
2. Uremic Ulceration of the Bowel. P. GRAWITZ.
3. The Hemolytic Action of the *Tenia Lata*. OSSIAN SCHAU-MANN and T. W. TALLQVIST.
4. Hepatic Abscess due to *Ascaris Lumbricoides*. BRUNO LEICK.
5. The Employment of Alcanosine in Nutritive Enemata. KURT BRANDENBURG and GUSTAV HUPPERZ.
6. A Contribution to the Knowledge of Leprosy; Contagion and Heredity. E. v. DÜRING.
7. A New Heatable Staining Table. RIORKOWSKI.

1.—Scagliosi reports the case of a woman who, during pregnancy, had repeated attacks of severe hemorrhage, to which she ultimately succumbed. At the autopsy, aside from slight fatty degeneration of the heart muscle, no changes were found excepting pronounced anemia of all the organs. Small portions of the brain and spinal cord were placed in a saturated solution of mercuric chlorid for 6 hours. They were then washed in water and imbedded, and sections were cut and stained by Nissl's method. All the cells were altered, but particularly the pyramidal cells of the cortex. These exhibited fragmentation of the chromatin-bodies, and a diffuse staining of the achromatic substance. In the cerebellum, the protoplasm of the cells of Purkinje was filled with minute granules. Some changes were found in the ganglion-cells of the spinal cord. The presence of vacuoles in the nucleoli of most of the cells is also recorded. It is concluded that diminution in the number of red blood-cells is capable of causing severe changes in the ganglion-cells of the nervous tissue.

2.—Grawitz believes that there are at least three causes for **diphtheric ulceration of the large intestine**: (1) decubitus from hard fecal masses; (2) the virus of dysentery; (3) the salts of mercury. In those cases in which diphtheric ulceration occurs in the course of severe nephritis, it is often difficult to understand the pathogenesis. These ulcers are, however, somewhat commoner in the ileum, and may be readily mistaken for tuberculous lesions. The most typical ulceration of this nature is that which occurs after surgical operations upon the kidney. Under these circumstances there occur, both in the large and small intestines, large areas of necrosis that extend deeply into the tissues. This condition may exist for some weeks, the older lesions

showing cicatrices, and it appears from these that the earliest changes occur in the neighborhood of the ileocecal valve. It is possible that they are the result of an excessive excretion of urates through the intestinal wall.

3.—Schaumann and Tallqvist have endeavored to discover whether the **bothriocephalus latus** contains in its tissues a **toxic substance** that is capable of destroying **red corpuscles**. The experiments were conducted as follows: Parasites were taken from patients suffering from bothriocephalus anemia, and were either fed to dogs and rabbits, or else an extract obtained either by digestion or trituration was injected subcutaneously. The doses were considerable, from 30 to 50 gm. per day by the mouth, and from 10 to 20 gm. subcutaneously. Usually the first dose produced a diminution of from 1 to  $1\frac{1}{2}$  million red blood-cells per cu. mm. Later the reaction diminished in intensity and sometimes disappeared completely. In one case, however, the red corpuscles were reduced from 7 to 3 million. The animals exhibited all the symptoms of profound anemia, and ultimately died of exhaustion. It is suggested that perhaps death was due in part to other toxic substances. Rabbits seemed to exhibit very slight changes in the blood, although 2 of them died within 2 days of the inoculation. It is concluded that extract of tapeworm has a distinct globulicidal action upon the blood of dogs; although it is admitted that possibly some of the intestinal bacteria or some of the drug used to expel the worm had gotten into the extract and produced the symptoms. No difference could be detected in this blood-destroying power between worms obtained from cases of anemia and those obtained from apparently normal individuals.

4.—Leick has collected 18 cases of **hepatic abscess** that were caused by the presence of the **ascaris lumbricoides** and reports an additional case. A woman, 35 years of age, the wife of a shepherd, was seized with severe pains in the region of the liver; and in the course of 4 months noticed a tumor growing just above the navel. A month later she was found to be anemic, to have an evening rise of temperature, and a large fluctuating tumor that reached from the navel to the ensiform process, more on the right than on the left side. This was punctured and was found to contain pus. Although hooklets were not discovered, a diagnosis of suppurating echinococcus-cyst was made in view of her husband's occupation and her frequent association with his dogs. The swelling was accordingly incised and a large amount of pus evacuated, which was found to contain an active round worm. It is not believed that the abscess developed first and the worm subsequently entered, because the channel by which it could have reached the abscess must have permitted evacuation of the pus, which was in a state of great tension. Attention is also called to the fact that the teaching of Leuckart and Davaine, that the lumbricoid worm can only live for a few days in the liver, is false.

5.—Brandenburg and Hupperz have experimented with **alcanosine** in nutritive enemata. In order to secure definite results they estimated the amount of nitrogen in the urine and in the feces, and the extent of the intestinal putrefactive changes as indicated by increase of the ethereal sulphates in the urine. Three patients were used in the experiments; one a woman of 28, suffering from chronic gastric ulcer; one a man of 62, with arteriosclerosis and hyperacidity; and the third a man of 37, suffering from neurasthenia. There were no disagreeable results from the injections and the body-weight was not markedly altered. The results of the chemic examinations show that the amount of nitrogen eliminated in the urine was considerably increased. The amount of nitrogen in the feces was only slightly increased, and it is therefore concluded that at least  $\frac{2}{3}$  of the alcanosine were absorbed by the intestinal mucous membrane. The ethereal sulphates were not increased at all. It thus seems that the substance may be used in nutritive enemata.

6.—Düring criticises the conclusions of the Leprosy Conference concerning the **contagiousness of leprosy**, and particularly the arguments of Zambaco. Baelz, Kaposi, and Zambaco have argued that they have never seen a case of direct contagion; but such cases certainly have occurred and are sufficiently recorded in the literature; they are particularly illustrated in cases of leprosy developing in Europeans going to leprosy countries. In many of the infectious diseases even close contact is not sufficient to produce contagion, as is seen in the rarity of transmission of tuberculosis



from husband to wife. It seems, therefore, that, although microorganisms are the most essential, they are not the only cause of contagious diseases. Düring calls attention to the paper of Lohk, who studied the disease in one of the West Indian Islands, and was able in nearly every case to trace contact with some other individual suffering from the disease. [The paper is unfinished.]

7.—Riorkowski describes a small table holding water in the interior with its upper surface divided into small rectangles lined with porcelain, in which staining fluids can be placed. Heat is applied and the cover-glasses, upon which has been smeared the material to be stained, are laid upon the staining fluid, with the smeared side down.

#### Münchener medicinische Wochenschrift.

May 17, 1898. [45. Jahrg., No. 20.]

1. The Local Employment of Superheated Steam. FEDOR KRAUSE.
2. Parturition Peculiarly Modified by a Myoma. OTTO FALK.
3. A Contribution to the Statistics of Syphilitic Disease of the Spinal Cord. WITTERN.
4. Some Disturbances in the Distribution of the Oculomotor Nerve Following Measles. DREISCH.
5. Bilateral Traumatic Chylothorax. OTTO HENSSEN.
6. Alterations in the Larynx and the Trachea in Cases of Leukemia. OTTO BARNICK.

1.—Deterred from the use of the Tallerman apparatus on account of its high price, Krause had a **hot-air** cylinder constructed that answered his purpose perfectly. The hand or arm is enclosed in asbestos and inserted into the cylinder. A thermometer is also inserted through a small hole in the tube, but care must be taken that it does not come in contact with the limb. The initial temperature does not usually exceed 70° C., and is increased according to the endurance of the patient; most patients being able to endure a temperature of 120° C. without much discomfort. Profuse perspiration always occurs and the air in the cylinder is soon saturated with moisture. Krause believes that this must be the condition in all forms of apparatus, on account of the ordinary laws of osmosis. Of course the skin does not attain anything like the temperature of the air in the cylinder, and it is probably protected by the layer of gas formed from the evaporated perspiration. The healing factors seem to be the perspiration and the increased activity of the circulation. This diaphoretic action is not limited to the parts treated, but it may affect the whole body. The usual immediate results are relief of the pain, particularly of rheumatic joints; then increased activity of movement and loss of the feeling of weakness. In acute cases the treatment is rarely of value. A case is recorded of psoriasis that was healed very quickly after the application of the cylinder for other reasons. Three cases are reported, one of achillodynia with contraction of the tendon that was treated for 20 days, with an application morning and evening at 80° C.; another of chronic pain in the right hip following fracture, in which 3 applications at 110° C. were made; and a third of periostitis of the left tibia, also treated for 20 days. In all 3 cases complete recovery ensued.

2.—Falk reports a case of a 36-year-old pregnant woman who had given birth to 5 children without any difficulty. The present pregnancy had been uneventful. For 24 hours before being seen, however, she had suffered from profuse bleeding from the vulvar orifice, and when first seen was still bleeding freely and was very anemic. The labor-pains were strong and regular, and the fetal heart-sounds could be heard to the left and below the umbilicus. Vaginal exploration showed a high position of the cervix, which was directed posteriorly and lay above the symphysis pubis. The posterior vaginal fornix was filled with a hard, round tumor, which was regarded, from the presence of the sutures and fontanel, as the fetal head, forced in the middle of the pelvic canal. The placenta could be felt low down on the anterior uterine wall, just above the cervix, and it was from this that the bleeding was taking place. Under deep anesthesia the cervix was forcibly dilated, the feet seized and version performed; the child was slightly asphyxiated, but soon recovered. An uneventful puerperium followed. Three months later another examination was made, and there was discovered on the posterior vaginal fornix and springing from the pos-

terior uterine wall at a point between the cervix and the body, a very hard tumor, the size of a man's fist and resting above the small pelvis. The body of the uterus was enlarged from the presence of multiple myomata. The cavity measured 9 cm. After the labor the patient had had once a very profuse menstruation. The presence of the tumor is believed to explain the placenta prævia and the difficulty at the time of birth.

3.—After a brief discussion of the pathology and symptomatology of **spinal syphilis**, Wittern reports the case of a woman, 33 years of age, who had previously been healthy and had had a healthy child that subsequently died of intercurrent disease. Her husband, however, had had syphilis just before marriage. The disease commenced with severe pain in the back that seemed to radiate forward into the breasts. There was some tingling and dulness of sensation from the lower portion of the ribs to the feet; and the spinal column was sensitive and somewhat stiffer than normal. In a short time there was diminished power of movement in the legs, particularly on the left side, and distinct impairment of sensation, also more marked on the left side. The reflexes were increased and there was difficulty in urination and defecation. A diagnosis was made of syphilitic leptomeningitis, which yielded promptly to specific treatment. Two years later weakness of the legs appeared that increased to almost complete paraplegia. There was retention of urine and obstinate constipation. All the reflexes were exaggerated. There was diminution of sensation to touch, and pain, but hyperesthesia over the abdomen. There was severe pain in the back, extending forward and giving rise to a girdle-sensation about the thorax. A diagnosis of syphilitic leptomeningitis and myelitis was made and mercurial inunctions at once instituted. Twelve days later the symptoms of meningitis had disappeared, but there was still considerable paresis, with exaggeration of the reflexes and diminution of tactile sensation. These symptoms gradually disappeared, and finally the patient was discharged, completely cured. The lesion was located in the lower part of the lumbar region of the spinal cord. Although no other symptoms of syphilis could be detected it is believed that the diagnosis is justified on account of the gradual increase of the paralysis in the lower extremities, the inequality of the signs on the two sides and the great irregularity in the areas of disturbed sensation. The diagnosis was based, however, chiefly upon the results of antisyphilitic treatment.

4.—Dreisch reports 3 cases of **paralysis of the oculomotor nerve as a sequel to measles**. The first patient was a boy, 9½ years of age, who, 11 days after recovery, noticed some difficulty in reading, which soon increased so that he was unable to read at all. Distant vision was perfect; near vision was made perfect by a convex lens of 3 D. A diagnosis was made of paralysis of accommodation, and this soon disappeared. The second patient was a girl, 8 years of age, who noticed similar symptoms 3 weeks after an attack of measles. The third patient was a boy of 14, who noticed the first symptoms 5 weeks after the disease. They commenced with vomiting, chills and then diplopia. When examined he was found to have marked ptosis, incomplete paralysis of the internus, superior, inferior recti and the inferior oblique. Recovery occurred in 3 weeks. Dreisch admits that it is impossible to say how these changes occur. He does not believe, however, that they are due to the late influence upon the nervous tissue of a toxin circulating in the blood, particularly because similar paralyzes occurring in diphtheria are not prevented by injections of serum. He is inclined to locate the lesion in the peripheral nerves on account of its occasional exquisite localization to a single branch.

5.—Henssen reports the case of a miner who was crushed between a mine-car and a door. He immediately noticed dyspnea, but soon recovered and continued at work for 3 hours. On the following day difficulty in breathing was more marked and the man was cyanotic. Examination disclosed the presence of a pleural effusion on the right side. About 6 cu. cm. of a milk-like fluid were aspirated that contained fat, sugar and leukocytes. Two days later an effusion also was discovered on the left side, and similar fluid was withdrawn. Henssen states that this is the first case of **bilateral traumatic chylothorax** that has been described.

6.—Barnick reports 2 additional cases of **leukemia** in which the **trachea** was found **infiltrated**. The first pa-



tient, a woman 30 years of age, had typical leukemia, with marked leukocytosis, and she died in collapse. At the autopsy there was found a general lymphatic hyperplasia, some thickening of the mucous membrane of the large intestine and a persistent thymus. Upon the mucous membrane of the larynx were some yellowish-white nodules. Microscopically there was found a leukocytic infiltration between the epithelial cells and in the submucosa, with here and there the formation of small leukemic nodes. The second patient, a man 60 years of age, presented hemorrhagic symptoms. At the autopsy the tissues were found very anemic, and there was some fatty degeneration of the heart. The mucous membrane of the larynx was pale, thickened and granular. In the middle of the vocal band was a hemorrhagic ulcer. Numerous nodules were found in the mucous membrane of the trachea. Microscopically the chief accumulation of leukocytes was found in the submucosa, particularly in those situations in which there are normally a considerable number of glands. In the right vocal band the squamous epithelium was absent in the region of the ulcer, and the lymphoid nodules were everywhere surrounded by hemorrhagic extravasation. There was considerable epithelial desquamation in the trachea; and the nodules were formed almost exclusively of leukocytes. These laryngeal changes are usually of little clinical importance, partly because they are overshadowed by the more serious general symptoms. Nevertheless, as they may be readily mistaken for other conditions, it is important to recognize that they exist. It is impossible to distinguish them from the changes that occur in pseudo-leukemia. They may also be mistaken for lymphosarcomatosis, from which they may be distinguished by the involvement, in the latter condition, of the retrolaryngeal space, the tonsil, and the base of the tongue. Moreover, the mucosa is rarely involved until late in the course of the disease, when there is, however, a considerable tendency to ulceration. Less difficulty attends the differentiation from tuberculous infiltration. In this condition the swollen parts are usually reddened, the tumors are denser and microscopically giant-cells may be found. In the leukemic nodules there is very little tendency to degenerative changes, such as are found almost invariably in the tuberculous nodule. A few cases have been reported in which the leukocytic infiltration caused dyspnea and necessitated tracheotomy.

May 24, 1898. [45. Jahrg., No. 21.]

1. Operative Removal of Fibromata at the Base of the Skull, with a Report of Two Cases Operated on by a New Method. MAX JORDAN.
2. Operation for Hard Polypi at the Base of the Skull (Fibromata or Fibrosarcomata). HOPMANN.
3. Some Considerations Upon Cesarean Section. CARL EVERKE.
4. A Case of Bilateral Chancre of the Eyelids. JOSEF HELBRON.

1.—Jordan has employed in two cases a modification of previously described methods for the removal of **fibromata from the base of the skull**. The special advantage claimed for this method is the greater accessibility of the growth. The operation consists in a combined resection of a portion of the superior maxilla and nose, the flap composed of the latter structures being displaced to the right. The inferior incision extends from the right ala of the nose to the middle of the malar bone, the superior incision from the minor canthus of the right eye, along the inferior orbital ridge to the frontal process of the malar bone. The terminus of each incision is united by a third, bow-shaped incision. The nasal bones and septum and the superior maxilla are divided with chisel and saw and the whole mass is temporarily displaced to the right. The growth, now easy of access, is removed without difficulty; hemorrhage is controlled with the thermocautery; and the entire wound is packed with iodoform-gauze.

2.—Hopmann classifies **nasal polypi** according to the absence or presence of glandular elements; the one class he designates as soft, edematous fibromata, the other as mucous polypi or adenomata. As for the surgical treatment of these fibromata of the base of the skull, it is quite possible to gain access to the growths at one operation, without any preliminary steps, by resection of either the nose or the superior

maxilla. This direct method of attack is the most expeditious, and, though attended with considerable loss of blood, is followed by a rapid convalescence.

3.—The patient, a primipara, was in labor, and the indications for **Cesarean section** were marked. But a few minutes before she was prepared for operation it was quite evident that the fetus was alive; 5 minutes later, however, the woman was delivered by a Cesarean section of a dead fetus. The uterus was not removed, as the patient wished to be delivered of a living child. At the expiration of a year, she again presented herself in the ninth month of pregnancy. After the onset of labor Cesarean operation was performed and a living child delivered. It was intended to close the wound, leaving the uterus in place, but the latter being so atonic and failing to contract, a formal hysterectomy was performed to control hemorrhage.

4.—A large number of chancres of the eyelids have been reported during the last decade, but a **chancre of each eyelid** is exceptional, there being only 7 authentic cases of the kind. The disease was transmitted from an individual with mucous patches in the mouth.

### Wiener klinische Wochenschrift.

May 12, 1898. [11. Jahrg., No. 19.]

1. Ankylostomiasis. HUGO GOLDMANN.
2. A Contribution to the Knowledge of Myogenic Trismus. FRIEDRICH V. FRIEDLÄNDER.
3. Facial Tetanus Healed with Behring's Antitoxin. SIGMUND ERDHEIM.
4. Aphoristic Remarks upon an Eventual Discussion as to Permanent Cures of Carcinomata. ALEX. FRAENKEL.
5. The Necessity for Legislative Prophylaxis of Tuberculosis. ST. BULIKOWSKI.

1.—As physician to a coal-mine, Goldmann has frequently been called upon to treat cases of **severe anemia** that proved to be due to the presence of **ankylostoma duodenale**. The symptoms are those of profound anemia or chlorosis, leading in some cases to retinal hemorrhages and venous murmurs. Examination of the blood usually shows, in addition to the paleness and diminution in the red cells, a considerable increase of the white cells. The hemoglobin is always diminished out of proportion to the reduction of the erythrocytes. Stained preparations show usually marked eosinophilosis. Microscopic examination of the feces commonly discloses the presence of numerous eggs, and if a drastic purgative has been employed, often larvæ in all stages of development. The eggs are oval, have a chitinous capsule, and may be more or less completely segmented, or even contain moving larvæ. Charcot-Leyden crystals are also frequently present. If the feces are kept for 48 hours in a warm place, the larvæ develop and in this way the diagnosis can be made certain. Infection takes place always through the mouth, and the opportunities that occur in uncleanly conditions that exist in mines are only too frequent. It seems almost impossible to persuade the miners to observe any of the hygienic rules that have been prescribed. They constantly carry food into the workings, and very rarely perform sufficient ablutions. Among the drugs that Goldmann has employed, the most useful is perhaps thymol. This may be given in doses of as much as 10 grams per day until 20 grams have been given, and should then be followed by castor-oil. Santonin, and black copper oxid, are practically useless, although the latter seems to improve the general condition. Extract of male fern is nearly always efficient, and may be given even to debilitated persons in doses of as much as 15 grams in 3 hours, preceded and followed by calomel. The treatment of the anemia is sometimes very difficult, but consists essentially in the administration of iron, arsenic and phosphorus. The popular remedies, particularly wormwood and petroleum, have only injurious effects. The most frequent sequel is gastric ulcer. Among the conditions that favor dissemination and general infection is the presence of rats and horses in the mine, and more particularly in regard to the spreading of the epidemic, the tendency that miners have to travel from place to place.

2.—Friedländer reports the case of a girl, 19 years of age, who 2 years before coming under observation had noticed a tumor in the left masseteric region. This increased very gradually in size, but was never painful. It moved freely



with the lower jaw, and did not appear to interfere in the least with chewing. It was removed and found to be an osteoma. After the wound healed there was some difficulty in opening the mouth. Later a small tumor appeared on the right foot, which was also removed. A short time after this, the patient found it impossible to open the mouth at all. When examined both temporal regions were found to be rather fuller than normal, and upon palpation, instead of presenting the ordinary muscular resistance they were found to be extremely hard. An incision was made in order to remove the supposed osteoma, but nothing was found except a slightly swollen and extremely hard muscle. This was incised without relief and then finally removed. Macroscopically the muscle was extremely hard, but otherwise appeared to be normal. Microscopically it was found that the muscle-cells were separated by a fibrous non-vascular tissue, and had almost totally disappeared. Toward the posterior portion of the muscle, the fibers were replaced in part by fatty tissue. A certain amount of bony tissue was also found in the muscular substance. The condition therefore represents fibrous degeneration with partial ossification of the muscle, and has been named by Münchmayer progressive ossifying myositis. The only treatment is operation.

**3.**—Erdheim reports 2 cases of **facial tetanus**. The first patient apparently infected himself by scratching a small ulcer upon the cheek. After a period of incubation of about 13 days, the spasm commenced in the right masseter muscle and there was slight paralysis of the left cheek. The same day 500 units of tetanus-antitoxin were injected intravenously. General spasm, however, reappeared and on the following day death occurred. The diagnosis was confirmed by inoculating 2 mice with some of the scab removed from the wound. The second patient wounded himself with a plough and remained well for 6 days, when severe trismus developed. Later in the same day there was general spasm and immediately 500 antitoxin-units were injected subcutaneously. There was no improvement, and death followed in the course of an hour and a half. In both cases the serum was used only after the development of typical symptoms. Erdheim has collected the cases of tetanus that have been treated with Behring's serum and finds that there were 11 deaths and 11 recoveries. Although his own results were unfavorable, he expresses himself as not opposed to the serum-therapy.

**5.**—Bulikowski calls attention to the urgent need of the introduction of adequate **prophylactic measures against pulmonary tuberculosis**. He reviews the suggestions of others and the laws that have already been introduced into other countries, and reaches the following conclusions: 1. There should be careful official supervision of cattle and some adequate system of investigating milk; probably, the usual test-inoculations of cows. 2. A method of investigating meat for tuberculosis. 3. The same control should be exercised over persons suffering from tuberculosis as is exercised over those suffering from other contagious diseases, such as smallpox. 4. The introduction of sanitary measures in all public places, such as churches, schools, barracks, etc., and the obligatory use of spit-cups. Finally the segregation of tuberculous patients is commended—at least they should be placed in separate wards in general hospitals; and the construction of climatic sanatoria is also advocated.

May 19, 1898. [11. Jahrg., No. 20.]

1. Further Communication Concerning the Demonstration of Protozoa in Cases of Leukemia. M. LÖWIT.
2. Some Relations between Neuroses and Local Diseases. MAXIMILIAN STERNBERG.
3. Renal Symptoms in Connection with Constipation and Intestinal Colic. G. KOBLER.

**1.**—An experienced hematologist states in this, his second paper on the subject, that he has found a **sporozoon** in all cases of **leukemia**—16—so far examined. Of these cases 11 were examples of mixed leukemia, and in them the sporozoa were found in the leukocytes or lying against them or free in the plasma, as well as, and usually in greater number, in the blood-forming organs, particularly the bone-marrow. In cases of pure lymphemia the parasites are not found in the circulating blood, but only in the hemopoietic organs. Whether this is indicative of a difference in species of the hemameba of leukemia, Löwit is unable to decide,

but he is inclined to a belief in the identity of the sporozoa. In a case of infantile pseudoleukemic anemia few amebæ were found in the circulating blood, but many in the splenic pulp, and they resembled closely those found in the leukemia of adults. In the lymph-glands and bone-marrow of this case the ameba could not be demonstrated. Culture-experiments have so far been nugatory, but there is some promise of success in animal inoculations.

**2.**—**Local affections and general neuroses** may be related or combined in several ways: (1) A local disease may be the cause of a general neurosis; (2) A general neurosis may give rise to local symptoms; (3) A general neurosis and a local disease may coexist and be coordinated, although they are rarely independent, but mutually influence each other. Two groups of cases can be recognized: (1) One in which the combination of neurosis and local disease is only apparent, the local symptoms being manifestations of a general psychoneurosis, *e. g.*, the hysteric joint (*Gelenkneurose*). In the toxic neuroses local affections are often complained of that are based upon the nervous derangement induced by the drug. In this connection an interesting case of cocaineism is reported in which the patient had acquired the habit of irrigating his bladder with a solution of cocain. In three years he had used nearly a pound of cocain. When the drug was withdrawn the cystitis which had led to the habit disappeared. (2) The second group is constituted by cases in which an indubitable local affection is combined with a general neurosis. In such cases the treatment will depend on the relative importance of the two affections, and sometimes it is best to remove the local condition, at others to treat the general disease. Several examples are given to illustrate this topic—the toothache of pregnant women, the pharyngeal troubles of the climacteric that are often associated with acroparesthesia, floating kidney, diseases of the sexual organs and the attendant neurasthenic phenomena, etc. The question in all of these cases is the one already mentioned, to which feature the treatment should be directed. In the first place, Sternberg cautions against informing the patient of any local affection that may be present, particularly in the case of floating kidney. If an operative procedure is absolutely necessary, it should be done promptly, and, preferably, at one sitting. If the indication for operation is not urgent, the question arises whether the complaints are chiefly motor or sensory. In the former case operative measures, with their power of suggestion, may be crowned with success. If the symptoms are mainly sensory, it is best to ignore the local disease. If pain is present, it is best to treat the affected parts by stretching, after the method of Naegeli. From nephrorrhaphy and nephropexy in floating kidney Sternberg has seen no permanent results.

**3.**—The well-known association of urinary symptoms—albuminuria and cylindruria—with choleraic affections, suggested to Kobler a study of the urine in the opposite condition of intestinal functions, and he found in cases of obstinate **constipation** associated with painful colic always **cylindroids**, often **casts** and **albumin** and **renal cells**. This fact lessens the value of albuminuria and cylindruria as symptoms of strangulation of the bowel. As to the cause of the acute renal degeneration—which, if there was no previous nephritis, always subsides—Kobler thinks that the acute pain, causing a reflex contraction of the renal vessels, is the chief factor.

D. S. Hanson (*Cleveland Jour. of Med.*, June, 1898) reports several cases of **scarlet fever treated with the full bath** according to the method suggested by Rotch. In cases in which the temperature ranges above 102.5° F. the bath is used at a temperature of 90° F., constant friction being made to draw the blood to the skin. About 8 minutes constitute the time necessary, and after drying quickly the child is wrapped in a blanket and put in bed. General medication is entirely superseded by the bath. A washtub may be used in case a suitable bathtub is not at hand. The best results were obtained in cases in which the treatment was begun early, and it is specially useful for the relief of nervous symptoms. Hanson believes that if this treatment were put into general use and systematically employed many lives might be saved and many direful complications and sequelæ averted.



## Original Articles.

INFANTILE SCURVY IN NORTH AMERICA.<sup>1</sup>

By J. P. CROZER GRIFFITH, M.D.,  
of Philadelphia;

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THE subject of infantile scurvy has so recently come into prominence, and still presents so many mooted questions, especially regarding its etiology, that it was the decision of the American Pediatric Society a year ago to undertake a collective investigation of the matter, based upon the cases occurring in America. This seemed particularly needed, as no other such study upon a large number of cases has yet been made in any country.

The committee, which is now making its report, was accordingly appointed. It has been diligently at work during nearly a year, and has used every means in its power to reach reports of cases of the disease. A list as accurate as possible was prepared of all the medical journals of North America, and a notice of the proposed investigation was sent to each, inviting correspondence on the part of all readers. Letters were sent to the secretaries of the county societies in a large number of the States of the Union requesting that notice be given at the meetings. Letters were also addressed to the professors of diseases of children in all the regular medical colleges of the United States. The *Index Medicus* was searched for the names of those who had published reports of cases, and letters were addressed to all of them, as indeed to all physicians of whom even the rumor had come of probable cases under their charge. Circulars were printed containing questions to be answered, and were sent to all the members of the American Pediatric Society, to all physicians applying for them, and finally wherever there seemed any chance of getting a response.

The questions contained in the circular requested information on the following points: Whether the case was seen in hospital or private practice; the race, sex, and age; the hygienic surroundings, family-history, and previous illnesses; full details of feeding from birth, and the influence which the food appeared to have had upon the development of the disease; the symptoms in detail, with special reference to pain and its location, apparent paralysis or inability to move, swellings, fractures, hemorrhages, the condition of the gums, the presence of fever, the condition of the urine and bowels, the presence of anemia or malnutrition and of rickets or any other complicating diseases, and the character of the first symptom to develop, the treatment

in detail, with duration of illness, and the time before decided improvement was discovered; the direct cause of death in fatal cases, and the post-mortem findings; and finally, whether the case had been published previously.

The committee has been surprised and pleased at the large number of replies received. There are other cases of which it has knowledge of which no reports could be obtained, and, undoubtedly, many more whose existence was not discovered. But in all the committee has collected 379 cases seen by 138 observers. Some of the cases are very incompletely reported, but in the majority of instances the answers are for the most part satisfactory. No cases needed to be excluded as instances of mistaken diagnosis, although a very few were somewhat doubtful.

The topics covered by the questions can best be taken up for the most part *seriatim*, stating merely what the reports state, without vouching for the correctness of opinions.

**RACE.**—The race to which the subjects of the disease belong is stated in 372 cases. It is not given with definiteness sufficiently often to allow of an analysis further than to say that there were 367 white, 4 black and 1 Chinese.

**SEX.**—Sex shows out of 372 cases, 189 male, *i. e.*, 51%; and 183 female, *i. e.*, 49%; a difference not decided enough to indicate that sex is an etiologic factor. In the remaining cases the sex is not mentioned.

**AGE.**—Age is a very important matter. Although, strictly speaking, the age of the cases of infantile scurvy should be limited to those under two years, the committee has ventured to include a few in children slightly or decidedly older than this; since the etiology and symptoms are not different in any respect. Question IV on the circular reads: "Age when Seen with Scurvy," while XIV reads: "Duration of Illness before Treatment was Commenced." By combining the answers to these two questions, the age at which the illness developed could be determined in most instances. Reliable information was given in 359 cases; in the remaining number the age was unknown or was not stated. The accompanying tabular arrangement shows the number of cases developing at different ages:

AGE WHEN SCURVY DEVELOPED.

AGE.	NO. OF CASES.	PER- CENTAGE.	AGE	NO. OF CASES.	PER- CENTAGE.
3 weeks.	1	.27	16 months.	7	1.70
1 1/4 months,	1	.27	"	1	1.67
2 "	1	.83	"	1	1.70
3 "	2	.55	"	4	1.11
4 "	9	2.50	"	2	.55
5 "	5	1.40	"	1	.27
6 "	13	3.62	"	1	.27
7 "	33	9.19	"	2	.55
8 "	41	11.42	2 years, 3 mo.	1	.27
9 "	47	13.09	"	6	1.67
10 "	51	14.20	"	7	1.87
11 "	26	7.24	"	8	2.11
12 "	25	7.11	"	1	.27
13 "	25	7.00	"	1	.27
14 "	22	6.12	"	1	.27
15 "	17	4.73	"	1	.27

It will be seen that the disease is most likely to develop between the ages of 7 and 14 months, inclusive.

<sup>1</sup> Being the Report of the American Pediatric Society's Collective Investigation presented at the Tenth Annual Meeting at Cincinnati, June 2, 1898.

The youngest case was that reported by Dr. A. Matheson, of Neillsville, Wis. This was a child of 4 weeks that had already been ill 5 days when first seen. The infant was fed at the breast. Its hygienic surroundings were poor. The disease exhibited perfectly typical symptoms and ended fatally. The oldest child, reported by Dr. J. H. Fruitnight, was one of 9 years, and was also a typical case, rapidly recovering under dietetic treatment. The cause appeared to be improper diet.

**SOCIAL POSITION.**—Of 379 cases it is interesting to note that 83% occurred in private practice, and only 17% in hospital-practice. Although no absolute class-distinctions can be based on these figures, yet they point very positively to the greater tendency of the disease to occur among the rich or the well-to-do. This tendency is still further illustrated by the statements of the writers regarding the *hygienic surroundings* of the cases. In 303 cases these are described as good, and often the statement is volunteered that they were of the very best. In 5 they were doubtful, and in only 40 are they described as bad. The figures of the report would therefore seem to indicate that the influence of bad hygienic conditions upon the etiology of the disease is extremely limited.

**PREVIOUS HEALTH.**—Out of 285 cases suitable for study, it is distinctly stated in 167 that the previous health had been good. In 118 the child had suffered from various diseased conditions which may be enumerated as follows:

Bronchitis, 5; chickenpox, 1; constipation, 1; convulsions, 3; cretinism, 1; diarrheal conditions, 45; eczema, 1; furunculosis, 1; indigestion, 22; influenza, 6; malaria, 1; measles, 7; pneumonia, 5; rheumatism, 1; scurvy (previous attack), 1; scrofulous diathesis, 1; typhoid fever, 1; whooping-cough, 2.

It is evident that the occurrence of most of these diseases can only be considered as accidental. There is a striking preponderance of instances of digestive disturbance. This probably is an indication that the faulty diet which occasioned the scurvy produced the indigestion also. It is no proof that the digestive disease itself bore any etiologic relation to the constitutional affection. This is clearly the view of the correspondents, for, in answer to the question of the circular, a belief in any other cause than diet is expressed in only 24 instances.

Rickets, anemia, and malnutrition are not mentioned in the foregoing list. They will be referred to later.

Attention may be called to the instance of a second attack of scurvy reported by Dr. L. E. Holt. The child was 18 months of age at the time of the second attack, the previous one having developed 4 months before. The first attack followed the use of Mellin's food and sterilized milk. Recovery followed in a week upon a diet of sterilized milk and beef-juice, no fruit-juice being given. The second attack followed the use of Reed & Carnrick's soluble food. The patient in this

attack was in a wretched condition and died in 8 days. The case of scurvy developing in a cretin, reported by Dr. A. Caillé is also interesting. The child was a typical cretin of 14 months. Scurvy followed the use of condensed milk. Recovery was very prompt under the administration of sterilized milk, fruit-juice and cereals.

**FAMILY HISTORY.**—This too appears to exert little or no influence. In 129 cases the family-history is stated to have been good, and in 97 it is negative. In 74 the following diseases are mentioned in the family:

Alcoholism, 2; anemia, 2; asthma, 1; carcinoma, 1; caries of spine, 1; diarrhea, 1; eczema, 1; gout, 2; neurotic tendency, 6; paresis, 1; pneumonia, 1; rheumatism, 16; sciatica, 1; scurvy, 1; syphilis, 7; tuberculosis, 29; uricacidemia, 1.

**DIET.**—The most important etiologic factor, according to general opinion, is a dietetic one. Consequently, the committee has paid particular attention to this point. When correspondents did not make the matter quite clear in their answers, personal letters were addressed to them, asking for further information. A large number of such letters have been written, and replies received in most instances. Full details were asked regarding diet from birth onward, and the question of food used at the time the scurvy developed, or so shortly before that it might seem to be associated with it, was particularly emphasized. The question was also asked, whether in the opinion of each correspondent there was reason to believe that the disease depended on the nature of the food used. An affirmative answer was received in 275 cases; negative, and the disease attributed to other causes, in 24. The committee is not in a position to judge of the correctness of this view, nor can it claim that the disease *did* arise in any instance as the result of the diet employed. It would make merely the following statements of the food employed at or shortly before the symptoms of scurvy were observed according to the reporters' replies.

Any accurate percentage-analysis of the report is impossible, both because the correspondents have not always stated the exact nature of the food, and because in very many instances more than one form of food was given. Perhaps the following summary of some of the main divisions may be of value, remembering, however, that cases are repeatedly counted twice; *e. g.*, one case may be counted in the condensed-milk class and again in the sterilized-milk division.

**FOOD USED AT OR SHORTLY BEFORE SCURVY DEVELOPED.**—The number of cases in which the character of the food is specified is 356.

The food given was as follows:—

**Breast-milk.**—Alone, 10; with raw milk and amylaceæ, 1; with sterilized milk and amylaceæ, 1; total, 12.

**Raw Milk.**—Alone, 4; with breast-milk and amylaceæ, 1; total, 5.



*Milk* (nothing said about heating).—Alone, 8; peptonized, 4; with amylaceæ, 4; total, 16.

*Sterilized Milk*.—Alone, 68; with proprietary foods, 21; with amylaceæ, 8; peptonized, 10; total, 107.

*Pasteurized Milk*.—Alone, 16; with proprietary foods, 2; with amylaceæ, 1; peptonized, 1; total, 20.

*Peptonized Milk*.—Nothing further stated, 3; sterilized, 8; pasteurized, 1; with proprietary foods, 1; with amylaceæ, 1; total, 14.

*Amylaceous Food* (not proprietary).—Alone, 6; with breast-milk, 3; with milk, 5; with sterilized milk, 8; with pasteurized milk, 1; with peptonized milk, 1; total, 24. (Nine of these were oatmeal.)

*Table Food*.—Nothing else mentioned, 11; with condensed milk, 1; total, 12.

*Mellin's Food*.—Nothing further stated, 42; with condensed milk, 22; with sterilized milk, 16; with pasteurized milk, 2; with other proprietary food, 1; total, 83.

*Malted Milk*.—Nothing further stated, 44; with cream, 1; with amylaceæ, 1; with other proprietary foods, 2; total, 48.

*Condensed Milk*.—Alone, 32; with milk, 1; with cream, 1; with other proprietary foods, 3; with table food, 1; total, 38.

*Reed & Carnrick's Soluble Food*.—13.

*Imperial Granum*.—6.

*Liebig's Food*.—Alone, 1; with condensed milk, 1; total, 2.

*Lactated Food*.—Alone, 3; with condensed milk, 1; total, 4.

*Nestle's Food*.—Alone, 1; with sterilized peptonized milk, 1; total, 2.

Among other articles of diet mentioned by correspondents, each in one instance, are: Gardner's food, Robinson's barley, Ridge's food, Brush's food, animal broths, Bartlett's pepsinated food, Lactopræparata with Malted milk.

There are a number of instances in which the writers mention "proprietary foods" without further designation. In all 214 cases (60%) were fed on proprietary foods.

The effect of dietetic treatment has such an important bearing upon the etiologic influence of diet that the whole matter will be discussed more fully under the head of Treatment.

**SYMPTOMS.**—The symptoms in infantile scurvy are so typical and well known that they would appear to need little further study. Nevertheless, the attention that has been directed to them by the questions of the circular has not been without fruit.

**FIRST SYMPTOM TO DEVELOP, AND ORDER AND TIME OF OTHER SYMPTOMS.**—In response to this question the answers have not been altogether satisfactory. Undoubtedly in a large number such early symptoms as anemia and malnutrition were overlooked or were not included by the readers, as symptoms for the answers

have not made it quite clear whether the correspondent intended that a certain number of symptoms developed in the order in which the names are written, or whether they all were noticed at one time. Presuming that the first is the writer's intention, we make the following statement of the first symptom seen, basing this on 327 cases. The order of symptoms is too complicated and too uncertain to warrant a statistical arrangement.

**FIRST SYMPTOMS SEEN.**—Pain and tenderness, 145; affection of gums, 42; interference with motion, 36; anemia, 27; cutaneous hemorrhages, 22; swellings, 16; restlessness, 6; anorexia, 5; debility 5; diarrhea, 5; constipation, 2; hemorrhage from nose, 1; hemorrhage from mouth, 1; hemorrhage from rectum, 1; hematuria, 3; "hematoma of tongue," 1; irritability, 3; vomiting, 1; fever, 1; opisthotonos, 1; sweating 1.

**PAIN ON MOTION OR HANDLING.**—Pain is clearly a very prominent symptom of the disease. Generally it is evident only when the child is moved, or tries to move itself. Sometimes it is so intense that the approach of anyone to the bedside is sufficient to cause the child to scream out through fear of being touched. Pain is reported present in 314 instances. In most of the remaining, no answer was made, and it is probable that the symptom could not have been a prominent one. The locality of the pain in the cases in which there were accurate details was as follows:

Legs, 120; legs and arms, 25; legs and one arm; 11; legs and body, 4; one leg, 13; one leg and one arm, 1; one arm, 1; back, 1; back and legs, 1; back and leg, 1; back and thighs, 1; thighs, 1; hips and thigh, 1; one thigh, 2; one hip, 2; knees, 1; knees and ankles, 2; knees, ankles and shoulders, 1; knees, ankles and wrists, 2; knees and arms, 1; one knee, 1; one ankle, 1; ankles, 1; ankles and feet, 1; ankles and elbows, 1; elbow, 1.

**PAIN WHEN AT REST.**—In 91 cases pain seems to have been present, even when the child was still; while in 134 it is definitely stated as absent under this condition.

**INTERFERENCE WITH MOTION.**—The symptom variously described as *paralysis*, *pseudo-paralysis* and *disability* or *unwillingness to move* is reported frequently. It probably depends in every instance upon pain, since there is no evidence that actual paralysis occurs in the disease. In 319 cases interference with motion of this nature existed.

*Rigidity* is described as present in 96 cases and absent in 106. It is due to pain in most instances, but perhaps in others may have been occasioned or increased by the presence of swelling.

The parts of the body in which motion has been interfered with in any way in the cases reported, and the locality mentioned in detail, may be enumerated as follows:

Legs, 159; legs and arms, 55; legs and one arm, 14; legs and one hand, 2; one arm, 3; legs and thighs, 1;

thighs, 3; one leg and one arm, 1; one leg, 27; one thigh, 2; hips, 1; one hip, 2; one hip and thigh, 1; one hip and knee, 3; hip, leg and shoulder, 1; hip, elbow and shoulder, 1; one knee, 4; one ankle 2; ankles, knees, hand and wrist, 1.

**POSITION OF THE LIMBS.**—To a question regarding the position of the limbs, about which Barlow speaks so definitely, there have been replies in 205 cases. In 17 of these the position was normal. In the balance we find the position of the limbs as follows:

Flexed, 152; extended, 23; flexed and abducted, 1; flexed and adducted, 1; flexed and everted, 1; abducted, 1; everted, 3; everted and extended, 2; toes extended, 1; feet extended, 3.

**WEAKNESS OF THE BACK.**—The occurrence of weakness of the back, a symptom which Barlow says is marked, is mentioned as present in 97 of the cases reported to the committee and as absent in 108. In the remaining nothing is said of it.

**DEPRESSION OF THE STERNUM.**—This condition is likewise emphasized by Barlow as being sometimes striking and characteristic. It is mentioned in 34 cases, but said to be absent in 170 others. It is not certain in the cases of the report how frequently the condition had developed acutely as a result of scurvy, and how often it had already been produced by a previously existing rachitis.

**SWELLINGS.**—The effort has been made by analyzing the cases collected to determine the position of local swellings, whether these were situated in the joints or the shafts of the limbs, in the soft tissues or in the bones, and whether any redness was present. The answers are not clear in every instance, and are frequently somewhat contradictory, partly, perhaps, from failure of the observer to understand the question, and partly from lack of careful discrimination between subperiosteal and other effusions, and between effusion into a joint and that about it. The great irregularity also of the distribution of the swelling renders an accurate tabular arrangement too complicated. Remembering that in many cases more than one part of the body was involved and that the figures given do not mean that only the portion mentioned is affected in these cases, the following division may be made:

Joints (or probably oftener about joints) involved in 165 cases. Location given in 101; viz:

Knees, 73; ankles, 28; wrists, 12; hand, 1; elbow, 3; shoulder, 5; hip, 6.

Shafts of limbs involved in 179 cases. Location given in 123; viz:

Thighs, 59; legs (below knee), 61; "legs" (not further stated), 11; forearm, 5; upper arm, 4; "arm," 5; ribs, 1; scapula, 1; ilium, 1.

The gross results of the answers regarding the tissues in which the swelling occurred give:

Swelling in soft tissues, 97.

Swelling in subperiosteal tissues, 114.

Swelling in both situations, 16.

In 69 cases the swollen parts were reddened also. It is stated that there was no redness in 121. A more general swelling, to be classified rather as edema, is described in 68 cases and stated to be absent in 98.

In regard to the swelling or protrusion of one or both eyes which has been described by writers, the symptom is said to have been absent in 110 cases and is reported present in 49. In 9 of these swelling only is mentioned, in 18 protrusion only, and in 22 both are referred to.

**GUMS.**—The condition of the gums and mouth is one of extreme interest. In 16 cases it is distinctly stated that the gums were entirely unaffected, while in 313 they were diseased. The degree of involvement varies from slight swelling to great sponginess and even ulceration. The degree and form of the affection in the cases suitable for study may be seen in the following table:

Swelling, absent, 14; present, 293.

Sponginess, absent, 27; present, 249.

Discoloration, absent, 23; present, 259.

Bleeding, absent, 64; present, 188.

Ulceration, absent, 101; present, 91.

The relation of the affection of the gums to the presence of teeth is of much interest. In nearly all the cases of scurvy in this report teeth were present, but what influence this has is not quite clear, as experience teaches that curiously it is usually the gums of the upper jaw which are most affected, although the lower teeth naturally are the first cut. Statistics on the portion of the gums involved were not furnished sufficiently to allow of conclusions; but regarding the teeth it is to be noted that of 359 cases suitable for comparison, teeth had already appeared in 314 instances, *i.e.*, 87.5%; while in only 45 cases, *i.e.*, 12.5%, were there no teeth. In studying more carefully these 45 cases of scurvy without teeth, we may make the following analysis:

No teeth; gums normal, 21 cases.

No teeth; gums affected, 24 cases.

The conditions present in the latter group were as follows:

Swelling, 19 cases; sponginess, 14 cases; bleeding, 5 cases; discoloration, 17 cases; ulceration, 4 cases.

This is a proof that affection of the gums may occur equally well when there are no teeth as when teeth have developed. The fact that in the great majority of cases of infantile scurvy the presence of teeth and the affection of the gums is associated, depends merely on the fact that the disease generally develops at an age when teeth naturally have been cut.

**CUTANEOUS HEMORRHAGES.**—These have occurred with frequency in the cases reported. Accurate data are given in 353 cases. Of these, cutaneous hemorrhage is reported present in 182 and absent in 171. There is much doubt about the accuracy of the writers



in their classification of the hemorrhages according to size, and to the proper use by them of the descriptive names employed, inasmuch as the question on this point did not specify clearly. In 99 instances the presence of "ecchymoses" is mentioned. In 83 "purpuric eruption" is reported and in 37 "petechiæ." In 13 the nature of the lesion is not specified.

**HEMORRHAGE FROM MUCOUS MEMBRANES.**—Data are available in 361 cases. Of these there were no hemorrhages from any mucous membrane in 196, while in 164 they occurred. In 93 cases there was hemorrhage from the mouth. This includes the cases where bleeding from the gums is described by writers. In 33 cases there was bleeding from the nose; in 2 from the stomach, and in 37 from the bowels. Cases of hematuria are not included here, and will be referred to later.

**FRACTURES.**—Fractures in infantile scurvy are usually separations of the epiphyses merely. Even this would seem to be rare, for fracture of any kind is mentioned in only 9 of our cases. In 342 it is distinctly stated to have been absent, and in the remaining the question is not answered.

**FEVER.**—Probably in the majority of the cases of the disease upon which this report is based no temperature-record has been made. In 93 cases it is stated that there was no fever; in 182 it was present and in the remaining no answer is given. In the cases where present it is described as slight in 116 instances, moderate in 23, high in 8, and irregular in 6. Clearly, fever is not a prominent symptom of the disease, and probably often, when present, depends on accidental causes.

**BOWEL-MOVEMENTS.**—The following conditions are mentioned:

- Bowels regular, 74.
- Bowels irregular, 15.
- Constipation, 126.
- Diarrhea, 65.
- Bloody diarrhea, 12.

**URINE.**—Judging from the number of instances in which no answers have been returned, no examination of the urine has been made in most of the cases. It is reported as examined for albumin in 163 cases; in 33 of these albuminuria is reported and in 130 it was absent. Tube-casts were present in 13 instances, absent in 13, and no observation reported in the others.

Properly speaking the occurrence of hematuria should be discussed under the title of hemorrhage. It is mentioned as present in 22 cases only. Of other abnormal conditions of the urine the following may be mentioned: Urine very acid, 1; urine scanty, 9; urine suppressed, 1; urine increased in quantity, 3; glycosuria, 1; hemoglobinuria, 1; pus (from cystitis), 1; phosphates increased, 1; chlorids increased, 1.

**ANEMIA; MALNUTRITION.**—These conditions, already referred to as often the earliest symptoms of infantile scurvy, may have been the first evidences of the disease in many of the cases on which this report is based. In

other cases they must be regarded as complicating affections only. Answers are not full enough to allow of satisfactory conclusions on this point.

Anemia is said to have been present in 254 cases, as follows:

- Anemia present (without specifying degree), 47.
- Anemia slight, 66.
- Anemia moderate, 32.
- Anemia marked, 109.

Blood-examinations were made in 15 cases and the conditions noted as follows: The percentage of hemoglobin was much reduced in all the cases, 8 in number, in which an examination was made, some being as low as 35%. Of the 7 cases in which the red blood-corpuscles were counted, all showed a reduction except 2. In these 2 the number was normal or nearly so, but the hemoglobin was 50 and 35% respectively. Leukocytosis was present in 5 cases; poikilocytosis in 2. In only one instance was there a differential count of the leukocytes made.

Of 217 cases in which the question is answered, *emaciation* is recorded in 167, and is said to have been absent in 50.

*Malnutrition* was observed in 178 cases out of 216, in which replies were made as follows:

Malnutrition present (without specifying degree), 108; slight, 20; moderate, 7; marked, 43.

**RICKETS.**—Infantile scurvy has so often been described as "scurvy rickets" and "acute rickets," that the investigation of the actual relationship of the two diseases was one of the matters to which the committee directed especial attention. The question upon the circular reads as follows: (a) "Any symptoms of rickets present? (b) Slight or well-marked? (c) What relation in time of development did they bear to the scurvy?" Satisfactory answers were received in 340 cases; in 152 of these (45%) there were symptoms of rickets present, slight in 72, marked in 64, and the degree not mentioned in 16. In the remaining cases (55%), rickets is definitely stated to have been absent. With regard to the relation in time of development, it is stated in 50 cases that the rickets was first present; in 14 that it developed with the scurvy, and in 2 after it. There does not seem to be evidence, as far as this investigation teaches, that the association of rickets and scurvy is at all intimate. Very possibly the same defect in diet which produced the one produced the other also, but the rapid recovery under treatment which the scurvy underwent did not apply to the rickets. This seems to indicate only accidental association of the two diseases; certainly not any causal relation between them.

**OTHER COMPLICATING CONDITIONS.**—A variety of affections are mentioned complicating scurvy in a number of cases, as follows:

- Bronchitis, 5; cretinism, 1; enlargement of inguinal glands, 1; "cerebral symptoms," 1; convulsions, 1; pneumonia, 2; boils, 1; irritability, 1; vomiting, 4;

eczema, 2; enuresis, 1; sweating of the head, 1; tympanites, 1; caput medusae, 1; diaphoresis, 1; pertussis, 2; insomnia, 1; anorexia, 2; post-nasal discharge, 1; measles, 1; restlessness, 1; phimosis, 1; indigestion, 2; laryngismus stridulus, 1; cystitis, 1.

**DIAGNOSIS.**—The study of diagnosis has been only incidental, based upon the mistakes made before the disease was recognized in certain cases. The only disease for which infantile scurvy was repeatedly taken appears to have been rheumatism. In several instances the affection of the legs was supposed to be due to sarcoma. The apparent paralytic condition has also been the cause of error in some instances.

**DURATION OF ILLNESS AND PROGNOSIS.**—The disease is essentially chronic, its course terminating only on the institution of proper treatment. This seems to be proved by the answers contained in the circulars. To the question concerning the *duration of the disease before the case came under observation*, replies were received in 306 cases, of which the following analysis may be made:

**DURATION OF DISEASE BEFORE TREATMENT WAS COMMENCED.**

DAYS.	CASES.	WEEKS.	CASES.	MONTHS.	CASES.
2	3	1	15	1	18
3	3	2	33	2	42
5	2	3	58	3	31
8	1	4	22	4	14
9	1	5	8	5	4
10	3	6	29	6	7
24	1	7	6	7	2
		8	1	10	1
		10	3	12	1
				2½ yrs.	1

Intensely interesting in this connection are the replies to the next two questions: (1) *Duration of illness after treatment was commenced*, and (2) *Duration of treatment before marked improvement was noticed*. To the first question replies concerning 308 cases were received. Of course, those fatal during the attack of scurvy are not included here, nor those which passed from observation.

Still more striking are the answers to the second question, as to the time when marked improvement was first noticed. There are 311 cases suitable for study in this category, excluding fatal cases and those passing from observation as before. The replies are often astonishing. Nothing is more striking than the speed with which these reports show a grave constitutional disease disappearing under proper treatment. There is certainly no disease for which a more specific treatment can be said to exist. The replies to the last two questions may be conveniently stated in the following tables:

**DURATION OF TREATMENT BEFORE MARKED IMPROVEMENT WAS NOTICED.**

DAYS.	CASES.	WEEKS.	CASES.	MONTHS.	CASES.
1	19	1	47	1	6
2	58	2	27	2	4
3	46	3	8	3	4
4	26	4	1		
5	19	5	1		
6	1	6	1		
7	2				
8	2				
9	1				
10	7				
12	2				

Reported as prompt recovery, 13; at once, 15; immediate, 1.

**DURATION OF TREATMENT BEFORE RECOVERY WAS COMPLETE.**

DAYS.	CASES.	WEEKS.	CASES.	MONTHS.	CASES.
1	6	1	48	1	28
2	5	2	34	2	14
3	14	3	36	3	5
4	8	4	14	4	2
5	5	5	6	5	1
6	1	6	14	6	2
8	2	7	1	7	1
10	17			8	1
12	3			9	1
13	3				
15	2				
16	1				

Reported as immediate, 4; almost immediate, 9.

**TREATMENT.**—Not so much could be learned of the value of treatment as could be desired on account of the fact that in nearly all cases we have a combination of diet and of medicinal measures, including the use of fruit-juices, and it is impossible to determine absolutely which was the active curative agent.

Taking the cases in which treatment was effectual and which are suitable for study, the results may be stated as follows:

I.	Cases recovering under treatment with drugs only (no change in diet)	0
II.	Cases recovering under the use of fruit-juice alone (no change in diet)	3
III.	Cases recovering under the use of beef-juice alone (no change in diet)	2
IV.	Cases recovering under the use of beef-juice and fruit-juice combined, with or without drugs (no change in diet)	6
V.	Cases recovering under the combined effect of change of diet, often including beef-juice, and employment of fruit-juice, with or without drugs	257
VI.	Cases recovering under change of diet, often including beef-juice, and the use of drugs (no fruit-juice)	20
VII.	Cases recovering under change of diet alone, often including beef-juice (no fruit-juice)	38

These last two may be properly considered together, as there is no evidence that any treatment with drugs has an appreciable effect upon the disease. So many of the reported cases were treated with drugs alone without result before the correct diagnosis was made and other treatment instituted, that this belief is amply justified. Combining, therefore, divisions VI and VII, and comparing the statements of the writers regarding the diet employed during treatment and that employed when the scurvy developed, we may make the following table based upon 58 cases:

Again the committee would state that no claim is made that the recovery was the result of the change, but that it quotes merely the statements of the correspondents to the effect that recovery took place after the change was made.

**VI. AND VII.—RECOVERY FOLLOWING CHANGE IN DIET ALONE, WITH OR WITHOUT DRUGS. (NO FRUIT-JUICE EMPLOYED.)**

Mellin's food to milk and beef-juice	2
" " to raw milk and beef-juice	1
" " to modified milk	4
" " to modified milk and beef-juice	2
" " to diet and beef-juice	1
" " and sterilized milk to beef-juice and broths	1
" " and sterilized milk to sterilized milk and beef-juice	2
" " and condensed milk to modified milk	1
" " and condensed milk to raw milk	2
" " and sarcopetone to fresh milk and beef-juice	1
Condensed milk to fresh milk and beef-juice	1
" " to sterilized milk and diet	1
" " to lactated food and raw milk	1
" " to sterilized milk	1
Malted milk to milk and diet	1
" " to raw milk and beef-juice	1



Malted milk and amyloceae to modified pasteurized milk and beef juice	1
Sterilized milk to diet and beef juice	1
" " to fresh milk and beef-juice	2
" " to raw milk	1
" " to diet	6
" " to raw milk and beef-juice	1
" " to sterilized milk and beef-juice	1
" " peptonized to raw milk and beef juice	1
" " to pasteurized milk and diet	1
" " "	1
Pasteurized milk to raw milk	2
" " to fresh milk and beef-juice	1
" " to sterilized milk and broths	1
Raw milk to amyloceae	1
Breast-milk to peptonized milk and broths	1
" " to sterilized milk	1
Lactated food to raw milk and beef-juice	1
Reed & Carnrick's soluble food to modified milk	1
" " to baked potato	1
" " to beef juice	1
Imperial granum to raw milk and beef-juice	1
Patented food to diet	1
Ridge's food to diet	1
Diet poor to diet (better)	2
Bartlett's peptonized food to fresh milk	1

It must be noted with regard to this table and those following that the term "modified" milk is used very loosely by the reporters. Occasionally it is specified to be laboratory-milk, but much oftener this is not the case, and we are unable to know whether the modification was done at home or not, and whether the milk was heated or not. Presumably it was pasteurized in many instances. Where the term "fresh" milk is employed in the table, we have been unable to learn by additional correspondence whether "raw" milk is meant or whether only a change from proprietary food to cow's milk is intended. The term "diet" as employed in the tables either expresses the fact that a large and varied number of different forms of diet were tried, too complicated to be detailed, or else quotes merely the statement of the writers that a change of diet was made, the original food probably being abandoned entirely unless otherwise stated.

The following table shows the food employed in divisions I, II, III and IV, in which the diet was the same (except sometimes for the addition of beef-juice) while the scurvy was developing and while it was recovering.

#### RECOVERY FOLLOWING WITH NO CHANGE OF DIET DURING TREATMENT.

I. Treatment with drugs only	0
II. Treatment with fruit-juice only	3
Mellin's food (milk sterilized)	1
Sterilized milk	2
III. Treatment with beef-juice only	2
Sterilized milk	1
Raw milk	1
IV. Treatment with combined beef-juice and fruit-juice only	6
Sterilized milk	2
Sterilized milk and broths	2
" " amyloceae	1
Table-food	1

Division V contains by far the largest number of cases, 257 in all. The changes in diet employed are much too complicated to be stated fully in the table. Moreover, they are of little value, since the treatment was such a composite one, viz., change of diet combined with the use of fruit-juice in every case, and often of beef-juice and drugs as well. A few of the more striking classes of cases may be selected as follows:

#### V.—RECOVERY FOLLOWING CHANGE OF DIET COMBINED WITH FRUIT-JUICE, WITH OR WITHOUT DRUGS.

Condensed milk to milk, variously treated	23
Imperial granum to milk, variously treated	7

Lactopreparata to raw milk	1
Lactated food to milk	1
Reed & Carnrick's Soluble Food to milk, variously treated	3
Malted milk to milk, variously treated	8
Mellin's food to milk, variously treated	21
Mellin's food and condensed milk to milk, variously treated	19
Sterilized milk to fresh (probably always raw milk)	4
Sterilized milk to pasteurized milk	4
Pasteurized milk to "fresh" or "raw" milk	1
Pasteurized milk to sterilized milk	1
Raw milk to sterilized milk	1
Breast-milk to cow's milk, variously treated	6

The conclusions to be drawn from this combined study of etiology and of treatment seem justifiable only to the following extent:

(1) That the development of the disease follows in each case the prolonged employment of some diet unsuitable to the individual child, and that often a change of diet which at first thought would seem to be unsuitable may be followed by prompt recovery.

(2) That in spite of this fact regarding individual cases, the combined report of collected cases makes it probable that in these there were certain forms of diet which were particularly prone to be followed by the development of scurvy. First in point of numbers here are to be mentioned the various proprietary foods.

(3) In fine, that in general the cases reported seem to indicate that the farther a food is removed in character from the natural food of a child the more likely its use is to be followed by the development of scurvy.

FATAL CASES.—Twenty-nine of the 379 cases are reported to have died. In 2 of these, death seems to have been remote from the attack of scurvy. Of the remaining 27 the causes as enumerated by the reporters are as follows:

Exhaustion, 6; cerebral hemorrhage, 3; diarrhea, 2; bronchitis, 2; vomiting (?), 1; convulsions, 1; pneumonia, 4; malnutrition, 1; pulmonary hemorrhage, 1; ulcer of the stomach, 1; syncope and nephritis, 1; doubtful, 4.

It is difficult to determine in how many of these the scurvy itself could be held responsible for the death; probably in few if any.

AUTOPSIES.—There have been handed in to the committee the reports of 6 autopsies in all, some of them only partial. The salient points of each may be enumerated as follows:

Case of Dr. A. Caillé. Child of 9 months; ill about 3 months. Autopsy showed hemorrhagic spots on the pericardium and surface of the liver; subperiosteal hemorrhage of the long bones.

Case of Dr. L. E. Holt. Child of 12 months; ill for 2 months. Autopsy showed separation of the lower epiphysis from the shaft of the left femur; extensive subperiosteal hemorrhage of the left femur; subpleural hemorrhages; broncho-pneumonia.

Case of Dr. L. E. Holt. Child of 13 months; ill about 2 months. Autopsy showed subperiosteal hemorrhage and separation of the lower epiphysis of the left femur; hemorrhages into the muscles of the left thigh, swellings about the opposite knee and both ankles; knee-joints normal; minute subpleural hemorrhages; well-marked exudative nephritis; minute hemorrhages on the surface of the liver.

Case of W. P. Northrup. (The first autopsy in the United States.) Child of 18 months; ill about 1 month. Autopsy showed subperiosteal hemorrhage of both tibiae and both femora; detachment of the lower epiphysis of the left femur and maceration of lower end of shaft; broncho-pneumonia

of left lung; no rachitic or syphilitic changes on microscopic examination.

Case of Dr. L. Starr. Child 13 months; ill for 13 months. Autopsy showed "right leg from knee to ankle stuffed with a puffy mass replacing normal tissue. Separation of both bones one inch above ankle."

Case of Dr. C. W. Townsend. Child of 10 months; ill 3 or 4 weeks. Autopsy showed bloody serum in pleural cavity; perforating ulcer of the stomach; tuberculous (?) process in peritoneum.

In conclusion the committee would thank publicly their correspondents who have sent their reports of cases and who are enumerated below. They are also much indebted to Dr. Wm. Schleif, of Philadelphia, for valuable aid in analyzing the circulars received and tabulating the results.

Minority Report.

By AUGUSTUS CAILLÉ, M.D.,  
of New York.

- 1. From a study of this report and from due consideration of other known facts, scurvy appears to be a chronic ptomain-poisoning due to the absorption of toxins.
- 2. It follows the prolonged use of improper food, and abnormal intestinal fermentation is a predisposing factor.
- 3. Sterilizing, pasteurizing or cooking of milk-food is not *per se* responsible for the scurvy-condition.
- 4. A change of food and the administration of fruit-juice and treatment of any underlying cause is the rational therapeutic procedure in scurvy.

SEMI-ANNUAL REPORT OF THE LOOMIS SANITARIUM FOR CONSUMPTIVES, AT LIBERTY, SULLIVAN COUNTY, N. Y.

By J. EDWARD STUBBERT, M.D.,  
Physician in Charge.

The following report represents the work of the Loomis Sanitarium for Consumptives for the 6 months ending May 1, 1898:

Patients in Sanitarium November 1, 1897.....	78
"    admitted since    "    1,    "    .....	63
	141
Patients in Sanitarium May 1, 1898.....	54
"    discharged apparently cured.....	20
"    "    disease arrested.....	8
"    "    improved.....	33
"    "    unimproved.....	23
Deaths.....	3
	141

CONDITION OF PATIENTS WHEN ADMITTED.<sup>1</sup>

Physical signs in incipient stage, without bacilli.....	11
Incipient stage, with bacilli.....	43
Moderately advanced.....	70
Far advanced.....	17
	141

<sup>1</sup> *Incipient Stage*.—Slight localized involvement of lung, with little or no constitutional disturbances. *Moderately Advanced*.—More general consolidation of lung, with constitutional disturbances and beginning of softening, or single cavity. *Far Advanced*.—Softening and excavation, with marked constitutional disturbances.

CLASS No. 1. (Patients who remained 3 months or less.)

Condition when admitted.	Condition when discharged.
Incipient stage, without bacilli..... 6	Apparently cured..... 6
Incipient stage, with bacilli..... 11	Disease arrested..... 3
Moderately advanced..... 11	Improved..... 15
Far advanced..... 8	Unimproved..... 10
	Deaths..... 1
	36
	35

CLASS No. 2. (Patients who remained longer than 3 months.)

Condition when admitted.	Condition when discharged.
Incipient stage, without bacilli..... 3	Apparently cured..... 14
Incipient stage, with bacilli..... 13	Disease arrested..... 5
Moderately advanced..... 29	Improved..... 18
Far advanced..... 7	Unimproved..... 13
	Deaths..... 2
	52
	52

Number of patients whose sputum contained bacilli on admission.....	130
Number of patients whose sputum was free from bacilli when discharged.....	24
Number of cases in which there had been hemorrhages before admission.....	30
Number of cases in which there had been hemorrhages at the Sanitarium.....	6
Number of patients who gained in weight.....	106
Number of patients who lost in weight.....	12
Number of patients who remained stationary in weight.....	23
Average gain per week per patient	2 lbs.
Average loss per week per patient	1 lb.
Greatest monthly gain.....	14 lbs.
Greatest monthly loss.....	6 lbs.
Greatest gain for one patient.....	30 lbs.

SUMMARY OF RESULTS OF PATIENTS STILL IN THE SANITARIUM.

Bacilli disappeared in.....	5 cases.
"    decreased in.....	21    "
Cough decreased in.....	40    "
"    disappeared in.....	4    "
Physical signs improved in.....	41    "
Weight increased in.....	42    "
"    stationary in.....	9    "
"    lost in.....	3    "

By comparing these tables with those contained in my annual report of November 1, 1897,<sup>2</sup> the following increase in good results among patients discharged during these two periods will be noted: During the first year 8% of the patients discharged had lost their tubercle-bacilli; during the last 6 months, covered by the present report, 18% of those discharged had lost their bacilli. During the first year 73% of those discharged had gained in weight, while during the past 6 months 81% of those discharged had gained in weight. During the first year 13% of the patients discharged were

<sup>2</sup> PHILADELPHIA MEDICAL JOURNAL, March 12, 1898, p. 467.



apparently cured, while during the past 6 months 23% of those discharged were apparently cured; last year 10% were discharged with their disease arrested; during the last 6 months 9%.

It is interesting to note that of those patients discharged after a residence of 3 months or less at the Sanitarium, 17% were apparently cured, while among those who were discharged after remaining longer than 3 months, 26% were apparently cured. This is a good object-lesson for those physicians who send their patients to us with the advice to remain 6 weeks or 2 months.

As heretofore, the basis of treatment in all cases has been *climatic* and *hygienic*. The climate of Liberty is well adapted to the treatment of tuberculosis throughout the whole year, but it will appear that there is even more marked improvement during the winter months than in the summer. The elevation, 2,300 feet, is within those limits generally conceded to be most advantageous for lung-troubles; this altitude, with the peculiarly dry atmosphere and abundance of sunlight, furnishes all the conditions necessary in the climatic and hygienic treatment of incipient cases of tuberculosis. Malarial fevers are unknown here excepting when imported. A clinical fact that has struck me rather forcibly is, that while strong winds are generally supposed to be detrimental to the class of patients under consideration, our patients brave with impunity cold and northwest winds. I have seen 80 patients gather for their meals 3 times a day at the Administration Building when the snow has been 1 or 2 feet deep, and almost a blizzard blowing, without the least detrimental effects. On the contrary, it seemed to improve their appetites and digestion. I have not seen one case of bronchitis or influenza among our patients that could be attributed to thus braving the elements. The experiences encountered and the results obtained during the two cold seasons at this Sanitarium seem to tend to revolutionize the popularly accepted ideas of the injurious effect of winds and stormy weather upon incipient cases of tuberculosis.

In this connection I wish to refer to the question of exercise. A good deal has been said and written against allowing tuberculous subjects to walk or exert themselves to any great extent, especially if their temperature ranges above the normal. It is a rule with me to allow all patients whose evening temperature does not reach above 100° F. to walk moderately, and if the temperature is not above 99° F., no restriction at all is placed upon them in this respect; but they are encouraged to gradually accustom themselves to pedestrian tours extending from 2 to 10 miles daily. I have never seen any untoward result from this exertion on the part of the patients, and I am firmly convinced that it is a mistake to encourage any such patients in taking the rest-cure. We are seeking to improve the general nutrition of our patients in order to enable

them to overcome a specific poison, and it would seem unwise to impair their general nutrition by compelling them to do nothing but eat, sleep and sit.

In the way of specific treatment of individual cases, *creosote* and its derivatives have been used. Of the different forms *guaiacol valerianate* has been more extensively used than during last year, as it is the least irritative form of this drug for the stomach that we have had experience with.

*Ichthyol* in keratin-coated pills has been used with considerable success; as I stated last year, this remedy seems especially beneficial in cases showing intestinal complications. Tanneur has claimed to be able to administer this drug in daily doses of from 2 to 3 grams or more; I have tried to approximate this dose, and have found the maximum amount tolerated daily to be from 1 to 1½ grams.

*Oil of cinnamon* in daily doses of from 30 to 40 minims has been used with fairly good results.

We have continued to use hot-air inhalations as heretofore in about 35% of the cases at the Sanitarium, with the following results:

Number of cases treated, 52			
Cough decreased in.....	39	Expectoration decreased	
" increased in.....	3	" .....	40
" stationary in.....	9	Expectation stationary	
Taken off on account of		" .....	12
blood-spitting .....	1		52
	52		

SERUM.

Our investigations in the use of antitubercle-serum have been continued with the following results:—

UNITED STATES GOVERNMENT SERUM.			
Number of cases treated, 29.			
Condition before taking.		Physical signs.	
Incipient stage.....	14	Improved.....	26
Moderately advanced.....	15	Unimproved.....	3
	29		29
Expectoration.		Temperature.	
Decreased.....	25	Decreased.....	10
Stationary.....	4	Unchanged.....	19
	29		29
Cough.		Spitting.	
Decreased.....	25	Improved.....	24
Stationary.....	4	Stationary.....	3
	29		27
Tubercle-bacilli.		Weight.	
Disappeared in.....	7	Increased.....	26
Decreased.....	14	Stationary.....	3
Stationary.....	6		—
Had none.....	2		29
	29		

As will be seen from the foregoing table, 7 of the 29 cases thus treated, or 24% of the cases, have lost their tubercle-bacilli; in 48% the bacilli have decreased, as

against 20% of last year. I have lately examined 15 cases treated with serum, and have not found one that had redeveloped the disease; on the contrary all have been enabled to remain in their homes and at their work. All of these cases have been away from the Sanitarium for periods varying from 6 months to one year.

The general effects of this United States Government serum of de Schweinitz during the past 6 months upon cough, expectoration, temperature, tubercle-bacilli, etc., are more or less the same as reported last year. As I stated at that time, I am not ready to pin my faith to serotherapy in tuberculosis; but, in view of the fact that as far as bad results are concerned it has proved negative, and that a comparatively fair number of cases have apparently improved under its administration, I believe it to be the duty of the profession to continue clinical investigations along this line.

A few cases that have been treated in New York City with this serum have been examined periodically by Dr. Loomis and myself, without our being able to arrive at any positive opinion. Dr. Loomis' experience with serum among hospital-patients has been, I believe, absolutely negative as far as good results are concerned. Concerning those patients treated in private practice in this city and Brooklyn, reports of attending physicians have varied; it is difficult in these cases to separate either climatic or moral influences from any that may be exercised by the serum. The 3 apparent effects noted, above all others, from the use of this serum have been reduction of temperature, decrease of tubercle-bacilli, and possible immunity conferred upon patients after returning to their homes. However, I have discarded its use at the Sanitarium in all but incipient cases.

To my mind the effects of this serum are (1) not deleterious; (2) patients show at least as good a percentage of results as under creosote or any other drug, without their deleterious effects; (3) the moral effect upon the patient is such that even if we gain nothing in the way of specific action by its use, we are contenting the patient while he is under good climatic and hygienic environments.

I shall continue my investigation along these lines and hope to be able to make a more definite statement, either for or against, in my next report.

*Fischer's Serum.*—During the past month we have placed 4 cases upon Fischer's antitubercle-serum, but of course cannot as yet formulate any report upon them.

*Oxytuberculin.*—Dr. Hirschfelder very kindly forwarded us some of his oxytuberculin, which was faithfully tried in one or two cases, until the patients rebelled against having such a large quantity of fluid injected. The doctor has informed me that if we would use hot-water massage after each injection the patient would not complain of any discomfort; however, it has been impossible for us to devote the time for this purpose.

*Antistreptococcic Serum.*—In view of the fact that anti-tubercle serum did not seem to be efficacious in cases of mixed infection, I was led to employ, in 6 cases, Pasteur's antistreptococcic serum (selecting, of course, only such cases as showed streptococci), believing that if we could neutralize the secondary infection we would leave a clear field for the supposed action of the anti-tubercle serum. In the first case only one injection was employed; expectoration ceased immediately for a number of days, and then returned in diminished quantity; on examination the streptococci were found to be far less numerous and smaller in size.

The next case had suffered from chronic bronchitis for 3 or 4 years; and developed tuberculosis a short time before entering the Sanitarium, about 15 months ago. Tubercle-bacilli disappeared under treatment, but bronchitis remained. The sputa were muco-purulent in character and contained streptococci. One injection of the antistreptococcic serum was given, after which cough and expectoration increased materially. After a few weeks the patient began to improve, expectoration decreased somewhat in quantity and became very markedly less purulent in character. This patient is now living in New York, and I have lost track of her.

The next patient had a dry cavity at one apex, which had done very well here at the Sanitarium. She was given 4 injections of the antistreptococcic serum, after which the streptococci disappeared. This patient is still an inmate of the Sanitarium, and the sputum still contains tubercle-bacilli.

The next case was in a young lady whom I have treated, first as a private patient, then as an inmate of the Sanitarium, for the past 15 months. Tubercle-bacilli disappeared from her sputum, the physical signs cleared up, and she was about to return home, cured of tuberculosis. However, she had also a history of chronic bronchitis, but with scanty expectoration. About the time she was to be discharged from the Sanitarium numerous and long chains of streptococci were discovered in her sputa and she was immediately given an injection of 10 cu. cm. of antistreptococcic serum, and two days later a second injection of 10 cu. cm. After the first injection a slight increase of expectoration was observed, but a few days after the second injection no streptococci could be found, and at the present time all expectoration has ceased.

In a fifth case 3 injections were given, but without any effect. The only other patient that was treated with this serum was a man with tuberculous meningitis, who died. He was given 8 injections, but no modification of the course of the disease could be observed.

If, as some of the advocates of antitubercle-serum contend, the cause of failure in many cases is due to mixed infection, the successful use of Pasteur's serum would solve a great part of this riddle before us. The



one point that I suppose will be immediately noted is the apparent slowness of action of this serum upon the streptococcus in these cases of chronic infection, as compared with the reports from time to time of its rapid action upon the same germ in cases of acute infection.

*Throat-Treatment.*—During the past 6 months 27 cases of tuberculous laryngitis have been treated at the Sanitarium; 13 of these patients are still in the Sanitarium, and 14 have been discharged. The combined statistics that I have been enabled to gather from all points in Colorado show 25% of cures among cases of laryngeal tuberculosis in the ulcerative stage. It is gratifying to be able to report that at the Loomis Sanitarium 50% of the ulcerated cases were discharged cured, as follows: 8 cases among them were infiltrated and ulcerated; of these 4 were healed, in 3 the ulceration was lessened, and in only 1 was it worse. Of the remaining 6 of the 14 discharged, namely those with infiltration without ulceration, 2, or 33%, were cured, 2 were improved, and 2 were unimproved.

Number of cases treated, 27.

Infiltration and ulceration.	Infiltration without ulceration.
Healed..... 4	Cured..... 2
Improved..... 3	Improved..... 2
Worse..... 1	Unimproved..... 2
8	6
Of the 14 discharged, weight was gained in... 8 cases.	
" " " " " " stationary in 4 " "	
" " " " " " lost in 2 " "	
14	

THROAT-CASES STILL IN SANI-TARIUM.

Infiltration and ulceration.	Infiltration without ulceration.
Healed..... 1	Cured..... 1
Improved..... 3	Improved..... 5
Stationary..... 1	Stationary..... 2
5	8

The report of Dr. Walter F. Chappell, our Consulting Laryngologist, is appended.

Report of Consulting Laryngologist.

By WALTER F. CHAPPELL, M.D.

This report of laryngeal tuberculosis at the Loomis Sanitarium is on cases that have received climatic, systematic, and local treatment under most favorable conditions. No favor has been given to any special remedy or method of treatment, the report being simply a statement of facts as taken from the notes of the Sanitarium. The climatic conditions and the general surroundings were of course the same in all cases, but the internal medication and local application differed, selections being made according to what the experience of the writer and others deemed best for such cases.

*LOCAL TREATMENT.*—Special attention was given to the upper respiratory tract in all of the patients,

whether suffering from throat-manifestations or not. This attention, it is believed, assists greatly in the general results obtained. The applications for tuberculous laryngitis consisted of such well-known and recognized remedies as creosote, lactic acid, orthochlorphenol, ichthyol, iodoform, etc.

It is unnecessary to go in detail into the history of the patients noted in this report. I will simply state that there were 19 cases of tuberculous laryngitis under treatment during the past 9 months; 12 of these had laryngeal ulceration and 7 laryngeal thickening. The results were as follows:

Laryngeal ulceration: healed.....	8 cases.
Laryngeal ulceration: improved.....	2 " "
Laryngeal ulceration: unimproved.....	2 " "
Laryngeal thickening: improved.....	7 " "

The subjective symptoms also showed marked improvement, the voice returning to its normal tone in several instances, and the laryngeal cough and irritation entirely subsiding; relief from pain was also marked, especially in one case in which it had been severe for 15 months. In every case of laryngeal improvement, the pulmonary involvement also showed equal gain, and the generally improved condition was marked by a universal gain in weight. A more critical examination of the relation between the laryngeal and the pulmonary conditions will show their great dependence one upon the other, ulceration occurring only when the pulmonary disease is active or in the advanced stage, and the location of laryngeal ulceration corresponding in nearly every instance with the lung that was most affected.

In conclusion I wish to state that although the patients covered by this report were specially selected for admittance to the Sanitarium, the results have been most encouraging, as showing what may really be attained. I have always felt that most reports by throat-specialists on laryngeal tuberculosis did not represent all that might be done, as their observations had usually been made in large cities, and often in climates very unsuitable for such cases. I, therefore, believe that if patients with tuberculous laryngitis can secure competent throat-treatment with suitable climate, very excellent results may be expected.

DISORDERS OF GAIT DEPENDENT UPON DELUSIONS.<sup>1</sup>

By CHARLES W. BURR, M.D.,  
of Philadelphia.

Clinical Professor of Nervous Diseases in the Medico-Chirurgical College.

THE cases I am about to report show disorders and peculiarities of gait not caused by palsy or ataxia, and not due to disease anywhere in the motor tract, but dependent upon delusions, false beliefs. Peculiarities of attitude, of movement, and of gait, are not uncommon

<sup>1</sup> Read at the meeting of the Philadelphia Neurological Society, January, 1898.

in the insane and the idiotic. In every asylum there are patients showing all forms of such motor disturbances. They are not due to one cause, but to several. Thus, in one class of cases there is no real consciousness of the movements, certainly no volition, and only the lower cerebral and spinal centers act. In another class the patient is more or less conscious of what he is doing, but does not deliberately will to do it—the motor excitement is merely the index and accompaniment of mental unrest. In a third class the movements are made deliberately and in response to a delusion—are indeed what it would be very proper, or at least might be very proper, for anyone to do, assuming the delusion not to be a delusion, but a belief based on truth. Thus, a man day after day frequently passed his hands over his face as if brushing some object away. His gestures were so complicated, so apparently purposive, that it was hard to believe they were automatic and without will and consciousness, and, as a matter of fact, when he recovered he explained that during his illness he had felt all the time that there was something like a veil over his face that he wanted to get rid of. These delusional motor disturbances occur not only among the insane in the narrower sense of the word, but also in persons living on the borderland between sanity and insanity, and in hysterics. They are of interest, not only in themselves, but because they are of some value in determining the condition of the patient, in diagnosing the case, just as the physiognomy is of some value, and because they are easily feigned and hence may readily mislead, and finally because they are not infrequently supposed to be feigned when in reality they are genuine.

The first patient, G. W., white, a male, 56 years old, was admitted to the Philadelphia Hospital in alcoholic coma on July 3, 1897. On recovering consciousness he stated that two weeks before he had dislocated his right shoulder by falling and that ever since the reduction of the dislocation, the day after the injury, he had been drinking heavily and eating almost nothing. The right shoulder and arm were very painful on examination, but there was no deformity of the joint. The man could not move the arm without great pain. There was no anesthesia. He was a fat, stupid man, slow in thought, thick in speech, and irritable, but he showed no other or more marked mental symptoms than those commonly seen after a debauch. A few days later he tried to get out of bed, but could not, because the right leg gave way under him. On examination the right leg, which previously he had moved well, was found to be much weaker than the left, and the movements of the right arm, though all pain had ceased, were very poor. The weakness in the arm did not affect a single group of muscles, but the extremity as a whole. Mentally the man was much clearer and there was no trouble with speech except that his voice was a little thick, the disturbance being articulatory and not aphasic. He said that the right side of his body felt numb and that touch was less distinct than on the left side. There was, however, no demonstrable, objective anesthesia. A few days later he was transferred to the nervous wards. On examination we found the following conditions: The man complained of weakness in the right arm and both legs. He could stand unsupported for a moment, but he could not or would not walk. The right arm and leg seemed to be distinctly paretic. There were no discoverable signs of disease. Tactile and painful sense were normal over the entire body. The knee-jerks were equal, increased, but not spastic. There was no ankle-

clonus and no muscular rigidity. The biceps tendon-jerks were equal. There was no muscular wasting and no other trophic change. The tongue was protruded straight and was freely movable in the mouth. There was no palsy of the face. The pupils were equal, of moderate size, and they reacted well to light and on convergence. There was a slight, fine tremor of the hands on extension, but none of the tongue or head. The heart was normal. The breath-sounds were roughened and expiration was prolonged. The urine contained neither albumin nor sugar. The temperature was normal. The control of the bladder and rectum was good. By August 2d the man ceased to complain of the weakness in his right arm, which he used well. He could walk, but in a very curious fashion. While in bed or on a chair he moved the legs well, all movements being strong and well directed. He could stand without difficulty and with no sign of weakness or ataxia. In walking, he would start off bravely enough, but soon the feet would be lifted less and less from the ground, the steps would become shorter and shorter until each foot was slid along the ground only a few inches, and finally after going about 30 feet he would stop altogether and stand for several minutes; or if told to go on he would again start out well, only to stop again. Occasionally he trembled violently while walking, and he always looked distressed and frightened. He walked but little on his own initiative, sitting hour after hour and moving only to the water-closet and back. There was at this time absolutely no objective sign of physical disease.

It would be easy to dismiss this case as one of malin-gering, and the absence of signs of organic disease would lend color to such an opinion. I think, however, its real explanation lies in the man's mental condition. In the first notes it is stated that he showed no symptoms of mental disease other than those commonly seen in patients after a debauch; but later many symptoms were noticed. He was very dull, often abusive without cause, took no interest in what was going on about him, sat hour after hour doing nothing and saying nothing. When asked to explain his trouble in walking, at first he would answer he did not know what was the matter, but on being pressed he would say that there was a hole in the floor in front of him and that he was afraid he would fall into it. When told there was no hole, he said that was all right, that maybe other people would not fall into it, but he would. This was his only permanent delusion, although he had not a few temporary ones. Mentally, he was in a state of mild dementia, a condition that must have long antedated his admission to the hospital. The second case is of an entirely different type.

The patient, K. B., is a single woman, 60 years old, and was admitted to the Home for Incurables in July, 1888, on account of epilepsy. Since her admission she has had an average of about 30 attacks yearly—classic in character, showing the sudden unconsciousness, general convulsion, biting of the tongue, cyanosed face, stertorous breathing, and relaxation of the sphincters. But this is not all, nor is it the point of present interest. Rather, I wish to speak of other attacks, surely hysterical, and of her, at times, curious gait. When walking in the house after the gas is lighted she, at times, and not only when under known observation, begins to sway from side to side, her knees give way under her, she recovers equilibrium only to sway again, and finally tumbles to the ground; then, after a moment, she rises and, after walking, say, 20 steps well, goes through the same performance. Sometimes after falling, she holds her breath until her face becomes dusky, struggles a little, coughs and gasps. There is nothing sudden about the attack; indeed, there is much deliberation and apparent willfulness. On the other hand, the attacks happen when she has no reason to suspect she is being watched, and, indeed, in the



course of years they have become such an old story as to arouse neither the sympathy of the other patients, nor the curiosity of the attendants. She explains her trouble in locomotion by saying that as soon as she begins to walk in a closed space, as a hall or room, she grows very hot, and the air becomes stifling, and she stumbles about, because she fears she is suffocating. Gas-light and artificial heat are the two things she fears. The difficulty in walking never occurs out-of-doors, nor from the time in the spring when the furnaces are extinguished until they are relighted in the autumn. The heat of summer does not disturb her. In her room the window is open all the year round, and on the coldest days she will sit by it for hours, or walk on an open porch without any outside wrap or bonnet. The gas is never lighted in her room, and once, when I attempted to light it, at the same time shutting the window, she showed abject terror. She has not, and never has had any form of palsy. There is no unilateral or other type of anesthesia. The eye-grounds and fields, examined by Dr. William Campbell Posey, are normal. Examination of the thoracic and abdominal viscera yields negative information. The knee-jerks are active, and there is a second jerk, as if the thigh-muscles were restrained, and then released. There occur, occasionally, typical mild hysteroidal convulsions.

Fraud would account for this woman's trouble in walking as easily as in the man's case and with as little base for support. There would be needed a powerful motive to make anyone endure cold and sit every night in darkness for years. None is discoverable. Desire for sympathy can not be at the bottom of it, because, as I have said, she long ago ceased to attract attention. It cannot be a wish to get a home, for that is provided for her. The well-known causeless trickiness occurring in some old epileptics would explain her condition, but this is scarcely satisfactory. The gait resembles somewhat hysteric ataxia, but differs in that it is not constant, is not present whenever the patient walks, but appears only at times. She is such a mixture of epilepsy and hysteria that to find any one cause for this symptom is difficult. I am inclined to believe that though she shows no other distinct signs of mental unbalance, the peculiarity depends upon a fixed delusion that burning gas poisons the air. Whether her constant complaints as to suffering from heat are also due to a delusion, or whether she actually has some functional disturbance affecting the heat-center, or some disease of the sensory peripheral nerve-endings, it is impossible to determine. Any one of these explanations may be correct. It is not uncommon to find at necropsy in patients who have had delusions concerning some viscus a lesion that would have been competent to produce sensations, the false interpretation of which might easily have been the foundation of the delusions. It is possible that some disturbance of function in the sensory nerve-endings in the skin and mucous membrane of the trachea of this patient is at the bottom of her trouble; that from it she has built up a delusion of heat and suffocation, and that she acts in the attacks as she supposes one ought who suffers in such a manner. This is not so far-fetched as at first sight might appear. Gastric polypi have given rise to delusions of living animals in the stomach more than once, and similar instances of disease of organs being interpreted as a delusion are not rare. Both cases can be

placed in the large class of morbid fears, but both have a more definite delusion as their cause than is common.

### NOTE ON SUDAN III. A NEW SELECTIVE STAIN FOR FAT.

By ALBERT G. NICHOLLS, M.A., M.D.

Demonstrator of Pathology, McGill University, Assistant Pathologist to the Royal Victoria Hospital, of Montreal, Can.

For some time past I have been making use of a new selective stain for fat in laboratory-work, which I think will prove of much value in histological investigations, since it possesses some distinct advantages over osmic acid. This material is Sudan III, which was first recommended by Daddi, of Turin, in 1896. It is an amorphous powder of a brick-dust color, soluble in alcohol, ether, and the various aromatic oils, but insoluble in water or glycerin. Daddi's observation was that when he fed young animals on oil saturated with this stain, after the animals were killed the fatty tissues alone of the body had appropriated the stain, the method of absorption being actually made out. Acting on this hint, Herman Rieder,<sup>1</sup> of Munich, advocated its use for section-work and clinical microscopy generally: 96% alcohol is saturated with Sudan III, filtered and then diluted two-thirds with 50% alcohol and filtered again. Sections should be placed in this for a few minutes and then washed in from 60 to 70% alcohol, drained, and mounted in glycerin. If fat is present it takes on a carmine-red color and is perfectly defined. The smaller fat-particles are, however, more of a golden-yellow.

This color is distinctive and can readily be distinguished from biliary or blood-pigments. Fat-crystals and palmitic and stearic acids are not stained by the dye. For the examination of fatty degeneration, fatty infiltration, lipemia, lipuria, chyluria, milk, sputum from abscess-cavities, fatty stools, and fatty urinary casts, the method is of great value. Rieder is of the opinion that in many cases the reaction will prove of diagnostic value. He advises that specimens should be hardened in glycerin and Müller's fluid, or, even better, frozen sections should be employed. Further, the sections cannot be clarified in oil of bergamot, cedar-oil or xylol, nor be mounted in balsam. Absolute alcohol cannot be used to dehydrate. Glycerin is advised as a clarifying and mounting fluid. If desired, a preliminary staining with hematoxylin can be employed.

After some experience with this new stain I am enabled to corroborate on many points Rieder's observations and believe that we have in it a valuable addition to our laboratory-technic. I find that specimens hardened in Zenker's fluid give good results, but the method I use most frequently is to place small bits of tissue in 7% formalin. This hardens in one to two

<sup>1</sup> *Deutsches Archiv für klinische Medizin*, Dec. 2, 1897.

hours sufficiently and the specimens can then be cut directly on the freezer, very satisfactory sections being the result. These are stained in Sudan III of the strength above mentioned and are then rapidly washed in 60% alcohol and mounted in Farrant's fluid. It is important to wash off all excess of stain in alcohol, since it is apt to precipitate on the addition of glycerin or Farrant. Preliminary staining with hematoxylin I have also found useful, but have not succeeded with the aniline colors.

The method possesses distinct advantages over osmic acid. Sections prepared directly from the freezer into osmic and then examined in Farrant are often dirty, smeary and generally unsatisfactory, while the method of hardening in Flemming has the disadvantage that the solution decomposes when kept about laboratories and is often not immediately available, while if the portions of tissues are not very small, the fluid does not penetrate well and irregular staining results. All these faults are absent in the case of Sudan III, and bright, clear pictures are produced equally well by rapid methods as by the more leisurely. Bacteria are not tinged by the dye, but the method could be employed to detect fat-particles in their substance. Further, the stain appears to be absolutely differential, except that I find that myelin is slightly tinged by it, although by no means to the same degree as is fat. The granules of cloudy swelling do not take it.

The method can also be applied to blood-work for estimating the presence of fat. For this purpose the slides should be made absolutely free from grease; the film should be hardened in formalin-vapor for 15 minutes, and Sudan III can then be used in the usual way. Rieder finds that the eosinophile granules are not stained by this dye, thus adding another proof to the many that these bodies are not fat.

I have found that the neutrophile granulations also fail to take the stain.

Altogether we may expect good results in the future from the use of this new dye.

### ABDOMINAL PREGNANCY WITH A PECULIAR HISTORY.

By J. M. WARD, A.M., M.D.,  
of Oil City, Pa.

MRS. NANCY K., a white American woman, aged 43, was admitted to the Oil City Hospital on February 23, 1898, with the following history: Menstruation had begun at the age of 11 years, and had always been regular, of 3 days' duration, and without pain. The woman was married at 15, and had borne 7 children. She had had 2 miscarriages preceding the birth of the last child 3 years ago, but she had had no doctor at any confinement. She has worked hard on a farm and was in good health until one year ago, when she began to fail, and to notice in the lower left side of her ab-

domen, a lump which was tender and increased in size rapidly. In May she was attacked with "inflammation of the bowels," and confined to bed for 3 weeks. For the next 3 months the lump rapidly grew until August, when, in accidentally straining herself at her work, she "broke something," and a "lot of water" was passed by the rectum. After another 3 weeks in bed she again got up, but was not well, had no appetite, was constipated, became rapidly emaciated and complained of pain in her abdomen and legs. Several times in the next 6 months the tumor enlarged, and then, following a discharge of foul, decomposing liquid through the rectum, it diminished again. Her condition became so bad that for another month she was confined to bed, and on the advice of her physician she was brought to the hospital. On admission she was quite emaciated, and presented a tumor extending two-fingers' breadth above the umbilicus, irregular in outline, nodular and cystic in feel, lying mostly in the left iliac region. On vaginal examination the uterus was found pushed to the right,  $2\frac{1}{2}$  in. long, and apparently attached to a cystic mass involving the left broad ligament. The breasts presented a normal appearance. The left leg was edematous and painful. For the next week the daily temperature varied from  $99^{\circ}$  to  $102^{\circ}$  and the woman appeared septic. On March 3d celiotomy was performed by Dr. Thomas and myself, assisted by Dr. Davis. Upon opening the peritoneal cavity, a well was struck containing about two quarts of yellow, fetid pus, in which floated a macerated, male, 6-months' fetus. The placenta was attached to the parietal peritoneum and to the anterior surface of the omentum, which seems to have been pushed up and walled off the intestines. The left tube had been ruptured, and the sac was also adherent to it, the left ovary and the rectum. As much as possible of the placenta was removed from the abdominal wall; the cavity flushed with hot saline solution, a Mikulicz drain of iodoform-gauze inserted and left in 48 hours. Then daily, for 10 days, after first flushing out with 50% hydrogen dioxid, it was irrigated with formalin 1 dram to the pint; then every third day it was dressed, until 4 weeks after the operation, when she left town, carrying a big market-basket on one arm, and supporting a drunken husband on the other. A peculiar feature in the history was regular menstruation during the whole time.

W. S. Davidson (*North Carolina Med. Jour.*, June 5, 1898) reports a case of successful **cholecystectomy**. The gall-bladder contained 63 stones and 18 ounces of fluid. A large stone, which could not be removed, was found impacted in the neck of the gall-bladder.

L. Freyberger (*Treatment*, May 12, 1898) has treated 30 cases of **incontinence of urine** with fluid extract of **rhus aromatica**, with permanent cure in 18 and with relief in 10 others. The dose employed was from 5 to 10 minims 3 times a day for children from 2 to 5 years old and from 10 to 15 minims for children from 5 to 10. The disagreeable taste can be disguised by aromatic sirup.



# The Philadelphia Medical Journal

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**A Unique Periodical** is *Medical Libraries*, edited and published by Dr. C. D. Spivak, 3 Denison Building, Denver, Col. We hope that every one interested in medical libraries will subscribe, and thus aid in extending the work to which this excellent little periodical is devoted. The price is only 50 cents a year. No. 1, vol. i, was issued in May.

**A Model Department of Health** is that of Buffalo, N. Y., at the head of which is Dr. Ernest Wende. The monthly report is an example, not without many imitators, of what such a report should be in its conformity with the most modern classification of diseases, perspicuous arrangement, and permanent scientific value. There have been a number of attempts at criticism of Dr. Wende's work, but we believe every one has failed. To him belongs the superlative merit of having reduced the mortality of his city far below that reached by any city in the world of equal, or even of approximate, size. Monuments are erected to slayers of men and for ambitions more or less selfish, but what reward will have, or could have, such determined and really heroic labor, resulting in the saved and lengthened lives of thousands of one's fellow-men! So business-like, so foresighted with legal conditions, has been the warfare against filth, negligence, and disease, that out of about 1,200 suits instituted by the department only two have been lost. If every city had such a commissioner!

**When Shall the Surgeon Operate in Cases of Appendicitis?**—If there was any doubt as to the continued and general interest in this much-discussed question, it must have been dispelled by the spirited and able debate on the subject at the recent meeting of the American Medical Association at Denver. The statement is often made that no definite rules have been laid down by those surgeons who do not advocate operation in all cases as to when surgical interference is justified. As bearing on this point a few conclusions from a most able and exhaustive paper by Czerny in a recent number of the *Beiträge zur klinischen Chirurgie* may be of interest: "The first acute attack of appendicitis belongs to the physician. This attack may: (a) pass by without complication, in which case there is no occasion for surgical interference; or (b) earlier or later, with alarming symptoms of general or local nature (fever, rapid pulse, pain, dulness on percussion, rigidity), it

may go on to perforation and abscess-formation. Such an abscess either (A) leads to progressive and threatening general peritonitis or (B) it remains circumscribed and becomes encapsulated, the first severe symptoms continuing without important change. The conditions (b), (A), (B) indicate surgical treatment, as do all chronic recurrent forms of appendicitis, whether they be purely catarrhal, ulcerative, perforating or obliterative." The question is still undecided, for there are several eminent American surgeons of large experience in this disease who hold that all cases should be operated upon as soon as a diagnosis is made, and there is a still smaller minority, made up mainly of medical men, who hold that nearly all cases should receive only medical treatment. However, the opinion of Czerny, as quoted, probably coincides with that of the large majority of representative surgeons of America and Europe and furnishes a clear and concise rule for the guidance of those who are in doubt as to when surgical interference is indicated.

**Lay Experts and their Opinions.**—The promptness with which the lay experts of the newspaper-press print their opinions about the mental capacity of a man who has just committed a crime is something remarkable. There is scarcely time to get the offender safely landed in the county-jail before these experts and "educators of public opinion" make a diagnosis and fix the sentence. The fact that they never saw or heard of the criminal before is entirely immaterial to them. His case, on the face of it, may raise the gravest doubt of mental capacity and responsibility, but the lay expert, on less than twenty-four hours' notice, can concoct an editorial article that demolishes at one fell swoop all the theories of criminal lunacy and all the chances of this particular criminal. All considerations of fairness, of justice, of science, are subverted to the urgent demands of the space-filler and the competition between rival dealers in snap judgments.

All this, of course, should not be so. In a community in which public opinion were really "educated," instead of being led by the nose, it would not be so. A judgment, affecting injuriously the character, liberty or life of an accused man, written by an irresponsible newspaper-scribe, who shows by his writing that he has neither scientific attainment nor a sense of justice, would be considered by a truly educated public opinion

as an offence not only against intelligence, but, what is far worse, against conscience. The fact that such screeds can pass for evidences of true journalism is in itself as grave a reflection upon the public as upon the newspaper. As water will not rise above the level of its source, so the lay expert will not feel an impulse to rise superior to public prejudice and ignorance.

The value of the opinions of newspaper-experts may be gauged by the lucubrations of one of them who recently announced that over-training of the mind had led a certain professor to set fire to a college-building for revenge! This is certainly an argument not only against the evils of higher education, but also in favor of a new dogma in medical jurisprudence—an argument that is worthy of a lay expert.

**Death from Moral Autotoxemia.**—A number of years ago we knew a member of the medical profession who was apparently without that part of the normal cerebral outfit called the moral sense. It might be somewhat harsh to say that he was a moral idiot, because it was plainly not so much a case of degeneration or atavism, as it was that none of his ancestors had been endowed or had acquired the essentials of ethics and humanization, and therefore the fates had been unkind to the boy at birth. He was in that state of arrested development which biologists illustrate by a number of species of animals and plants, and which *e.g.* is known in politics as “the boss,” and in medicine as “the newspaper doctor.” The significance of his life consisted in the lessons to be gleaned from it by would-be imitators, and by those of his professional co-workers who were compelled to suffer from his influence. He was considerable of an ignoramus, and therefore never was intellectually capable of seeing the necessity of a really shrewd aping of morality; he never quite learned that it was politic to be perfect in his hypocrisies. He was always judging others after his own standards and therefore soon lost what little tact he ever had and began to blunder sadly in his tricks. He had, for instance, so long and so successfully supplied lay newspapers with secret advertisements of his operations, his goings and comings, his health and his social doings, that he constantly erred and showed the public the machinery of the mystery, and even made himself the butt of ridicule of amiable reporters and city news editors.

As in all such cases the psychic organism, following the known laws of physiology, began to grow foul with ptomains and retained secretions. Mental auto-intoxication increased despite excellent purges and antitoxins, until colleagues and even those much of his own ways of mental make-up began to shrink from him; finally kind death put an end to the nuisance.

This, as we say, was a long time ago, and yet to-day the habit of the medical profession, the cowardice of the censors of medical societies, and the prevalence

of “politics” in professional institutions, permit the constant repetition of the phenomenon. It is of course becoming harder for the charlatan to retain his “brilliant success,” but for a time the trickster’s office is filled and his hospital-positions and professorships multiply. Soon, however, difficulties and doubts arise, the mental vigor wanes, blunders increase, the suspicion of friends grows to disgust, and finally, again, psychic autotoxemia results in death. But what a mistake on the part of the profession to keep on repeating the stupid experiment.

**The Recent Meeting of the American Medical Association.**—It is so well known that the *Medical Record* is always ahead of its contemporaries in printing the medical news of the day and reports of important meetings throughout the world, that it seems almost superfluous to remind our readers again of its preeminence in this respect. The report of the Denver meeting of the American Medical Association was given to our subscribers complete two weeks ago. Some other journals are still stringing it along in their columns, and it is almost pathetic to read the apology of the official journal of the association in its issue of June 25th, for its neglect promptly to print the proceedings, even of the general session.”—*Medical Record*, July 2, 1898.

The *Medical Record* for June 11th devoted 3 pages of its valuable space to the proceedings of the American Medical Association, giving an account of the work done on the first and second days in the general session; the *telegraphic report* of the PHILADELPHIA MEDICAL JOURNAL for the same date occupied 15 pages and covered the work of the general session for three days and of the sections on Practice of Medicine, on Surgery and Anatomy, on Obstetrics and Diseases of Women, and on Diseases of Children for two days. In its issue of the 18th the *Record* did make the splendid showing of 29½ pages, but it had already been largely anticipated by this JOURNAL.

The *Medical Record* has published reports of the proceedings of the following sections of the Association in addition to that of the general session: Practice of Medicine, Surgery and Anatomy, and Obstetrics and Diseases of Women; as compared with the following published by the PHILADELPHIA MEDICAL JOURNAL: Practice of Medicine, Surgery and Anatomy, Obstetrics and Diseases of Women, Diseases of Children, Neurology and Medical Jurisprudence, Physiology and Dietetics, Laryngology and Otology; together with the Address in Medicine in full, and Dr. Laplace’s description of his ingenious apparatus for intestinal anastomosis. When completed the report of this JOURNAL will be found to be the fullest (with the exception perhaps of the official report in the *Journal of the American Medical Association*), as it has been the promptest of all.

It is possible that in patting itself on the back the *Record* has overlooked, or possibly was unaware of the existence of, the PHILADELPHIA MEDICAL JOURNAL. We, therefore, feel it our duty to keep our able and alert and usually reliable contemporary informed, in order that it may be spared the humiliation arising from the error of



making unsubstantiable claims, such as being "always ahead of its contemporaries;" we concede also the superfluity on the part of the *Record*, under the circumstances, of reminding its readers of a "preeminence" that is based upon fancy rather than fact. It shall be the policy of this JOURNAL to stint none of its contemporaries their full meed of praise; nor will it withhold condemnation when that seems deserved. For ourselves we ask only, as we feel we have a right to ask, for the simple truth. We are willing to stand or fall on our merits.

**Sensory Conduction in the Spinal Cord.**—In a recent instructive paper, Dr. Harvey W. Cushing (*American Journal of the Medical Sciences*, June, 1898) reports two cases of pistol-shot-wounds of the spine in which the symptoms of a unilateral lesion of the cord were marked. The so-called Brown-Sequard syndrome was quite clearly suggested, if not absolutely demonstrated, in both cases. The motor paralysis was more marked on one side (the side of the injury), and the sensory paralysis on the other. We wish to call attention, however, to a possible interpretation of some points in these cases, which the author himself, in his excellent analysis of the symptoms, has not, in our opinion, quite sufficiently emphasized. This interpretation refers to the fact that the impairment of sensation, on the side opposite the lesion, was much more marked for heat, cold, and pain, than for touch. In other words, the "dissociation-symptom" was conspicuous only on the sound side. Tactile anesthesia was not marked on this side, although it is reported as having been present in a slight degree. This was in accord with the fact that it probably never is present on the unparalyzed side, with a purely unilateral lesion. We think it has been very clearly demonstrated, both by experiment and by disease, that the paths for tactile impressions pass up the same side of the cord as that of the posterior nerve-root by which the sensory neurons enter the posterior column. Histology also supports this view, as these neurons can be seen, after their entrance, dividing dichotomously, the one branch passing up and the other down on the same side of the cord. Hence, in cases of unilateral lesion, if tactile anesthesia is not observed on the same side as motor paralysis, it is probably because the posterior column of that side is not involved. In Cushing's cases this inference is fair; *i. e.*, the posterior column was possibly not extensively injured on the side of greatest injury.

In the matter of the thermal and the pain sense, however, the case is entirely different. Clinical observations, with which Cushing's cases are strictly in accord, are now sufficiently numerous to prove that these paths are especially involved in lesions of the central gray matter. Syringomyelia is not the only lesion of this sort: the syndrome can be caused by trauma, as has been shown by several observers. The

important point, which we wish to emphasize, is that these paths probably decussate in the gray matter. Hence, as in Cushing's cases, the analgesia and therm-anesthesia are seen on the side opposite the lesion. The paths for these modes of sense, according to Van Gehuchten, may be by a second order of neurons, the cell-bodies of which are situated in the gray matter, at successive levels, their axis-cylinders passing up the opposite side by Gowers' tract especially. According to this view the Brown-Sequard syndrome should consist, not in motor paralysis on the side of the lesion and complete tactile, pain and thermal anesthesia on the other, but in motor paralysis and tactile anesthesia on the one side (the side of the lesion) and in the "dissociation-symptom" on the other.

According to Gotch and others, ascending degeneration after section of a posterior root is seen only in the posterior column on the side of the lesion. This probably represents the direct tract brainward of the tactile sense—the simplest of the modes of sensation. That no ascending degeneration after such a lesion is seen in Gowers' tract is easily accounted for, of course, by the fact just stated, *i. e.*, the fibers in this tract are *endogenous* fibers arising from cells in the central gray matter.

We think that Cushing's cases are clearly suggestive of such a histologic arrangement as is here indicated. Like all clinical proof, however, the demonstration is open to some doubt and criticism. A pistol-shot wound is not likely to make a purely unilateral lesion, much less an exact hemisection, of the spinal cord. Hence the slight degree of tactile anesthesia on the side opposite the lesion might well be accounted for by temporary disturbance of the posterior column of that side, which could readily follow such a wound. The fact that it was not so persistent as the analgesia and therm-anesthesia is proof that the fibers subserving this function were not so severely injured as those for pain, heat and cold, which, as already said, pass by way of the central gray matter, and were probably involved, in these cases, in a central hematomyelia. As both of Cushing's patients recovered, no histologic study of the cords was possible.

In a report of the discussion of a paper on brain-surgery of the Medical Society of the State of California (*Pacific Record of Med. and Surg.*, June 15, 1897) two **successful operations for epilepsy** are recorded. Dr. Wills mentioned a case of depressed fracture resulting from a railroad accident in which epilepsy developed. After using the bromids without relief, an operation was performed, removing the depressed bone. Immediate relief followed the operation and the patient still remains in good condition, 3 years after operation. Dr. Ford reported a case in which there had been innumerable epileptic convulsions and finally unconsciousness coming on some time after a fracture of the skull. By trephining, the scar-tissue resulting from the fracture was removed, the patient regained consciousness and has had no epileptic seizures since the operation, 6 years ago.

## Reviews.

### Atlas and Abstract of the Diseases of the Larynx.

By DR. L. GRÜNWARD, of Munich. Edited by CHARLES P. GRAYSON, M.D. Lecturer on Laryngology and Rhinology in the University of Pennsylvania; Physician-in-Charge of the Throat and Nose Department, Hospital of the University of Pennsylvania. Philadelphia: W. B. Saunders, 1898.

The original object of this atlas was to convey to the beginner in the special line of laryngology at least some idea of the appearance of the various lesions of the larynx as observed with the aid of the laryngeal mirror. Any one familiar with the work of reproduction of natural colors knows how difficult this is, and yet the importance of such drawings in colors as an aid to the student cannot be overestimated. But little space has been devoted to descriptions of the various lesions, yet what is given is clear and concise. While the reproduction of the various pathologic conditions are all good, those showing acute edema and the ulcerative processes are especially true, as illustrative of the actual conditions. The drawings illustrating the microscopic appearances of the various inflammatory changes also are worthy of special mention. Taking the book as a whole it is a valuable addition to our literary resources on the subject of diseases of the larynx. Dr. Grayson deserves great credit for his part in placing in the hands of the profession an American edition of this praiseworthy atlas. It is a pleasure to record the presence in a book of such original and well-executed cuts as are here shown. The good appearance of the colored plates is largely due to the admirable paper on which they are reproduced. The publisher deserves credit for the mechanical execution of the work.

### Proceedings of the New York Pathological Society for the Year 1896. Printed for the Society, 1897.

This volume contains a number of valuable articles, some of which have appeared in print, as, *e. g.*, Dr. Ewing's essay on the lymphatic constitution, an abstract of which appeared in our department of latest literature some time ago. In the last section of the book are found the Middleton-Goldsmith lectures on the relationship between inflammation and sundry forms of fibrosis, delivered before the New York Pathological Society by Dr. Adami, of Montreal. Judging from the character of the original articles in the volume, the standard of pathologic science in our sister city is commendably high.

### Transactions of the American Microscopical Society, Volume XIX, being the Proceedings of the Twentieth Annual Meeting, held at Toledo, Ohio, August 5, 6, and 7, 1897. Edited by the Secretary, WILLIAM C. KRAUSS, M.D., F.R.M.S.

The volume contains the president's address and the usual number of scientific papers read at the annual meeting. Among the latter there are several of especial interest to medical men. Of these we may mention: "A Study of the Organs of Taste," by A. E. Loveland; "A Comparative Study of Hair for the Medico-legal Expert," by William G. Reynolds; and "The Comparative Histology of the Digestive Tract," by Edith J. Claypole.

R. A. Stirling (*Intercolonial Med. Jour. of Australasia*, April 20, 1898) reports 3 cases in which he has **successfully removed gall-stones from the cystic duct**. Cholecystotomy was performed in addition, so as to drain the ducts for a time and relieve the cholemia.

As the result of a series of experiments to determine the effect of freezing upon antidiaphtheric serum, H. C. Ernst, J. N. Coledge and H. A. Cooke (*Jour. of the Boston Soc. of Med. Sci.*, May, 1898) find that the antitoxic property can be removed from one portion of the serum and added to another by a method of fractional freezing, the bottom layers showing greatest strength. By this method serum of high potency, that is more or less permanent, can be obtained without the dangers to the animals of the ordinary method of forcing the dosage of toxin.

## War Correspondence.

[From our Special War-Correspondent.]

### Departure for Santiago.—Alcoholic Excess in the Army and Navy.

ON BOARD U. S. HOSPITAL-SHIP "RELIEF."

July 3, 1898.

THIS beautiful ship got safely off on the first log of her journey late yesterday, and if a peaceful sea and sunny skies are an omen for good, surely she will bring comfort and relief to our brave men in the field. Our progress down the bay was marked with the wildly enthusiastic tooting of many whistles. It seemed more like a triumphant return from duty well done and must have touched the heart of our commanding surgeon. People crowded the rails of the ferry-boats and cheered long and heartily. The *St. Paul*, looking as if she were in bad humor and longing for another torpedo-boat to eat up, dropped her flag in a dignified way as we passed; the huge *Campania* gracefully did the same with the Union Jack, and with a funny little squeal from a tiny launch we slid out to deeper waters.

As I said last week, it is really difficult to do justice to the absolute completeness of this floating hospital; already things have gotten into shape, and surgeons, nurses, hospital-stewards seem to have caught the spirit of the Surgeon-in-chief, and those at home need have no fear but that this ship is destined to accomplish great things.

There are two chaplains on board: The Rev. Mr. Robinson and Father Connelly. Each held a simple service on deck this morning, and asked a blessing on this mission of peace. Both are unaffected Christians whose ministrations will bring consolation to many a poor fellow who is suffering or dying in this war.

We stop at Fortress Monroe for a few hours this afternoon, and then to Santiago, where we are due some time Thursday.

In the letter of Dr. Crothers (see p. 49) that you have kindly submitted to me and which contains comments upon my criticisms of an article in that journal of temperance (for some occult reason) called the *Voice*, there occurs the following:

"The special charge denied is that during the Civil War some of the most serious disasters followed the intoxication of the commanding officers. Both the *Army and Navy Register* and this correspondent are seemingly unaware of the mass of facts on file. . . . I have on file, for publication in the future, two very startling papers compiled from these records showing many such facts."

I do not nor did I deny that there were several instances of great and unfortunate over-indulgence at critical times during the Civil War, nor am I in ignorance of the existence of certain records, but I protest against the dragging out of these incidents after 35 years and the hysterical conclusions that the *Voice*, with such evident gusto, draws from them. The threatened publication of the "two very startling papers" can serve no earthly good unless it be to increase the sale of this eminent fanatic's paper.

Dr. Crothers goes on to say

"It was a serious question whether the publication of some of those records (of inebriety) would not have been helpful to our new army, now in the field."

If by "the army in the field" he means our military officers, I can assure him that, if I can judge by the expressions used about his editorial by quite a number of officers who saw it, nothing he could publish is likely to be read by them;



while if he means the thousands of privates in the field I fear that his paper would reach but few unless he should distribute them gratuitously.

Since my attention was called to the matter in the *Voice* I have questioned a number of army-officers as to the use and abuse of alcohol in that service, and they, without exception, affirm the "good habits" of officers and men. The Rev. Mr. Robinson, the chaplain of this ship, tells me that in 22 years of service he can recall but one case of an officer being intoxicated on duty, and he says it is a pleasure to be able to attest the self-restraint exhibited by our officers in all such matters both on and off duty. He agrees with me in believing that no good purpose can be served by raking up old scores now, over a third of a century after their occurrence. In the old days there was much drinking in both the army and the navy, but that time happily is past, and all who know anything about these branches of our Government recognize this fact and are happy and proud to give credit where credit is due.

FRANK DONALDSON, B.A., M.D.

## Correspondence.

### ALCOHOLIC INTOXICATION IN THE ARMY AND NAVY.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL.

My attention was called to a letter in your issue for June 4th from a special war-correspondent who refers to some statements in the New York *Voice* about drinking in the army; also to a statement by Gen. Howard, and by the *Army and Navy Register*; and then calls such statements "a libel on the army," and quotes the *Army and Navy Register* as saying these assertions "are wanton exaggerations," etc. The special charge denied is that during the Civil War some of the most serious disasters followed the intoxication of the commanding officers. Both the *Army and Navy Register* and this correspondent are seemingly unaware of the mass of facts on file at the Department at Washington bearing on this subject—facts which show that the use of alcohol among officers in the early part of the war was responsible for some terrible disasters. I have on file, for publication in the future, two very startling papers compiled from these records showing many such facts. The participants in some of these disasters and their friends are living, and the publicity of events of this nature is deemed impracticable at present. The statements of Gen. Howard in the *Voice* are not libels or exaggerations on the army and navy, the great majority of whom were earnest, temperate men. It was a serious question whether the publication of some of those records would not have been helpful to our new army, now in the field. It would certainly have been a warning to many an officer, to avoid the treacherous relief that comes from alcohol in the hour of strain. A chapter of terrible mistakes arising from the false judgment of men under the influence of alcohol in the army, is to be written, and without exaggeration, or libel, will be a sickening record of delusions of otherwise brave men. It is unquestioned, that the American army is the most temperate army in the world, excepting the Moslems and the Turks, and yet these records at Washington show how sadly and intimately alcohol has been responsible for its blunders and mistakes. The correspondent is afraid of sneers of foreign critics at such statements of facts. In reality the same evil, only worse, exists in the army and navy of all the

great European nations. The difficulty is to find an officer who in times of great peril and excitement will not resort to stimulants. There are many such men, and yet there are others who drink on such occasions and their work suffers. It is not a question for the surgeons, but one for the commanding officers to determine, and the same rules that apply in civil life will require responsible officers to be total abstainers, at least while in active service in the field.

Respectfully,

T. D. CROTHERS, M.D.

Hartford, Conn.

### THE ADVANTAGES OF LITHOLAPAXY.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL.

As Dr. W. S. Forbes, of Philadelphia, seems to be one of the few surgeons in the country who are convinced of the vast superiority of litholapaxy over all other operations for stone in the bladder, and certainly is its ablest advocate, I am tempted to say an encouraging word in the way of my own very satisfactory experience in two cases.

The first was in a gentleman of 50, on whom perineal lithotomy had been performed 10 years ago; he was in bed for 3 weeks and suffered a great deal. Fifteen months ago I crushed and washed out of his bladder a stone weighing 120 grains; he had no fever afterward and went to his office on the third day and has been there ever since, and at present has no suspicion of any bladder-trouble. He at least does not need any statistics to help him decide the respective merits of the two operations.

The other case was in a man of 71 years, who ruptured his urethra by falling on a fence, and had a scrotal abscess and urethral fistula following. A homeopathic practitioner put a soft-rubber catheter in his bladder to keep the urine from coming through the fistula, with the result of inducing an aggravated suppurative urethritis and cystitis. The catheter was left in place for 40 days and then could not be removed on account of the heavy deposit of lime-salts within, around, and in the eye of the catheter. The patient, more dead than alive, was then brought to me. Under slight ether-anesthesia I passed a steel stylet through the catheter, broke off the stone attached to the eye and forcibly withdrew the catheter. I should then have removed the pieces of stone with the lithotrite but for his bad physical condition. He afterward passed one or two fragments and then seemed to have no more trouble. He went away and came back a year afterward (May 28, 1898) with a history of having had trouble with his bladder for 6 months previously, with a further resort to homeopathy. Everything had been tried except irrigation of the bladder. The man was urinating every hour, was suffering a great deal, and was greatly debilitated. I relieved him by litholapaxy of a soft phosphatic stone one inch in diameter, and on the fourth day he was walking about, perfectly comfortable.

In the face of the unanswerable statistics of such Indian surgeons as Keegan, Forbes-Keith, Freyer and Baker, how can we account for this absolute stone-blindness and stone-deafness of American surgeons? What other religion has a surgeon but his faith in the statistics of his brother surgeons? This is the only instance in the whole range of surgery where statistics seem to be entirely ignored.

At the meeting of the American Medical Association in Philadelphia last year I heard a paper on stone by one of the most prominent surgeons of Philadelphia. He mentioned litholapaxy in the most perfunctory way, and merely passed it by with the assertion that the mortality from the three

operations was about the same. He seemed to have had no personal experience with it. I remember also that Prof. Forbes was present and administered a very eloquent and well-deserved rebuke that was unanswered. He intimated very strongly that a paper on stone in the bladder that took no notice of Indian statistics, which show a mortality of from 0.5% to 2 or 3%, based on thousands of cases, was much like the play of Hamlet with Hamlet left out.

I recently saw four cutting operations for stone at one of the leading hospitals of the country. Upon inquiry I learned that they had never done the operation of litholapaxy and that there was not a lithotrite in the house. The explanation, I suppose, is that stone-cases are comparatively rare and lithotrites are expensive; and again the two cutting operations are *usually* very satisfactory, that is in about 90% or less of the cases. The lowest estimated mortality of the cutting operations, however (as against Baker's 404 cases, with 2 deaths), is about 10%. Dr. Forbes says the Truss Company had 52 cases of ventral hernia, 14 of which were due to suprapubic cystotomy.

I have a boy of 11 in my hospital now with a vesico-rectal fistula who has had 8 operations in the last 4 years, all of which have failed. He has been bedridden the greater part of the time now for 6 years because of a lateral operation for stone which, of course, if reported at all, was put down among the cures.

Yours truly,

G. S. BROWN.

Birmingham, Ala.

### THE STATE OF THE BLOODVESSELS IN INTERMITTENT FEVER.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—*

For some time I have been using a hot-air apparatus in the treatment of certain chronic troubles, as well as of sprains, and I have been interested in observing the high degrees of heat that can be borne with comfort; together with the fact that the perception of heat is relative. Frequently, in the treatment of sprains, I have employed with benefit a temperature as high as 450° F., the only pain complained of being referred to the end of the big toe and the heel, the two points where the circulation is least active.

On June 24th, using the same apparatus in the case of an old gentleman, he complained greatly of the heat and I reduced the temperature to 190° F. While the box was cooling the patient became very pale, with weak circulation and in a semi-unconscious state. I removed his leg from the box, laid him upon a couch and gave him some whisky. The cerebral symptoms became better, and he immediately went into the cold stage of a chill; whereupon I gave him morphin hypodermically and shortly he was asleep. Upon awaking he complained of severe pain in his large toe, the end of which I found blistered, owing to the fact that the bloodvessels of the part had not dilated under the influence of the heat as they should have. This was before the chill had come on. Had the apparatus been heated as high as it is frequently the damage done might have been very extensive. The cerebral symptoms must have been due to the increased circulation, carrying a larger amount of toxic matter to the brain. The case is interesting mainly in showing how profoundly the vasomotor system is affected in intermittent fever. One would have thought that the vessels would surely dilate at 190° F. The constriction of the bloodvessels should be remembered whenever heat is applied in the algid stage of intermittent fever, lest injury result

therefrom. It also suggests in the treatment of the same the use of some drug having an effect on the medulla and the other centers for the vasomotor constrictors.

Respectfully,

W. M. HOLLADAY.

Hampden, Sidney, Va.

### RUPTURE OF THE POSTERIOR CRUCIAL LIGAMENT, WITH DISPLACEMENT OF THE INTERNAL SEMILUNAR CARTILAGE.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—*

The following case seems to me noteworthy, because of the difficulty in getting at the affected parts. A strong, healthy woman, weighing about 175 pounds, with a history of a weak knee, was dancing, and felt a snap in the knee-joint. She fell to the floor and was unable to rise, because of the pain on motion, although there was little or none spontaneously. Upon superficial examination, I concluded that there was a displacement of the semilunar cartilage of that side. I tried by flexion to reduce it, but failed. On the day following, I noticed a considerable antero-posterior looseness of the joint, and suspecting rupture of the posterior crucial ligament, I advised the opening of the joint, and this was done, under anesthesia. I made a two-inch incision internal to the patella and found the joint apparently healthy. The internal semilunar cartilage was folded upward upon itself, and the free lower end of the posterior crucial ligament was within sight. The latter was seen to be small, and it had been torn from its insertion. As it was impossible to find sufficient tissue at that point, I stitched the end, or rather that portion about a quarter of an inch from the end, to the posterior portion of the external semilunar cartilage, leaving the short free end in apposition at its proper site, and, in order to insure it from further movement before union had taken place, I passed a single suture through the two crucial ligaments at their point of intersection. I then stitched the internal cartilage into its proper place, and closed the external wound with silk. The internal work was done with catgut. I kept the limb in splints for 6 weeks, at the end of which time the patient could stand, though with some pain. The movement of the joint was considerably limited; so I devoted the following 2 months to breaking the adhesions, and at about the tenth week after the operation I felt give way what I believe to have been the temporary union between the two crucial ligaments—at least movement thereafter was much greater and continued to improve until at 8 weeks the joint was in good and useful condition, the patient contending that it was stronger than at any time during the past 20 years. The operation was, of course, done with every antiseptic precaution. I did not irrigate the cavity. There was no suppuration.

Respectfully,

Ansonia, Conn.

PAUL NORWOOD.

**Pneumonia Complicated by Malignant Endocarditis of the Tricuspid Valve.**—F. G. Finley (*Montreal Med. Jour.*, May, 1898), reports a case of acute lobar pneumonia of moderately severe type with early prostration, in which on the eleventh day a rigor occurred, and after a second rigor malignant endocarditis was suspected. At the necropsy acute endocarditis confined to the tricuspid valve was discovered. The valve was covered with polypoid vegetations as large as cherries, forming a cluster, and somewhat obstructing the orifice; but there was neither dilatation nor stenosis. Microscopic examination disclosed the presence of many large lancet-shaped diplococci about twice the size of the pneumococcus, of which it was suggested they might be involution-forms.



## American News and Notes.

Unsigned Items and those not otherwise credited are generally Original Contributions furnished by Physicians acting as Special Resident Correspondents of the PHILADELPHIA MEDICAL JOURNAL.

**Sir William Hingston**, of Montreal, has received the degree of LL.D. from the Ottawa University.

**Dr. Frederick Holme Wiggin** has been appointed assistant visiting surgeon to Bellevue Hospital, New York.

**Dr. S. C. Ayres** has been elected professor of ophthalmology in the Medical College of Ohio, the medical department of the University of Cincinnati.

**The Toronto Clinical Society** has elected the following officers: President, D. L. M. Grassett; vice-president, G. A. Bingham; secretary, H. A. Bruce.

**Northwestern University Medical School.**—Dr. Frank S. Johnson has been elected Dean, vice Dr. N. S. Davis resigned; and Dr. N. S. Davis, Jr., has been elected Secretary.

**The Quadrangle Club of the Chicago University**, which was destroyed by fire last year, was opened June 20th, by a large reception given by the Club to the University and Department Faculties.

**Typhoid fever** of rather severe type is epidemic in **Lancaster, Pa.** The Board of Health attributes the outbreak to pollution of the Conestoga Creek, the source of the city's water-supply.

**Dr. H. C. Tinkham**, of Burlington, professor of surgery in the University of Vermont, has been elected Dean of the medical faculty, to succeed Dr. A. P. Grinnell, who had been Dean for the past 24 years.

**The Columbian Medical School Hospital.**—The old Columbian University Preparatory School in Washington is to be transformed into a hospital, fitted with all approved sanitary appliances, and conducted in connection with the Columbian Medical School.

**Appropriation for Johns Hopkins University.**—The *Medical News* states that the Maryland State Legislature has appropriated \$400,000 to this institution to tide it over its financial straits, due to the loss sustained in the default of the Baltimore and Ohio Railroad Company.

**The Memphis Lancet**, which has just made its appearance, is the latest addition to the already long list of medical journals. We congratulate the editorial management upon the scientific value of the initial number, and commend to other journals the position that the *Lancet* takes with regard to unethical advertisements.

**The Toronto Medical Society** has elected the following officers for the ensuing year: President, A. Primrose; 1st vice president, D. Oakley; 2d vice-president, J. Webster; corresponding secretary, M. Currie; recording secretary, J. N. Brown; treasurer, G. H. Carveth; Council, W. J. Wilson, J. E. Graham, T. F. McMahon.

**Cobalt Nitrate in Cyanid-poisoning.**—The London correspondent of the *American Practitioner and News* for June 1st says that a chemist is stated to have found in cobalt nitrate an effective antidote in both hydrocyanic-acid and cyanid-poisoning. Successful in the first trials with animals, its application has been extended to some 40 cases of poisoning among human beings, and proved successful.—[*New York Medical Journal* .

**Cook County Hospital Alumni Association.**—The 28th annual meeting was held in Chicago June 30th. Dr. A. E. Halstead and E. R. Le Count read a paper upon Tuberculosis of the Mammary Gland, and Dr. Adolph Gehrmann read a paper on Certain Infarcts in Veal Kidneys and their Relation to Meat-inspection.

**Chicago Medical Society.**—At the annual meeting held June 29th, the following officers were elected: Dr. Arthur D. Bevan, president; Dr. Junius C. Hoag, vice-president; Dr. S. C. Plummer, treasurer, and Arthur R. Edwards, secretary.

Dr. A. D. Bevan received the \$100 prize offered by the *Chicago Medical Recorder* for the best surgical paper, and Dr. Maximilian Herzog a prize of \$100 for the best medical paper read before the society during the year.

**Obituary.**—DR. T. E. MURRELL, professor of ophthalmology in Barnes Medical College of St. Louis, Mo., at Denver, Col., June 26th, aged 48 years. He was graduated from the University of Maryland in 1873, and practised at Little Rock, Ark., for nearly twenty years, when he removed to St. Louis.—DR. GEORGE MELVILLE FROST, Peabody, Mass., June 20th, aged 55 years.—DR. T. N. CUNNINGHAM, Princeton, Ill., June 22d, aged 54 years.—DR. J. B. JOHNSON, Allegheny, Pa., June 20th, aged 61 years.—DR. E. J. DE RAISMES, Union, N. J., June 18th, aged 39 years.—DR. W. F. MILLER, Louisville, Ky., June 17th, aged 74 years.

**Mr. H. Martyn Hart**, of the Cathedral Vestry, Denver, Col., solicits employment or assistance for a Persian, Joseph Shimmoon, who has been in this country for 4 years; has struggled to obtain a medical education, and has been more than a year a medical student in the University of Denver. The man knows English splendidly, has a remarkably good head, but he finds it very difficult to get his living and study medicine at the same time. He is capable and willing to do anything, his whole anxiety being to fit himself to do some good in his benighted country, where there is no qualified medical practitioner.

**Honorary Degrees to Be Conferred on Medical Men.**—At the International Zoological Conference to be held in Cambridge in August, the honorary degree of D.Sc. will be bestowed on Dr. Henry P. Bowditch, professor of physiology in the University of Harvard; Dr. Camillo Golgi, professor of general pathology in the University of Pavia; Dr. Hugo Kronecker, professor of physiology in the University of Berne; Dr. Willy Kühne, professor of physiology in the University of Heidelberg; and Sir William Turner, professor of anatomy in the University of Edinburgh, and president of the British General Medical Council.

**The American Otological Society** will meet at New London, Conn., July 19th. The following papers are announced: Dr. Gorham Bacon, of New York City, The Importance of an Early Operation in Thrombosis of the Sigmoid Sinus, with a report of Two Cases, of which One Recovered; and Report of a Case of Double Mastoid Disease, Presenting Symptoms of an Intracranial Complication: Operation: Recovery; Dr. J. Orne Green, of Boston, Three Cases of Suppuration of the Labyrinth, Two of them Producing Abscesses of the Cerebellum: Operations; Dr. C. J. Blake, of Boston, Bloodclot in Mastoid Operations; Dr. H. Knapp, of New York City, The Functional Examination of the Ear, with Demonstration of Bezold's Continuous Tone-series; Dr. E. B. Dench, of New York City, The Sequelae of Middle-ear Suppuration, with a Report of Cases; Dr. H. A. Alderton, of Brooklyn, N. Y., Tuning-fork Reactions in Affec-

tions of the Sound-conducting Apparatus; and Trephining of the Stapedial Footplate for Otitis Media Sclerosa; Dr. C. H. Burnett, of Philadelphia, Does Tympanotomy and Removal of the Incus Arrest Progressive Hardness of Hearing?; Dr. Samuel Theobald, of Baltimore, Md., Report of Cases of Otomycosis, Treated by Insufflation of Boric Acid and Zinc Oxid.

**The Pacific Record of Medicine and Surgery** has begun a new series in a new and attractive form. In addition to interesting editorials, original articles and abstracts, full and valuable reports are given of the proceedings of the local California Medical Societies. The *Record* says: "We are working for no individual, no scheme, no clique, no faction or body of men, but aim to encourage our physicians to greater diligence and a stronger effort to maintain and raise the medical standard of California." We are in hearty sympathy with our contemporary in its worthy efforts, and trust that it will receive the cordial support that it deserves.

**A Missionary Hospital in Central Mexico.**—Dr. Levi P. Salmans has been established as a medical missionary at Guanajuata, Mexico, since 1891. He has had the assistance, at various times, of two other physicians, Drs. Hyde and Cartwright, so that in some years, they have been able to record between 6,000 and 7,000 visits to their "Dispensario Medico-quirurgico." This dispensary is in fact an embryo hospital, containing as it does some 20 rooms, of which 3 are large ward-like apartments and one other suitable for an isolation-ward for infectious diseases. Dr. Salmans needs some financial help from his fellow-countrymen to complete the surgical outfit of the dispensary.

**Patriotic Women-nurses at the Brooklyn Naval Hospital.**—Miss Helen Long, the daughter of the Secretary of the Navy, is, with three companions, regularly detailed as a nurse at the Naval Hospital at Brooklyn. All four were until recently in attendance in the medical course at the Johns Hopkins University, and they expect in due time to take the medical degree. Meanwhile they have offered their services, during the summer-vacation, to help take care of the sick and wounded sailors. They are on duty daily from 8 A.M. to 6 P.M., and two of them are assigned to the wards for tuberculous cases. This is the first time since the Civil War that there has been volunteer female nursing done at this Hospital.

**Chicago Society of Internal Medicine.**—At the regular meeting held June 23d, Dr. JAMES B. HERRICK read a paper upon the **existence in Chicago of epidemic cerebrospinal meningitis**, detailing 12 cases seen and demonstrating the intracellular meningococcus from a fatal case.

Dr. GUSTAV FÜTTERER read a paper on **the rapidity of the dissemination of microorganisms throughout the system when introduced into the portal vein**. The paper detailed experiments showing that bacteria pass through the portal into the general circulation with great rapidity, less than one minute being required for their appearance in the general circulation after being introduced into the portal vein.

Dr. GEORGE F. BUTLER read a paper on **chronic parenchymatous nephritis and aortic regurgitation, with enormous dilatation of the heart**. He reported a case, and considered the diagnosis of aortic insufficiency, by means of its secondary effects, in cases without murmur. He referred to the role of chronic parenchymatous nephritis in these cases, to indications for the use of digitalis in

aortic regurgitation, and to the dietetic and hygienic management.

**The Lister Laboratory Club** held its last meeting on June 27th in the Pathological Institute of McGill University. Dr. J. G. MCCARTHY demonstrated a hitherto undescribed **structural peculiarity in the hippocampus major** of the human brain. His paper is to be given in extenso at the approaching meeting of the British Medical Association in Edinburgh.

Dr. A. BRUERE showed a series of preparations stained by various selective stains for fat, such as Sudan III, Sudan yellow, indulin, quinolin-blue and osmic acid. He was of the opinion that the best results were obtained from the use of Sudan III. He found that like quinolin-blue it also tinged myelin.

Prof. J. G. ADAMI gave a demonstration of specimens of liver and peritoneal lymph-glands in **Pictou cattle-plague**, showing the characteristic microorganisms; also specimens from **progressive atrophic cirrhosis** in man, showing a somewhat similar organism.

Dr. W. MORROW read a communication upon certain rare cases in which he had found that after boiling **saliva** for a short time it still retained its **diastatic properties**. He also detailed the precautions necessary to be taken in making the investigation. Dr. McTAGGART and others showed specimens.

**Rush Medical College of Chicago.**—The following additional appointments are announced: Sanger Brown, Associate Professor of Hygiene and Medical Jurisprudence; Truman W. Brophy, Associate Professor of Dental Surgery and Pathology; Alfred C. Cotton, Associate Professor of Diseases of Children; Henry B. Stehman, Assistant Professor of Gynecology; Jerome H. Salisbury, Assistant Professor of Medicine and of Chemistry; John A. Robison, Assistant Professor of Medicine; Harold N. Moyer, Assistant Professor of Medicine; Albert I. Bouffler, Assistant Professor of Emergency Operations; Frank Hugh Montgomery, Assistant Professor of Skin, Genito-Urinary, and Venereal Diseases; John Edwin Rhodes, Assistant Professor of Diseases of the Chest, Throat and Nose; Frederic S. Coolidge, Assistant Professor of Orthopedic Surgery; George H. Weaver, Assistant Professor of Pathology; Edwin R. Le Count, Assistant Professor of Histology and Pathology; B. McPherson Linnell, Assistant Professor of Physiology; Jacob Allen Patton, Assistant Professor of Materia Medica and Therapeutics, and of Chemistry; Albert C. Eycleshymer, Assistant Professor of Embryology; David W. Graham, Clinical Assistant Professor of Surgery; Philip Adolphus, Clinical Assistant Professor of Gynecology; and Effa V. Davis, Clinical Assistant Professor of Obstetrics.

**Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army.**—From June 26, 1898, to July 2, 1898:

Acting Asst. Surgeon EUGENE H. HARTNETT, U. S. Army, ordered from this city to duty in U. S. General Hospital, Fort Monroe, Va.  
Acting Asst. Surgeon HENRY S. GREENLEAF, U. S. Army, ordered to report in person to the Major-General commanding the Army for duty.  
Acting Asst. Surgeon S. MELVILLE WATERHOUSE, U. S. Army, at General Hospital, Fort Myer, Va., ordered to accompany Artillery Battalion from Washington Barracks, D. C., to San Francisco, Cal.  
Acting Asst. Surgeon THOMAS A. SMITH, U. S. Army, is relieved from duty on U. S. Hospital Ship "Relief," New York City, N. Y., and ordered to Fort Slocum, N. Y., for duty.  
Captain CHARLES E. B. FLAGG, Asst. Surgeon, ordered from Columbus Barracks, O., to duty in General Hospital at Fort McPherson, Ga.



Major W. FITZHUGH CARTER, Surgeon, U. S. Army, ordered from Nashville, Tenn., to Tampa, Fla., for duty with Fourth Army Corps.

Acting Asst. Surgeon EDWIN P. HAYWARD, U. S. Army, ordered from Kansas City, Mo., to duty in Leiter General Hospital, Chickamauga, Ga.

Acting Asst. Surgeon, C. F. DE MEY, U. S. Army, ordered from Louisville, Ky., to San Francisco, Cal., for duty with Philippine Expedition.

First Lieutenant FRANKLIN M. KEMP, Asst. Surgeon, ordered to San Francisco, Cal., for duty with the expedition to the Philippine Islands.

Acting Asst. Surgeon J. W. DONNELLY, U. S. Army; Acting Asst. Surgeon STEPHEN M. LONG, U. S. Army, and Acting Asst. D. T. LAINE, U. S. Army, ordered from this city to Tampa, Fla.

Acting Asst. Surgeon R. FLEMING JONES, U. S. Army, is relieved from duty at Fort Bliss, Tex., and ordered to Tampa, Fla.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon G. A. LONG, detached from the "Supply" and ordered to the "Philadelphia" immediately.

Asst. Surgeon C. A. CRAWFORD, ordered to the Washington Navy Yard immediately.

Asst. Surgeon H. A. JOHNSON, detached from the "Peoria" and ordered to the "Terror" immediately.

Asst. Surgeon F. M. FURLONG, detached from the "Richmond" and ordered immediately to the "Siren."

Asst. Surgeon E. J. GROW, ordered to the Boston Navy Yard.

Asst. Surgeon J. R. WHITING, ordered to the "Richmond" immediately.

Asst. Surgeon G. F. FREEMAN, detached from the Boston Navy Yard and ordered to the "Peoria."

Asst. Surgeon B. L. WRIGHT, detached from the "Richmond" and ordered immediately to the "Supply."

Asst. Surgeon C. A. CRAWFORD, order of June 25th, to the Washington Navy Yard revoked.

Asst. Surgeon H. D. AVERILL, ordered to Port Tampa, Fla., in re enlistments and to return to the "Lancaster."

Asst. Surgeon E. O. HUNTINGTON, detached from the Naval Hospital, Boston, Mass., and ordered to the marine rendezvous, Boston.

Asst. Surgeon D. F. SUGHRUE, detached from the marine rendezvous, Boston, Mass., and ordered immediately to the "Abarenda."

Asst. Surgeon L. B. BALDWIN, ordered to the "Alexander" immediately.

Asst. Surgeon J. B. DENNIS, detached from the "Vermont" and ordered immediately to the "Frolic."

Asst. Surgeon H. C. CURL, ordered to the Mare Island Naval Hospital.

Asst. Surgeon H. E. O'DELL, detached from the Mare Island Naval Hospital and ordered immediately to the "Philadelphia."

Asst. Surgeon W. L. BELL, ordered to the Mare Island Navy Yard.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 22 days ended June 30, 1898:

Surgeon H. W. AUSTIN, relieved from duty at Bureau and directed to rejoin station at Boston, Mass. Relieved from duty at Boston, Mass., and directed to proceed to Philadelphia, Pa., and assume command of "Service."

Surgeon FAIRFAX IRWIN, upon being relieved by Surgeon H. W. AUSTIN, to proceed to Boston, Mass., and assume command of "Service."

Surgeon W. A. WHEELER, to proceed to Cleveland, Ohio, and assume temporary command of "Service" during absence of Surgeon D. A. CARMICHAEL.

Passed Assistant Surgeon A. H. GLENNAN, to proceed to Egmont Key detention-camp, Fla., for special temporary duty.

Passed Assistant Surgeon J. H. WHITE, to proceed to Fontainebleau, Miss., detention-camp for special temporary duty.

Passed Assistant Surgeon H. D. GEDDINGS, to proceed to Fontainebleau, Miss., detention-camp for special temporary duty.

Passed Assistant Surgeon C. P. WERTENBAKER, to proceed to Statesville, N. C., and then to Reidsville, N. C., for special temporary duty.

Passed Assistant Surgeon B. W. BROWN, granted leave of absence for 5 days.

Passed Assistant Surgeon W. J. S. STEWART, granted leave of absence for two days from July 1, 1898.

Assistant Surgeon C. E. DECKER, granted extension of sick leave for one month from June 23, 1898.

Assistant Surgeon S. R. TABB, to proceed to Fontainebleau, Miss., detention-camp, for temporary duty.

Assistant Surgeon TALIAFERRO CLARK, to proceed to Brunswick Quarantine, Ga., and assume temporary command of service during absence of Sanitary Inspector R. E. L. Burford.

Assistant Surgeon M. H. FOSTER, to proceed to Savannah, Ga., and assume temporary command of service.

Board convened June 22, 1898, to report by letter on the physical condition of Assistant Surgeon C. E. DECKER. Passed Assistant Surgeon A. H. GLENNAN, chairman; Passed Assistant Surgeon W. G. STIMPSON, recorder.

Assistant Surgeon SEATON NORMAN, resignation accepted, to take effect June 22, 1898.

The following-named passed assistant surgeons have been ordered to be examined as to their fitness for promotion to the grade of surgeon. The examining board met July 6: Parker C. Kalloch, Arthur H. Glennan, Eugene Wasdin, Stephen D. Brooks, Joseph H. White.

## Foreign News and Notes.

Unsigned Items and those not otherwise credited are usually Original Contributions furnished by Physicians acting as Special Resident Correspondents of the PHILADELPHIA MEDICAL JOURNAL.

**Dr. Hofmeister**, for many years assistant to Professor von Bruns, has been appointed professor of surgery in the University of Tübingen.

**An epidemic of typhoid fever** as a consequence of the use of polluted ice is reported by Dorange in a recent number of the *Revue d'Hygiene*.

**Dr. Monprofit**, has been appointed professor of surgery and director of the surgical clinic at Angiers, in succession to the late Professor Dezanneau.

**Professor Francesco Durante** celebrated, on June 5th, the twenty-fifth anniversary of his election to the chair of surgery in the University of Rome.

**Koch on Tropical Hygiene.**—Prof. Koch will shortly give a discourse on Tropical Hygiene before the Society for the Care of Public Health in Berlin.

**Prof. v. Eulenburg**, of Berlin, the chief editor of the *Deutsche medicinische Wochenschrift*, has been elected an honorary member of the Society of Psychiatry and Nervous Diseases of Moscow.

**Prof. Frenkel**, the inventor of the **movement-therapy for tabes dorsalis**, gives a course on the subject during July and August at his home, Heiden in the Canton Appenzell in Switzerland.

**Prof. Kolisko's official appointment** as the successor of Hofmann in the chair of Legal Medicine at Vienna, is just announced. His nomination for the position to the University authorities by the Medical faculty, *primo et unico loco*, was noted in these columns some time ago.

**Superficial Area of the Human Body.**—At a recent meeting of the Société de Biologie of Paris, MM. Bergonie and Sigalas stated that as a result of recent investigations they had found the superficial area of the human body to be 16,206 square decimeters (17.4 square feet)—about one-tenth higher than the figures of Bouchard.

**The Council of the Royal College of Surgeons of England.**—Three vacancies are about to occur in this the ruling body of the college in the course of the next few days. There are five candidates for the seats, two of whom—Mr. Langton, surgeon to St. Bartholomew's Hospital, and Mr. Henry Morris, surgeon to the Middlesex Hospital—are already members of the Council, but submit themselves for re-election. The other three candidates are Mr. Clement Lucas, surgeon to Guy's Hospital, Mr. Bennett May, surgeon to the Birmingham Infirmary, and Mr. R. Cross, ophthalmologist to the Bristol Royal Infirmary. The Fellows of the College only, and not the general body of the members, elect to the Council, so that it is not easy to predict who will be successful, but Guy's Hospital is already trebly represented on the Council, so that it is the turn of a provincial man, the interests of London being thoroughly looked after.

**The Red Cross Society of Paris, France.**—This old and influential organization has opened a subscription-list on behalf of the wounded of both the American and Spanish armies. The society heads the list with a subscription of \$10,000. In this connection it is observed that during the Franco-German war the society raised \$2,400, and it has since raised \$600,000 more on behalf of the wounded in various colonial expeditions. The Italian Red Cross Society has offered its assistance to the American and Spanish Red Cross branches, and has placed at their disposal its sanitary appliances, and other articles for the use of the sick and wounded.

**The Renewal of Prescriptions, etc., in Germany.**—A recent decision of the Ministry of Public Worship, of Education, and of Medical Affairs in Germany is of interest. Prescriptions for internal use in Germany may not be repeated for the patient by an apothecary unless the physician signifies his approval in writing. External remedies, however, may be repeated. Substances prescribed as eye-washes, for inhalation, for subcutaneous injection, or for clysters and suppositories are by this recent decision classed among internal remedies as regards their repetition, though the regulations as to bottles and labels that hold for external remedies still apply to them.

**The German Emperor and the Medical Profession.**—Some idea of the cordial feeling of Kaiser Wilhelm toward the medical profession in Germany may be gathered from the number of medical men who were invited to be present at the dinner given at the Royal Palace at Berlin on June 16th, on the occasion of the tenth anniversary of his accession to the throne. All of the German physicians who were in attendance on his father, the late Emperor Frederick, were present. Beside the chiefs of the medical staff of the army, who were officially present, there were in attendance Professors von Leyden, Waldeyer, Gerhardt and von Bergmann, of Berlin, von Bramann, of Halle, Moritz Schmidt, of Frankfurt, and Tobold and Ernesti.

**Obituary.**—THEODOR EIMER, professor of zoology in the University of Tübingen.—A. VON ZENKER, formerly professor of pathologic anatomy in the University of Erlangen. He is particularly remembered for his investigations concerning trichinosis, diseases of the esophagus, and the pathologic alterations in the voluntary muscles that occur during typhoid fever. In association with Professor von Ziemssen he founded and edited the *Deutsches Archiv für klinische Medizin*.—DR. KARL VON ROKITANSKY, Professor of Gynecology and Director of the Gynecological Clinic at Graz, June 20th, aged 51 years.—DR. KARL EDWARD WITTH, Professor of Internal Medicine and formerly Director of the Friedrich Hospital, Copenhagen, June 17th, aged 72 years.

**An Abdominal Operation on the Sultan's Daughter.**—The European press has reported an operation that is probably destined to have much more than ordinary significance and import. The daughter of the Sultan of Turkey was operated on successfully for what, so far as can be gathered from unauthoritative sources, would seem to have been hypertrophic stenosis of the pylorus. The operation was performed by Djemil Pasha, whom visitors to the surgical section of the recent International Medical Congress at Moscow will remember as an unassuming young man, who, though the representative of the Turkish Government, was only in evidence when he had something to say, which he did briefly and pointedly. After the operation he received the Osmanic order. Seven surgeons were present at the

operation and the dissemination of the knowledge of the operation among the Turks is likely to have a most salutary effect with regard to the medical and surgical treatment of Turkish women by men.

**International Congress of Applied Chemistry.**—Chief Chemist, Dr. H. W. Wiley, has sailed for Vienna as the representative of the U. S. Government to the Third International Congress of Applied Chemistry to be opened in that city, July 28th. In addition, Dr. Wiley will act as the special representative of the Agricultural Department, and of the American Chemical Society. The provisional officers of the congress include the president of honor, Dr. Alexander Bauer, professor of the Royal Imperial Technical High School, Vienna; active president, Dr. Hugo Ritter von Perger, professor at same institution; vice-president, Dr. Josef Maria Eder, director of the Royal Imperial Graphic School, Vienna; and secretary, Dr. F. Strohmer, director of the experiment-station for beet-sugar industry, Vienna.

**German Copyright Expires with Patent.**—As noted in these columns some months ago, the antipyrin-patent expires July 22d, and a reduction in the price of the chemical of about one-third is expected shortly thereafter. In fact, as several German drug-firms are said to have been manufacturing antipyrin in anticipation of the event, it is thought that lively competition will, for a time at least, still further reduce the price. The German courts decided not long ago that the word antipyrin, though copyrighted, had now become common property by its universal acceptance in medical and scientific circles, and that the trademark would not secure the exclusive right of the term for the original makers after the expiration of the patent. Other makers will then not have to employ the longer chemical term, dimethyloxychinicin, as was at first thought, under which, of course, the drug would scarcely be recognized. Unless the Imperial Court of last resort, to which an appeal has not yet been made, should reverse the decision of the lower courts, which is considered quite improbable, it is evident that German law at least will not permit its trademark-regulations to have a significance that was not originally intended, nor to create inconveniences in commerce.

**The Forthcoming Meeting of the British Medical Association.**—The 66th annual meeting of the British Medical Association will be held at Edinburgh on Tuesday, Wednesday, Thursday and Friday, July 26th, 27th, 28th, and 29th, under the presidency of Sir Thomas Grainger Stewart, Professor of Medicine in Edinburgh University and Physician in Ordinary to the Queen in Scotland. In a town so rich in distinguished medical men as Edinburgh, there could be no difficulty in finding fit persons to deliver the addresses in plenary congress, save such difficulty as might arise from a surplus of material. The choice of the executive has fallen upon Dr. Thomas Richard Fraser, Professor of Materia Medica and Therapeutics in the University, to deliver the address in Medicine; upon Mr. Thomas Annandale, Professor of Clinical Surgery, to deliver that in Surgery, and upon Sir John Battey Tuke, President of the Royal College of Physicians of Edinburgh, to deliver that in Psychological Medicine. The connection of Sir John Battey Tuke and Mr. Annandale with their respective branches of the medical profession, is well known to all the civilized world, but Dr. Fraser's name is hardly so familiar. Yet he is one of the most scientific physicians in the United Kingdom, and particularly famous for his elaborate researches, both independently of and in collaboration with M. Calmette into



the nature of snake-poison. His investigations into the antivenomous properties of the bite of serpents and generally into the possibility of immunizing the human subject against snake-poison have resulted already in the saving of human life; and as it is estimated that in India alone many thousands perish annually from snake-bite, it is probable that Dr. Fraser is on the way to establish a very solid claim to his country's gratitude. The Royal Society of London has proved its belief in Dr. Fraser's work by electing him a Fellow of that exclusive body.

#### Formal Opening of the Berlin Medical Club.

The Berlin Medical Club dedicated its quarters Unter den Linden at an invitation-lunch on June 18th, to which some 600 medical men, including the members, sat down. Evidently medical interest has been thoroughly aroused in the new enterprise and the executive faculty of the president, Prof. Lassar, is clear from the way difficulties have been overcome. A feature consists in the adjoining hotel parlors, which are to be used on festive occasions and which at all times may constitute a rendezvous where physicians may meet their wives and daughters when in the center of the city. König, Professor of Surgery in the University of Berlin, prophesied that the club would be a source of great benefit to the profession of Berlin, where the friction of competition, even in professional work, has made itself felt. Every effort is to be made to exclude political and university differences, and there is really an enthusiastic feeling among the more than 400 members that great things will be accomplished in the way of rendering pleasant and profitable the relations among medical practitioners.

**Deaths in Child-birth in New South Wales.**—At a recent meeting of the Royal Statistical Society of London, Mr. T. A. Coghlan read a most interesting paper on the statistics of deaths in child-birth. The data on which Mr. Coghlan's investigations were founded were the births and deaths registered in New South Wales during the 3 years from 1894 to 1896 inclusive, during which there were 115,669 confinements in the colony and 813 deaths due to child-birth. Mr. Coghlan was able to give his audience many interesting deductions from his examination of the circumstances of their various confinements. Among others he showed that in New South Wales if a woman marries at the age of 20 years, the total average number of children born by her is 7.2, if at 21 years 6.8, if at 24 years 5.6, if at 28 years 4.1, if at 32 years 2.9 and if at 36 years 1.7. He also showed that in the colony 1 woman on an average out of 23 who marries at the age of 20 will die in child-birth; a fate that should overtake 1 out of 32 at the age of 25, 1 out of 39 at the age of 30, 1 out of 43 at the age of 35 and 1 out of 42 at the age of 40. The paper was listened to with appreciation and will certainly receive the serious attention of English obstetricians.

**University College Hospital, London,** the foundation-stone of which was recently laid by the Prince of Wales, has experienced some curious fluctuations of fortune during the past few years. When the hospital was built in 1833 to supply the needs of the North Central district of London, this district was sparsely built over and the occupants of the substantial Bloomsbury mansions required no medical charity. Now, an enormous quantity of small houses, which are densely crowded, have been built in serried rows all over the neighborhood of Bloomsbury and the parishes of Marylebone and St. Pancras, with the result that the wealthier occupants of the big houses have fled westward, and that the hospital is left minus its wealthy local supporters and plus a crowded

and poverty-stricken environment. As a consequence none of the money subscribed to the hospital could be spared for any purposes whatever save such hand-to-mouth objects as paying for drugs, instruments and dressings; and the hospital-premises became obsolete and positively unfit to be a home of modern medicine. Then Sir John Blundell Maple, the head of a famous firm of upholsterers and the largest employer of labor in the vicinity of the hospital, offered to rebuild the whole place out of his own pocket at a cost of £100,000 or more. Great were the rejoicings of the hospital-authorities—but brief the duration of their joy; for, the public having grasped the fact that Sir John Blundell Maple had made a magnificent donation, but not the fact that it had been made for the specific purpose of rebuilding, and that it must not be employed in current expenses, turned a deaf ear to the usual appeal for annual subscriptions; and some of the wards, wards for every bed in which there was a fierce competition among the sick, had to be closed for want of money. A vigorous statement in the press of the real state of affairs and a timely grant from the Prince of Wales' Hospital Fund have made matters wear temporarily a better appearance; and now the work of rebuilding has actually begun. The plans provide for a spacious pile, with every up-to-date detail of accommodation for the sick, and it is the general belief that with increased facilities for doing good there will come to the hospital an equivalent increase of income.

## Philadelphia News and Notes.

**Obituary.**—DR. PETER HOOPER, a graduate of the University of Pennsylvania, in the class of 1880, July 1st, aged 49 years.—DR. HENRY L. WOODS, a graduate of Jefferson Medical College, in the class of 1887, June 30th, aged 40 years.

#### Infectious Diseases in Philadelphia for the week ending July 2d:

Disease.	Cases.	Deaths.
Diphtheria.....	56	10
Scarlet fever.....	26	0
Typhoid fever.....	51	10
Pulmonary tuberculosis.....		47

**The Philadelphia Vacant Lots Cultivation Association** for aiding the unemployed is now entering the most interesting part of the year's work and is anxious that the friends and contributors to the movement shall see each for himself what gratifying results are being attained. Hence a special invitation is extended to all to visit the gardens. To students in sociology no better field is open for careful study. To see what is being done on any one of the farms is practically to see what is being done on all. The most interesting hour at which to visit is from 6 to 8 o'clock in the evening, when most of the gardeners and families can be seen at this pleasant and profitable work. Farms No. 1, 2, 3 and 5, containing 64 gardens, are easily reached by the Haddington cars out Market Street to 57th and Haverford, or on Arch Street to 57th and Master Streets. Farm No. 4, 16 gardens, at 50th and Haverford Streets, is reached by Haddington cars on Market Street. Farms Nos. 8 and 9, 53 gardens, are but a short distance west from George's Hill Station, Park trolley. The other tracts or farms are scattered over the various sections of the city and contain only from 1 to 4 gardens each. The Superintendent takes great pleasure in showing interested parties over the farms. Dates for such trips of inspection can be arranged by sending him a postal card a day or two beforehand.



## Society Proceedings.

### AMERICAN MEDICAL ASSOCIATION.

Forty-ninth Annual Session, Held at Denver, Col.,  
June 7, 8, 9, and 10, 1898.

(Special Report for THE PHILADELPHIA MEDICAL JOURNAL.)

(Continued from p. 15.)

#### Section on Laryngology and Otology.

**The Address of the Chairman** was delivered by DR. B. ALEXANDER RANDALL, of Philadelphia.

**The Position and Significance of Drumhead-Perforations.**—DR. BARTON H. POTTS and B. ALEXANDER RANDALL, of Philadelphia, reported that from an analysis of 1,000 cases it was found that the greatest number (38%) of perforations of the drum-membrane occur in the upper posterior quadrant, 17% in Shrapnell's membrane, and 10% in the anterior inferior quadrant. DR. J. A. STUCKY, of Lexington, Ky., said that he found the largest number of perforations in the upper posterior quadrant. It would be interesting to know the cause. DR. W. W. ARNOLD, of Colorado Springs, suggested that this might be the point of least resistance. DR. S. G. DABNEY, of Louisville, referred to the persistence of many small marginal perforations. DR. RANDALL considered the position of less importance than the character of the perforation and the presence of caries.

**The Presence of Polypi and Granulations in Suppurative Diseases of the Ear not an Unfavorable Indication.**—DR. LOUIS J. LAUTENBACH, of Philadelphia, said that benign growths in the middle ear are not an unfavorable indication. New-tissue formations show extreme vascularity and an effort to heal. Moist heat is condemned by some as favoring granulation. Several cases were cited to show that after removal of the growths and cauterization of the base with nitric acid, the suppuration ceased and the perforation healed. It is easier to cure chronic suppuration of the middle ear if granulations or polypi exist than if they are absent, as their presence denotes great effort to repair. DR. FULTON said these cases were serious before surgical treatment was employed. DR. COULTER asked why nitric acid was used. He prefers the galvanocautery, and does not think nitric or chromic acid safe in situations that cannot be well seen. DR. J. A. STUCKY said that in chronic suppurative cases in which granulation or polypi existed, he generally found necrosis, and had to curet. DR. ALLPORT thought the underlying principle was to go in and clear out, as in any other part of the body. He agreed with Dr. Coulter about the use of nitric acid. Too much tissue might be destroyed. DR. RANDALL thought cases of granulations and polypi cases of neglect. DR. BARNHILL said if necrosis existed, it must of course be removed, but surgery should be a last resort. DR. LAUTENBACH preferred the galvanocautery in cases in which he had plenty of room, but if the space was small, the smoke arising obscured the field, whereas acid could be carried in on an extremely fine point, and the operator could see. He had been taught that necrosis existed when polypi are present, but if so, healing would not have followed so rapidly after removal of the growths. When the polypi had broad bases he generally found necrosis. He advised packing with gauze instead of cotton, as cotton shrinks with moisture.

**How Shall We Operate on Adenoid Growths in the Nasopharynx?**—DR. MAYER, of New York, said that on operating on extremely young infants no anesthetic could be given. The youngest child he had operated on for this condition was 18 days old. In these very young cases he warns parents that operation will only give temporary relief. To older children he gives an anesthetic. Chloroform must be condemned. Too many deaths result. Nitrous oxid and ether form an excellent combination. There is no shrieking and no struggling. It is best administered by the drop method. From 4 to 6 minutes are required to get the patient under its influence. The morning is the best time to operate, and the operating-room of a hospital the best place. It is not well to operate in the physician's office. The patient's head is hung low over the table, the mouth held open with a gag. Dr. Mayer examines with the finger, then uses forceps, then the Gottstein curet, and lastly the finger.

He cleanses with an iced antiseptic spray, keeping the patient in bed 24 hours. He never undertakes the operation if acute inflammation exists, or any of the exanthemata. DR. G. H. MAKUEN said that he performs this operation in adults for defects of speech. He depresses the head, draws the uvula forward, making a cup of the nasopharynx, and drops in cocain. DR. R. LEVY said he found nitrous oxid efficient, but it is not always at hand. Therefore he sometimes uses chloroform. He has as good success with no after-treatment as he formerly had with it. In fact he thinks by not using it he avoids one source of sepsis. DR. BARNHILL is cautious about chloroform, having had some bad results. With the palate retracted and the aid of a mirror, he lays crystals of cocain on the growths, then removes the crystals, first weighing the cocain. DR. J. A. STUCKY rarely uses any general anesthetic, employing instead a 10% solution of cocain and resorcin. The resorcin prolongs the anesthesia. He would be afraid of cocain-crystals. DR. COULTER uses no anesthetic. He thinks the operation is attended with more fright than pain, as adenoid tissue has little innervation. For adults he uses cocain. DR. LAUTENBACH does not use a general anesthetic; seldom even cocain. He removes the growths with the finger, and has had but one case of recurrence following this method, but many recurrences after using instruments. DR. DABNEY uses general anesthesia, and thinks the operation is rather more painful in adults. DR. LEVY asked if there had been autopsies in cases of reported death from chloroform, to discover if other causes of death existed. DR. INGALS believes in general anesthesia. Twenty-five per cent. of cases recur. The percentage would be less with general anesthesia, as the operation could be more thorough. In 33% of cases there is occlusion of the posterior nares. Under an anesthetic, forceps can be passed through the nares, opening them up. He is opposed to the putting method. DR. MAYER opposed the use of cocain. It adds to the danger. Nitrous oxid is evanescent in effect, but nitrous oxid and ether together form an ideal anesthetic. The operation could not be done thoroughly with the finger alone. He uses it only as an aid.

**Cystic Tumor in the Neck Along the Right Side of the Larynx.**—DR. E. FLETCHER INGALS, of Chicago, reported a case in which the voice was reduced to a hoarse whisper; there was no cough; the temperature was 99.4°. The fluid was aspirated. Later a mass in the larynx proved to be an everted ventricle, which was successfully removed with a snare. DR. MAYER mentioned a case once reported to the Academy of Medicine as a prolapsed ventricle, which afterward proved to be a tuberculous swelling.

**Adenoid Growths in Relation to Deaf-Mutism.**—DR. A. C. GETCHELL, of Worcester, Mass., reported 12 cases of operation on adenoids and tonsils, for relief of this condition. The results were not satisfactory as regards deafness. These growths do not generally appear till the third or fourth year, while deaf-mutism occurs earlier. Hence they are not an adequate cause. They may, however, increase the trouble by interfering with the action of the vocal organs. Their removal improves the speech, also the general health, and possibly, in some instances, the hearing to a slight extent. DR. RANDALL believed as large a percentage of these growths existed in healthy children as in deaf-mutes. DR. MAKUEN believed that it is difficult to determine the character of hearing in young children; to tell just how much they can hear. He has a theory that the difficulty may be more central than peripheral, and that the child does not care to hear. After removal of the growths the child must be taught to speak, as it has passed the natural period for learning. DR. J. A. STUCKY reported the removal of adenoids for deafness following scarlet fever. The result was satisfactory. DR. McREYNOLDS had slight success in 3 cases, but it was largely due to teaching. DR. RANDALL believed much could be done by developing the peripheral organs by use. DR. LEVY asked what plan could be used with cases in which no home-training could be given. Would one or two trainings a week enable the patient to train himself? DR. MAYER believed the presence of adenoids calls for operation. It at least gives comfort and improves the general condition. DR. OWEN found that operations in the school at Omaha produced little effect on the hearing, but speech was improved.

**Adenoid Vegetations of the Nasopharynx.**—DR. JOHN O. McREYNOLDS, of Dallas, Tex., contended that the



surgical method is the most efficient. He has abandoned the use of general and local anesthetics. The local do not reach deeply enough, and the general are dangerous. He operates in 30 seconds, using the finger, unless the growths are very fibrous and large. A thin layer of adenoid tissue in the nasopharynx is normal. The child is held firmly in the lap of an assistant, another holding a basin for the blood. The operator passes his left hand around the head, holding the gag, and removes the growth with the index-finger of the right hand; cleansing afterwards with an alkaline antiseptic spray. DR. RICHARDS said he knew by experience that operation on these growths is painful. DR. HOLMES thought with this method the child would dislike the operator. As a rule the growths are too hard to remove with the finger. Under an anesthetic more thorough work can be done. DR. GETCHELL said the operation is not a slight one. He uses an anesthetic and instruments. DR. PARKER favored complete anesthesia. DR. BOYD uses a narrow curet through the anterior nares to remove plugs of tissue that are often left. DR. WAXHAM endorsed complete anesthesia, and the curet followed by the finger, the head hanging low. He also ties the soft palate forward with a soft-rubber catheter. DR. MAKUEN thought it would be a mistake to let it go out that the Association endorsed the removal of these growths with the finger. DR. OWEN formerly used the finger, but found that many cases recurred. He had pushed some of the growths forward with the finger. He uses no anesthetic. DR. BARNHILL thought sorbefacients, as a rule, gave little result. DR. RANDALL thought the diversity of opinion showed there is no infallible method. Different methods suit different cases. Judgment must be used in the individual case. There should be some adenoid tissue in the nasopharynx. He had seen cases of atrophy and cicatricial contraction from too thorough removal. He did not like the word recurrence. The lateral masses sometimes grew after removal of the central growth. DR. MAYER said the presence of adenoid tissue in the nasopharynx was almost always made apparent by the same tissue on the posterior wall of the pharynx; so that examination with the finger is not always essential. As to anesthesia being too much work, no trouble is too great for a perfect result. He also introduces the forceps through the anterior nares to see that all is removed. DR. McREYNOLDS agreed with Dr. Randall. It is results, after all, that are sought. His results are better by using the finger, without an anesthetic.

**Hypertrophic Middle-Ear Catarrh.**—DR. BURT D. LA FORCE, of Ottumwa, Ia., said that this condition may be the result of pyogenic infection, the amount of infection determining whether or not suppuration will exist. Deafness is increased by the air in the tympanic cavity being rarified. This is sometimes produced by hypertrophic turbinates and nasal polypi. Sniffing or drawing the air through partly occluded nostrils draws the air from the tympanum. Among the symptoms are a sense of fulness, and a dull feeling in the ear, and confusion of ideas. The cure of catarrhal conditions in the throat and nose is sometimes all that is necessary. Children should be taught to clean the nose.

DR. McREYNOLDS presented a specimen of membrane from a case identical with those described by McKenzie as chronic diphtheria. It exfoliates every three days. If removed earlier it bleeds. It covers the whole of the pharynx and soft palate, and has lasted two months. It is not diphtheria. It is white, not a dirty gray. There are no systemic symptoms. DR. HARLAN did not think the possibility of diphtheria could be eliminated. He had a case of long-standing membrane on the under side of one eye-lid. When removed it always returned. After an application of jequirity and the resulting inflammation, diphtheria developed in the throat. DR. RANDALL thought the specimen resembled a croupous membrane. Small foci of diphtheria might cause croupous membrane to develop in other parts. He liked hydrogen dioxid in these cases because it penetrates.

**Affections of the External Ear, Illustrated by the Stereopticon.**—DR. B. ALEXANDER RANDALL, of Philadelphia, showed views of leprosy, herpes, fibromata, eczema, pemphigus, lupus, etc., of the external ear, also atresia of the canal, absence of the auricle, and exostoses of the external canal. He said these cases constituted one-fourth of ear-practice, and the simplest, yet the most neglected. Furuncles in the canal are often the cause of caries, as they sometimes affect the deep ceruminous glands, which are nearly in con-

tact with the cartilage and the periosteum. DR. MAYER asked for the treatment when there is no evidence of a canal. DR. RANDALL said in cases of congenital deformity he felt justified in performing a plastic operation, as it put the parts in a better position for growth. If the canal is wanting the patient can still hear with mouth, nose, eyes, etc. In soft atresia good results are often secured. A rubber tube passed into the canal affords drainage and dilatation.

**Empyema of the Maxillary Sinus.**—DR. J. A. STUCKY, of Lexington, Ky., said that this condition is more common than is supposed. It is usually caused by caries; sometimes by infection from atrophic rhinitis; sometimes by enlarged turbinates or nasal polypi damming up the secretions. The nose should be cleared out. His favorite method of operation is to remove the first molar, making the opening large enough to admit a finger. This secures better drainage than opening through the canine fossa. He seldom needs a counter-opening in the inferior meatus. He cures. He has discarded the drainage-tube, using strips of gauze instead and removing them in 24 hours. He washes twice a day with a boric-acid solution. DR. MEYER said disease of the antrum is often associated with ethmoid disease. The best opening is through the alveolar process. For washing, he attaches the tube to an antitoxin-syringe. DR. MELVILLE BLACK operates through the alveolar process; uses no drainage-tube, as it excites granulations; uses gauze; cures at first; then mops out with trichloroacetic acid. A white slough comes off in 10 days. DR. RANDALL said in many cases the antrum was simply a reservoir of drainage from the other sinuses. DR. LEVY spoke of the difficulty of always determining the source of the discharge. It could not always be decided by appearances in the nose. DR. MAKUEN said the antrum sometimes drains up-hill through the nose even when the opening is large. DR. J. A. STUCKY often removes the anterior part of the inferior turbinate, to leave the opening free. He is afraid to use caustics in the antrum. The gauze can be easily removed by dropping on hydrogen dioxid to soften clots. Before dressing, he touches the edges with 10% cocain and 10% resorcin.

**Effects of the Climate of Colorado upon the Mucous Membrane of the Nose.**—DR. G. MELVILLE BLACK, of Denver, Col., mentions the large amount of fluid poured out by the bloodvessels of the nose, and taken up by the inspired air. The relative humidity of Denver is 50% less than that of the Atlantic coast. Hence twice as much fluid must be supplied by the nose. The vascularity of the part, therefore, must be greater. Atmospheric pressure in Denver is 3 lbs. less than at sea-level; hence in newcomers the capillaries dilate. This requires increased nerve-force, and from a few days to a few weeks are required to supply this force. The nose, being so vascular, is most liable to be affected by such disturbances of circulation. Increased blood-supply leads to hypertrophy, and this, in time, to sclerosis. Hypertrophy at this altitude tends to sclerosis quicker than in lower altitudes. This sclerosis is not atrophy, but contraction and hardening of the tissue, cutting off the blood-supply and lessening the moisture. Dry secretions form, but no odor. DR. LEVY said some cases of atrophic rhinitis do improve at Denver, because the blood-supply and the general condition improve.

**A Report of Five Cases of Falsetto Voice in the Male.**—DR. G. H. MAKUEN, of Philadelphia, finds in these cases that the larynx is high during phonation, from faulty action of the extrinsic muscles of the larynx; the poise of the levators and depressors being disturbed. If the larynx is pulled down, the voice is low; if up, the voice is high. By holding the thyroid cartilage down during phonation, a low tone is produced. The patient must be taught to keep the larynx low. There must be training. It must be determined which muscles are overused and which underused, and training is to be continued till all act in harmony. DR. INGALLS said he directed the patient to draw the chin firmly down and sound A repeatedly. DR. MAKUEN thought this increased the resonance by holding the larynx against the spine.

**The Fauical Tonsil; its Relation to the Ordinary Diseases of the Nose and Throat.**—DR. G. B. SWEENEY, of Pittsburg, said that the tonsil is most nearly normal when it appears to be absent. If diseased it may be a source of infection for the entire system. That part of the throat is like the small end of a funnel. Almost



everything that enters the system, food, drink, air, must pass over the tonsils. They are an open gateway for infection. Hypertrophied tonsils are a hotbed for germs. If diseased they should be removed. DR. RICHARDS believed that the glands are never completely extirpated. DR. COULTER said that he removes all the tonsillar tissue by electrocautery dissection. He believes in complete extirpation. DR. J. A. STUCKY thought complete extirpation unnecessary. If one-half is removed the rest will atrophy. DR. SOLLY said if the tonsils were so large as to obstruct, they should of course be removed. DR. GALLAGHER thought tonsillitis is often due to a rheumatic diathesis and not to the tonsil. DR. BARNHILL is satisfied if he gets out all the crypts. DR. SWEENEY removes the large masses and treats the stumps. All that is needed is to get a clean, smooth, non-absorbing surface.

**Throat-Symptoms in the Adult.**—DR. G. HOMER COULTER, of Chicago, insisted on a differentiation between throat-symptoms in the adult and those in the child. The child is not a little man, but an undeveloped man. Among symptoms peculiar to the adult are those resulting from nasal conditions in infancy and childhood, including adenoids and mouth-breathing; also symptoms arising from occupation and intemperance. He does not agree with those that claim that the reflex is no longer a reflex. There are many reflex cases. DR. J. A. STUCKY is sure there are many reflex coughs. DR. SOLLY cured a case of pain in the anterior pillar with pure water, telling the patient it was silver nitrate. DR. COULTER thought the anatomic fact that the vagus, lingual and glossopharyngeal nerves anastomose so freely accounted for some reflex symptoms.

**Laryngeal Tuberculosis and Use of Monopara-chlorophenol in its Treatment.**—DR. GEORGE L. RICHARDS, of Fall River, Mass., uses this remedy following applications of lactic acid and the results are better than with lactic alone. No sound tissue is injured. He uses from a 4 to a 10% solution twice a week, after applying lactic acid, first cocainizing. The phenol goes deeper than the lactic acid.

**The Use of Formaldehyd in Tuberculous Laryngitis.**—DR. T. J. GALLAGHER, of Denver, cleans with hydrogen dioxid, cocainizes, and applies from  $\frac{1}{2}$  to 10% of formaldehyd. It shrinks vegetations, gives comfort, penetrates infiltrated tissue. If too strong it may cause dry gangrene.

**Some Results of Tubercular Laryngitis.**—DR. S. E. SOLLY, of Colorado Springs, reported a case of cauliflower excrescence between the arytenoids that was much reduced by a spray of absolute alcohol. He was afraid to remove the formation entirely. The vocal bands were ulcerated. Later the false cords came together and phonation was produced through them. DR. MAYER also found absolute alcohol successful in shrinking vegetations. He also believed in leaving latent influences alone. DR. SOLLY said that in anemic conditions of the larynx followed by infiltration, stimulation is needed. It is a mistake to use sedatives. He believes cureting and lactic acid do good by giving the larynx a stimulus. Tuberculous laryngitis sometimes does well in high altitudes because the blood is stirred and the general condition improved. DR. BARNHILL said one drug not yet spoken of is orthoform. It relieves the pain of the ulcerations. He first cleanses with a warm, alkaline spray, applies the orthoform, and holds it on with an albolene spray. There is relief from pain for 18 hours or even longer. DR. MAYER endorsed this, and thought the drug would form an important addition to our armamentarium.

**Officers.**—The section elected Dr. Emil Mayer, of New York, chairman, and Dr. Holmes, of Cincinnati, secretary.

(To be continued)

## MEDICAL SOCIETY OF THE STATE OF NEW JERSEY.

132d Annual Meeting, held at Asbury Park, N. J.,

June 28, 29 and 30, 1898.

FIRST DAY—JUNE 28.

**Annual Address of the President.**—DR. DAVID C. ENGLISH, of New Brunswick, delivered an address on **Patriotism in the Medical Profession.** He pointed out that the Medical Society of the State of New Jersey is the oldest society of its kind in the country, and that its past history gave many examples of the true patriotic spirit of its

early members. The Society was founded with the three-fold object of "mutual improvement, advancement of the profession, and the promotion of the public good." Many of the early presidents took an active part in the War of the Revolution, but the patriotism of the Society had been shown as well in times of peace as in war. Nearly all of its work had been done for the public good, and often against the pecuniary advantage of its members. After 27 years of exertion the State Board of Health had been established. That the profession of New Jersey had been true to its traditions, and faithful in its unselfish labors for the public weal, was attested by the vital statistics, which show a marked diminution in the number of deaths from preventable diseases. Dr. English then compared the present time with that of half a century ago, as regards the political influence of physicians, and deplored the feeble and waning political power of the members of the profession. If, said he, there were more physicians now in our legislative halls, there would be less extreme partisanship and cleaner politics.

**Progress in State Medicine and Hygiene.**—DR. HENRY MITCHELL, of Asbury Park, presented a report on these subjects. He said that 600,000 persons now reach the age of 21 years who, 60 years ago, would have died. Last year, in New Jersey alone, there was a saving of 920 lives by the prevention of disease. Regarding typhoid fever, modern research gave reason to believe that sewer-gas is incapable of spreading this disease, except indirectly by lowering the vitality of persons exposed to the germs of typhoid fever, and so making them an easy prey. At last, evidence is being brought forward to prove that acute articular rheumatism is a germ-disease, and that some of its more important phenomena, at least, can be produced by inoculating animals with its specific germ. Much has been said recently about the hygiene of the barber-shop, and the public is beginning to appreciate the importance of patronizing barbers who not only are themselves clean, but take care to have their razors, combs and brushes properly sterilized. An important and significant step had recently been taken by Rutgers College—the granting of certificates of capability to sanitary inspectors who have proved their proficiency and qualifications for this responsible work.

**Progress in Medicine and Therapeutics.**—DR. WILLIAM H. ISZARD, of Camden, in a report on these subjects, dwelt upon the lengths to which specialism in medicine had run, and the unfortunate trend of the times toward too much experimentation and the use of too many new remedies.

**Progress in Surgery.**—DR. CHARLES YOUNG, of Newark, presented a report on this subject. As an example of the present position of surgeons regarding appendicitis, he quoted the statistics given by Dr. G. E. Armstrong, of Montreal, and also his working rule, viz.: Operate upon all well-marked cases at once, including all cases in which there are pain, tenderness, muscular rigidity with vomiting, elevation of temperature, acceleration of pulse, and an anxious facial expression. In connection with the treatment of lateral curvature of the spine, attention was called to the fact that Mr. Roth had treated 1,000 cases by posture and exercises, with the result that 869 had been much improved, and 75 moderately so. In proof of the efficacy of tetanus-antitoxin, it was stated that out of 361 recorded cases only 3 had ended fatally. A somewhat new field in surgery was that of splenectomy for injuries. Among 160 cases, in which this operation had been performed for various reasons, the mortality was 86%. In 28 cases the spleen had been ruptured and was prolapsed into the wound. In these the operation was attended with success. There were only 6 cases in which the operation was performed for rupture, without an external wound, and in 5 of these death resulted. In connection with amputations of the breast, it will be of interest to note that the report states that it is the practice of a certain London surgeon to support the upper extremity on the affected side by a suitable rectangular splint, and that a surgeon in Halifax has improved upon this suggestion by confining the arm in a pillow-case, and suspending it from the head of the bed. Mr. Robson, without knowing of the previous work of Dr. Robert Abbé, suggested a blunt-dissection operation for exposing and examining the kidney. The incision begins to the inner side of the anterior superior spine, and is carried backward obliquely toward the tip of the last rib. The fibers of the oblique muscle and its aponeurosis are then split and retracted, exposing the internal oblique, the muscular fasciculi of which



are split between the ninth costal cartilage and the posterior superior spine of the ilium. When the fingers are pushed in, the fibers of the transversalis muscle are separated. The transversalis fascia is next exposed, and then the peritoneal fat. The advantages claimed are that the abdominal wall is not weakened, that no nerves are severed, the freedom from hemorrhage and shock, and the rapidity of operating and of convalescence.

**Progress in Diseases of the Nose and Throat.**—DR. E. FAYETTE SMITH presented a report on these subjects. He stated that, with the exception of intubation of the larynx, the improvements in the operative treatment of laryngeal carcinoma gave evidence of the greatest advance made in laryngeal surgery for many years. A subject of absorbing interest is the relation that apparently exists between deaf-mutism and the presence of adenoids. Thus, one observer found adenoids in 59% of the boys and girls who were deaf-mutes. It is probable that if sufficient attention were given to adenoids in early infancy, a material diminution in the number of these unfortunates would result. Another matter that claims attention is the treatment of ozena by the use of diphtheria-antitoxin. While the treatment is inconvenient and not altogether free from risk, a few observers claim that this ordinarily rebellious condition yields in a remarkable manner to the antitoxin-treatment. Eucaïn has lately established itself as a worthy rival of cocaine in nose and throat work, and nosophen seems to be an efficient substitute for iodoform. Perhaps the most encouraging indication in this special field of surgery is the decided reaction in favor of conservatism.

SECOND DAY—JUNE 29.

**Progress in Bacteriology.**—DR. B. MEADE BOLTON, of Princeton, presented a report on this subject. He said that recent observations serve but to strengthen the position of the diphtheria-antitoxin as a valuable remedy. The antitoxin-serum is now used in greater strength than formerly, and this increased concentration is secured either by the use of a more potent antitoxin or by evaporating the serum. An interesting deduction from certain recent animal experiments, and one full of practical significance, is that it is difficult to infect animals by causing them to breathe air that has been impregnated with dust laden with dried tubercle-bacilli, but that few animals escape infection when they are made to inhale air into which has been sprayed moist tuberculous sputum. Another interesting bacteriologic observation is by no less an authority than Theobald Smith, who asserts that the bovine tubercle-bacillus is not identical with the human tubercle-bacillus. The clinical results from the use of anti-tuberculous serum have not been encouraging, and Dr. Bolton states that his own experiments in this direction show that this serum actually hastens the death of animals. Koch's idea of immunity against disease is that the body must be protected, not alone from the injurious products of bacterial activity, but against the growth of the organisms themselves. The experience of the past year with antistreptococcal serum has been so discouraging that Dr. Bolton believes this treatment will be gradually discarded. Recent investigations on Rinderpest and on snake-poisoning have brought out the important fact that the infective agent is to be found in the bile. To offset the discouragements encountered in various fields with serum-therapy are the successes recorded by veterinarians in the use of tetanus-antitoxin. Thus, one veterinarian reports that the use of this antitoxin has increased the percentage of recoveries from 10 to 65. Serum-therapy has also been tried in syphilis, but only with harmful results. Opinion is still divided regarding the efficacy of this form of treatment for leprosy, but the antitoxin-treatment of bubonic plague has been demonstrated to be of great value.

**The Umbilical Cord.**—DR. WILLIAM PIERSON, of Orange, said that the practice of the present day regarding the time of ligating the cord does not differ materially from that advised by Hippocrates—*i. e.* not to tie it until the infant has cried. For ligature-material he preferred sterilized narrow linen bobbin, and he favored its application to a very short stump after Wharton's jelly has been stripped out. In dressing the cord, it is important to expose the part freely to the air, and to use dry absorbent cotton, with or without a drying powder, such as boric acid. Dr. Pierson spoke most emphatically against the time-honored custom of making

the new-born infant wear a belly-band, claiming that there was a strong developmental tendency to close the umbilical opening, and that the application of a tight belly-band, by compressing the abdominal contents, actually encouraged the formation of umbilical hernia. He had met with one case in which the cord was over 5 feet long, and one in which it measured  $1\frac{1}{2}$  inches in diameter. When coiling and entanglement of the cord seriously interfere with delivery, it may be necessary to tie the funis with two ligatures, dividing it between them, and hasten the delivery of the child. When the cord becomes prolapsed, safe delivery may often be insured by a policy of masterly inactivity, by which the integrity of the membranes is preserved as long as possible. When the membranes rupture early and the cord prolapses, the well-known postural treatment should be employed.

**Foreign Body in the Esophagus and Retropharyngeal Esophagotomy.**—DR. JOHN C. MCCOY, of Paterson, reported a case of this kind and exhibited a radiograph showing the position of the whistle in the esophagus. Having exposed this viscus, it was found that the tissues were swollen and eroded in the immediate vicinity of the foreign body, showing how dangerous would have been further efforts, by means of esophageal instruments, to dislodge the whistle. The operation was followed by neither shock nor vomiting, and, contrary to the usual custom, small quantities of sterilized water were given by the mouth immediately after its completion, with the object of keeping the esophagus clean. The following conclusions were formulated: (1) A foreign body impacted in the esophagus for over 12 hours, particularly if it be known to have sharp edges, should be removed at once through an external incision; (2) the prolonged and continued use of esophageal instruments should be condemned, as the tissues are usually lacerated by their use, and their vitality is lowered; (3) if the condition of the tissues permits, the wound in the esophagus should be closed by suture at the time of the operation.

**Foreign Body in a Bronchus, with Tracheotomy.**—DR. WALTER B. JOHNSON, of Paterson, reported the case of a child,  $3\frac{1}{2}$  years old, who had inspired a kidney-bean. A large incision was made into the trachea, with the object of stitching it to the skin in the event of inability to extract the foreign body at once. Fortunately the body was brought within reach by the coughing of the child, and was extracted with forceps. The tracheal wound was then tightly sutured, and the patient was discharged from the hospital on the seventh day after the operation. DR. ILL, of Newark, objected to sewing up the trachea, as this procedure was likely to cause marked emphysema, which he had known, in one case, to be so extreme as to cause death. DR. JOHNSON replied that in his case no inconvenience resulted from the closure of the tracheal wound, and that the escape of air from a tracheal wound underneath the skin is not of special importance. DR. CANTWELL said that in a rather extensive experience with tracheotomy, he had never sutured the wound in the trachea, preferring always to allow it to heal by granulation. He had never observed emphysema, the cases had done well, and examinations, in some of the cases, months afterward, showed the scar to be small and satisfactory. DR. JUDSON DALAND, of Philadelphia, said that on theoretic grounds, it would seem better to give the esophagus absolute rest for at least 24 hours after operation, instead of administering sterilized water, especially as this could hardly have much effect in keeping the esophagus free from invasion by the numerous microorganisms found in the buccal cavity. DR. MCCOY replied that, in any case, it was not possible to give the esophagus absolute rest, as it was constantly engaged in the act of swallowing saliva.

**Milk as a Culture-Medium, and Its Capacity to Spread Infectious Diseases.**—DR. JOHN L. LEAL, of Paterson, opened the discussion of this subject by some remarks on *Milk as a Carrier of Infection*. He said that the chief diseases so transmitted are typhoid fever, cholera, tuberculosis, and scarlet fever. Not only must the milk be taken from healthy animals, but it must be exposed as little as possible to the air; the hands of the milkers and the udder of the cow must be clean and the water and ice used in connection with the handling of the milk must be free from infection. Several interesting and remarkable cases were cited from the experience of the health-authorities in their efforts to ferret out the sources of certain epidemics of typhoid fever. DR. JOSEPH W. STRICKLER, of Orange, said



that the composition of milk makes it a nutritive medium for every germ whose biology is at present understood. An investigation carried on in Boston showed that when healthy cows, in a clean place, were carefully milked into a sterilized flask, the milk contained only 530 bacteria per cu. cm., but when the ordinary milk-pail is used and the milk is conducted in the common way, there were, on an average, 30,500 bacteria per cu. cm. immediately after milking. It should be remembered that the germs of diphtheria, cholera, typhoid fever and scarlet fever develop at ordinary room-temperature, and that such growth does not affect the gross appearance of the milk. DR. RICHARD C. NEWTON, of Montclair, said that pasteurization of milk did not seem to have fulfilled the claims originally made for it—indeed, Dr. Henry Koplik goes so far as to assert that he has repeatedly seen cases of milk-poisoning result from its use. It has been recently claimed that tuberculosis in cows is largely due to over-milking, and it is recommended that the cows be allowed to go dry for the last 3 months of gestation. Dr. E. F. Brush was quoted as believing that the chief, if not the only, cause of tuberculosis in the human race, is tuberculosis among cattle. DR. T. R. CHAMBERS, of Jersey City, spoke in high praise of the work done by Dr. H. L. Coit, and by Mr. Franciscisco, the dairyman, in placing on the market, within the reach of all, a pure milk, known as "certified milk." DR. HEDGES, of Plainfield, referred to an epidemic of scarlet fever in his town that had been finally traced to two young men who were going around peddling milk while still presenting on their persons evidence of active scarlatinous desquamation.

**The Method of Administering, and the Use of, Enteroclysms.**—DR. JUDSON DALAND, of Philadelphia, said that all the necessary apparatus was a rubber rectal tube and a fountain-syringe, or a funnel. He prefers a rectal tube of soft rubber, having rather thick walls and measuring 2 feet in length by  $\frac{3}{8}$  inch in diameter. The surface of the tube is made very smooth, and the tip is rounded and slightly tapering, and has a terminal opening. The reservoir is usually placed at a height of 4 or 5 feet, and the tube is introduced a distance of 8 inches. A child is usually given an enteroclysm of 1 pint, an adolescent one of 2 pints, and an adult one of 3 or 4 pints. Ten minutes are usually occupied in administering the enteroclysm, and the fluid should be retained for a like period. The occurrence of colic is an indication of the presence of gas, of the use of too large a quantity of fluid or of its too rapid introduction. Experiments on the bodies of 4 children, to determine how far up the intestinal tract these injections go, showed that there was no difficulty in causing the fluid to pass through the ileocecal valve into the small intestine, and even out through the mouth and nose; in 2 cases the ileo-cecal valve prevented irrigation of the small intestine; in 1 case this valve completely excluded the fluid from the small intestine. Dr. Daland said that his attention had first been directed to the possibility of fluid passing up through the small intestine by observing that the solution of tannic acid, used as an enteroclysm in the treatment of cholera, was sometimes vomited. The following are the conditions in which enteroclysms are chiefly useful: (1) Obstinate and long-standing constipation; (2) autointoxications due to decomposition of the intestinal contents; (3) many forms of irregular gout; (4) cases of chlorosis in which fecal anemia is a prominent element; (5) progressive pernicious anemia occurring without obvious cause; (6) diabetic and uremic conditions; (7) cholera; (8) typhoid fever in the early stages; (9) pseudo-membranous colitis; and (10) insolation. DRs. NEWTON and HEDGES spoke of the value of enteroclysms in the treatment of the acute intestinal indigestion of children, and DR. BENJAMIN referred to the valuable aid rendered by ice-water enemata in checking hemorrhage from the bowel in cases of typhoid fever. DR. P. C. BARKER, of Morristown, said that he had derived great satisfaction from the alternate use of cold and hot enteroclysms in the treatment of catarrhal jaundice. He thought that in some patients it would be found that the rectal tube must have a length nearer 4 than 2 feet. In the treatment of dysentery he had been pleased with the effect of antiseptic enteroclysms, such as a 1 to 5000 solution of mercuric chlorid. DR. DALAND added that he had tried various antiseptics, given in this way, but, owing to the large quantity of fluid retained and absorbed, their use exposed the patient to considerable risk, and, moreover, he had been

impressed with the aseptic properties of simple salt-solution. In cases of cholera, a 3% solution of tannic acid had been found safe, and its efficiency could no longer be doubted. Dr. Daland knew of no intestinal antiseptic that could compare with 3 pints of bile secreted by a healthy liver.

**School-Hygiene with Reference to the Production of Ocular Disease.**—DR. W. B. JOHNSON, of Paterson, after referring to the constant increase in the number of myopes in the United States, said that the light supplied to school-rooms should be direct, and not reflected from adjacent buildings, and that all of the light should enter from the left and behind the pupils. Paper and black ink should be used in preference to slates and pencils, and it had recently been suggested that the blackboards should be tinted green. The general hygiene of the school-room was also touched upon, particularly the ventilation and the proper adjustment of the seats and desks to the individual pupils. DR. NEWTON remarked that it seemed highly necessary to educate teachers regarding the practical ventilation of rooms.

#### **Chronic Cardiac Disease, and its Management.**

—DR. LOUIS FAUGÈRES BISHOP, of New York, said that the care of cardiac disease is the care of invalids in general. The hypertrophy of the heart-muscle was compared to the over-trained athlete, and the necessity of ever bearing in mind the tendency of the heart-muscle to undergo fatty degeneration was pointed out. Excessive hypertrophy is best avoided by a systematic hygienic life, and by the avoidance of such exertions as undoubtedly throw a strain on the heart. Chronic constipation must be guarded against most sedulously, and when it is present, the wise physician will endeavor to combat it not with occasional strong purgatives, but by the prolonged use at bedtime of a dose of the fluid extract of cascara sagrada. This dose is gradually diminished, and at the same time every effort is made to permanently cure the constipation by change of diet and habits of life. The cardiac patient should have his mind disabused of the fear of sudden death, and should be instructed that it is likely to come gradually, and after repeated danger-signals have been disregarded. With such a subject, slight malnutrition should be an indication for an immediate change of his habits of life. DR. JOHN C. JOHNSON, of Blairstown, spoke of the great importance of relieving the constipation, and warding off dilatation of the stomach and of the bowel, both of which are responsible for much embarrassment of the heart's action and of respiration. An occasional small dose of calomel would frequently have almost a magical effect, while the nightly use of a tablet containing rhubarb, aloes and gentian would be exceedingly useful for more prolonged administration. The addition of two drops of tincture of nuxvomica to a morning draft of Epsom salt not only makes it more palatable, but materially increases its efficiency.

**Uterine Displacements.**—DR. H. B. COSTILL, of Trenton, presented the most advanced views of gynecologists, and analyzed them in a wise and conservative manner. For example, he said that thorough dilatation, curettage and drainage of the uterus would cure nearly every case of ante-flexion. In the treatment of retrodisplacements demanding operation, he favors utero-sacral ventral approximation. In this operation the abdomen is opened by a short incision, as low down as possible, adhesions are broken up, the uterus is brought forward, and two sutures are passed through the abdominal wall and tied on the outside. These remain for about 4 weeks only. Attention was called to the fallacy of relying solely on a plastic operation on the perineum. In the severe cases, or those in which cure is not expected by curettage, amputation of the cervix and repair of the perineum, some form of ventral fixation or suspension must be used. In the use of pessaries, the degree of success achieved depends very largely upon the personal element. DR. E. J. ILL, of Newark, referred to two forms of displacement that had given him a good deal of trouble, viz: (1) a simple retroposition, occurring most often in unmarried or sterile married women, and resulting from a shortening of the utero-sacral ligaments or of the peritoneum of Douglas' pouch; and (2) lateral displacements. The most recent treatment for the first form is to open the abdomen, cut the utero-sacral ligaments and perform ventral fixation. The second variety of displacement may be either congenital or acquired, and is peculiarly liable to make the woman an invalid. The acquired form is much more amenable to



treatment. DR. CHARLES P. NOBLE, of Philadelphia, said that he agreed, in the main, with the sound principles laid down in the paper, but he differed from the preference given to shortening of the round ligaments in cases of retrodisplacement. In many cases of retroversion the adhesions are of secondary importance, the primary trouble being disease of the appendages. When these are diseased, Dr. Noble's experience led him to favor hysterectomy. Of the many operations for holding the uterus forward, he preferred Dr. H. A. Kelley's suspension-operation. Too much should not be expected from pessaries, for those who have most carefully studied this method of treatment do not claim to cure more than 15 or 20% with pessaries.

**The Fellows' Prize Essay** of \$100 was awarded this year to DR. FREDERICK RANDOLPH BAILEY, of Elizabeth, for an essay on *The New Histology and Pathology of the Central Nervous System*.

**Regression vs. Progression, Viewing the General Practitioner from a Scientific Standpoint.**—DR. J. C. APPLGATE, of Bridgeton, deplored the excessive specialism of the present age, as it causes discontentment among the laity and works injustice to the general practitioner. He also regretted the lack of that almost universal cooperation between physicians and pharmacists that formerly existed, and which is now largely responsible for the common use of fixed formulæ and compressed tablets.

**The Dangers of Certain Faulty Impressions Regarding the Menopause.**—DR. PHILANDER A. HARRIS, of Paterson, endeavored to set the laity right on the many popular, but erroneous notions regarding the menopause, and pointed out the serious consequence of ignorance on this subject. There is little in the change of life to effect pronounced pathologic conditions in the uterus or vagina. DRS. NOBLE, JOHNSON and BALLERAY emphasized these statements, and pointed out clearly the duty of the family physician in the matter of educating the public aright.

**The Early Diagnosis and Treatment of Pott's Disease.**—DR. S. A. TWINCH, of Newark, delivered a clear and practical address on this theme, illustrating it by a lantern-exhibition of many photographs from life.

THIRD DAY—JUNE 30.

DR. JOHN MCCOY presented specimens from typical cases of *appendicitis*, and also a specimen from a case of *nephrectomy*.

DR. P. A. HARRIS exhibited a **portable operating table**.

**Officers.**—The following officers were elected: President, DR. C. R. P. FISHER, of Bound Brook; first vice-president, DR. LUTHER M. HALSEY, of Williamstown; second vice-president, DR. WILLIAM PIERSON, of Orange; third vice-president, DR. JOHN D. MCGILL, of Jersey City; corresponding secretary, DR. E. L. B. GODFREY, of Camden; secretary, DR. W. J. CHANDLER, of South Orange; treasurer, DR. ARCHIBALD MERCER, of Newark.

**Indigestion in Breast-fed Babies.**—W. G. MURPHY (*Albany Medical Annals*, July, 1898) states that whilst milk-sugar, salts and ash are all necessary in proper proportions, their influence is probably less important than that of the water, fat, and proteids; the influence of the last being particularly marked. As a general rule women who are markedly anemic, sick, convalescent or suffering from grave constitutional disorder should not nurse their babies. In the presence of functional disturbances resulting from worry, anxiety, overwork, lack of exercise or too frequent and prolonged nursing, a fair amount of success may be expected in restoring the normal proportion of the constituents of the milk. The proteids may be increased by too frequent nursing, lessening the watery elements and increasing the solids; too great length of the intervals increases the water and decreases the solids. By using Holt's apparatus a fairly accurate estimate may be made of the proportion of proteids and fat. Knowing the abnormal relation of the several constituents of the milk, much can be done by proper diet, exercise and care on the part of the mother to modify the milk. Several cases are reported in which successful results were obtained by regulation of the intervals between nursing, the diet and the exercise of the mothers, and by giving boiled water to babies that were getting proportionately too large quantities of fats or proteids.

## The Latest Literature.

### British Medical Journal.

June 18, 1898. [No. 1955.]

1. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. Lecture I. SYDNEY MARTIN.
2. The Temples and Ritual of Asklepios at Epidaurus and Athens. Lecture II. (*Illustrated*.) RICHARD CATON.
3. Surgeon-Major Ronald Ross' Recent Investigations on the Mosquito-malaria Theory. (*Illustrated*.) PATRICK MANSON.
4. A Case of Acute Streptococcal Enteritis. W. C. C. PAKES and J. W. WASHBOURN.
5. The Diagnosis of Diphtheria of the Conjunctiva. SYDNEY STEPHENSON.
6. Sympathetic Ophthalmia. CECIL E. SHAW.
7. Ophthalmitis Occurring Long After Enucleation of the Fellow Eye for Injury. GEORGE FERDINANDS.
8. A Case of Acquired Nystagmus. ARCHIBALD S. PERCIVAL.
9. Traumatic Lesion of the Pons Varolii. (*Illustrated*.) J. E. GRAHAM.
10. A Case of Tumor of the Pons Varolii. HENRY HANDFORD.
11. Yaws in the South Sea Islands. (*Illustrated*.) V. GUNSON THORPE.
12. Tuberculous Testes following an Attack of Measles: Double Castration: Recovery. JAMES B. SHAW.
13. Pes Valgus, Varus, and Lateral Curvature. J. ROSS MACMAHON.
14. Atresia Ani Vaginalis. ERNEST A. T. STEELE and JAMES ADAMS.
15. Yaws in the Malay Peninsula. R. M. CONNOLLY.
16. A Case of Contracting Malignant Disease of Breast. (*Illustrated*.) J. F. S. FOWLER.
17. Two Cases Illustrating Spasmodic and Bronchial Asthma. J. C. THOROWGOOD.

1.—Three varieties of poisons are considered in the present communication: (1) Those secreted by the bacterium itself; (2) the products of the digestive action of the bacterium, namely, its albumoses; and (3) the final non-proteid products that may be provisionally called animal alkaloids. The first two are precipitated from solutions by means of alcohol. Generally speaking, the last class is soluble in alcohol. By precipitation by means of saturation with neutral ammonium sulphate, all the proteids are thrown down with the poisons, and may be collected and re-dissolved by means of dialysis. The first is the better method. To prepare the secretory products of the bacteria, the bacillus is grown on a medium made of sterilized extract of meat, to which 1 or 2% of commercial peptone and a small proportion of common salt are added. After growing in the medium for 3 weeks or a month or longer, and after filtering off the bacilli through porcelain, a clear sterile fluid is obtained that is extremely poisonous, although the chemie identity of the contained poison has not yet been determined. To separate the digested products, the bacillus is grown on a liquid containing either alkali-albumin, serum, or any of the liquids of the body containing proteids in solution, to which extract of meat and salt should be added. After growing the bacillus in this liquid for from 3 to 5 weeks, it should be filtered through porcelain, and the clear filtrate after concentration at 40° C. should be precipitated by an excess of alcohol, the precipitate collected, re-dissolved in water, re-precipitated by alcohol, and after washing in alcohol and ether, dried over sulphuric acid. There results a lightish-brown powder, readily soluble in water and having the reactions of albumoses. There are no chemie means of separating the secretory products from the albumoses in the case of bacteria producing toxic secretion as well as albumoses. The final products are obtained in an alcoholic filtrate after the precipitation of the proteids in solution. This should be evaporated to dryness at 40° C. and extracted with absolute alcohol. The extract should be filtered, again evaporated to dryness, and re-dissolved in alcohol. After filtration it should be thrown into an excess of ether, which causes a precipitate, and permits of the alcoholic extract being separated into two parts, one of which consists of substances soluble in alcohol and insol-



uble in and precipitable by ether, and the other of substances soluble in ether and alcohol, but insoluble in water. In addition to investigating the toxic products formed in infective diseases, it is essential to make a chemic examination of the blood, spleen and liver in order to determine whether the same products are found in the body as in the artificial culture. In addition to these extracellular bacterial poisons, intracellular poisons may be present in the body of the bacillus, and these must be studied by other methods. One method is to add a few drops of chloroform to the liquid, which is then thoroughly shaken and allowed to stand for 24 hours or longer. In this way the bacilli are destroyed and a sterile liquid results. The chloroform should be evaporated in a vacuum. The remaining liquid contains the bodies of the bacilli and any secretory poisonous products they may form. The results obtained by the injection of this liquid should be compared with those observed after the use of the broth-culture, with the addition of chloroform, and from which the bodies of the bacilli have been removed by centrifugation. The comparison of the two will show the difference in action between the poison contained in the body of the bacillus and the secretory product, namely, between the intracellular and extracellular poisons. The physiologic action of both of these may be investigated by studying the effects produced by their subcutaneous injection, either into the peritoneal cavity or into the veins. The effect is more rapid by the latter method. From the experimental point of view infective diseases may be divided into those in which the symptoms are only those of toxemia and those in which specific lesions develop. In addition to the toxic action of the poisons the bacterial products may produce a toxic reaction. This occurs most readily as a result of the injection into an animal refractory to the disease of small or gradually increasing doses of the poison. The poison does not act within the body, but there gradually occurs an increase in the blood-tissues of the substance or substances that are inimical to the poison of the bacillus. These substances are divided into two groups: the antitoxic, which counteract the effects of the poison, and the antimicrobial, which counteract the effects of the bacillus. The blood of a single animal may contain products possessing both these properties. The chemic and pathologic processes that occur in anthrax, diphtheria and tetanus are next discussed. The bacillus of anthrax produces in the body of an animal, as well as in an artificial culture-medium containing digestible proteids, a large quantity of albumoses, and also a body that yields some of the reactions of an alkaloid. The albumoses induce fever and cause death in coma in large doses. The alkaloidal body, which is much more poisonous, induces no rise in temperature, and causes stupor, ending in coma and death, when injected into mice, guinea-pigs and rabbits. The anthrax-bacillus is the chief example of the class of microorganisms whose toxic products result from the transformation of the proteid solutions in which they occur. The bacillus of tetanus, grown in a solution of peptone-broth, produces a highly toxic substance, which must be considered a secretion of the bacillus and which causes the characteristic convulsions of tetanus. Albumoses have also been found in the spleen and blood of patients dying of tetanus which possessed no other action than that of inducing fever. The bacillus of diphtheria produces a secretory product, when grown in peptone-broth, which is also present in the membrane of diphtheria and probably in the tissues as well. It has a characteristic action on the nervous system, causing in rabbits paralysis dependent upon nervous degeneration. The bacillus, grown in a solution containing digestible proteids, digests them in the form of albumoses and certain by-products that have a toxic action similar to or less powerful than that exhibited by the secretory product, and they are found in the spleen and blood of persons dying of diphtheria. The secretory products of tetanus and diphtheria are remarkably sensitive to heat, that of the former being destroyed at 80° C., that of the latter at 60° C.

3.—Manson calls attention to the promising field for investigation that the subject of malaria offers, places on record Ross' claims to priority in discovery, and vindicates himself from the charge of unscientific and unwarrantable speculation. He gives the result of the work of Ross in Calcutta during the present year on the parasites in birds—the halteridium and especially the proteosoma—correspond-

ing to the malarial parasites in the human being. Mosquitoes were fed on birds' blood containing the parasites named, with the following results: (1) pigmented cells are found in the stomach-wall of gray mosquitoes fed on crows, larks, and sparrows with proteosoma; (2) pigmented cells are not found in control gray mosquitoes fed on healthy men or men with crescentic plasmodia, on healthy sparrows, on crows, larks, nor on crows and pigeons with halteridium; (3) these pigmented cells are found in the external coat of the stomach, and grow from the size of 6 mm. in 30 hours to 60 mm. in 6 days, and are probably coccidia; (4) successive feeds by the same mosquito on the same bird are followed by fresh crops of young coccidia; (5) similar pigmented cells have been found in mosquitoes fed on human gymnosporidia.

4.—A man who had partaken of tinned fruit was 6 hours afterward seized with acute gastro-intestinal symptoms suggesting some form of poisoning. These were eventually controlled, and the general condition improved for a time, after which the patient sank rapidly. He became unconscious and died 30 hours after the inception of the symptoms. On autopsy 2 pints of turbid fluid were found in the peritoneal cavity. The mucous membrane of the stomach was moderately congested. That of the first 4 feet of the small intestine was deeply congested, edematous, and blackened in patches. The bowel contained a moderate amount of liquid material. The lungs showed hypostatic congestion, and the endocardium was blood-stained. The organs were otherwise normal. Specimens of the heart-blood and of the peritoneal fluid, of the liver and of the wall-contents of the first part of the small intestine were collected in sterile tubes under aseptic precautions. The intestinal contents showed a large number of streptococci, with other bacteria. The juice from the wall of the affected portion of the intestine showed a moderate number of streptococci, with no other bacteria. The heart-blood and the juice from the liver showed streptococci and a few large bacilli. The peritoneal cavity showed a few bacilli, but no cocci. Cultivations from this fluid showed the bacillus coli communis. Sections of the small intestine showed diplococci and streptococci. The streptococcus (pyogenes aureus) proved pathogenic to mice, and produced transient local lesions in rabbits and guinea-pigs. The bacillus in the heart-blood and the juice from the liver did not grow in broth, nor on agar at 37° C., nor in the depth of glucose-gelatin at 20° C. It was considered an anaërobic putrefactive bacillus.

5.—The diagnosis of diphtheria of the conjunctiva must be based upon the presence of diphtheria-bacilli. There are other associated phenomena which are valuable aids in the diagnosis, but none is pathognomonic. The presence of small, dusky-red hemorrhages scattered over the surface of the diphtheric patches, enlargement of the preauricular glands, the occurrence, within from 2 to 5 weeks after the infection has subsided, of loss of knee-jerks, pareses in various parts of the body, the coexistence of diphtheria of the fauces or of the nasal or buccal mucous membrane, are points whose consideration will be of assistance in finally determining the diagnosis.

6.—Shaw states that the whole weight of experimental evidence, and the greater portion of clinical evidence, that have accumulated since the publication of the migratory theory, either fail to support or are actually opposed to it. It is necessary, therefore, to fall back on some form of the old theory, that **sympathetic ophthalmia** is due to irritation of the ciliary nerves.

7.—Ferdinands reports 2 cases of **sympathetic ophthalmitis** remarkable for the length of time that elapsed between the enucleation of the fellow-eye for injury and the development of the sympathetic trouble—in one case 18 years, and in the other about 21 years. The interval in the latter case is without precedent.

9.—A young man, aged 15 years, fell, when 18 months old, and ran the slender, jagged end of a stick into his mouth, which penetrated the soft palate just posterior to the hard palate. Much force was required in the removal and profuse hemorrhage followed. Sixty-seven hours later convulsions set in, which lasted for 2 hours. A second less severe series developed on the next day, a third on the third night after the accident and a fourth on the next afternoon. The last attack was followed by pain, which continued until morning, at which time paralysis of the right arm and leg and of the left side of the face was noticed. The left eye was turned



slightly inward and the pupil was contracted. Liquids were swallowed with difficulty. The child was in bed for 7 months. The epileptiform convulsions were repeated frequently, for a number of years, occurring at night and being induced by constipation. Intelligence was fair, the facial expression dull and heavy. The face was flushed, the finger-nails cyanosed, and rough and harsh on the right hand; the pupils were equal and reacted well to light and in accommodation. There was no paresis of the eyeballs, and no nystagmus. There was marked atrophy of the right upper extremity, and marked contracture at the flexures of the elbow, wrist and fingers, especially at the wrist, the metacarpal bones making an angle of about 60° with the radius and ulna. There was some atrophy of the right lower extremity and slight contracture of the right calf-muscles. The muscular tone was not increased. In walking, the patient tended to drag the right toe. There was slight weakness in the lower extremity, marked weakness in the right arm, and slight paresis about the angle of the mouth. There occurred distinct spasmodic contractions of the muscles of the left side of the face. Coordination was poor in the right arm and the muscular sense was impaired. Sensation was slow to touch, pain and temperature on the flexor and extensor surfaces of the right forearm and hand. The superficial reflexes were normal, the deep reflexes in the right arm and leg increased, and ankle-clonus was present. There was no diminution in the reaction to the faradic current. Speech was slow and drawing. The condition of the right arm and leg was probably due to descending degeneration of the motor tract. A sharp-pointed steel instrument driven through the base of the skull in the same direction as the piece of wood mentioned would enter the cavity of the cranium beneath the anterior portion of the pons varolii. It is believed that a meningo-encephalitis followed the accident and that in this process the pons and the left cerebral hemisphere, together with the membranes, were to a greater or less degree affected.

**10.**—A boy, 10 years old, who for a year had been growing dull and his speech thick, developed an internal squint of the right eye and paralysis of the right side of the face. At intervals, from infancy, he had had discharges from both ears. There existed a perforation of the right tympanum, and the ear-disease seemed quiescent. Seven weeks previously he had developed a stumbling gait, had vomited, and had complained of pain over the eyes. The vomiting continued for 3 weeks. The gait became more staggering, with a tendency to fall forward and to the left. The knee-jerks were increased. There was paralysis of the sixth and seventh nerves on the right side, and advanced optic neuritis with abundant exudations of lymph and hemorrhages in both retinae. After diminution of the symptoms for some time, vomiting returned, with weakness of the left arm. The pupils were irregular. Within a week from the beginning of these symptoms the boy began to grow drowsy. There was marked weakness of the left leg, with ankle-clonus, and the patient gradually sank and died within a few weeks. The autopsy showed a tumor the size of a large walnut occupying the lower half of the right side of the pons varolii. It had pushed the cerebellum to one side, thinned out the flocculus, and the right side of the medulla was indented by pressure. The sixth and seventh nerves were involved in the tumor, which microscopically proved to be a myxosarcoma.

**11.**—Thorpe calls attention to the existence of **yaws** in the South Sea Islands, and considers the disease probably due to a microorganism, as it most often affects portions of the body that frequently come in contact with the ground, namely, the feet, the legs, and the perineal region.

**12.**—**Tuberculosis of the testes** is rather an unusual sequel of measles. The patient was a young laborer, without any hereditary predisposition to tuberculosis. The tuberculous process spread so rapidly that double castration was deemed necessary and was subsequently performed.

**13.**—McMahon reports the case of a child with congenital **pes valgus, varus, and lateral curvature**. In this instance the cause of these deformities was obviously pressure due to dearth of liquor amnii and the consequent diminution of the fluid contents of the membranes and the uterus.

**16.**—**Contracting malignant disease of the breast** is rather uncommon, and there seems to have been no case

precisely similar to the one here reported. The patient was a negress, 30 years of age and unmarried, who had always enjoyed good health. The left breast was the first to become involved, her attention being first attracted to the condition by the rather persistent pain. The breast became considerably smaller than normal and appeared as a hard, irregular, lobulated mass. Subsequently the right breast became involved, there being at first only a general hardness throughout, afterward, however, assuming the lobulated condition of the left. Not long afterward the patient's general condition became progressively worse till she became bedridden. The growths were so firmly adherent to the chest that operative interference was out of the question. It is probable that the growth was an encephaloid carcinoma, with the development of a greater amount of fibrous tissue than is usual, and the subsequent contraction of which obliterated the cellular elements.

**17.**—Thorowgood reports two cases: one an example of **spasmodic asthma** with marked inspiratory dyspnea, retracted epigastrium, a certain amount of emphysema, and no dilatation of the heart, resulting from obstruction by nasal polypi; the other an instance of asthma with over-distended emphysematous lungs and dilated heart. In cases like the second the capillary vessels are gorged with venous blood, the extremities blue and cold, and the discomfort of the patient is very great. The treatment should be directed to the relief of the circulation, and with this purpose in view a course of mercurial pills, Carlsbad salt and hot water every morning is directed, with tincture of digitalis.

### Lancet.

June 18, 1898. [No. 3903.]

1. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. Lecture I. SIDNEY MARTIN.
2. Extra-Uterine Pregnancy. Lecture III. JOHN W. TAYLOR. (*Illustrated.*)
3. A Method of Injecting the Lymphatic Vessels. CECIL H. LEAF. (*Illustrated.*)
4. The Production of Chloroform-anesthesia. EDWARD LAWRIE. (*Illustrated.*)
5. A Case of Recovery after the Injection of a Large Dose of Strychnin. CHARLES D. GREEN.
6. Latent Tuberculosis of the Tonsil. HUGH WALSHAM.
7. Note on a Case of Rapid Collapse and Redevelopment of an Ovarian Cyst. JOHN D. MALCOLM.
8. Note on a Case of Intestinal Obstruction Due to Induration of the Great Omentum. T. ARMSTRONG BOWFS.
9. A Case of Chlorodyne-poisoning; Recovery. D. J. FREEMAN.
10. A Case of Addison's Disease with Miliary Tuberculosis and Old Pulmonary Tuberculosis; Syncope; Necropsy. (Under the care of Dr. J. ANDERSON.)
11. A Case of Perforation of the Ileum; Necropsy. (Under the care of Mr. E. G. WOOLERTON.)

**2.**—In considering the diagnosis of **extrauterine pregnancy** Taylor lays stress upon the increased vascularity of the parts affected. A very constant and valuable sign accompanying this vascularity is the presence of pulsating vessels in the vaginal vault on the affected side. All the branches of the uterine artery are subject to very marked enlargement on the side of the pregnancy. It is often easy to touch a vessel the "pulse" of which is comparable to that of the radial, and, although inflammatory affections may sometimes give rise to similar hyperemia, the pulsation of the vessels is rarely so marked and so easy to elicit as in the presence of tubal pregnancy. The diagnosis includes the differentiation of tubal pregnancy from pyosalpinx with amenorrhea, myoma, simple abortion, retroflexion of the gravid uterus, antelexion of the gravid uterus, and twisted, pedunculated tumors of the tube or ovary. If the pyosalpinx be quite recent there will still be a history of a purulent vaginal discharge preceding the pelvic inflammation. A twisted pedunculated tumor is not so intimately connected with the uterus as a tubal pregnancy would be. When formed by the tube or the ovary it has rather the character of an ovarian enlargement, and unless adherent to the uterus there is quite generally some unoccupied space to be discovered between the uterus and the tumor.



3.—By injections of large quantities of formalin-solution under high pressure, Leaf has been able to render the lymphatic vessels sufficiently plain for the purpose of dissection. In some of the subjects prepared in this way, communication between the veins and the lymphatic vessels was observed.

5.—A man, 50 years old, took at a single dose, in a small quantity of water on an empty stomach, a packet of vermin-killer containing 3.437 grains of strychnin. Convulsions had occurred before treatment was instituted. The patient was chloroformed, the stomach washed out, and other appropriate treatment administered, and recovery eventually ensued.

6.—From an examination of the tonsils, cervical glands, and follicular glands of the tongue in a number of cases dead of tuberculosis, and of portions of hypertrophied tonsils and adenoid vegetations removed from living subjects, Walsham reaches the following conclusions: (1) the tonsils, instead of being almost immune from tuberculous disease, are affected frequently; (2) tubercle may be primary in the tonsil; (3) the tonsils are frequently affected secondarily in persons suffering from chronic pulmonary tuberculosis; (4) when the tonsils are tuberculous, the cervical glands receiving the lymphatics from these organs are also frequently affected with tubercle; (5) the follicular glands at the base of the tongue are rarely found tuberculous; (6) the tonsils may be affected from without or through the blood-stream in cases of acute miliary tuberculosis.

7.—Malcolm records a case in which an ovarian cyst was diagnosed. Nine days later rupture occurred, with evacuation by abortion of the cyst-contents. Five weeks afterward another examination revealed a cystic tumor extending nearly halfway to the level of the umbilicus. This was removed by operation 9 days later and found to be a cyst the size of a coconut springing from the left ovary.

8.—Bowes reports a fatal case of intestinal obstruction in which post-mortem examination revealed a mass of indurated great omentum surrounding the transverse colon, the resulting contraction having occurred to such an extent that the lumen of the gut for a length of 6 inches or more would just admit a fine penholder. As there was no evidence of malignancy of this mass, the possibility of its being syphilitic was suggested.

9.—A woman, 53 years old, took an ounce of chlorodyne at a single dose. Four hours later she had two convulsions, after which she was comatose and her breathing stertorous. The pupils were insensible to light, the pulse hard and wiry, 80 per minute, and the temperature 102° F. The teeth were clenched. A third convulsive seizure occurred, during which the teeth were ground, the face distorted, and the body bent to the left. Following this the coma recurred. The respirations were inaudible, the pulse imperceptible at the wrist, and for the moment the patient seemed lifeless. She reacted from this condition, and, after vomiting was induced, slowly and persistently recovered.

10.—A boy, 14 years old, suffering from an old pulmonary tuberculosis, with a recent miliary outbreak, complained of considerable epigastric pain during life. There was no pigmentation of the skin. Post-mortem examination disclosed, in addition to the lung-condition, enlarged and pigmented bronchial glands, enlarged and firm mesenteric glands, with congestion of the liver, kidneys, spleen and intestines. The capsules of the suprarenal bodies were thickened and adherent to the surrounding tissues. Each suprarenal body was four times its normal size. On section they were caseous, and contained cretaceous nodules. Microscopically the mesenteric glands showed small-cell infiltration without giant-cells. The periphery of the suprarenals was rich in typical small tubercles, many containing large, multinucleated giant-cells; the medulla contained caseous material. The signs considered of diagnostic importance in this case were the extreme asthenia, the emaciation, the anorexia, the vomiting, the abdominal pain, and the small, rapid pulse.

11.—A woman, 30 years old, had 5 weeks previous to death an attack of abdominal pain accompanied by vomiting. These symptoms continued off and on until the day before death. Feeling better at this time, she ate heartily of meat, and shortly afterward the violent pain and vomiting recurred. The bowels had been well opened. Shortly the patient went into a condition of collapse, in which she died. The autopsy showed general purulent peritonitis, with a perfora-

tion the size of a three-penny piece in the ileum, situated at the end of the gut farthest from the mesenteric attachment, and about 12 inches from the ileo-cecal valve. There was some slight constriction of the lumen of the bowel at this point. The perforation was thought to be possibly due to friction from an inflammatory band.

## New York Medical Journal.

July 2, 1898. [Vol. lxviii, No. 1.]

1. Local Examination and Treatment of Diseases of the Upper Rectum and Sigmoid Flexure. JAMES P. TUTTLE.
2. A Discussion of the Pathology of Quinin-amaurosis. ALEXANDER TAYLOR MITCHELL.
3. The Early Recognition of General Paresis (Progressive Dementia). B. SACHS.
4. Treatment of Hoarseness in Singers and Speakers. F. A. BOTTOOME.
5. A Study of Alcohol, Tobacco, Coffee, and Tea as Causative Factors in the Production of Nervous Disorders. CHARLES E. LOCKWOOD.
6. The X-Ray "Burn"; Its Production and Prevention. Has the X-Ray any Therapeutic Properties? CHARLES LESTER LEONARD.

1.—The employment of the proctoscope and sigmoidoscope in the presence of diseases of the upper rectum and sigmoid flexure is of invaluable service, both for diagnostic and teaching purposes. The ability to recognize various lesions in their incipency, establishing the diagnosis beyond doubt, enables one by the prompt administration of appropriate treatment to attain excellent results. Tuttle describes the pictures, as viewed through the proctoscope, that are characteristic of neoplasms, including carcinomata and fibrous and adenoid polypi, and such non-surgical diseases as simple acute catarrh, hypertrophic catarrh, and atrophic catarrh. In the latter conditions the treatment consists chiefly in copious irrigation with saline or mild antiseptic solutions; in cases of atrophic catarrh a 5 or 10% solution of argonin has been found to be particularly efficient, while in cases of hypertrophic catarrh the aqueous fluid extract of krameria is regarded as almost a specific.

2.—Mitchell reports a case in which amaurosis followed the administration of 240 grains of quinin in 30 hours, but at no time was either deafness or tinnitus complained of. The ophthalmoscope showed the caliber of the retinal vessels to be remarkably narrowed, that of the retinal artery being reduced at least one-half. Commenting on the pathology of quinin-amaurosis, a theory is advanced to supplant the commonly accepted explanation, which attributes the diminution of caliber to spasm of the muscular tunic. This permanent narrowing of the arterioles may be due, according to this theory, to the formation of rigid connective tissue in the space between the endothelium and the middle tunic. When this tissue becomes organized, the function of the middle tunic is lost, and the vessel remains permanently smaller, because atrophy follows the supplanting of its contractile function.

3.—No one should endeavor to make a diagnosis of general paresis from the physical symptoms alone. There must be at least some indication of change in the psychic state. It is doubtful if there has been any marked change in the type of cases suffering from this condition. The suggestion is made that it is well to consider whether possibly minute differences are not beginning to be noted between a type as established years ago and other affections that resemble a given type so closely that it is difficult to differentiate between them. The disease is of vascular origin in the majority of instances. Circulatory disturbances may follow upon acute affections, upon cerebral injuries, and upon specific endarteritis. During the vascular stage the cellular elements may exhibit impaired function, but need not be permanently destroyed, thus making remissions and recoveries possible; though not when the vascular disturbance has led to the destruction of a large number of brain-cells and fibers. In a few cases the cellular elements may be primarily diseased, and yet not be beyond the possibility of improvement or recovery. In the earlier stages of the disease the physical signs are the most marked. Chief among them are: (1) the stammering or tremulous speech; (2) the tremor of the facial



muscles and of the tongue; (3) the pupillary symptoms; (4) the change in the handwriting; (5) the exaggeration or the absence of the reflexes. The diagnosis, however, can only be established if some one or more of these signs are associated with mental symptoms. Any departure from the standard of thought and action that the individual has established for himself should always be regarded with suspicion, as should also any changes in his bearing that are not in keeping with his position in life. Defective judgment and especially defective memory are common changes. The early stages of the disease may be readily confounded with other conditions. The most common is cerebral neurasthenia. A short period of observation will in doubtful cases usually clear up the case, as the neurasthenia improves. It is a question whether or not it is possible to distinguish in the earlier stages between alcoholic and other forms of progressive dementia. (The article is to be concluded.)

4.—The commonest condition causing **hoarseness in singers and speakers** is simple acute laryngitis, the result usually of undue exposure. Although the temptation is great to employ local treatment, this should be deferred until the acute symptoms have subsided, and such measures as a hot mustard foot-bath, calomel and aconite internally, and a Leiter coil over the larynx, be relied upon to relieve the intense congestion. When local treatment is indicated sprays of argentic-nitrate solution (10%), or, if a narrow line of congestion is visible along the free edges of the bands, solution of menthol, one dram to the ounce of alcohol, will be found efficient. During the early stage use of the voice must be absolutely interdicted, and the patient must proceed with great precaution when the time comes to try his voice. When hoarseness is due, as is not infrequently the case, to accumulation of mucus on or between the vocal bands, deep inhalations of menthol in alcohol should be prescribed. Temporary paralysis of the bands occasionally causes hoarseness, and will disappear under a treatment consisting of faradism applied externally over the larynx, and strychnin in full doses.

5.—Lockwood first takes up the study of alcohol and considers its general effect on the human race as derived from the researches of statistics; next its physiologic effects upon the human system so far as known; and third the part it plays as a causative factor in nervous disorders. The effect of alcohol on the nervous system varies with the manner in which it is taken, habitual use being more often followed by pathologic changes than is periodic excess. There is also a class of subjects who cannot use alcohol habitually without detriment. The pathologic changes induced in the nervous system by habitual excess are degeneration of the nerve-cells of the cortex of the brain, of the vasomotor centers of the bulb and cord, parenchymatous and interstitial inflammation of the nerves, and arterial degeneration with hyperemia and chronic inflammatory conditions. Thickenings of the pia mater and arachnoid, increase in size of the Pacchionian bodies and excess of subarachnoid fluid due to atrophy of the brain have been noted by Rolleston. Occasionally pachymeningitis has been found, and not infrequently signs of chronic meningitis. The brain is shrunken and the convolutions distinctly separated by the sulci. The ependyma of the ventricles has been described as granular or villous. Degenerative changes are found in the fifth layer of the motor cells of the cortex. Chronic myelitis is sometimes present. Degenerative changes occur irregularly in various groups of the ganglion-cells of the cord. Systemic sclerosis in the cord are occasionally seen. There may be optic neuritis from chronic meningitis. Changes in the nerves begin near their peripheral distribution, especially in the intramuscular branches of the motor nerves. The degenerative changes of alcohol are developed more rapidly in the peripheral than in the central nervous system. Recovery may take place from peripheral neuritis, but in the presence of definite organic change in the brain the prognosis is bad. The affections of the cerebrum produced by alcohol as an exciting or predisposing cause are (1) delirium tremens, (2) alcoholic mania, (3) mania of exaltation, (4) acute transitory mania, (5) alcoholic dementia, (6) dipsomania, being a recurrent alcoholic mania, (7) acute melancholia. Epilepsy is occasionally an effect of alcoholic excess, the attacks seldom occurring periodically. A series of attacks is usually excited by a bout of drinking. (The article is to be concluded.)

6.—Leonard believes the **X-ray burn** to be the result of the static charges and currents induced in the tissues by the high-potential induction-field surrounding the X-ray tube. As the dermatitis is not due to the X-rays themselves, neither do the therapeutic properties, attributed to the X-rays, belong to them; they also are due to the static charges and currents induced in the tissues. To protect the patient from the harmful effects of the static charge, the interposition is recommended, between the tube and the patient, of a grounded sheet of conducting material, that is readily penetrable by the X-rays, as for example a thin sheet of aluminum or gold-leaf spread upon cardboard.

### Medical Record.

July 2, 1898. [Vol. 54, No. 1.]

1. The American Pediatric Society's Collective Investigation on Infantile Scurvy in North America.
2. The Organization of the Surgical Personnel of an Army Division (12,000 Men), and its Duties in Time of War. PAUL RICHARD BROWN.
3. A Case of Progressive Muscular Dystrophy (Landouzy-Dejerine Type), with Microscopical Examination of the Sterno-Cleido-Mastoid Muscle. WILLIAM G. SPILLER.
4. State Medicine. HARRY S. PEARSE.
5. Apomorphin and its Uses. SAMUEL A. VISANSKA.
6. Intestinal Obstruction Caused by the Vermiform Appendix Acting as a Constricting Band. FREDERIC C. PAFFARD.
7. A Case of Large Uterine Fibroid with Unusual Complications. CARL F. GISSLER.
8. Report of a Case of Gonorrheal Rheumatism Treated with Injections of Bichlorid of Mercury. WILLIAM H. MARCY.

2.—Brown calls attention to the fact that the present regulations furnish little information in regard to the employment of the **surgical personnel of the army in time of war**. The introduction of the small-caliber rifle, firing bullets that have great range and tremendous velocity, has necessitated an increase in the distance at which the dressing-stations and field-hospitals must be established behind the line of battle, and has resulted in increasing the number of casualties at least 50%. Brown outlines a scheme for the organization of the surgical personnel for a division of 12,000 men, among whom it may be safely estimated that the casualties will be about 15%, and that 70% of this number (1,260) will require surgical attention. A force that would be able to competently handle this number of injured should include the following: division-surgeons, 1; brigade-surgeons, 4; regimental-surgeons, 36; hospital staff-surgeons, 20; division-orderlies, 1; regimental orderlies, 48; brigade orderlies, 4; hospital staff-orderlies, 20; 2 ambulance-companies, 132; 2 hospital-companies, 128; drivers of transportation, 112; total, 506.

3.—A boy, 17 years old, had several falls when about a year old, when it was noticed that his head was drawn to the right and downward. This gradually increased and became very marked at the age of 11 years. The patient began to walk when 14 months old, and had always been more feeble in the left leg than in the right. At the age of 13, he found himself unable to walk a distance of 5 or 6 blocks. The muscular atrophy was almost universal. The myopathic facies was well marked in the lower half of the face. The *rire en travers* was very evident. The power of whistling was limited. The lower part of the face was much wasted and the forehead quite smooth, but the orbicularis palpebrarum contracted with normal force, on either side. There was distinct scoliosis. The muscles of the back were not affected, as is usual in this condition, so that the patient could rise from the floor as any normal person would do. The only contractures were in the right sterno-cleido-mastoid and the muscles of the calf of the left leg. There was no evidence of muscular hypertrophy anywhere. The left heel was kept elevated. The gait was that described by the French as a "duck walk." The right sterno-cleido-mastoid muscle was cut, and 2 cm. of tissue removed, and the movement of the head became good to the left, though somewhat hindered to the right. All the muscles of the upper and lower extremities tested responded promptly and normally to the galvanic current. The knee-jerks were prompt, but not exaggerated.



The scapulæ were prominent, but wasting of the muscles in the scapular region was not excessive. The position of the left hip-joint suggested the possibility of dislocation. In fact, this was considered an indication of a probable initial stage of iliac dislocation due to relaxation of the ligaments. Histologic examination of the muscular tissue removed disclosed considerable increase of the connective tissue, diminution in the number of muscle-fibers in certain portions, and a circular condition of the fibers in transverse section. The fibers contained many nuclei, sometimes centrally located, and surrounded by a clear space. Some of the fibers were distinctly forked in longitudinal section, terminating in two or three distinct processes, each striated transversely and longitudinally and containing nuclei. Other fibers were found in transverse section divided into from two to five distinct divisions. Long chains of rectangular nuclei were found in the longitudinal fibers, sometimes two or three of these within a single fiber. These nuclei were shorter than the usual muscle-nuclei. They were equidistant from each other, frequently having very long axes pointing in the direction of the fiber. Some of the fibers had undergone hyaline degeneration.

4.—This article is a brief review of the origin and development of **State medicine**. A more manifest interest in State medicine on the part of the various medical organizations is advised than has heretofore been given. It is predicted that it is a matter of but a few years before a public-health system, national in character, and with supreme authority, will be established. The Minister or Secretary of Public Health will occupy a position equal in power and importance to the head of any other department in every advanced country in the world.

5.—After a brief description of the physiologic action of **pilocarpin**, Visanski advises its use in the treatment of puerperal convulsions on account of its general relaxing effect upon all of the muscles. It is especially useful when puerperal convulsions are threatened. From  $\frac{1}{60}$  to  $\frac{1}{40}$  of a grain subcutaneously is advised. In cases of epilepsy the drug used hypodermically will prevent or cut short an attack. In the treatment of tetanus it can be used in doses of from gr.  $\frac{1}{16}$  to gr.  $\frac{1}{8}$  subcutaneously. It is also valuable in cases of obstinate hiccup. In cases of bronchial asthma relief is almost instantaneous if it is given during an attack. It acts through its relaxing effect. It is also useful in cases of catarrhal laryngitis. In cases of croup in childhood doses of from gr.  $\frac{1}{16}$  to gr.  $\frac{1}{8}$  for a child from 2 to 4 years of age should be given hypodermically, to be repeated when necessary. In all forms of bronchitis in which the cough is dry and secretion scanty it forms a valuable addition to expectorant mixtures. This is especially true of pneumonia. The drug is valuable as an emetic in cholera morbus and in the various forms of poisoning.

6.—Pafford reports a case of **intestinal obstruction** terminating fatally, in which the constricting band was found to be the **vermiform appendix**, stretched across the lower part of the umbilical region, and attached by its extremity to a loop of small intestine.

7.—Gissler records a case of immense **uterine fibroid** complicated by an old vesicovaginal fistula. The fibroid sprang from the cervix of the uterus subsequent to an operation 10 years before for fibroids of the fundus. In the primary operation the bladder had been accidentally injured in the anterior fornix of the vagina, and the fistula was a natural sequence.

8.—**Gonorrheal rheumatism** should be regarded as an infectious disease of metastatic origin with local manifestations, which must be combated chiefly with local measures. A case is here reported in which the symptoms responded only to repeated intra-articular injections of 60 minims of a 1 to 3000 mercuric-chlorid solution.

#### Medical News.

July 2, 1898. [Vol. lxxiii, No. 1.]

1. The Treatment of Uricacidemia. JOHN L. HEFFRON.
2. The American Pediatric Society's Collective Investigation on Infantile Scurvy in North America.
3. Pluck and Nerve in the Navy. RAYMOND SPEAR.

1.—Heffron points out that individuals of the **uric-acid diathesis** are very different in their characteristics. The

main things to be relied upon in the treatment of this condition are proper dietetics, exercise, and daily baths. The use of meats is to be restricted in all individuals, excepting those that are anemic, while sugars are given, their use being limited only by the occurrence of indigestion after partaking of sweets, and all meat-extracts and the like are excluded from the dietary because they contain a large amount of waste from the animal tissues from which they are derived.

#### Boston Medical and Surgical Journal.

June 30, 1898. [Vol. cxxxviii, No. 26.]

1. The American Pediatric Society's Collective Investigation on Infantile Scurvy in North America. J. P. CROZER GRIFFITH, CHARLES G. JENNINGS, and JOHN LOVETT MORSE.
2. Major Amputations at the Massachusetts General Hospital. A Study of the Mortality from 1822 to 1896. CHARLES L. SCUDDER.
3. Cesarean Section vs. Symphysiotomy. G. H. WASHBURN.
4. Omental Hernia of the Left Labium Majus; Operation, Recovery. Service of DR. F. W. JOHNSON, Reported by DR. J. M. CROWLEY.
5. A Case of Extra-Uterine Pregnancy. F. W. JOHNSON.

2.—Scudder publishes a series of statistics of **major amputations** performed at the **Massachusetts General Hospital**, during various periods from 1822 to 1896. The first period from 1821 to 1870 includes amputations performed before antiseptics were generally used; the period from 1870 to 1890, those performed while antiseptics were being introduced, and had become established; the period from 1885 to 1896 represents the true antiseptic and aseptic period. A comparison of the first and third periods shows a noticeable diminution in the mortality-percentage of all operations excepting traumatic primary amputation of the arm, and pathologic amputation of the leg. For some unexplainable reason the mortality in these two instances was higher.

3.—Washburn states the dangers of **symphysiotomy** as hemorrhage, tears of the urethra, bladder, or vagina; septic infection; inflammation of the pubic joint; and failure of union. The danger in **Cesarean section** is from sepsis (and that is very small), and the possibility of ventral hernia. Statistics show a much smaller mortality for Cesarean section for both mother and child than for symphysiotomy. The operation of Cesarean section is also much easier of performance.

4.—According to Crowley, **hernia of the labium majus** is sometimes described as inguinal labial hernia, and consists in the passage of intestine, omentum, ovary, oviduct, or uterus, by the side of the round ligament into the labium majus. Inguinal, though less common in women than femoral hernia, is not rare. Another form that is exceedingly rare may occur in one of two ways: (1) the hernia may descend in front of the broad ligament, distending the vesico-uterine fold of peritoneum, and passing down between the bladder and uterus along the vagina into the labium (vagina-labial hernia); or it may descend behind the broad ligament between the rectum and the vagina, into either the labium or the perineum. Winckel found 6 cases of labial hernia in 5,600 patients examined by him.

5.—Johnson records a case of **extrauterine pregnancy** in a woman, 38 years of age, whose first child had been born 18 years previously. The fetus was of about 3 months' growth and was lodged in the right tube.

#### Journal of the American Medical Association.

July 2, 1898. [Vol. xxxi, No. 1.]

1. Diseases of the Lacrimal Passages; their Causes and Management. LEARTUS CONNOR.
2. The Morbid Anatomic Evidences of the Lymphatic Constitution in Idiopathic Epilepsy. A. P. OHLMACHER.
3. Cerebral Syphilis and Some of its Mental Aspects. ARTHUR E. MINK.
4. Treatment of Urethral Stricture. FREDERICK LEUSMAN.
5. The Reclassification of Some Organic Nervous Diseases on the Basis of the Neuron. CHARLES K. MILLS.



6. How Does the Cause of Disease Produce Disease? A New Interpretation of Operative Principles. W. R. DEXHAM.
7. The Alloxur Bodies and their Estimation. H. RICHARDSON.
8. On the Existence of Epidemic Cerebrospinal Meningitis in Chicago, with Report of a Case with Autopsy. JAMES B. HERRICK.

1.—In concluding his paper on **diseases of the lacrimal passages**, Connor mentions defects of structure and of refraction as predisposing factors. Syphilis, gout, pulmonary tuberculosis and scrofula are general causes, and conjunctivitis and nasal disease local causes that may give rise to lacrimal affections. In the management of cases constitutional diseases should be treated, errors of refraction corrected, and diseases of the conjunctiva or nasal diseases removed. The treatment of the lacrimal passages with aseptic solutions through small syringes or the forced washing by Gould's method and the systematic external use of hot water are recommended. The puncta should be rendered pervious, strictures should be located by probes and dilated or divided.

2.—Necropsies of 18 cases of **epilepsy** made with special care as to both the **gross and microscopic pathology** are reported. The work was undertaken with the hope that the data, carefully gathered and reliably recorded, would eventually furnish statistics from which conclusions could be drawn. In 8 cases distinctive features were found. From the clinical side it is important to note that these cases were all examples of typical, idiopathic major epilepsy. The patients were all young adults and had suffered from epilepsy since childhood. The gross pathologic anomalies are summarized as follows: A persistent, enlarged, and apparently active thymus body; pronounced hyperplasia of the intestinal and splenic lymph-follicles; more or less marked hypertrophy of the lymphatic glands, and of the lymphadenoid follicles of the tongue, larynx, trachea, esophagus, tonsils, and even of the stomach; narrowing of the arteries; abundant development of fat; enlargement of the thyroid; and certain osseous changes indicative of old rickets. Not all these abnormalities were present in all cases, though the persistent thymus and one or more other features were constant.

4.—In conclusion, Leusman states that dilatation is the best method of treatment for **urethral strictures**, provided it cures; electrolysis is a modified form of dilatation, and is good unless contraindicated; cutting is the cure in non-dilatable cases and in the presence of strictures at or near the meatus.

5.—It is believed that the time has arrived for applying the theory of the neuron or nerve-cell regarded as an anatomic unit in the **classification** of some of the most important organic **nervous diseases**. As an example it is suggested that locomotor ataxia might be named "sensory neuron-degeneration," for, whilst it is neither purely neural nor purely spinal, neither purely central nor purely peripheral, it is primarily an affection of the sensory neurons or nerve-cells. Many other diseases are named, and the essentials that should appear in their names are pointed out. For clinical reasons it will probably be best to arrange diseases under the heads of embryonal and of acquired neuronal diseases, and then to subclassify them according to the particular system or systems of neurons attacked.

7.—**Uric acid** and various other organic compounds are considered; their effects in the body and the various means of estimating them chemically are discussed. Richardson has devised a process for estimating uric acid which is simpler than the usual methods and equally reliable. To determine if all the uric acid was precipitated by saturation with ammonium chlorid, a sample of uric acid was bought and purified by warming with 3% sulphuric acid, cooling, filtering and washing with water and then dissolving in a little potassium carbonate. Three portions of 100 cu. cm. each of the solution were acidulated with acetic acid, neutralized with ammonia, saturated with ammonium chlorid, allowed to stand 3 hours, filtered, washed with a saturated solution of ammonium chlorid, the filtrate and washings made strongly alkaline with ammonia, 3% silver-nitrate solution added, the precipitate filtered, washed, dried at 100° C., and the nitrogen estimated. The whole of the uric acid was found precipitated. After a considerable number of estimations of **xanthin-bases**, Richardson has failed to find any

relation between them and mental disease. He has failed to verify Rachford's results in cases of epilepsy, but in 2 cases of *tabes dorsalis* the total xanthins were excessive. It is doubtful whether the xanthins have much pathologic importance, their presence in excess being probably due to want of oxidation in the metabolism.

8.—A case of **cerebrospinal meningitis** in which the diagnosis was confirmed by finding the diplococcus of Weichselbaum in the meninges at the necropsy is reported. Brief reports are also given of 12 cases, several of which, from their clinical history and exclusion of other forms, were probably instances of epidemic cerebrospinal meningitis.

### American Journal of the Medical Sciences.

June, 1898. [Vol. cxv, No. 6.]

1. Acute Inflammation of the Gall-bladder. MAURICE H. RICHARDSON.
2. The Clinical Significance of Reduplication of the Heart-sounds. HENRY SEWALL.
3. Hematomyelia from Gunshot-wounds of the Spine. A Report of Two Cases, with Recovery following Symptoms of Hemileision of the Cord. HARVEY W. CUSHING.
4. The Vomiting of Pregnancy. C. S. BACON.
5. The Shape of the Stomach. HENRY WALD BETTMANN.

1.—The subject of **acute inflammation of the gall-bladder** is discussed chiefly in connection with acute abdominal lesions demanding immediate surgical interference. The importance of early recognition is quite as great in cases of cholecystitis as in those of appendicitis, and though it occurs comparatively rarely, it is in Richardson's experience more frequent than intussusception, volvulus, or other forms of acute intestinal obstruction. In most cases of acute infection of the gall-bladder, the presence of gall-stones is directly or indirectly responsible for the attack, yet there have been cases in which gall-stones have exerted no influence upon the acute infection. When they do exist they give rise to certain pathologic processes in the bladder-wall that offer a fertile field for the infecting germ; the great distention of the gall-bladder presents, too, a possible cause of infection and in the absence of gall-stones may be due to swelling of the mucous membrane of the cystic duct. The bacillus coli communis is, owing to the contiguity of the gall-bladder to the intestinal tract and its direct communication therewith through the ducts, the infecting agent in the great majority of cases, although the typhoid-bacillus and the diplococcus of pneumonia have at times been found in the contents of the gall-bladder. "The symptoms of acute cholecystitis have been those of a confined abscess at the border of the right costal cartilages in the vicinity of the tip of the tenth rib." They may be those of acute inflammation of the vermiform appendix situated near the liver, of acute intestinal obstruction, of sudden closure of an organic stricture; they may suggest an inflammatory process in a diseased kidney, acute pancreatitis, an extravasation from the stomach, a malignant abdominal tumor, a tumor with a twisted pedicle. Pain is the most important and invariable symptom, usually severe and paroxysmal, situated in the right half of the abdomen, though not always localized in the region of the liver. Other symptoms of bacterial infection follow, nausea, vomiting, acceleration of pulse and elevation of temperature, prostration, distention of the abdomen, rigidity, general tenderness becoming localized, or localized tenderness becoming general. The diagnosis may in severe cases be easy and again in others it will be extremely difficult or even impossible. In those cases in which surgical interference has been timely, the prognosis is encouraging; in all, however, it is grave. The acute inflammation may subside, an empyema may form or the bladder-wall may become gangrenous, and rupture and fatal peritonitis follow. The treatment should consist in securing sufficient drainage without contaminating the peritoneum.

2.—Sewall reviews the opinions of other authors as to the cause of **reduplication of the heart-sounds**. His personal views will follow in the continuation.

3.—Cushing reports the following interesting case of gunshot-wound of the spine. A woman, 27 years of age, was shot in three places, the most important wound being situ-



ated on the right side of the neck, on a level with the cricoid cartilage. She did not become unconscious, but as soon as she was shot she noticed that her limbs had become stiff, and there was a sensation of swelling of the right calf. Six hours after the injury respiration was diaphragmatic; and there was severe pain in the arms, which felt as if they were asleep. There was likewise pain in the right leg and to a less degree over the abdomen, where there was also exquisite sensitiveness. Marked tremor of the lips was present, with right-sided hemiplegia below the level of the deltoid. There was slight motion in the right arm, but movement caused great fatigue. The left leg was the seat of complete analgesia. Tactile sensation was everywhere normal. The reflexes were increased. The right side of the body was warmer than the left. On the third day the motor paralysis had largely disappeared from the left arm, although this member was still weak. The right leg was yet paralyzed. There was hyperesthesia over the whole of the right side, anesthesia to pain and temperature on the left side, and a zone of total anesthesia over the breasts and back. There was anesthesia to pain and temperature on the ulnar surface of both arms. The patient developed pneumonia 2 days after the injury and this precluded operation. The symptoms gradually improved, all of the limbs going through the following peculiar cycle: At first they felt as if asleep; that is, they were numb and tingled; then there was intense itching, and next a sensation of burning; this was replaced by radiating pains, which were followed by a return of motor power and the disappearance of all subjective symptoms. Four days after the injury there was girdle-pain. During the 2 months there was no progress, but at the end of this period improvement recommenced and ultimately recovery was almost complete. The reflexes were at first present, slightly exaggerated on the right side; then they became feeble on the right and were greatly exaggerated on the left side, followed by disappearance on the right side and diminution on the left; and then finally they reappeared on both sides and gradually reached normal. There were some vasomotor disturbances. The patient complained bitterly of cold feet; the right hand was often very warm, and there was marked hyperidrosis on the right side. It was noted that at first there was rather rapid wasting of the leg, but this gradually improved. By the second month the hyperesthesia had almost disappeared, but was still marked on the right half of the thorax. The anesthesia to touch had also improved, but was still evident. Cushing believes that the bullet had caused concussion of the spinal cord and a hemorrhage into the gray matter, at the level of the fifth spinal segment, extending from that point throughout the cervical enlargement. This diagnosis was strengthened by locating the bullet by the Röntgen-rays in the sixth cervical vertebra. It is believed that the lesions involved the left half of the spinal cord, although not to as great an extent as the right half. The case is also briefly reported of a boy, 14 years of age, who was shot in the back, fell to the ground without loss of consciousness, and found that his left leg was paralyzed. The bullet was lodged in the eighth dorsal vertebra, the left leg was hyperesthetic, and the right anesthetic to everything excepting touch. Motion returned in the course of 5 days and the paralysis soon disappeared completely. The reflexes were present for 48 hours; on the left side they disappeared for 36 hours and finally returned gradually. In neither case was there reason to believe that the spinal cord had been directly affected.

4.—Bacon makes the following suggestions as to the treatment of the **vomiting of pregnancy**: 1. The abnormal irritability of the nervous system, including the vomiting-center, is to be allayed by keeping the patient in the horizontal position, by attention to the skin and bowels and kidneys, using rectal and, if necessary, hypodermic injections of salt-solution. 2. The hysteric condition that is so commonly found present should be controlled by strengthening the will and influencing the dominant ideas of the patient. 3. All sources of peripheral irritation should be discovered and treated. 4. In extreme cases subcutaneous saline injections serve the threefold purpose of (a) diluting the blood and increasing vascular tension, (b) eliminating toxins through renal and intestinal excretories, and (c) furnishing two important kinds of food. 5. Induction of abortion is never indicated. At a stage when it is safe and efficient it is not necessary, and in extreme cases it adds

greatly to the danger, rarely stops the vomiting, and can be substituted by the use of artificial serum.

5.—Bettman has studied the **form of the stomach** by inflating that organ with a hand-bellows after it was removed from the body, then allowing it to dry in the air. The method suffers from the errors that the inflation is not always uniform in different stomachs, and that a slight amount of shrinkage occurs during the drying, but Bettmann believes that these errors may be disregarded. The preparatory use of formalin, or of other solutions, gave unsatisfactory results. There was found great variation in shape, there being, however, two chief types which are called the cylindric form and the deep form. The shape of the curvatures, as well as the general form, vary. In the study of fetal stomachs, the usual statement is strongly objected to, that the fundus is absent. It was found as well developed in infants as in adults, and the so-called cylindric form of the stomach, with absence of the fundus in infants and fetuses, is mythical. The length of the fundus as compared with that of the entire stomach was but little shorter in fetuses than in adults, and, in the stomachs of infants and children examined the average length was greater than that of adults. One anatomic feature is also noted that has not previously been dwelt upon, *i.e.*, that the esophagus is inserted nearer the anterior than the posterior wall—at about the junction of the anterior with the middle third. This is explained by the twisting that the stomach undergoes in its development, and the more rapid subsequent development of the posterior portion of the organ. The constriction of the stomach near the pylorus is believed to be due to muscular contraction, owing to the more powerful muscular function of the pyloric half of the organ. It is usually only temporary and disappears spontaneously when the muscles relax and inflation effaces it.

#### Glasgow Medical Journal.

June, 1898. [Vol. xlix, No. 6.]

1. Extra-Uterine Pregnancy. J. K. KELLY.
2. On Cysts of the Prepuce and Raphé, with an Illustrative Case. GEORGE HENRY EDINGTON.

1.—Kelly states that **extra-uterine pregnancy** gives rise to no symptoms before it separates from or ruptures the tube. Previous to this, there may, or may not be present symptoms of early pregnancy, but, if they are present, there is nothing in them characteristic of tubal pregnancy. At the time of rupture, the characteristic symptoms are (1) a sudden attack of illness marked by signs of shock, (2) distention of the abdomen following upon this attack, and (3) the formation of a tumor in Douglas' pouch. The sudden shock is due to the rapid loss of blood consequent on the laceration of the placental vessels; the abnormal swelling to the collection of this blood in the abdomen, raising up the intestines, so that they float on its surface or are completely bathed in it; and the retrouterine tumor to the blood gravitating to the lowest part of the peritoneal cavity.

2.—But little attention has been given to the study of **cysts of the prepuce and raphé**. From a review of the few recorded cases, one finds that these may be divided into 4 groups, namely, the sebaceous, mucous, congenital (this may include the former two), and traumatic epithelial. In the case reported by Edington, the cyst was situated on the under aspect of the free margin of the prepuce, the antero-posterior meridian of the cyst corresponding to the raphé. Microscopic examination of the solid contents disclosed the presence of squamous epithelial cells, a few leukocytes, and free fat-droplets; the lining membrane was seen to consist of flattened epithelial cells. No cholesterin-crystals were observed. The cyst is regarded as of congenital origin, and belonging to either the mucous or sebaceous variety.

#### Deutsche medicinische Wochenschrift.

May 26, 1898. [24. Jahrg., No. 21.]

1. A Contribution to the Statistics of Thrombosis and Embolism of the Large Abdominal Vessels. H. KÖSTER.
2. Grave Syphilis in Physicians. BRANDIS.
3. A Contribution to the Study of Leprosy; Contagion and Heredity. E. v. DÜRING.
4. The Treatment of Leprosy in the Fiji Islands. L. LEWIN.



5. Antipyrin-Exanthemata. WILHELM WECHSELMANN.  
 6. A Case of Rupture of the Uterus Induced by Ergot. BOND.  
 7. Double Coloration of the Iris of an Otherwise Normal Eye. GEORG GOTTWALD.

1.—Köster reports a number of cases of **thrombosis or embolism of the abdominal vessels**. The first patient, a man, aged 31 years, was brought to the hospital suffering with intense pain in the region of the bladder. There was violent vomiting and hiccoughing, and signs of complete intestinal obstruction, although the vomiting was never fecal in nature. Celiotomy was performed immediately, and it was found that the greater part of the intestines was already gangrenous. The patient died within a few hours. At the autopsy dark red, turbid, and offensive fluid was found in the peritoneal cavity. The descending colon was dark blue and gangrenous; the peritoneum and the remaining intestines were normal. When the intestines were opened, some swelling of the follicles was found in the ileum and cecum, and just below the splenic flexure there was a moderate amount of ulceration. Examination of the vessels showed the presence of extensive thrombosis of the inferior mesenteric vein, and, to a less degree, of the superior mesenteric vein. The cause of the thrombosis was probably the previously existing enterocolitis. The second patient, a woman, 40 years of age, had undergone an operation for acute intestinal obstruction, which was found to be caused by peritoneal adhesions across the ileum and cecum. These were broken and the patient was discharged, apparently cured. Later she suffered from some pain after eating, and had violent vomiting. Considerable improvement occurred, although at one time there was slight edema of the legs. About two months after the operation the woman was suddenly seized with violent pain in the abdomen and vomiting, with cyanosis and collapse. At the autopsy the entire small intestine was found of a dark black color, and lying in parallel folds, but there was no sign of obstruction, no peritoneal adhesions, and no tympanites. The wall of the intestine was thick and edematous. The peritoneal cavity contained a small amount of blood. Unfortunately the vessels could not be carefully examined. The appearances, however, could only have been caused by thrombosis of the superior mesenteric veins, probably in consequence of the partially cachectic condition of the patient. The third patient was a workman, 57 years of age, who had for some time suffered from loss of appetite. He was brought to the hospital cachectic, with extreme ascites. The abdomen was tapped and a considerable amount of clear serum was withdrawn. There was immediate collapse and death. The intestinal loops presented the same appearance as in the previous cases, being arranged in parallel rows and dark blue in color. The wall was thickened and infiltrated with blood. The mesenteric veins, leading from the gangrenous portion, contained thrombi, but the main branch was free. Secondary carcinomatous nodules were found in the liver. Köster compares his own cases with those reported by various others, and notices that all present very similar symptoms; the only variation being in the parts of the intestines that are involved. The fourth patient, a woman, 53 years of age, had had a stroke of apoplexy. She was suddenly seized with severe pain in the abdomen which was soon followed by death. The peritoneal cavity contained a small amount of bloody fluid. The intestines were thickened and red. In one of the branches of the superior mesenteric artery there was found a large organized embolus, with secondary thrombosis extending from it. There was marked stenosis of the mitral orifice. Attention is called to a case reported by Gull, with similar symptoms, in which recovery ensued. The fifth patient, a man, 27 years of age, had had dyspnea and cough for about 5 years. He was very stout and of good muscular development. For a week before admission he had had high fever, and pain in the legs, but these symptoms disappeared in the course of a day or two. He was brought to the hospital suffering from marked dyspnea, severe cough and headache. Under vigorous stimulation some improvement ensued. One week later a second attack occurred, accompanied by vomiting and severe pain in the epigastrium, shooting to the back; the spleen was enormously swollen. Two days later the patient died. At the autopsy the spleen was found of enormous size, of a dark-blue color, and the splenic vein was filled by a firm thrombus 1 cm. in thickness, projecting into

the portal vein. Peyer's patches were swollen. The case, therefore, represents a thrombosis of the splenic vein during convalescence from typhoid fever. The only case resembling this has been reported by Bonne.

2.—Brandis relates his experience with 10 cases of **syphilis occurring in physicians** between the ages of 30 and 50 years, the disease having been acquired in the performance of their professional duties. In 2 cases infection took place in the care of obstetric cases; in 3, during examination of or operation upon the rectum; and in 2, from operations on buboes. The period of incubation averaged 4 weeks, the initial lesion appearing upon the index or middle finger, occasionally followed by the appearance of an axillary bubo. A short time after the appearance of the initial lesion there was frequently observed necrosis of the nasal and long bones, and in the majority of instances the early stages of the disease were characterized by marked septic fever, chills, and loss of vitality. In the majority of instances the diagnosis was not established until some time after infection; and in some instances when the disease was suspected, and a short course of treatment failed to give immediate results, the treatment was discontinued. For these reasons the disease was well advanced in every case before it came under observation. The subsequent history of these 10 cases is briefly as follows: 4 of the men are living and well, having returned to their practice, and from 5 to 25 years having elapsed since the course of treatment ceased; 6 have died after a cure was assured, 1 of typhoid fever, 2 of pulmonary tuberculosis about 5 years later, 1 of pneumonia 12 years later, 1, after 15 years, of some indefinite cerebral affection, and the sixth from an overdose of opium. This relatively high mortality may be attributed more to the average short life of the physician than to syphilis. The importance of an early diagnosis and the persistence of continuous treatment for at least 3 years are the lessons that should be learned from the observation of this series of cases.

3.—Düring attacks the upholders of the non-contagiousness of **leprosy** in an energetic and somewhat belligerent fashion. He contends that the only argument that Zambaco can adduce in favor of his view, is the fact that he has failed to observe direct contagion in Constantinople. Kaposi practically admits contagion, although he holds that the tendency to it is very slight, and in order that the person may be inoculated with leprosy it is necessary that some other predisposing cause should be present. The argument of Kaposi, that he has never observed contagion in hospitals, may be applied equally to tuberculosis and syphilis. Düring admits that the danger of contagion in leprosy is slight, particularly if the most ordinary precautions are observed. Among the poor, however, this is unfortunately uncommon. Accessory conditions favoring contagion are necessary quite as much for all the other contagious diseases as for leprosy; for example, bubonic plague, in which contagion is so frequent and so virulent, does not appear to be at all contagious in Constantinople. In regard to the theory of Zambaco that leprosy is hereditary and may often skip one or several generations, Düring is more or less sarcastic, ridiculing the claim that direct transmission from parent to child does not necessarily indicate contagiousness, when it is supported by no better examples than gout and epilepsy. The fact that in Constantinople the leprosy patients are almost exclusively Jews is not sufficient proof, because Jews in other communities do not suffer from the disease and sporadic causes occur among the Greeks and Turks. As a matter of fact the infection of the Jews is rather a proof that the disease is transmitted by intimate and prolonged contact. Düring admits that it is difficult to convince the supporters of the contagious theory, particularly as they are disposed to regard only the negative cases, and to regard all the positive cases of contagion as examples of atavistic heredity. He, however, believes that leprosy is a contagious infectious disease, transmitted from one human being to another.

4.—Lewin calls attention to the description given by a missionary named Moore of the method of **treating leprosy** in the Fiji Islands. The patient is placed in a small empty cot and his whole body is rubbed vigorously with green leaves and then covered with them. A small fire is built, in which are placed some pieces of the sinu tree. As soon as a thick black smoke commences to arise, the hands and feet of the patient are bound, and he is placed over the fire so that his head is about 15 inches from the ground, and



in the midst of the thickest smoke. He is left in this position for hours, and when he is considered sufficiently smoked, his friends scrape his skin and incise the flesh deeply. Sometimes the patient dies; sometimes he recovers; and in the latter case he may be cured of the disease. Lewin believes that the therapeutic qualities of the sinu tree (the *excoecori agallocha*) should be investigated scientifically. This plant when cut exudes a thick, milk-white juice that is mildly irritating. Its action may either be to produce a reactive inflammation in the skin or to kill the lepra-bacilli. It is believed that the disagreeable features of the treatment could be readily eliminated.

5.—Wechselmann reports 5 cases of **antipyrin-eruption**, the usual situations being the mouth, anus, eyelids, genitals and particularly the hands and toes. Occasionally a more universal form appears. The first patient, a man of 36, had suffered from migraine for many years. After gram-doses of antipyrin, he had a painful eruption of the lips, mouth and genitals. This disappeared after withdrawal of the antipyrin, and reappeared 1½ hours after an experimental dose had been taken. The second patient, a woman of 40, also suffered from migraine and had a similar eruption. The third patient, suffering from diabetes, had a sharply localized edematous and hemorrhagic eruption upon the back of the left hand. Three years later no trace of pigmentation was found in this situation. The fourth patient, also a diabetic, had a similar eruption upon the back of the right hand, which persisted for 6 weeks after discontinuance of the antipyrin. The fifth patient was a man of 29, who had an eruption extending over the whole of the lower part of the body, which recurred several times, always after the use of antipyrin for the relief of headache. Five years later he was again examined and there was no trace of pigmentation, and there had been no recurrence in the interval. It is possible that the eruption observed is due to the retention in the system of antipyrin. In one case at least the drug was found absent from the urine after its administration.

6.—Bond reports a case of **rupture of the uterus**, apparently produced by the administration by the midwife of at least 5 grams of powdered ergot, after she had artificially ruptured the membranes. He believes that the rupture was produced by the violent contractions of the uterine muscle induced by drug, and forcing the head of the child downward.

### Berliner klinische Wochenschrift.

May 16, 1898. [35. Jahrg., No. 20.]

1. The Diagnosis of Persistence of the Ductus Arteriosus of Boal. W. ZINN.
2. The Utility of and the Indications for Vaginal Ligation of the Uterine Arteries in the Presence of Myomata of the Uterus. SIGMUND GOTTSCHALK.
3. Blood-corpuscle Enumeration and Atmospheric Pressure. A. GOTTSSTEIN.
4. Acute Epidemics of Ocular Disease. GREEF.

1.—Zinn reports the case of a servant, 37 years of age, who had had dyspnea from childhood, and who presented a much enlarged area of cardiac dulness, particularly toward the right, with an area of dulness in the upper intercostal spaces to the left of the sternum, over which a thrill could be felt and a loud systolic murmur heard; the second sound was not accentuated. The diagnosis of the uncomplicated **persistence of the ductus arteriosus** was made, based upon the signs mentioned, and the conduction of the murmur into the cervical vessels and the left interscapular space and upon the absence of cyanosis. The absence of the second pulmonary sound is explained by Gerhardt by the acceptance of great width of the ductus arteriosus, resulting in such continual and excessive flow of blood into the pulmonary artery that its elastic contraction in diastole is not sufficient to close the valves with a loud tone. Radiographs of the case showed an excessive shadow under the upper part and to the left of the sternum.

2.—Gottschalk defends his method of **vaginal ligation of the uterine arteries** for the cure of uterine myomata, and claims among other advantages of the method that it is absolutely safe. He secures the main arterial supply in this way, and yet the peritoneal cavity is not opened. He has operated by this method in 21 cases during the past 6½ years,

with recovery in all. The hemorrhage from the presence of the tumors ceased in every instance very shortly after the operation.

3.—Gottstein devotes himself to a review of the work of others, beginning with the suggestion of Bert, that high altitudes cause blood-changes, although Viault was the first to determine an increase in the number of blood-corpuscles.

4.—Of the inflammatory **affections of the eye-lids**, in addition to acute conjunctivitis and trachoma, there exists a so-called **follicular catarrh**, in which all the manifestations of an acute catarrhal affection, namely edema, ecchymosis, and secretion, are absent. This affection is characterized by the appearance of small follicles, especially in the lower lid. Epidemics occur frequently in schools, but transmission does not take place by infection from person to person; bacteriology has as yet thrown no light on the subject. It is probable that bad hygienic surroundings, with the confinement of a number of individuals for several hours at a time in crowded quarters, and exposure to impure air, or air charged with ammonia and particles of dust, constitute an important factor in the etiology.

### Centralblatt für innere Medicin.

May 14, 1898. [19. Jahrg., No. 19.]

1. A Contribution to Sputum-examination. F. ALBIN HOFFMANN.
2. Metabolic Products following Thymus-administration. MINKOWSKI.

1.—Hoffmann calls attention to the value of **staining sputum with eosin**, as by this method in particular it is possible to recover the eosinophile cells. In addition he calls attention to peculiar cells of the size of ordinary white blood-cells and containing several small nuclei that take the eosin somewhat more intensely than the protoplasm does and are often surrounded by a clear zone. He considers these to be white blood-cells that have penetrated the epithelium of the lung. Other cells have a clear, sharp periphery and contain a number of small, dark granules, which may often be slightly elongated; usually there are only from 3 to 5 of these, but sometimes they are more numerous. These cells occur most frequently in the expectoration of children suffering from whooping-cough, and appear in a certain way to replace the eosinophile cells. They nearly always indicate an acute process, and may be found in the expectoration of pneumonia or acute bronchitis. They represent the nuclei of the columnar, ciliated epithelial cells of the mucous membrane.

2.—Minkowski has found in the urine of dogs that have been fed with **thymus gland**, a peculiar substance that has the formula approximately of  $C_5N_5H_7O_3$  and which he believes possibly to be an imidopseudo-uric acid—that is an oxidation-product of imidohypoxanthin. It is also possible that it is allantoin and this seems to agree with some of its chemical reactions. It is important as perhaps contributing to the explanation of the form of uric acid derived from nucleic acid.

May 21, 1898. [19. Jahrg., No. 20.]

1. Some Questions in Metabolism. H. HILDEBRANDT.

1.—Hildebrandt has undertaken some studies to learn why there is an increase in nitrogen-retention, and in body-weight, when somatose is given, even though there is seemingly a lesser amount of absorption from the intestine. Recent experiments of Voit and Harkonoff indicate that the amount of albumin with which one can keep an animal in nitrogen-equilibrium, when carbohydrates are given in sufficient amount, is the same as the amount of the albuminous destruction during starvation of that animal. Hildebrandt took a dog whose nitrogen-elimination through the urine during starvation was 3.5 grams daily. Throughout various periods he gave the animal an amount of nutrose or eucasin or somatose, corresponding to this amount of loss in nitrogen, together with starch, fat, salt, and water. With the first two foods, it was possible to keep the animal almost in such condition that the output and intake of nitrogen were equal; while during the somatose-period, the animal lost albumin daily; hence the somatose is evidently distinctly less valuable than the casein-salts. The smaller the dose given, the



more perfectly was it used, but it is impossible to determine by experiment, with positiveness, what amount is small enough to be completely absorbed, and, on the other hand, large enough to keep up the nitrogen-balance. This does not contradict the view previously expressed, that that part of somatose that is absorbed has as much nourishing power as the nitrogen of meat; but the greater amount is likely to be lost in the feces through diarrhea. The preparation is a very expensive one, and there is absolutely no proof that it has any specific effect upon individual organs.

May 28, 1898. [19. Jahrg., No. 21.]

1. The Question of Excessive Albuminous Nutrition of the Suckling Infant. ARTHUR KELLER.

1.—Keller has endeavored to determine under what conditions harmful products of food are formed in the intestines of infants, and the influence fermentative processes in the intestine have upon absorption and metabolism. He determined how much nitrogen was absorbed when varying amounts were ingested and how perfect metabolism was. He reviews the previous work on resorption and metabolism in children, and gives the results of his own studies on three children. Each of the children was given 5 meals in 24 hours, the urine and feces collected and the nitrogen determined by the Kjeldahl method. The resorption was determined by the difference between the nitrogen ingested and that excreted in the feces, neglecting the amount excreted in the sweat and gases, as of no serious importance. The results of previous investigators have varied. All found much more nitrogen in the feces than did Keller; his average being 95.2% of absorption, while the results of others varied from 89% to 62%. This he explains by the fact that he used a smaller amount of milk in feeding the children, and also that other investigators seemed to have given more than 5 meals daily. He concludes from his studies, that the albumin in cow's milk is well absorbed by sucklings, and may be almost fully absorbed by even sick sucklings. As to the extent of nitrogenous metabolism, he found in 2 children in 3 examinations that from 4.8% to 9.9% of the nitrogen was retained, while in the fourth examination nearly 12% was retained. Other observers have obtained much higher percentages, even up to 29%, and this he explains by the fact that they gave more nourishment. He would not, however, advise, from these results, the use of excessively large quantities of nitrogenous food, as clinical experience undoubtedly teaches that this yields bad results. Nitrogen-retention is aided by the use of carbohydrates, and it is by their use in conjunction with proteids rather than by increasing the proteids alone to excess that tissue-formation may be increased in children. In order to see whether the nitrogenous matter was properly reduced to its end-products, Keller determined the relative amount of urea when the end-products were progressively increased. The relation between the two remained the same, as did also the relative amount of ammonia; hence the albumins seemed to be reduced to their proper end-products. Keller was unable to determine what may be the harmful products that are produced by excessive albuminous food.

Centralblatt für Gynäkologie.

May 21, 1898. [22. Jahrg., No. 20.]

1. A Contribution to the Question of Myomotomv. L. WEIL.
2. A Gynecologic Operating-table. J. STAS.

1.—Weil has made an exhaustive study, including a recapitulation and statistical record, of the operative procedures that have thus far been recommended in the performance of **myomotomv**, dwelling especially upon the clamp-method. He states that Ambroise Paré was the first to perform hysterectomy for inversion of the uterus. Péan was the first to perform the operation in France in 1868, and Hegar in Germany in 1870. Since 1876 the clamps of Péan have been used in every operation to control bleeding; they were first used in hysterectomy in 1885. Various modifications were soon suggested in the performance of hysterectomy. Supravaginal amputation, with extraperitoneal treatment of the stump, was endorsed by Fehling, Schauta,

Fritsch, Hegar, and others. The intraperitoneal treatment of the stump claimed as its advocates Schröder, Olshausen, Gussow, and others. Total extirpation of the uterus either by the abdominal route (Martin, Olshausen) or by the vaginal method (Péan, Freund, Landau, Zweifel, Abt) next commanded attention. Finally, total extirpation in two parts, namely, supravaginal amputation and extirpation of the cervix through the vagina was suggested. No operation has been so modified and remodified as myomotomv. Weil claims that the main advantages of the use of the clamps is that convalescence is quicker than after the method by ligature.

2.—Stas has devised a new gynecologic operating table that is so supplied with mechanical appliances that the patient may rest in any position from the simple dorsal to the extreme lithotomy, to the exaggerated Trendelenburg or the Walcher position. The length of the table is 117 cm. and its height 13 cm. when packed ready for transportation. It is readily put together and as readily separated.

May 28, 1898. [22. Jahrg., No. 21.]

1. A Contribution to the Etiology of Hydramnios. E. OPITZ.
2. Remarks Upon Gessner's Injunction "Away With the Curet in the Treatment of Abortion." HERMANN BIERMER.
3. Away With the Curet in the Treatment of Abortion. B. FEINBERG.

1. Opitz states that hydramnios is in a very large percentage of cases complicated by edematous conditions of the fetus. In 26 cases reported in the *Polyclinic Journal* of the Breslau gynecologic clinic, there were 4 of hydrocephalus, 1 of anencephalus, 1 twin-case, 1 fetus with abnormality of the bladder, 5 fetuses with ascites, hydrothorax, and anasarca, of which 2 were macerated. Opitz has examined the organs of 3 fetuses from cases of hydramnios in order to discover whether or not they were syphilitic. In 2 a specific history was undoubted, while in the third there was a strong suspicion of the disease. It is concluded that syphilitic disease of the mother and child is attended with a larger flow of maternal blood into the placenta, and the fetus becomes plethoric. This increases the urinary secretion, which, so long as the fetal kidneys are normal, or are not gravely diseased, can be disposed of. If the kidneys are diseased the fetus becomes edematous and there will be more or less hydramnios.

2.—Biermer takes a stand against the advice of Gessner, who propagated the dictum "Away With the Curet in the Treatment of Abortion." He contends that curettage is much to be preferred to digital exploration and evacuation of the uterine cavity, as the curet can always be much more safely sterilized than the finger of the physician.

3.—Feinberg also asks why we should do away with the **curet in the treatment of abortion**. Certainly not because it has been used in cases without distinction or stipulation. It would be just as wise to do away with other valuable instruments that have been used indiscriminately. Neither should it be discarded because there have been reported from its use a number of cases of perforation of the uterus. This number is very small when compared with the thousands of curetments that have been performed. Feinberg objects to forcible digital dilatation of the cervix, as recommended by Gessner, in place of the use of the curet.

Revue de Médecine.

April 10, 1898. [18. Ann., No. 4.]

1. Rhizomelic Spondylosis. PIERRE MARIE.
2. Polydactyly and Atavism. E. BOINET.
3. Chronic Rheumatism due to Infection. (Concluded.) TRIBOULET.
4. Purulent Pleurisy due to Staphylococci. P. A. LOP and G. MONTEUX.

1.—Marie reports 3 cases from his own experience that presented a heretofore unobserved symptom-complex, and he adds to his own several cases that he has collected from the literature and that seem to belong to the same class, designating the disease **rhizomelic spondylosis**. The important symptoms are complete ankylosis of the verte-



bræ with more or less pronounced ankylosis of the articulations between the limbs and the trunk, the smaller joints of the extremities remaining intact. Ankylosis of the vertebral column is usually complete, the cervical region being affected somewhat late, however. The result is not the curvilinear kyphosis common in many other affections, but an abrupt inclination, chiefly at the junction of the cervical and dorsal portions, the portions beneath being in almost a straight line. The sacrum is completely ankylosed with the neighboring bones and there may be hyperostosis at these articulations. Sometimes bony prominences may also be felt on the anterior surface of the vertebrae by digital examination through the pharynx. The hip-joint is completely ankylosed, allowing of no movement; there is flexion and some adduction. The shoulder-joint is much less affected, but the movements are considerably limited. The knee shows no change on superficial examination, but there is usually slight limitation of movement. The chest and thorax are pronouncedly flattened, from the atrophy of the muscles or changes in the bones themselves, more probably the latter. The thorax does not move during respiration. The muscular atrophy is not more marked than is explicable by the lack of function. In order to preserve their equilibrium the patients flex their knees somewhat, and this, with the ankylosis in flexion of the coxo-femoral articulation and with the kyphosis at the neck, gives them, when viewed laterally, somewhat the appearance of the letter Z. They are unable to lie flat on their backs, owing to the ankylosis, and they must occupy the lateral decubitus, as a rule. In their progression, in using only their knee-joints and ankle-joints, they remind one of wooden manikins. They are usually obliged to employ canes or crutches. The affection has been observed exclusively in male subjects. It commences in early adult life, and the first symptom noticed is pain, almost always beginning in the knee, later felt in the sacrococcygeal articulation. The last-named pain is intense, and the subjects may have extremely violent spontaneous pain in any joint. The vertebral ankylosis progresses slowly from the sacral to the cervical region, the coxo-femoral ankylosis advancing at the same time to a high degree. There is never evidence of acute inflammation. The diagnosis from chronic rheumatism is made at once by the absence in the affection under discussion of any trouble with the small joints. Heredito-traumatic kyphosis is distinguished by the curvilinear character of the kyphosis, the absence of involvement of the joints of the extremities and the peculiar neuralgic character of the pains. Field-laborers sometimes acquire ankylosis in flexion of the vertebral joints of the lumbar region and appear doubled upon themselves. There is, however, in these cases no ankylosis of the whole vertebral column and no ankylosis of the articulations of the extremities. There is no definite knowledge of the nature of this new disease, as no autopsies have been made; but from a specimen in the Dupuytren Museum that Marie has examined, and that he believes came from a subject of this disease, because of the coincidence of vertebral and coxo-femoral ankylosis, the lesions seem to be a complete bony fusion of the vertebral bodies, owing to ossification of the anterior and lateral ligaments. Marie also notes that Bricon has described an analogous affection in cats. Similar clinical pictures are sometimes found in conjunction with specific urethritis, but in this disease of Marie's there is no history of gonorrheal infection.

2.—Gegenbaur's idea is that **atavism** explains all varieties of **polydactylism**. If, however, all these deformities are but results of atavism, there should remain vestiges of the bones of the ancestral species. Boinet has studied 17 cases, previously unpublished, by means of the X-rays, to determine whether such bone-remnants exist. He precedes his studies with some interesting historic data, showing that the first recorded instance of hexadactylism was biblical. In 1025 B. C., Jonathan killed, in combat, a giant Philistine who was possessed of 6 digits on each hand and foot. Another interesting historic point is that the anomaly was so common in the family of Foldi of the Arab tribe of the Hyabites, that all new-born infants not possessed of 6 fingers were considered the issue of adulterous union and sacrificed immediately. Boinet finds in these cases of hereditary hexadactylism that the supernumerary members are not remnants of preexisting digits, but that they are the result of a dichotomization or subdivision of the bones. This occurs probably

under the influence of the nervous system, as these deformities are symmetric and hereditary. The nervous system also exercises an influence upon ectrodactylism, but this deformity is probably influenced by other conditions likewise, as Boinet has himself reported a case of mother and son, subjects of monodactylism, many of whose ancestors had been lepers, and were much deformed by the disease. Mother and son themselves presented no evidence of leprosy, and it seemed probable that their deformities might be the result of the deformities in their ancestors. Contrary to the theory that the pisiform bone is the remnant of a sixth digit, Boinet gives a reproduction of a radiograph of a case of monodactylism, in which there was persistence of the pisiform, while all the other bones of the hands and carpus had disappeared, excepting 2 of the carpus and the series of bones belonging to 2 fingers. Were the pisiform the remnant of a preexisting digit, it would seem that it would have disappeared earlier than the others in such a case as this. Were polydactylism to be explained through atavism, the deformity would be expected to be much more frequent in antiquity, and that in the ancestral species to which the diverse varieties of polydactylism revert, the number of digits would present well-defined types, but, contrary to such a view, it is known that the *Baptonadon discus* has 6 digits, and that the *Ichthyosaurus communis* has 7 digits on the anterior extremities, and 8 on the posterior.

3.—Triboulet notes the attempts that have been made to hold lesions of the spinal cord responsible for the **articular changes of chronic rheumatism**. Such attempts must fail unless they prove the relation of cause and effect, and such relation has not been shown. In cases in which it has been possible to study the real relation between cord-changes and chronic rheumatism it has been shown that the two are evidences of one general process. After these changes are instituted they influence each other, but in their origin they are not dependent upon each other. Triboulet's conclusions are as follows: Some rheumatic manifestations are free from bacterial influence, such as those due to serums, cell-products, etc. In those forms due to bacteria no constant specific organism is found; and, as experimentation and clinical observation show that the results of infection by those bacteria that are active is not always the same, it must be believed that in certain individuals there is a predisposition to articular affections. Cold has an undoubted influence. This influence Triboulet limits to the preparation of an already predisposed individual for microbic invasion by lowering general or local vitality. Acute articular rheumatism is due to a bacterium with special pathogenicity toward joints and which rapidly loses its virulence. The staphylococcus is certainly the most frequent agent here, both in cases of frank rheumatism and in the joint-affections associated with scarlet fever, puerperal sepsis, etc. Pseudo-rheumatic affections are due to hemic infection, from some local affection, such as gonorrhea, with joint-manifestations. Chronic rheumatism is the result, when the acute attack has largely subsided, leaving only a less active process; or when the pseudo-rheumatic process has been prolonged, causing permanent joint-changes; or when the resistance of the individual has been so great or the virulence of the microorganisms so slight that general manifestations were absent.

4.—Lop and Monteux report the case of a man with a pleural effusion which was aspirated several times; finally becoming purulent after being at first serous, an empyema-operation was done and the pleural cavity irrigated. Cultures from the aspirated fluid showed the presence of staphylococci. Tubercle-bacilli could not be found. Two guinea-pigs were killed after inoculation, however, and found to have tuberculosis of slow course and slight virulence. A study of various reports of staphylococcal pleurisy shows that the condition is of extremely slow, irregular and prolonged cause. The fluid is often serous in the early stages, subsequently becoming purulent; but it does not contain flakes of fibrin. Suppuration is usually free. The staphylococcus is not very specific and only tends to develop in those who are already in bad health or who are convalescing from some serious illness. The prognosis is graver than in other non-tuberculous empyemas and the diagnosis from tuberculosis is often difficult. It is aided by injections of tuberculin. The preferable treatment is pleurotomy.



## Original Articles.

### MULTIPLE (TRIPLE) STRICTURE OF PROBABLE TUBERCULAR ORIGIN WITHIN THIRTEEN INCHES (33 CM.) OF THE JEJUNUM.

Resection and Circular Enterorrhaphy by Maunsell's Method, Followed by Complete Recovery; with Remarks on Multiple Intestinal Strictures.

By RUDOLPH MATAS, M.D.,

of New Orleans, La.

WHILE the comparatively recent contributions of Bouilly, Schier, Billroth, Durante, Czerny, Koenig, Salzer, Hofmeister, and others have fully established the importance of the tubercular process as a frequent and most important cause of stricture in the ileocecal region, the occurrence of multiple stricture of the small intestine attributed to this cause is not so generally recognized, and I trust that reference to this subject, and the presentation of an illustrative case, will not be considered superfluous. I have been prompted to present this observation not only because I believe that the subject itself is worthy of agitation, but also because the type of the strictures observed and the multiple character of lesions in the jejunum, so far away from the favorite seat of tubercular infection, viz., the ileum and the ileocecal region, justify its present record as a rare occurrence. Furthermore, as an illustration of the value of enterectomy and the method adopted in performing it (Maunsell's method), I believe it also presents technical features which may have some bearings on the history of the operative treatment of this condition, which is still in process of evolution.

In the latter part of April, 1896, I was consulted by Mr. W. H., of Texas, a civil engineer, for the relief of an obscure complaint which had very gradually but progressively undermined his health during the last 20 years. He is a tall man, over 6 feet in height, and 46 years of age. When the patient was referred to me through the kindness of my colleague, Professor Elliott, he presented an exceedingly thin, weak, and gaunt-looking appearance. In addition to his profound emaciation, his face indicated long and continuous suffering. He at once referred all his troubles to his abdomen, which had been the seat of paroxysmal attacks of pain, of variable intensity, since 1869, and which, in view of their repeated occurrence, foreshadowed the more serious complaint that now existed.\* His troubles had not become distinctly localized until about 2 months ago, when he felt a slight but distinct tumefaction in the left umbilical and lumbar regions. The appearance of this swelling coincided with a most violent paroxysm of pain, vomiting, fever, and constipation, which threatened his life for several days, when the acute symptoms gradually subsided, leaving a large, tender mass, which is at present distinctly recognized on abdominal palpation.

Upon examination I found the abdomen exceedingly thin and retracted. By palpation and inspection a distinct tumor could be recognized in the lower part of the left half of the abdomen. The center of the swelling occupied a spot which was crossed by a line drawn from the umbilicus to the left anterior superior iliac spine. In size, contour, and mobility the tumor suggested a large movable left kidney. The mass could be moved up and down from the costal arch to the

iliac crest; laterally from the umbilicus to the lumbar region. The mass spontaneously shifted its position, and was larger at times than at others. An experienced physician, who had seen him at his home, believed that this was a floating kidney, which caused crises of abdominal pain from torsion of the pedicle. He had consulted numerous physicians during the many years that he had suffered with his complaint. In the beginning of his complaint he was treated for gastralgia, then for intestinal indigestion, gall-stones, renal colic, etc., but nothing gave him any permanent relief. His description of his symptoms was, nevertheless, very striking and suggestive.

When he came to me he could eat anything, as far as simple admission of food into the stomach was concerned. His stomach accepted all food without rejecting it, but about two hours after ingesting his meals he would begin to suffer most intolerable and agonizing pain in the left hypochondriac and umbilical regions, which was accompanied by persistent nausea and vomiting. This condition of intolerable suffering would culminate in such unbearable and agonizing pain that only large doses of morphin (one and two grains), administered hypodermically by his wife, would suffice to quiet him. At times, when he committed any indiscretion in his diet the pains were so violent that even morphin failed to relieve him, and chloroform by inhalation had to be appealed to to allay his sufferings. Coarse food, fruit, and vegetables were always certain to provoke these attacks. When he limited his nourishment to milk and soups he suffered less pain. After years of experimentation with various articles of diet, he finally gave up everything but milk and beef-tea. Lately even milk would disagree with him, and following the advice of his physicians he had been compelled to resort to nutrient enemata to assist his nutrition. His condition became very much worse after the appearance of the abdominal tumor. After the lump had formed he soon realized that any indulgence in solid food might cost him his life, so that when I saw him he lived on an exclusively fluid diet. In the vomiting that followed the ingestion of even soft, semi-fluids (eggs, oatmeal, corn-meal) he noticed that frequently no relief would come to him until he had expelled every particle of the food taken.

He described his abdominal pains as "colics," which began intermittently, but rapidly became continuous and agonizing. Before the acme of the paroxysms was reached he felt his bowels contracting and twisting in an indescribable manner, but these movements were soon lost to the touch, owing to the extreme rigidity of the abdominal muscles, which became spasmodically contracted and hard as a "wooden board." His bowels were usually constipated, a condition which he attributed to the frequent use of morphin, and he was often compelled to resort to purgatives, salines, Seidlitz powders, and castor-oil to relax them. At times a diarrhea would set in without any assignable cause.

In view of the progressive aggravation of his condition, he finally decided to have a radical operation performed that would release him, no matter at what risk, from his present "martyrdom."

In questioning him as to his family-history, I learned that he was the descendant of very healthy and long-lived parents, except a grandfather on the paternal side, who had succumbed to some pulmonary trouble. His contemporary relatives had not suffered from known pulmonary or cancerous lesions; he had no children. As far as his personal history was concerned, he said that up to the age of twenty he had enjoyed exceptionally good health. He had never had any suspicion of venereal disease; he never indulged in alcoholics. He remembered, however, that in his childhood he had a protracted and rebellious diarrhea, from which he had apparently fully recovered when the first signs of his present illness (occasional colics) led him to remember his early bowel-ailment, though he failed to associate this with his present condition. He had had malarial intermittent fever in his childhood and pneumonia in 1872. A careful general examination failed to reveal any sign of disease in any part of the body but the abdomen.

In my mind, the history given by the patient clearly indicated an obstructive intestinal lesion, but what was the nature of the obstruction, what the character of the tumor that was now so clearly discernible in the abdomen

\* From 1871 to 1877, while at school, he was almost entirely free from pain. In 1879 he had a spell of vomiting and purging, with intense abdominal pain, which confined him to his bed eight weeks.



—was not so plainly defined. The long period of time that had elapsed since the beginning was not compatible with the primary existence of a malignant neoplasm—the tumor in the abdomen having developed suddenly and only in the previous two months.

A secondary carcinoma of the intestine engrafted upon an old intestinal lesion was possible, however. A displaced kidney following the relaxation of the peritoneum, consequent upon a progressive emaciation and fat-absorption (nephroptosis), suggested itself as another possible diagnosis. But the right kidney was not displaced, and there was no evidence of the relaxation and displacement of the colon or other viscera which Glenard and others have so clearly described as “enteroptosis” and “splachnoptosis,” and which is so likely to be associated with fat-absorption and peritoneal relaxation.

Then there were no reflex renal symptoms; no abdominal sensations referable to the bladder or urinary apparatus, which are likely to exist in such cases. In addition, the urine was perfectly normal, though scant and of high specific gravity. The possibility of simple stricture from previous ulceration did not suggest itself, as the patient's history of previous diarrhea in early childhood was not remembered until subsequent events and cross-questionings on my part served to revive the recollection of an early bowel-complaint.

Other possible conditions, of course, suggested themselves to account for the tumor, but none appeared satisfactory or conclusive. I, therefore, could not arrive at any complete diagnosis, except that there was some form of obstruction of the bowels associated with the development of an abdominal tumor of unknown nature and origin, but probably connected with the small intestine. I, therefore, agreed with the patient that the best course to pursue would be to perform an exploratory celiotomy—a conclusion which he hailed with great satisfaction.

The man was admitted to the New Orleans Sanitarium, and after a few days of careful preparation, during which he was given gentle laxatives and strengthened with hypodermics of strychnin and digitalin, and by enemata of peptonized foods, he was operated on on April 24, 1896. Under ether a median incision was made between the umbilicus and pubis large enough to allow the hand to palpate the mass. No clear idea could be obtained of the nature of the tumor until it was brought to the surface, where it was recognized as a loop of small intestine, which was twisted upon itself very much like an elongated ( $\Omega$ ) omega. It was largely covered by the omentum, which was firmly adherent in many places. In addition to this it was plastered and held in its peculiar shape by bands of old peritoneal exudates and pseudo-membranous formations. After enlarging the abdominal incision a little further, the entire loop of bowel with its mesentery was completely extruded from the abdominal incision, and a search was made for further abnormalities in the remainder of the intestine, but none was discovered. The bowel was traced upward toward the stomach, and at a distance of about 3 feet from the tumor the terminus of the duodenum was recognized at the crossing of the superior mesenteric artery. Further exploration of the small intestine downward from the tumor, toward the cecum, revealed a perfectly normal condition.

A further examination of the diseased loop showed that it

was evidently a portion of the jejunum. The valvulae conniventes were in some places remarkably thick and large, and could be distinctly felt through the bowel-walls, which were abnormally dilated above the loop. It was difficult to determine that the abnormal bowel was strictured at all until several bands of adhesions and masses of adherent omentum which covered it had been removed. It was then easily perceived that the bowel was contracted and very thick in several places. The coats of the bowel in the loop were thickened throughout. In some places where the omentum was adherent there were areas of marked injection of the serosa, and fresh flakes showing recent patches of localized peritonitis. The mesentery connected with this loop was unusually thick, injected and edematous, thus contrasting markedly with the other portions of the mesentery, which was very thin and almost translucent. The thickening of the mesentery appeared to be due to chronic infiltration, with inflammatory edema and exudates. The mesenteric glands corresponding to this area were also distinctly enlarged and hard.

As the patient had withstood the exploration without any evidences of serious shock, I decided to excise the entire loop with its corresponding mesentery and to perform a circular enterorrhaphy. The intestine was completely empty of all contents, and in a very favorable condition for extirpation. After thoroughly protecting the peritoneal cavity with towels, so that the operation would be performed outside of the abdomen, the loop that was to be excised was completely excluded by clamping it with long, thin-bladed forceps. The healthy bowel beyond this point was compressed by two long intestinal clamps applied over thin sponges and aided by the fingers of an assistant. The intervening healthy portion of the bowel was then divided with scissors and with it a wedge-shaped section of the mesentery was removed. The bleeding from the mesentery was provisionally controlled by forcipressure as the vessels were divided and permanently controlled by suturing the cut edges together with continued fine silk sutures. By this means the entire thickened and abnormal mesentery was removed. The Maunsell procedure for circular enterorrhaphy was then adopted, and in less than twenty minutes a very satisfactory joint was secured. A few extra sutures, made with fine silk, aided in giving greater security to the joint, and, by burying the through-and-through sutures of the Maunsell procedure, effectually diminished the risk of sepsis.

After completing the enterorrhaphy and thoroughly washing the united surfaces with normal salt-solution, the joint was dropped into the peritoneal cavity, two long but narrow iodoform-gauze drains were placed on each side of the united bowel so as to surround the line of suture completely. The thin edge of the abdominal wound was now closed completely with silkworm and catgut sutures, except at the center, which was allowed to remain open to give exit to the gauze strips. The operation consumed one hour, but the patient suffered very little from shock, though he was frequently nauseated and attempted to vomit. He recovered rapidly, though he suffered from nausea and vomiting until the third day, when, after the administration of one ounce of Epsom salt by enema, he had a free watery evacuation of the bowel, and was greatly relieved in every way.

The gauze packs were removed on the third day. Their removal was followed shortly afterward by the escape of some flatus *per anum*, and the patient was much relieved of pain caused by the active peristalsis and gurgling of the bowels. Nothing was given by the mouth except a few spoonfuls of very hot water and broken ice until the fourth day. The patient was stimulated regularly by the hypodermic injection of  $\frac{1}{20}$  gr. of strychnin every 6 hours. Water and food were furnished by rectal enemata administered systematically every 5 hours. These enemata consisted of 1 teaspoonful of beef-juice, 1 tablespoonful of whisky, 5-10 minims of digitalis, and 6 to 8 ounces of water.

After the operation the specimen was examined and found to represent 13 inches of very much altered jejunum. It presented three exceedingly narrow constrictions, the largest of which barely allowed a No. 5 E. catheter to pass through it. They were situated as follows: The first and second strictures were separated by an interval of nearly 5 inches; the second and third by an interval of 2 inches. The strictures were caused by very thick circular rings of hypertrophied



cicatricial tissue. At the point of constriction the mucous membrane was smooth, pale, and apparently divested of all epithelial covering. A dense ring of cicatricial tissue occupied the submucous tissues and indicated that the original ulceration, which had undoubtedly existed at some time past, but was now entirely healed, had begun in the sub-epithelial strata and penetrated the submucous layers. At several points the excessive outpour of exudates and agglutination of the omentum to the serosa showed that the ulceration had threatened to perforate the bowel completely. The bowel was distinctly sacculated in the spaces between the strictures. In the vicinity of the strictures the muscular and submucous coats were remarkably hypertrophied. The mesenteric glands had undergone a sclerogenic process, and, though larger than usual, were firm and hard, except in the center, which showed some *foci of caseation* undergoing calcification and other conservative involution-changes. It was evident that the original infection that had irritated them had been almost completely eliminated.

The excised bowel contained a little fluid, but no hard particles of food. The high situation of the strictures, about three feet from the terminus of the duodenum, or four feet from the pylorus, partially accounted for the remarkable escape of the patient for so many years from the dangers of total obstruction; the liquid character of the intestinal contents at this point preventing a total fecal obstruction, which would have been more likely to occur in lower portions of the intestine. The frequent and desperate attacks of colic, with vomiting, prove, however, that at times even very soft and easily digested foods would reach the strictures without sufficient maceration and succeeded in temporarily blocking up the opening of at least one of the strictures.

It should be stated that the existence of multiple strictures was not recognized until after the operation, when the excised piece of gut was opened, and it was found to be distinctly strictured at the points referred to.

In these places the strictures were formed by thick, concentrically hypertrophied rings of cicatricial tissue.

The patient began to eat soft-boiled eggs and milk on the fourth day after the operation. After this, more food of a semi-solid consistence was given with a great deal of water, until the end of the twelfth day, when some chicken-tea and more solid food were added. When he left the Sanitarium (May 27), 34 days after the operation, he could eat three full meals a day without experiencing the least distress or inconvenience. It is now (March 27, 1898) one year and eleven months since the operation was performed, and the patient has steadily gained in weight and strength. From less than 100 pounds, which he weighed when he came to see me, he now weighs nearly 180 pounds. He pursues his vocation without interruption. The only event that marred his recovery for a short time was the formation of a small abscess in the center of the scar of the abdominal incision. This abscess opened spontaneously about three months after his return home. He came back to me in considerable alarm,

but I was soon able to relieve his mind by extracting six knots of ligatures which, I presume, had been detached from the mesentery. After the removal of these knots of silk threads, the sinus healed rapidly, and the patient has never been annoyed since. He now eats of everything, enjoys his food, and never complains of his bowels.

The points of interest presented by this case are: 1. The difficulties, almost insurmountable, in making a satisfactory diagnosis of the true condition before operation. 2. The difficulty and practical impossibility of determining the true nature of the obstructive lesion until after the removal of the diseased bowel, which was opened and found to present three distinct strictures. 3. The unusually high position of the lesions in the jejunum. 4. The unusually long and slow evolution of

the stenotic process (over 20 years). 5. The apparently complete disappearance or cure of the primary ulcerative cause — tuberculosis. 6. The repeated recovery of the patient from numerous attacks of acute obstruction brought about by the plugging of the narrow orifices of the strictures by food-masses or other accidental causes. 7. The existence of a tumor simulating a displaced organ or neoplasm, a condition which evidently resulted from repeated attacks of localized peritonitis, which caused adhesion of the intestinal coils and omentum and



Specimen of jejunum rescued from multiple tubercular strictures.

the outpour of a mass of plastic exudate, evidently intended by nature as a conservative process to protect the bowel from rupture during the attacks of acute obstruction caused by the plugging of the strictures. 8. The marked hypertrophy of the muscularis of the intestine, especially on the proximal (gastric) side of the strictures—a compensatory process to aid the bowel in propelling the intestinal contents through the narrow constrictions. 9. The survival of the patient under these dangerous conditions without fatal permanent obstruction, owing in a great measure to the liquid character of the contents of the intestine in the constricted portion. 10. The limitation of the ulcerative process that led to the stenosis to a restricted portion of the bowel, as ascertained by a careful examination of

the entire bowel-tract during the operation. 11. The apparently complete and permanent cure obtained by the operative procedure adopted, viz., enterectomy. 12. The simplicity and security of Maunsell's method of circular enterorrhaphy as applied in this case.

Apart from the features of individual interest presented by this case, there are a few general but all-important questions that it suggests which it will be well to consider. Among these the problems that relate to diagnosis are most prominent. How is the diagnosis of multiple stricture of the small intestine to be made *intra vitam* apart from operation? If there are obstructive symptoms, and the history of the case suggests, as in this instance, the classical signs of progressive stenosis of the bowel, we, of course, endeavor to know what is the nature of the strictures—*i. e.*, are they of tubercular, syphilitic, digestive, so-called catarrhal, peptic—or are they neoplastic, and especially cancerous? Then, are the strictures single or multiple? What is the amount of bowel involved? If the strictures are multiple, it is especially desirable to know in what part of the intestinal tract they are situated, and what is the *distance* that separates the obstructed portions. Again, if strictures exist, are they causing the obstructive symptoms in virtue solely of pure cicatricial contraction of the lumen, or are they due to simple accidental plugging, or to secondary inflammatory processes, etc.?

The importance of these questions is self-evident to the operator or practitioner who is confronted with such problems. A careful analysis of the patient's history and clinical phenomena will greatly elucidate the case and aid in approximating the diagnosis. But a complete and satisfactory diagnosis is impossible in unfortunately too many, if not the majority, of cases. Next to determining the true nature of the obstruction and its location, the question that interests the operator most directly is that which refers to the *number* of the strictures and their situation when these are multiple. But here, again, unfortunately, these questions must remain unanswered until an exploratory celiotomy reveals the actual state of affairs. For this reason we see that there are few cases recorded in which the diagnosis has been accurately made before actual exploration. It may be also truly said that there are few abdominal conditions which justify more often an exploratory celiotomy, and which, after this has been undertaken, more thoroughly tax the resources and judgment of the operator. For this reason it is plain, also, that the surgery of intestinal stricture is of comparatively recent origin, and in fact owes its birth to the conditions which have made surgical intervention in the peritoneum successful, viz., the aseptic practice and perfected technic of the last two decades.

As the *multiple* strictures of the small intestine are those which offer the greatest complexity, it will not be amiss to inquire into the relative frequency of this class of obstructions. In his classical monograph on

intestinal obstruction (American edition, 1884), Treves presents us with a synopsis of 78 cases of stricture that he was able to gather in the literature of the subject up to 1884. Of these, 26 were cases of stricture of the small intestine, 8 cases of stricture at the ileocecal valve, and 44 of stenosis of the colon. Of the 26 cases of stricture of the small intestine, 10 were due to cicatrix after ulcer; 2 to cicatrix after injury; 4 following after strangulated hernia, and 10 after cancer. Of the cicatricial strictures of the small bowel, the most frequent in spite of their actual variety are, no doubt, those due to primary or secondary tubercular infection. It is now recognized that, notwithstanding the frequency of tuberculosis of the bowel, this condition is rarely followed by complete *cicatricial* stenosis. Yet it is undeniable, in the light of recent experience, that tubercular ulceration in the bowel is capable of producing obstructive conditions; not so much because of cicatricial retraction, but, as Koenig, Czerny and Hofmeister have demonstrated, from the fact that deep-seated tubercular ulcer will give rise to so much secondary inflammatory thickening, edema, and plastic exudation, that the lumen of the bowel will be narrowed and obstructed. In other words, a distinction must be made between the hypertrophic inflammatory type of tubercular stricture, which is relatively common, and the circular or cicatricial form, which is very rare, and is a sequel of cicatrizing surface-infection. In confirmation of this statement we find that "Eisenhardt, of Munich, as a result of 1000 post-mortem examinations made upon tubercular subjects, found evidences of tuberculosis in the bowel-tract in 566 cases, and yet in only 9 was the bowel strictured from this cause." On the other hand, Hofmeister,<sup>1</sup> from whom I have borrowed this statement, has been able to collect 83 reported cases in which operative intervention was practised for stenotic lesions caused by tuberculosis. In 13 of the cases collected by Hofmeister the operations were performed for *multiple* tubercular strictures; in 60 cases for *single* strictures. In 8 cases multiple strictures existed, but these were only recognized at the post-mortem, as no operation was performed.

All of these cases (91) were reported in the period beginning with 1880—*i. e.*, within the last 17 years. Again, if we were to examine the older literature of the subject—*i. e.*, that which preceded the present operative period, we would find in the anatomical descriptions given by the careful observers of the last century, and of the first half of the present, that a great many cases of single and multiple strictures of the small intestine were reported, which would strongly suggest a greater importance of the tubercular process in the causation of intestinal stricture than is usually accorded to it. In this connection the observations of Lalouette (1776), Billot (1809), Combe, C. (1813), Thillaye (1813), Bailey (1816), Heyne (1826), Goodrich (1829), Darrach (1829), Greenhow (1821), Roepke (1834), Roberts (1832), Roki-



tanski (1839), Ossipowski (1840), Hickley (1841), Consbruch (1842), Landgraff (1843), Oppolzer (1841), Perrin (1852), Millard (1859), Lancereau (1859), Peter (1862), Dumontpallier (1863), etc., would be especially instructive to the student of the subject, not only from a pathogenetic point of view but as a clinical study of multiple stricture-formation in the bowel as well.<sup>2</sup>

But as it is not my intention to discuss the pathology and clinical history of cicatricial stricture of the bowel except in so far as to call attention to its growing importance in the practice of abdominal surgery, I shall simply limit my remarks to intestinal strictures of tubercular origin, as these have a direct bearing upon the case reported in this paper. In reviewing some of the phases of this subject, I shall draw largely from the recent and valuable contribution by Fr. Hofmeister, of Tübingen, previously quoted, to which I now freely acknowledge my indebtedness.

To begin, it is interesting to know the number of strictures that may be found in one individual case. On this point we find that in 20 recorded cases of multiple strictures collected by Hofmeister, there were 5 cases (Koenig, Voltz, Esmarch, Meyer, Eisenhardt) in which there were *two* strictures in each individual; *three, four, and five* strictures were found in cases reported by Frank, Koeberle, Trendelenburg, respectively; *six* strictures existed in each one of the patients reported by Litten and Homén; *seven* strictures in Rotter's case; *eight* in Fränkel's, and finally, *twelve*, the greatest number thus far recorded in the same subject, in the cases reported by Fränkel (second case), Koenig, and Hofmeister respectively. In 6 cases the number of strictures is not accurately stated, and only vague designations are used, as "numerous constrictions," etc.

The vast majority of these (tubercular strictures) are found in the ileum.

Only in one case were the only existing strictures discovered in the colon (Eisenhardt, postmortem examination). Sometimes one or more strictures coexist with typical tubercular tumors of the ileocecal region, the ileal strictures being situated at a greater or less distance from the valve (Billroth, Koenig, Frank, Esmarch). But precisely in those cases which are distinguished by the greatest number of contractions (from 4 upward), the ileum is exclusively the seat of these constrictions. Furthermore, it is a notable fact that it is precisely when the strictures are multiple and are situated in the small intestine that we are likely to notice the most perfect type of cicatricial constriction—*i. e.*, the involution or healed form of intestinal tuberculosis. These peculiarities are typically illustrated by my case, in which almost all vestige of the original infection was lost in the cicatrizing process. In this case, probably the highest (nearest to the pylorus) multiple tubercular stricture thus far recorded, the tubercular process exhibited a remarkably slow and benign evolution. This fact is in accordance with the

suggestion of Hofmeister, that in the small intestine tubercular ulcer exhibits a greater tendency to cicatrize and develop circular or annular constriction, because the infection is primarily more superficial (surface-infection), while in the lower bowel, where single strictures occur most often, the tubercular infiltrations are deeper and more extensive, and the thick, wide, hypertrophic type of intestinal tuberculosis, as described by Koenig, is the rule.

The *distance* of the single strictures from one to another varies most widely (from a few centimeters to a half meter). In a case reported by Trendelenburg five strictures were distributed over a distance of 42 cm. (about 16½ in.) In Koeberle's celebrated case there were four strictures in over 205 cm. (over 83 in.) of excised intestine. Boiffin even speaks of multiple strictures over the *whole* small intestine.

As to the *length* of the individual strictures, it is notable that in the course of multiple constriction in the small intestine the tendency of the stricture is to form narrow rings. In others they form elongated tubular contractions (8 cm., Meyer, Eisenhardt). Sometimes in strictures which are closely approximated, as in my case, the local conditions distinctly simulate the hypertrophic tumor-like forms of tuberculosis that are more clearly identified with the ileocecal region.

As to the *caliber* of the strictures, they vary extremely, rarely, if ever, constituting an absolute atresia, but often closing so much as to barely admit a small No. 4 catheter, or even a fine probe.

Great interest attaches to the anatomical changes that are observed in the affected bowel above the stricture (afferent portion), and in the intestinal wall of the strictured portion. The relationship of acute obstruction by fecal and food-masses to stricture, without actual atresia, and the sudden relief of some of these patients, even when on the verge of dissolution, should be remembered; but these considerations must be passed by with a mere reference in order to reach the most important phase of the subject, *viz.*, the management and mode of intervention which is indicated in strictures, and in multiple strictures especially.

On this point the status of surgical evidence is furnished very thoroughly by Hofmeister, and I can do no better than to quote his summary: "In 83 collected cases of intestinal strictures of all kinds in which surgical interference was resorted to, including in this 6 exploratory celiotomies, 52 patients recovered (62.65%), and of the 26 fatal cases (31.33%), in only 16 (19.3%) death was more or less directly attributable to the operation. Of course, the value of these statistical conclusions is exceedingly debatable, for it is probable that many fatal cases are not reported, and the use of the word 'cure' is also very elastic, and, to say the least, uncertain, especially when unaccompanied by detailed explanations. But the individual reports of some surgeons who have recorded their uninterrupted

cases in series are more instructive, as, for example, Czerny's experience, which embraces the reports of 11 cases of intestinal tuberculosis, with 3 deaths (2 of which were attributed to the operation), and 6 cures, which after one to three years were still under observation and doing well, and two other cases that had proved to be incurable, and were presumably only temporarily relieved.

"If we restrict our study to *multiple strictures* we find 13 cases which were operated upon (including 3 exploratory celiotomies) with 8 recoveries (61.54%), and 5 deaths (38.46%), of which 3 (23.1%) are attributable to the operation. If we were permitted to conclude from this statistical evidence alone, it would appear that the risks of operation in the *multiple* variety are about the same as in the *single* cases, but this conclusion is of no value, practically, since the operator who undertakes an exploration for stricture of the bowel never knows whether he will find a single or a multiple stenotic condition. In other words, when he undertakes an operation of this character he must always bear in mind the possibility of multiple strictures. He must give due consideration to this possible contingency, and must be prepared to act accordingly.

"While it may appear theoretically much more simple to deal radically with single than with multiple strictures, there are single strictures which may offer insurmountable difficulties in the way of complete removal. Under all circumstances, the condition of the patient at the time of operation is the dominant consideration. How much traumatism can he stand? How long can he be kept under the anesthetic? are questions that must be answered before final action is taken. Of course, the ideal of surgical treatment in dealing with strictures of the bowel would be *enterectomy* or resection of the diseased and strictured sections.

"The fact that in 50 complete resections for tubercular strictures, including cases in which an artificial anus was left after the excision, resulting in 34 cures (68%) and 15 deaths (30%), of which 12 (24%) are ascribable to the impracticability of resection, does not condemn the surgeon to inactivity. On the contrary, almost as good results may be obtained by entero-anastomosis (5 cases with 5 cures) which will permit the re-establishment of the fecal circulation with a minimum of danger and often with prospect of radical cure. Another procedure which we owe to the Billroth school, and which bids fair to supplant enterostomy in certain cases, though still a procedure that is in an evolutionary stage, is *partial exclusion of the obstructed and diseased portion of the bowel*. While total exclusion of the bowel is to be condemned, *partial exclusion*, as practised by Salzer, Bardenheuer, Hochenegg, Frank, Körte, and Eiselsberg, Obalinski, and Kammerer in this country, is at least worthy of trial in certain cases. It consists in the absolute isolation of the strictured portion of bowel, with anastomosis or enterorrhaphy of the proximal and

distal ends on each side of the excluded portion. The excluded portion is partially sutured to the abdominal incision, and an opening (enterostomy) is made to permit drainage of the isolated part. The advantages that may be claimed for this procedure over simple entero-anastomosis are, that while partial exclusion permits a re-establishment of the fecal circulation, the diseased bowel is entirely excluded from the contaminating contact of the feces, and that by this means the bowel is given absolute physiological rest. By this means involution and atrophy of the diseased area are favored, and a permanent cure may be obtained. It has the advantage over total resection that it obviates shock, hemorrhage, and other complications that might result from an attempt at excision of a diseased area."

Two other modes of relief are now left for consideration, and these are *enterostomy* or the formation of an artificial anus on the Nélaton plan, and enteroplasty on the plan of the Heinecke-Mikulicz pyloroplasty—by which the stricture is enlarged by the *modus operandi* of this well-known procedure.

In cases of multiple stricture the surgical conditions are altered extraordinarily according to the *number* and the *situation* of the individual strictures. The more favorable cases are those in which the constrictions are closely distributed over relatively short sections of the intestine. In these cases, as illustrated by the writer's report, the strictures must be treated collectively, as if there were only one long stricture, and resection (enterectomy) should be the operation of election (*vide* cases reported by Koenig, Trendelenburg, Frank, and the author). On the other hand, when only a few (two) strictures exist, but these are separated by a long distance of sound intestine, the best course to follow is to attack the individual stenosis separately, and to resect, if possible, each single one in turn (Voltz, Esmarch). To this ideal treatment, which removes the diseased part without sacrificing more intestine than that which is absolutely necessary, there are very narrow limitations. It stands to reason that we cannot ask too much of the usually ill-nourished patient, whose powers of resistance have been reduced to a minimum by the condition which calls for the operation. It is in these extreme conditions, and when confronted by a great number of widely distributed strictures that the judgment of the operator is more severely taxed. The questions then resolve themselves into: Shall we resect the entire strictured area? Shall we exclude it? or perform anastomosis? or enterectomy? or can *any* operation be performed that will yield even a palliative result?

Cases of this complex type, in which many strictures of narrow caliber were distributed over the greater portion of the small intestine, are recorded by Boiffin, Fränkel, Rotter, Koenig, and Hofmeister.

It is very plain that when a very large portion of the bowel is involved total resection of the affected



bowel is out of the question; Koeberle, it is true, succeeded in successfully removing 205 cm. of the ileum, and though he has had a few imitators, it is very doubtful that the sacrifice of so much bowel is physiologically safe or compatible with sound surgery. At any rate, success in such wholesale sacrifice of the bowel must follow as a very rare and exceptional event. To dream of relief by resection would be preposterous in those cases in which the whole intestine is marked by cicatricial rings at variable and irregular intervals. In such extreme cases, which are, fortunately, clinical curiosities, there is nothing to be done but to close the abdomen and simply let the patient await the end. In cases of lesser severity a wise compromise may be made between individual resections of the stricture, entero-anastomosis and exclusion. As to enterostomy, on the Nélaton plan, it should always be kept in view only as an emergency operation when dealing with strictures or obstructions that are situated in the colon or low down in the ileum. If applied too high in the intestine the physiological exclusion of the remainder will result fatally in a few days, as the progressive emaciation and malnutrition will so diminish the patient's powers of resistance as to unfit him for further intervention. Finally, I shall close by adding two important recommendations made by Hofmeister: 1. In cases which present a history of gradual obstruction of the lower bowel the surgeon should be prepared to find multiple strictures, and in all such cases the exploration will not be complete until the entire bowel-tract has passed under the eye and finger of the operator. 2. If called upon to operate for an acute obstruction (ileus) in a case of chronic obstipation, and there is much distention with gas, it is best to make a free abdominal incision at once, as Kussmaul suggests, by which the entire bowel-mass can be rapidly examined and the seat of the obstruction promptly determined. It is only by this procedure that a proper diagnosis can be made and a proper decision quickly arrived at. Again,<sup>3</sup> one of the prime requisites to success in the operative treatment of stricture of the bowel is not to wait too long after the onset of the symptoms which indicate chronic obstruction (repeated but intermittent paroxysms of abdominal pain with vomiting, obstipation, etc.), before proceeding to exploratory celiotomy. It is evident that when a stricture becomes markedly narrowed its lumen is liable to sudden obstruction by accidental fecal plugging. Under these circumstances all the phenomena of acute ileus are liable to present themselves rapidly, and the tympanites which complicates this condition will be added to the original difficulties of the case. Remembering that the chances of perfecting the intestinal technic are infinitely greater when the intestinal tract is empty, we should advise early exploration in a calm period whenever a careful and long-observed history strongly suggested the possibility of chronic obstruction from the causes herein referred to.

Finally, a last word in reference to the special method of performing enterectomy in this case—Maunsell's method. I have had occasion to apply Maunsell's principle of invagination and intramucous suture through a fenestrum, in 6 cases of enterorrhaphy, including three gastro-enterostomies. In every instance but one I have found the joint reliable and safe, and the method itself very practical and of easy application. But Maunsell's method is not applicable to all cases. The chief technical contraindication for its performance is a very thick fat or inflamed mesentery, as this decidedly interferes with the amount of invagination required for a good suture. In such cases, Czerny-Lembert or other simple suture-methods are preferable. A thick mesentery is also in the way of the proper application of the Murphy button, which in my experience is less safe, but a little more rapid, than the Maunsell method. In cases of multiple strictures at long distances, which would justify repeated resections at the same sitting, it is probable that a judicious combination of methods, viz., the button for the distal stricture, with Maunsell's suture-method for the highest, or even the button alone, would expedite the termination of the operation and yield the most satisfactory results.

## REFERENCES.

- <sup>1</sup> Hofmeister: *Beiträge zur Chirurgie*, 3. Heft, Jan., 1897.
- <sup>2</sup> Full references to contributions by authors quoted in this paragraph will be found on p. 65, "Intestines (stricture of)," Index-Catalog, Surgeon-General's Library, Washington, vii, 1886.
- <sup>3</sup> A valuable report of a case of multiple tubercular strictures of the small intestine has been contributed recently to the *Norsk Mag. Lægevidensk.*, Jan., 1898, an abstract of which has appeared in *Semaine Médicale*, p. 88, No. 11, Feb. 26, 1898, and in the very interesting and valuable experimental and clinical paper on "Intestinal Tuberculosis and its Surgical Treatment," by Dr. Oreste Margarucci (*Il Policlinico*, Rome, Anno v., No. 4, Feb. 15, 1893), which I regret has reached me too late to be utilized in the preparation of this paper. An exhaustive paper on "Intestinal Tuberculosis in its Surgical Aspect" is also being prepared by my distinguished friend, Prof. Senn, which I know will prove to be one of the most instructive contributions that has appeared in this country on this important subject.

### OBSERVATIONS UPON THE TREATMENT OF ENTERIC FEVER BY SYSTEMATIC COLD BATHING, AS PRACTISED IN THE GERMAN HOSPITAL, PHILADELPHIA.<sup>1</sup>

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THE object of this communication is (1) to present the statistics of the enteric-fever cases treated by systematic cold bathing from the time I introduced that method of treatment in the German Hospital, February 1, 1890, until January 1, 1898; (2) to call attention to some modifications of Brand's original method that our experience has suggested.

In previous publications<sup>2</sup> I have more or less fully

reported the statistics of the subject to January 1, 1896, in the following series of cases :

1. February 1 to July 15, 1890, 40 cases, no deaths.
2. July 15, 1890, to February 1, 1891, 54 cases, 1 death; mortality, 1.8%.
3. February 1 to June 1, 1891, 66 cases, 7 deaths; mortality, 10.6%.
4. June 1, 1891, to June 1, 1892, 66 cases, 4 deaths; mortality, 6%.
5. June 1, 1892, to June 1, 1893, 74 cases, 8 deaths; mortality, 10.8%.
6. June 1, 1893, to October 1, 1894, 108 cases, 12 deaths; mortality, 11.1%.
7. October 1, 1894, to January 1, 1895, 27 cases, 5 deaths; mortality, 18.4%.
8. January 1, 1895, to January 1, 1896, 89 cases, 1 death; mortality, 1.1%.

I now add :

9. January 1, 1896, to January 1, 1897, 64 cases, 7 deaths; mortality, 10.9%.
10. January 1, 1897, to January 1, 1898, 153 cases, 10 deaths; mortality, 6.5%.

Total cases, 741; deaths, 55; mortality, 7.42%.

A patient was admitted to the hospital on the afternoon of October 14, 1895, having been sick only a few days. He was suffering from convulsions, and his temperature was 102.7° F. (39.3° C.). Death occurred the following morning. The anatomic diagnosis, based upon the intestinal lesions, together with enlargement of the spleen and of the mesenteric glands, was enteric fever. The clinical diagnosis was not made; the patient was not bathed, and the case is not included in Series 8. All other cases of enteric fever are included in the foregoing statistics. If the case referred to had been included the mortality would be 7.55%.

For the purpose of comparison with Series 9, I append the statistics of three principal hospitals in Philadelphia for the year 1896: Episcopal, 153 cases, 13 deaths; mortality, 8.49%. Pennsylvania, 149 cases, 15 deaths; mortality, 10.06%. Presbyterian, 101 cases, 12 deaths; mortality, 11.88%. Average mortality of 403 cases, 9.92%.

In these institutions certain members of the staff treat the enteric-fever cases by systematic cold bathing, based upon the method of Brand; but this treatment is by no means general. It is impossible to state what proportion of the cases are treated by bathing and what upon other lines. At the time of writing I have not been able to procure the statistics from these institutions for the year 1897.

A further interesting and most impressive comparison is based upon the figures concerning the prevalence and mortality of enteric fever in Philadelphia, furnished by Dr. J. H. Taylor, of the Board of Health:—1896. Number of cases reported, 2,490; deaths, 402; mortality, 16.14%. 1897. Number of cases reported, 2,994; deaths, 401; mortality, 13.39%.

It is important to note that these statistics include the very much more favorable series of cases reported by the great hospitals, in which cold bathing is to some extent, or, as in the German Hospital, altogether practised.

It has seemed to me better in this report to confine the comparative statistics to those of Philadelphia for the same periods of time. In this manner cases of the same endemic character, from the same population, and in general terms of the same hygienic conditions and manner of living, are compared.

The statistics of the Bureau of Registration are sometimes criticised by those to whose preconceived notions the high death-rate indicated does violence. It is assumed, and without doubt correctly, that deaths are reported as due to enteric fever that in point of fact are caused by other maladies. It may, however, be assumed with equal probability, that deaths are sometimes reported as due to other diseases, such as appendicitis, peritonitis, broncho-pneumonia, etc., that in reality have been caused by enteric fever. Such errors are unavoidable, but do not enter into any noteworthy proportion of the cases, and must be regarded as offsetting each other.

#### ANALYSIS OF THE CASES OF ENTERIC FEVER FOR THE YEAR 1896.

Total number of cases, 64; number of deaths, 7; mortality, 10.9%; 41 (67.2%) were in males; 23 (35.9%) in females. The average age was 24.8 years. Average day of disease on admission 9.3. Average day of disease on which temperature became normal, 22.9. Average duration of patient's stay in hospital, 36.3 days. Intestinal hemorrhage occurred in 4 cases (6.25%). The number of cases in which hemorrhage occurred that recovered was 2 (3.5%).

In the first case hemorrhage occurred on the 5th day of a relapse, the 38th day of disease. There were 51 small bloody stools, covering a period of 5 days. Five days later another hemorrhage, followed by 5 more on the 3 succeeding days.

In the second case hemorrhages numbering 6 occurred on the 6th and 17th days, followed by 2 on the 22d, 1 on the 25th and 26th, 2 each on the 28th, 29th, and 30th days.

Hemorrhage occurred in 2 of the 7 fatal cases (28.6%). Relapse occurred in 12 cases (18.8%). No case of multiple relapse. Albumin occurred in 30 cases (49.9%). Nephritis (as demonstrated by albumin, erythrocytes, hyaline and granular casts, etc.), occurred in 12 cases (18.7%).

Phlebitis, suppurative otitis, and pleurisy each occurred in one case (1.6%). Average number of baths, 84.6.

#### SUMMARY OF FATAL CASES IN 1896.

CASE I.—O. H., male, aged 22 years; waiter. Admitted on 5th day of disease, with temperature of 102° F.; pulse 96.



Spleen enlarged, but not tender. Abdominal tenderness and tympanites; diarrhea. Temperature range 103°-104° F. On the 22d day of disease 4 hemorrhages occurred; temperature fell to 101° F. On the 4 succeeding days there were 24 hemorrhages. Death on the 27th day of disease.

CASE II.—U. K., male, aged 31 years; stenographer. Admitted on the sixth day of illness, with temperature of 104.3° F.; diarrhea; pulse 114; spots. On the following day the temperature rose to 105.4° F. Death occurred on the 2d day after admission, on the 8th day of disease. Temperature 104.1° F.; no hemorrhage.

*Post-mortem:* Heart and lungs normal. Abdomen: Distention. Peritonitis: plastic and slightly purulent. There were 2 perforations in ileum, one 6, the other 10 inches from ileocecal valve.

CASE III.—C. C., male, aged 23; painter. Admitted on the 14th day of disease. Temperature 102° F.; pulse 100. Mentality sluggish, speech thick and slow; deafness; abdominal tympanites; enlarged spleen; spots. Heart weak. Three days after admission extensive petechial rash developed over chest and abdomen. Patient exceedingly stupid. On the 7th day of admission, the 20th day of disease, patient died. Temperature 102° F.; no hemorrhage. No post-mortem.

CASE IV.—J. F., male, aged 33 years; leather-worker. Admitted on 10th day of disease. Temperature 102°; abdominal tympanites; spots; diarrhea. Marked tenderness in the right iliac fossa. Death 8th day after admission, on 20th day of disease. No hemorrhage.

*Post-mortem:* Heart: Mitral valve thickened. Lungs normal. Abdomen: Intestines matted together with fibrino-purulent exudate and a collection of pus in flanks and beneath the liver. Colon and small intestines firmly bound together. The ileum within a half-meter of valve contained 8 or 9 ulcerations of clean, punched-out character, extending to serous coat, but without perforation. Empyema of gall-bladder.

CASE V.—A. F., female, aged 26 years; houseworker. Admitted on 10th day of illness; temperature 103° F.; pulse 112. Heart-sounds weak. Seven days after admission, on the 18th day of disease, 2 small hemorrhages occurred. Four days later 6 hemorrhages, temperature falling to normal. The same day the temperature rose to 102° F., and steadily increased for 5 days, when it reached 106° F., the case terminating in death.

*Post-mortem:* Gaseous distention of abdomen; acute degeneration of heart-muscle. Lungs: Hypostatic congestion of both bases; small tuberculous nodules at both apices. Gall-bladder filled with gelatinous, purulent material; one gallstone. Typhoid ulcers in ileum and cecum. Region of ileo-cecal valve riddled with mass of ulcers; no perforation.

CASE VI.—E. V., female, aged 14 years; servant. Admitted with temperature 100° F.; pulse 120. Day of disease unknown. Marked delirium; abdomen distended; spots. Two days after admission temperature rose to 103.2° F. Patient died on the 4th day.

CASE VII.—J. D., male, aged 29 years; fireman. Admitted on the 12th day, with a temperature of 106° F.; pulse 120; marked delirium; carphology; abdominal tympanites; enlarged spleen; spots. Consolidation at both bases. Temperature fell the following day to 103.2° F., thereafter fluctuating between 103° and 105° F. On 6th day after admission, on the 18th day of disease, the pulse became very weak, and the following day was uncountable. Temperature 104.4° F., death ensuing. No hemorrhage.

*Post-mortem:* Old tubercle at right and left apex; no apparent change in the heart; liver normal. Kidney showed interstitial nephritis. Eleven large ulcers in ileum. No perforation.

#### ANALYSIS OF THE CASES OF ENTERIC FEVER FOR THE YEAR 1897.

Total number of cases treated, 153; number of deaths, 10; mortality, 6.5%; 91, or 59.5%, were males; 62, or 40.5% were females. The average age of the patients was 23.4 years. Average day of disease on admission, 8.2. Average day of disease when the temperature became normal, 22.7 days. Average length of stay in the hospital, 35.2 days.

Intestinal hemorrhage occurred in 13 cases (8.5%). Hemorrhage occurred in 10 of the 140 recovered cases, or (7%). Hemorrhage occurred in 3 of the 10 fatal cases, or 30%. Relapse occurred in 29 cases (18.9%). Multiple relapse in 2 cases (1.3%), in each instance 2 relapses. No relapse occurred among the fatal cases. Average duration of relapse, 13.4 days. Albumin occurred in 59 cases (38.5%). Nephritis (determined by erythrocytes, albumin, hyaline, granular, and epithelial casts) occurred in 44 cases (28.7%). Average number of baths, 51.3. Crural phlebitis occurred in 3 cases (1.9%). Suppurative otitis media occurred in 2 cases (1.3%). Sciatica in 1 case (0.6%). Rheumatism (acute) in 1 case (0.6%). This complication developed during the period of incubation of the enteric fever.

Mortality for 1896 and 1897, taking Series 9 and 10 together, 217 cases, 17 deaths, (7.8%).

#### SUMMARY OF THE FATAL CASES IN 1897.

CASE I.—J. S., male, aged 38 years; pipe-fitter. Admitted on the 12th day of illness. Temperature 103.3° F.; pulse 116. Delirium; diarrhea; cardiac area increased; abdomen distended and tympanitic; spots; spleen enlarged. Three days after admission temperature rose to 104° F.; pulse 144. Death occurred on the same day, the 15th day of illness. No hemorrhage.

A complete post-mortem could not be made. Lungs normal, save some hypostatic congestion. Pericardial sac contained much fluid and serofibrinous exudate. The heart was not opened.

Liver and spleen enlarged. Kidneys were congested. Small intestines congested. Peyer's patches were found enlarged and broken down, extending through to serous coat. No perforation.

CASE II.—F. K., male, aged 28 years. Admitted at end of 3d week, with temperature of 102° F.; pulse 98. Marked stupor; abdomen tympanitic and tender; spleen enlarged and tender; spots. On day after admission small hemorrhage. Three days after admission the temperature rose to 104° F., gradually declining to normal. Death occurred 4 days later. Nephritis.

*Post-mortem.*—Thorax: heart normal; no embolus in coronary artery. Lungs crepitant throughout. Abdomen: organs in normal position; areas of slight congestion along ileum and large bowel. Appendix normal; liver normal; spleen large and slightly congested; kidneys anemic and apparently undergoing change.

Pathologic cause of death not found. Cerebral embolism?

CASE III.—A. U., male, aged 26 years; laborer. Admitted on 10th day of disease. Temperature 102.2° F.; pulse 98. Heart and lungs clear; spleen enlarged. On the 16th day of disease temperature 99° F., the next day rising to 103° F. Death on the following day. Marked nephritis.

*Post-mortem.*—Lungs normal, save slight hypostatic congestion; heart normal. Appendix had a constriction, with fecal concretion in tip. Liver somewhat congested. Kidney apparently normal. Intestines were congested and contained 37 ulcers, three of which were exceedingly large and deep. No perforation.

CASE IV.—U. H., male, aged 24 years; laborer. Admitted on 8th day. Temperature 101.3° F.; pulse 88; heart-sounds enfeebled. Impaired resonance at left lower lobe; bronchovesicular breathing throughout. Spleen enlarged; abdomen distended. Two days after admission the temperature rose to 103.3° F. Slight hemorrhage, death ensuing. Nephritis.

*Post-mortem.*—Both lungs showed evidence of acute bronchitis with hypostatic congestion of lower lobes. Heart normal. Liver enlarged and very firm to touch. Spleen greatly enlarged. Kidneys normal. Ileum and ascending colon deeply congested. Section revealed the ileum covered with many superficial oval ulcers covered with necrotic tissue.

CASE V.—M. J., female, aged 25 years; housewife. Admitted on the 7th day, with a temperature of 103° F.; pulse 114. Abdomen distended; spleen enlarged. Temperature-range 103–105° F. On 7th day after admission, the 14th day of illness, symptoms of perforation developed. The temperature fell 3°, pulse feeble. Hard, distended abdomen. No hemorrhage. Nephritis. Death.

*Post-mortem:* Heart and lungs normal. Intestines deeply congested in areas. Perforation at ileo-cecal junction. The lower 3 feet of ileum presented a number of deeply congested and sloughing ulcers, some of which were nearly perforating. Liver enlarged and congested. Spleen large, dark and soft.

CASE VI.—E. M., female, aged 16 years; housewife. Admitted on 7th day of illness. Temperature 103° F.; pulse 124. Temperature fell to normal on 20th day of disease; remained normal for 5 days, then gradually rose to 105° F., remaining at 104° or 105° F. for 5 days. On the 30th day the patient had 4 hemorrhages, followed by a hemorrhage on the 3 succeeding days. On the 33d day the temperature fell to 100° F., followed by death. Nephritis. No post-mortem.

CASE VII.—E. G., female, aged 21 years; housewife. Admitted on or about the 14th day. Had been severely overworked. Delirious on admission. Spleen enlarged; no spots. Heart and lungs clear. Twenty-four hours after admission delirium increased; patient passed several ascarides lumbricoides. Became rigid nearly to opisthotonos. Three days after admission the temperature rose to 105° F. Decided congestion of the right lung. Patient died 12 days after admission, about the 26th day of the disease. No hemorrhage.

*Post-mortem:* Heart normal, filled with chicken-fat clots. Lungs normal, save congestion of right lower lobe. Liver somewhat soft; otherwise normal. Kidneys apparently normal. Intestines much congested over areas of Peyer's patches. Head of cecum contained 4 round-worms. Areas of congestion over large bowel. Vessels of brain much congested. No pathologic diagnosis given.

CASE VIII.—M. W., female, aged 45 years; houseworker. Admitted on 8th day of illness, with a temperature of 105° F.; pulse 120. Delirious. Heart and lungs clear; abdomen distended; spleen enlarged; no spots. Died 5 days after admission, the 14th day of disease. Temperature 105° F. No hemorrhage. Nephritis.

*Post-mortem:* Heart normal, chicken-fat clot in right cavity. Lungs normal, save slight hypostatic congestion. Appendix normal; liver slightly yellowish in places; gall-bladder very large; walls thin. Contained 3 stones about the size of hickory-nuts. Spleen very large and soft, weight 190 grains. Kidneys normal in size. Parenchyma congested, cortex diminished.

CASE IX.—G. W., male, aged 50 years; horseshoer. Admitted on 20th day of disease. Temperature 104° F.; pulse 108. Coated tongue, offensive odor; enlarged spleen; pea-soup stools. Greatly emaciated. Heart and lungs clear. Delirium. Two days after admission profuse hemorrhage, followed by 2 on the next day. On the 4th day after admission patient had 6 hemorrhages. Death occurred on the following day, the 25th day of disease.

*Post-mortem:* Lungs normal. Aortic and mitral valves atheromatous. Liver enlarged. Spleen much enlarged and congested. Kidneys congested, otherwise normal. Intestines congested; lower bowel filled with blood. Small intestines for about 8 feet from ileo-cecal junction filled with longitudinal ulcers. Two of these were extremely large and perforated on handling.

CASE X.—A. R., female, aged 21 years; houseworker. Admitted on or about the 18th day of disease. Temperature 104° F.; pulse 100; wildly delirious. Abdomen much distended and tympanitic. Tongue dry and brown. Heart and lungs clear. Three days after admission the patient had 3 quite profuse hemorrhages, followed by 2 more 3 days later. Temperature-range 101°–105.2° F. Death occurred 10 days after admission, about the 28th day of disease.

*Post-mortem:* Thorax: Organs in normal relation. Pericardial sac contained some fluid. Weight of heart 320 grams. Left heart-muscle thick and anemic. Right side, walls thin, currant-jelly clot. Lungs: Right, adhesions, fluid effusion and plastic exudate over middle and lower lobe. Upper lobe firm and grayish in color. Middle and lower lobe congested, but crepitant. Abdomen: No fluid. Small intestines deeply congested, especially above the cecum. Many large

ulcers found in ileum, some of which had nearly perforated. Spleen large, soft, and deeply congested. Weight 330 grams. Kidneys congested.

Of the 17 deaths in the combined Series 8 and 9, numbering 217 cases, 8 must be ascribed to intense infection; 5 to repeated, exhausting, uncontrollable hemorrhage; 2 to perforation; 1 to peritonitis in the absence of perforation, and 1 to cardiac asthenia. In 2 instances slight hemorrhage occurred, but it was not repeated, and had no direct influence upon the fatal result. Nephritis occurred in a large proportion of the cases, and the anatomic condition of inflammation of the kidneys was noted; but this must, I think, be regarded as an evidence of intense infection.

#### THE MODIFICATIONS.

It is no part of my present purpose to speak of the general management of the patients, the diet, stimulation, or the details of bathing. These are already very well understood.

The modifications of the method as originally formulated by Brand, which have been gradually adopted as the result of our experience, are the following:

1. The administration of purgatives at the beginning of the attack. For this purpose calomel is used, sometimes in fractional doses, more frequently in doses of 0.3 to 0.5 g. (5 to 7½ grains). If necessary, this is followed in the course of several hours by a mild saline aperient. These purgatives are frequently repeated once or twice in cases that come in sufficiently early, but are never administered to those who come in after the 10th day of the attack.

2. External applications. Cold compresses or ice-bags are applied to the abdomen in all cases of abdominal tenderness or marked spontaneous pain, and in cases of hemorrhage. When tympanites is marked, turpentine-stupes are applied at intervals in connection with the external use of cold.

3. Medicines. The treatment by systematic cold bathing is a routine method, and is instituted in all cases. The signs of peritoneal inflammation, hemorrhage, and perforation constitute in general terms the only contraindications. Each patient, however, is closely watched, and the morbid conditions of individual cases receive proper consideration. Appropriate medication is administered in response to special indications, hence, the quantity of alcohol varies in different cases, and such drugs as the aromatic spirit of ammonia or ammonium carbonate, strychnin, caffein citrate, the bromids, chloral, opium and its derivatives, and hyoscin are occasionally used. Inhalations of oxygen are sometimes employed. The proportion of cases requiring any medication whatever throughout the attack is, however, very small, not exceeding 10%. On the occurrence of defervescence dilute hydrochloric acid is given for a short time, and later, if anemia persists, some form of iron, usually Basham's mixture.



4. Temperature at which the bath is administered. During the course of attack, whenever, 3 hours after a bath, the temperature taken in the mouth or the axilla, as the case may be, has reached  $101.4^{\circ}\text{F}$ ., the bath has been repeated. Brand's original formula fixed the rectal temperature at which the bath should be repeated at  $39^{\circ}\text{C}$ ., which is equivalent to  $102.2^{\circ}\text{F}$ . This arrangement was arbitrary and based upon an approximately average temperature of  $39^{\circ}\text{C}$ . in the course of the attack. In this country it is not generally customary to take rectal temperatures in the acute diseases of adults, and temperatures are usually taken in the axilla. The difference between the rectal temperature and the axillary temperature varies according to circumstances, but is nearly  $1^{\circ}\text{F}$ . It is for this reason that we have adopted the rule to repeat the bath when the axillary temperature reaches  $101.4^{\circ}\text{F}$ .

Until within the past year the baths were practically discontinued as soon as the temperature ceased to rise above this level. A remarkable fact caused us to modify this rule, namely, every now and then a patient whose temperature no longer rose to  $101.4^{\circ}\text{F}$ ., would ask to have the bath repeated, saying that it made him feel so much more comfortable. In consequence of this we have adopted the rule of giving 1 or 2 plunges a day during the defervescence, and a plunge every day or every second day for a short time after the defervescence has been completed. The result has been entirely satisfactory, and has seemed to us to hasten the convalescence.

5. The location of the tub with reference to the patient's bed. According to the formula of Brand, which has been universally followed, a movable bath-tub has been placed at the side of the bed, and the patient has been lifted from the bed into the bath, or has entered the bath with the assistance of the attendants. This was the invariable method at the German Hospital until about a year ago. I recall severe criticism upon the treatment, based upon the statement that the patient was allowed to sit upon the bed and to step into the bath, with the assistance of the nurses. A careful study of the previous cases led us at that time to modify this procedure. In the severer cases it was, of course, necessary to lift the patient into the bath; but, as improvement followed a series of baths, the patients were encouraged to help themselves, and under favorable circumstances it was soon found that they entered the bath with but little assistance. A different arrangement was then adopted. The bath was allowed to remain stationary at the end of the small fever-wards. The graver cases were placed in the beds near the bath and were carried by the attendants from the bed to the tub and back. The milder cases and the improving cases were placed in the more distant beds, and walked to the bath, with the assistance of the nurses. The fever-wards are small, each containing 6 beds; the most distant of which in the men's ward is

a little over 6 meters from the bath-tub; the most distant in the women's ward being about 5.75 meters from the bath-tub. Adjacent to these wards are other wards in which fever-patients can be placed with separate tubs, but in all instances the improving cases and the milder cases are wrapped in sheets, rise from their beds every 3 hours, and are assisted to the tubs by the attendants, and return in the same manner after the bath. Each individual case is carefully studied, and if any contraindication to this procedure is discovered the patient is carried by the attendants from his bed to the tub and back. In no instance have we seen any reason to believe that this modification has had unfavorable effects. On the contrary, it has appeared to be of signal service. It has exerted a very favorable influence upon the course and symptoms of the disease, particularly upon the condition of the respiratory and circulatory functions. Quite aside from favorable empiric results there are theoretic reasons for a change from traditional methods of treating cases of acute febrile disease of long duration. Among the more striking morbid phenomena in the clinical picture of enteric fever under drug-treatment, always inadequate, are the evidences of passive visceral congestions to which progressive impairment of the heart's force and the circulatory powers in general strongly contribute. Among these are especially to be named bronchitis, broncho-pneumonia, and hypostatic congestion. There are others of which one can speak less positively, as they are largely due to the action of toxins. Our experience leads us to believe, however, that the development of somnolence, gastro-intestinal catarrh and the intestinal paresis to which tympanites is due, has been in the past favored by the log-like, continued, passive recumbency of the patient suffering from enteric fever. The muscular atrophy due to disuse and the diminished activity of the circulation of the lymph throughout the body cannot be disregarded in this connection. The vast majority of patients suffering from enteric fever are adolescents and young adults at the most active period of life. The disease develops with comparative rapidity, and is of long course. Have we not in enforced continuous repose been adding to the pathologic process a secondary disturbance of nutrition due to disuse of function? Our experience in the last year justifies me in answering this question in the affirmative.

6. The system of Brand is designated "The Treatment by Systematic Cold Bathing." The measure of its success is determined by the period at which it is instituted in any given case; the sooner the better. Brand's claim, that the mortality is practically nothing in cases treated from the beginning, cannot in ordinary hospital-practice be established. Our cases do not come to us in the beginning of the attack. Many observations have, however, been published that show in large series of cases that the earlier the treatment is insti-

tuted the greater is the reduction in mortality. Under the ordinary conditions of hospital-practice few cases are received until toward the end of the first week, the great majority later than this, and a considerable number as late as the middle of the third week. It is obvious that the treatment by systematic cold baths instituted late in the course of the attack must largely fail as a plan. There is nothing specific in the individual bath. It is the rhythmic repetition of the stimulation of physiologic processes and of the modifications of pathologic processes produced by a succession of baths commenced early in the course of the attack to which the favorable results are to be attributed.

On the other hand, there are many mild cases admitted at any time during the progress of the attack in which the temperature is so low and the defervescence occurs so soon after admission that the number of baths administered is but limited. These cases belong to the group designated mild typhoid, in which recovery takes place under a management purely expectant. It would be obviously unfair to claim for the bath-treatment the shortened course and termination of such cases. These two groups of cases, however, in a certain sense offset each other, and thus justify the conclusions based upon the statistics.

I desire to thank Dr. Henry F. Page, Medical Assistant to the Hospital, for the analysis of the statistics for 1896-97, and Dr. J. C. DaCosta, Jr., Hematologist to the Hospital, for valuable assistance in the preparation of this paper.

### SUGGESTIONS FOR BLOOD-STUDY.

By W. F. ARNOLD, M.D.,

Passed Assistant Surgeon, U. S. N.

SUPPLEMENTARY to the interesting paper by Ostheimer<sup>1</sup> on the estimation of blood-corpuscles, I think it possible that the following suggestions may be found worthy of further practical application than I have had opportunity to give them.

I. As to securing the drop of blood, particularly the relatively large one necessary for estimating the leukocytes by Thoma's method, I think it will be generally admitted that an adjustable guarded lancet is most desirable. The instrument supplied by Hawksley with Gowers' hemocytometer and by the Tintometer Company, of London, with their apparatus for blood-examinations may be replaced at the trifling cost of a large, lancet-pointed surgical needle. Surely every physician has one or more empty vulcanite cases in which clinical thermometers are supplied. The needle is set in the male-screw end of this case between wooden wedges or in plaster-of-Paris, and the cover of the cap is perforated in its axis from the inside with the point of a pen-knife. (Fig. 1.)

The advantage of this contrivance is that it may be used rapidly and with greater confidence than an unguarded needle or knife-point. If it be desired to make a wound that will with certainty supply several full-sized drops of blood, slight pressure may be made laterally in the direction of one of the cutting edges of the needle after stabbing with it.

II. It will be urged that it is not possible for the busy practitioner to resort to blood-examinations by reason of the complexity of the apparatus required. While this may be granted, as regards the specific proposition, for my part I am unwilling to release him from the responsibility on that account, at least in those cases in which the patient is manifestly able to pay for having it done by those situated so as to carry out clinical examinations requiring delicate manipulations and expensive apparatus. The following expedients may be followed, if not without possibility of some compromise to the "end-results" with manifest improvements in many directions:

1. To secure specimens for estimating hemoglobin, it is only necessary to carry to the patient, in addition to the instrument first referred to, the pipet for measuring the blood and a small vial marked for estimating a volume of water that will vary with the instrument to be used. If this be von Fleischl's hemometer, the vial should contain the amount that will fill one of the lateral halves of the cup, less the contents of the measuring pipet. With Gowers' instrument, the contents of the vial should be not more than 400 cu. mm.; and, if the patient be unusually pale, the expert should be apprised of the fact, in order that this fact may be considered in the course of his dilutions. In extreme cases a double amount of blood should be measured out for Gowers' instrument.

2. Complementary specimens are almost absolutely necessary for estimating the number of corpuscles after the foregoing estimation has been made, although conclusions are sometimes unwisely formed from a study of the hemoglobin. The following procedure will, I think, not be found beyond the reach of anyone that cares for completeness. I have practised it in a few cases, but I have not had the opportunity to test it thoroughly. It may be said, *a priori*, however, that it presents few sources of disqualifying error. It is proposed that one specimen serve for the enumeration of both the red and the white blood-corpuscles. On this account, only the *melangeur* for diluting blood 1:100 must be employed. Miescher's modification of Thoma's pipet, both of which are supplied by Zeiss, the former with the Zeiss-Thoma hemocytometer, has not impressed me as being a material improvement; and von



FIG. 1.  
Guarded needle  
for making  
puncture.

<sup>1</sup> PHILADELPHIA MEDICAL JOURNAL, Feb. 26, 1898, p. 378.



Jaksch<sup>2</sup> has recorded an unfavorable opinion of its claims of advantages. The fluid for diluting had best be colored, for which purpose Toison's fluid,<sup>3</sup> or a normal salt-solution to which 0.01% (1:10,000) of saturated solution of methyl-violet has been added, will serve. I have used the latter with satisfaction frequently since it was suggested by Moncton.<sup>4</sup> The first of these is said to be of no assistance with regard to the white blood-corpuscles, but I have found the latter of considerable value in isolating leukocytes in blood diluted 1:100.

After the dilution has been made, the pipet may be securely closed by springing a large rubber band over its ends, as shown in the accompanying cut (Fig. 2); and there will be no immediate necessity of its being examined for several hours, or even a day or two.



FIG. 2.

In the examination there is possible an application of photographic principles which, so far as I know, is here suggested for the first time. Of this and its practicability I convinced myself while aboard a gun-boat in the harbor of Shanghai, China, in May, 1895, when I made a few negatives on bromid-paper; but they were very imperfect, and I have been unable to make any attempt to perfect the apparatus that I shall now describe.

The Thoma-Zeiss counting-chamber will receive the diluted blood as usual, and the whole of the area of its floor may be searched either with a  $\frac{1}{4}$  in. or  $\frac{1}{8}$  in. dry lens, or better, with an 8 mm. apochromatic lens.

This preliminary examination is made merely with reference to the leukocytes; and if, as is recommended in all cases, dried specimens of blood from the same patient are preserved, material errors with reference to them will hardly occur. At any rate, such errors will not exceed those inherent to Gowers' method of enumeration; and it is altogether unlikely that the cases that require Thoma's procedure will all be bed-ridden.

With the 8 mm. apochromatic lens and a No. 4 compensating ocular (both of Zeiss' manufacture), the coordinated floor of the counting-chamber may be exactly inscribed in the field by shortening the draw-tube to a length somewhat below 160 mm. Then this field may be located, as Fig. 3 shows, by successively shifting the slide, and a sufficient number of leukocytes may be brought into view to reduce materially the probability of error. Higher eye-piecing may be resorted to, in order to differentiate somewhat the leukocytes; the

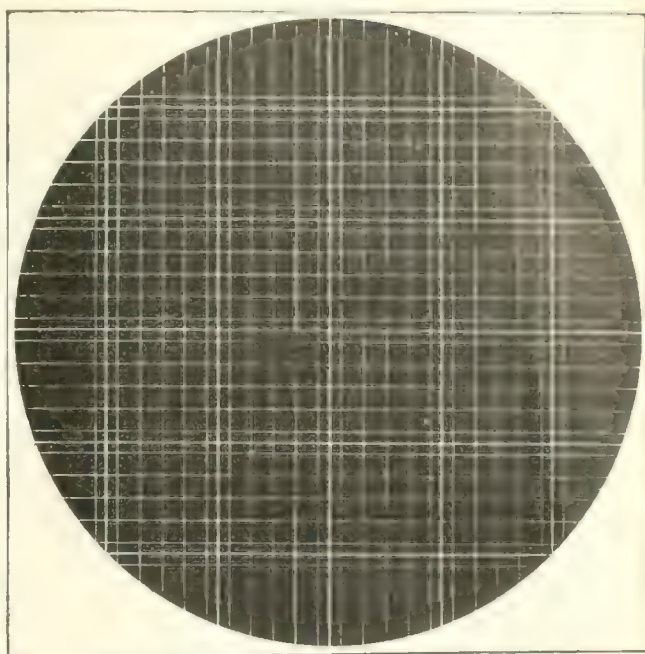


FIG. 3.

factors demanded would then be employed as a matter of course. But by estimating with the eye the course of the four cords of the 90° arcs rapid enumeration of the colorless corpuscles is quite feasible. When greater accuracy regarding the leukocytes is required, several mounts may be made from the pipet and a sufficient number of leukocytes may thus be counted.

The next step is to make a negative on bromid-paper held flat in the plateholder of the camera under one sheet of glass or between two sheets. With a No. 4 compensating eye-piece and the apochromatic lens mentioned a bellows 20 cm. long will give a field about 30 cm. in diameter. This field must not of necessity be the coordinated floor of the counting-chamber, although, if it be not, the average of the number of leukocytes encountered in the preliminary examination that was made for them should be borne in mind, in order that it may be subtracted from the number of corpuscles shown in the photographic negative that will result. The detail of this negative will be insufficient and the magnification will not permit the recognition of leukocytes upon it, and this attention to the interests of extreme accuracy seems required by the refinements that attach in general to this interesting subject. If the ruled floor of the counting-chamber be not used, it will be necessary to inscribe a square in the circle that will be developed upon the bromid-paper. I am quite sure that it will be possible to make a photographic negative upon fresh, smooth-surfaced bromid-paper that will show the faint marking of the counting-chamber; but I do not consider such accurate reproduction at all essential to the process advised.

The advantages of this bromid-negative are these: (a) By a comparatively short process, in point of time, an accurate impression of the number and regularity

<sup>2</sup> Clinical Diagnosis, 31 Ed., translated by Cagney, p. 12.

<sup>3</sup> Jaksch, *loc. cit.*, p. 14.

<sup>4</sup> *Lancet*, 1890, i, p. 73.

of distribution of corpuscles upon 400 squares is secured; (b) this area of a square with a side of  $\frac{1}{20}$  mm. is not necessarily confined to a single spot upon the floor of the counting-chamber, where, as some of us know, bubbles do most congregate; (c) the corpuscles may be counted with absolute accuracy, with the aid of mechanical devices, such as are used for many purposes in the commercial world (*e. g.* the counter used by lumbermen, railwaymen and others), or the separate corpuscles may be checked off with an engraving pen (which may be adapted from a bicycle-cyclometer—Fig. 4), within the limits of time that is



FIG. 4.—Cyclometer adapted for counting blood-corpuscles.

often spent in the tedious enumeration of numbers of corpuscles in fewer squares by the eye;<sup>5</sup> (d) the not small harassment of excluding or of including cells touching certain boundary-lines is greatly reduced; and (e) an impressive addition to the case-paper is possible.

I consider that one such photograph will ordinarily yield a sufficient number of corpuscles to reduce the variable error to 2%, or less.

This particular combination of lenses is commended because of expediencies inseparable from the apparatus that I have employed. With an enlarged field, greater bellows-length and higher eye-pieces, I am confident that the plan that I have suggested is capable of excluding practically all variable and personal errors. Owing to the irksomeness, to me, of using the hemocytometer, I have never been fully ready to swear (or affirm) that my results with it were within very ordinary limits of error. That is to say I rarely believed my own counting, being suspicious of having either skipped, or recounted, or both.

3. Films of blood dried, either upon slides or cover-glasses, will be necessary for completeness in most examinations of the blood. There are few observers that will be satisfied without a fresh slide or two, to overhaul at complete convenience; but it is, I think, far

preferable to no examination, if dried films supplement the two modes of examination thus far discussed. Malaria may usually, I believe, be detected with their aid; and so may filariasis, if attention be paid to the hour at which the specimen is secured;<sup>6</sup> and the spirilla of relapsing fever also.

The technic of spreading blood-films is quite simple. A medium-sized drop of blood is placed about 2 cm. from the end of a slide midway between the longer edges, and the edge of another slide or a needle is placed upon the surface of the slide in the drop. When the blood has run evenly along the edge it is drawn toward and across the center of the slide in the direction of its greater dimension. Films thus prepared dry readily in the air, and when dry they may be preserved for months in good order, if the smeared portion be not touched with the fingers or rubbed too forcibly. They sometimes mold in the tropics and I have lost many valuable preparations from the ravages of the omnivorous and omnipresent naval cockroach.

Cover-glass films are more desirable for certain purposes, but they are more difficult of preparation because of the great fragility of the slips.

III.—Three pieces of apparatus have been proposed for estimating the number of red blood-corpuscles without the employment of the microscope. Bizzozero's chromocytometer is claimed by its inventor to do this with a mean error of but 0.3%, and to afford a ready means of determining, besides, the amount of hemoglobin; but, in spite of its 18 years and odd months of life, it appears to be unknown to practical clinicians in this country. The hematokrit is held by most authorities on the subject not to fulfil the requirements of exact analysis sufficiently, although it is capable of many admitted aids to diagnosis.

The hemocytometer of the Tintometer Company, London, is the latest claimant for attention. It is the invention of Dr. George Oliver, Croonian lecturer for 1896; and it is being promulgated in connection with a hemoglobinometer devised by the same inventor, which appears to depend upon separate color-standards for different degrees of dilution of the blood. Twelve such standards are supplied, and the necessary adjuncts bring the cost of this hemoglobinometer up to quite a stiff figure. Its companion instrument has been commended highly, and its mean error is said to be a small one.

It would appear to be a very useful addition to the outfit of the practical physician. The apparatus can be obtained from Queen & Co., Inc., Philadelphia. I have had no experience whatever with either the first or the last of these erythrocytometers.

The method of employment is described as follows: A small quantity of blood is taken up into a short pipet (Fig. 5) and at once washed out of this by a dropping-tube (Fig. 6) into a graduated flattened test-tube

<sup>5</sup> The apparatus depicted can be obtained from Queen & Co., Inc., Philadelphia.

<sup>6</sup> Manson: Hygiene and Diseases of Warm Climates, 1893, p. 753.



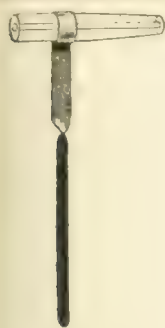


FIG. 5.

Fig. 7) with Hay-  
em's diluting mix-  
ture (which must  
not contain color-  
ing-matter). The  
graduations of the  
tube are so adjusted  
to the capacity of  
the pipet that with  
normal blood (as-  
sumed to contain  
5,000,000 red cor-  
puscles to the cubic  
millimeter) the light  
of a small wax-can-  
dle placed at a dis-  
tance of three yards  
from the eye in a  
dark room is just  
transmitted as a fine, bright line, when looked at through  
the tube held edgewise between the fingers and filled up  
to the 100 mark of the graduation. If there are fewer  
corpuscles than the normal, less of the diluting solution  
is required for the light to be transmitted; if more than  
normal, more of the solution must be added. The tube  
is graduated above and below the 100-mark, so as to  
indicate in percentages every decrease or increase of  
corpuscles per cubic millimeter, as compared with the  
normal standard of 100%. By this means, it is said,  
an accurate result can be obtained in two or three min-  
utes, whereas by the most expeditious observer an actual  
enumeration will take from 10 to 15 minutes.



FIG. 6.



FIG. 7.

### NECROSIS OF THE VERTEBRA.<sup>1</sup>

By H. HORACE GRANT, M.D.,  
of Louisville, Ky.

Professor of Surgery and Clinical Surgery in the Hospital College of Medicine,  
etc.

I saw recently a man, 24 years old, who had been ill for 6 months with what was supposed to be, up to a few days before I saw him, sciatic rheumatism. It was attended with some elevation of temperature, with a gradual decline of health. Although at times he appeared better, yet he never improved in strength and there seemed to be constitutionally some loss of vital force. The pain from which he suffered was referred to the hip and to the front of the thigh, and also to the groin on the right side. This appeared to

get better at times than worse, but he was in such a condition that he could get out of the house and do any work.

After he had been sick for 6 months the physician into whose hands he had recently fallen, called me hurriedly, and gave me the information that he thought it was a case of sepsis. When I saw the man he had every appearance of sepsis. He had an elevation of temperature of 1 or 2 degrees, which persisted for 2 or 3 weeks; there was an immense tumor in the region of the appendix, which was so large as to be distinctly seen without any manipulation whatever. It appeared to be a large abscess, causing great distention in this situation, and it occurred to me at the time I saw him that it must be a perinephric abscess, although it was situated in the region of the appendix.

The man was removed to the infirmary, and his family was given to understand that we expected to find an abscess around the kidney, or else it was in the region of the appendix, possibly a postcecal abscess. Deeming it wise to make an exploration with an aspirator, I put the needle into the region of the kidney behind and it returned well filled with blood. I then introduced it a second time in the same situation, varying the direction of the needle, and again it returned with blood. I then looked on the case as probably a sarcoma of the kidney; certainly there was here a tumor filled with blood, and the condition was so grave that I felt it advisable to explore it.

I made an incision in the region of the appendix, and came down upon a tumor which was highly discolored, and which evidently contained a large blood-clot. There was no pulsation whatever, and no indication of an aneurysm. I slipped my fingers alongside the tumor and peeled the peritoneum off from it in front where it appeared to be somewhat adherent. In making this manipulation, after a minute or two of dissection, there was a profuse rush of blood; it was not so bright as arterial blood, but it looked like very fresh venous blood at least. There were a few clots in this gush of blood and the hemorrhage was so alarming that I explored the wound with my hand and removed quite a number of clots, some of them large, and then stuffed the wound full of gauze. We watched the patient for 10 or 15 minutes and there was no further hemorrhage. He became perfectly pulseless on the table and at the close of the operation was apparently almost dead. We used transfusion or introduction of saline solution, injecting quite a quantity into the rectum and into one of the veins of the arm, perhaps as much as 3 pints, and his pulse improved and became quite perceptible although still weak. He was put to bed and rallied and seemed to be doing well. There was no further hemorrhage, but his pulse again failed and after 4 or 5 hours he died. The operation was performed about 10 o'clock and his death took place at 3, from gradual failure of the pulse, and the mind becoming a little cloudy toward the last.

After death I opened the wound, with permission of the family. The gauze that had been introduced to block it was almost dry; I squeezed it firmly and there was not in all two tablespoonfuls of blood. I then explored what appeared to be the sac, passing my hand up as high as I could, reaching up to about the level of what I supposed to be the diaphragm. Here I found a distinct necrosis of the vertebra, which was quite sharp and was overlying the abdominal vessels. This abrasion was at the upper end of the sac; all this portion of the cavity was filled with clotted blood, or partially solidified blood, some of it partly fluid, and I turned out as much as 1½ pints of clots and fluid blood. This was above the point at which the gauze had been applied. There was no other covering for this tumor except the fascia of the psoas muscle. There was no sac; not only was the muscle absolutely bare, but its fibers were loosened by the hemorrhage and the blood-clot that had impinged against it. There were some adhesions seemingly partially organized; at any rate they were frail and separated easily. There was no slough, and there was evidently no pressure-disintegration.

It occurred to me then that there could be no other explanation of this condition, except that there had been a small wound of the vena cava from its attrition against this necrosed surface of the vertebra; possibly instead it was some small artery, perhaps the renal.

<sup>1</sup>Read before the Louisville Surgical Society.

I did not make a careful exploration of the regional anatomy, because I did not have permission to do more than enlarge the wound; and exactly what the lesion was I was not able to determine. The appearance of the blood was nearly that of arterial fluid; it was quite red, but there was no evidence of pulsation, and the hemorrhage ceased upon application of gauze, which we would not have expected had there been a wound in a large artery. I judged it to have been a mixture of fluid blood running perhaps from one of the large veins, it may be even from the vena cava. It is probable that the tumor that I felt had existed for 4 or 5 days when I saw the patient. It is the statement of Dr. Pottinger, under whose care the patient had been, that the tumor had existed only a few days, and that the patient's previous trouble was sciatic rheumatism. He had suffered from no other disease at any time. It seems clear now, however, that the pain from which the man suffered was due to pressure upon some of the nerves of this region, and that probably his original trouble was a necrosis of the vertebra; that some injury had been done the nerves that gave rise to the pain, and that this immense hematoma developed by reason of a small opening in one of the large veins.

### A CASE OF HYSTERICAL BRADYCARDIA.

By CHARLES S. POTTIS, M.D.,  
of Philadelphia.

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AMONG the many manifestations of the hysterical state, tachycardia is often noted, and is mentioned in the text-books as a common symptom. The opposite condition, *i. e.*, bradycardia, must be of much less frequent occurrence, as the possibility of its being present is not mentioned at all by many authorities, while others state that it may sometimes occur in cases of hysterical syncope and trance or lethargy, but they do not mention the possibility of its being found otherwise. Preston,<sup>1</sup> indeed, is the only writer whom I have been able to consult, who gives any idea that, excepting in the conditions mentioned, we may find an hysterical slow pulse. He says, after speaking of tachycardia, that "the other extreme, a slow heart, is rarely seen in hysteria, except in the state of lethargy already alluded to." To be sure, it may be of more frequent occurrence than we are here led to suppose, but is not discovered through lack of examination of the pulse, and hence is not reported. As we have so many symptoms of entirely opposite significance in hysteria—for example, motor paralysis and spasm, coma and convulsion, hyperesthesia and anesthesia—it would seem reasonable to suppose that as tachycardia may occur so also may bradycardia. In this connection I beg to report the following case:

G. G., aged 42 years, a carpenter by trade, belongs to what might be called a nervous family. His father was notably so, and a first cousin has had attacks of acute mania. The patient himself has always been of an intensely nervous and excitable temperament. He has a violent temper, and is unduly elated or depressed by trifles, according to their nature. All of the bodily functions are usually well performed, and while in the past the patient has used tobacco to excess and at times alcohol, he had not done so for several years previous to the attack about to be described. On July 4, 1894, he had a severe seizure of cholera morbus, from which he recovered in a few days, and returned to work. About this time he was subjected to considerable worry and annoyance, and after several days he ceased his occupation and took to his bed, complaining principally of violent pains in the epigastrium. These were aggravated by taking food, which, however, was seldom vomited. He also had marked insomnia. At times he was excited, threatening violence to others; at times he was depressed, and talked of suicide. No treatment seemed to be of any benefit until lavage of the stomach was practised a few times. This was distasteful, but the gastric symptoms improved. At this time the slowness of the pulse was noticed. At first it was paroxysmal; then it became constant, the pulse averaging about 40 to the minute, but being regular and not weak. It was also noted that at this time the man suddenly lost power in one arm, the weakness persisting for several hours and disappearing as suddenly as it came. When I saw him, a few days later, he was in bed complaining of pain in the epigastrium and head, alternately, wringing his hands and running them through his hair, at times weeping, then threatening to get up and go out. The pulse was 48 to the minute, regular, and of moderate strength. At intervals there were quick, irregular, jerking movements of the arms and legs. There was loss of painful and tactile sense (the temperature-sense was not tested) of the stocking type in the right arm, extending to a point just below the insertion of the deltoid. When some subjects of interest were broached, the patient became rational, apparently forgot his pains and aches, and entered into the conversation. On the following morning he was again in about the same condition, and, in addition, he complained of pain in the region of the left nipple. Examination revealed an area of hyperesthesia extending from the nipple about 3 inches in all directions. The pulse was 54. These symptoms persisted, with more or less intensity, for several days, the pulse ranging from 40 to 60. The man then began to improve, the pulse became of normal frequency (72 to the minute), and all of the symptoms disappeared, excepting the hyperesthetic area about the left nipple. This persisted for some days longer, but was finally relieved by a few applications of the faradic current. Since this time the patient has had several other attacks of undoubted hysterical nature, always following some mental worry or physical strain. In only one, however, was bradycardia noted, the lowest pulse counted during this attack being 54.

Before making a diagnosis of hysterical bradycardia, all other causes of slow heart were considered and eliminated. The patient had not been a sufferer from chronic gastric disease, nor is he now. To be sure, cholera morbus had preceded the first attack a few days, and during the attack the man complained of gastric pain, but there was no other evidence of gastric disease, and he has since had a similar attack not associated with disturbance of the gastric functions. He still continues to use alcohol and tobacco in the same quantities as he did previous to the attack, but never, excepting during these two attacks, has bradycardia been noted, although the pulse has been counted at intervals. The kidneys were normal, and there was and is now no evidence of any organic disease of the nervous system; and finally the condition was associated with other well-marked symptoms of hysteria. For the opportunity of seeing the patient and for the early history I am indebted to Dr. J. Chalmers DaCosta.

<sup>1</sup> Preston: Hysteria and Allied Conditions, p. 194.



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**The Practitioner's Tuberculosis Number.**—In the department of latest literature portion of this number of the JOURNAL will be found abstracts of a series of most valuable papers on tuberculosis that occupy 146 pages of the June number of the *Practitioner*. We cannot refrain from expressing our admiration for the splendid series of articles which are brought together in this symposium. The keynote in the treatment of tuberculosis is struck by nearly all of the writers—fresh air and sunshine—and most valuable information is given in climatic and sanatorial treatment. Speaking of climate, it must be admitted that we, in this country, have not sufficiently appreciated the importance of this factor in the treatment of tuberculosis and other affections, and also, probably in consequence, have no definite knowledge on the subject of climatology in general and of American climates in particular. We have known physicians to send patients to climatic resorts for special indications when the place selected possessed climatic conditions almost the opposite of those desired and required. It is time, it appears to us, to devote some attention to climatology and kindred subjects in medical curricula, to the end that more exact knowledge may prevail in such important matters.

**Four Arguments Against Noise.**—There are four reasons why every physician and every other good man should wage persistent war against unnecessary noises:—

1. Because in a certain and an increasing number of sensitive and "well" people such noises distinctly aid in carrying them over the easily passed line from comparative health among the sick and "unfit for service," thus surely increasing the sick-rate.

2. Because they decidedly destroy the vital and restorative powers of the sick, and thus clearly increase the death-rate.

3. Because they dull and brutalize the nervous systems of those who can and do learn to withstand their pathogenic influences.

4. Because they serve to make the sensitive and cultured, who are able to do so, separate themselves in their search for quiet from the masses, who must endure, thus serving to intensify the license of the noise-makers, by lessening the checks upon their crimes. The separation of the community into classes is exaggerated in

this way, and these growing wider apart, make impossible desirable helpfulness, sympathy, and mutual understanding of each other. Noise is undemocratic; it should be un-American.

**The Duty of Vacation-taking** is a double one at least. Physicians are, beyond question, the hardest workers in the community; their responsibilities and calls for service are not limited to the ordinary working-hours of the day or of the week-day. The demands upon them are not only onerous in a physiologic sense, but all the mental functions, intellectual and emotional, are put upon the strain as with no other large class of men. The duty, therefore, of finding periods of rest and recuperation becomes a necessity if one is careful to husband and utilize his life in a workmanlike and sagacious manner. The duty and necessity are physiologic and psychic,—body and mind both need rest and change. But there often seems to be a combination of internal and circumstantial reasons driving the practitioner to keep on with his tasks twelve months of the year. Patients demand, a narrow self-interest urges, the economic phase of the question looms up in a threatening way, etc. And yet, we believe that not only would it be mentally and morally beneficial in the long run to secure the change and rest of one or two months, but it would also be not expensive in a worldly way. We all waste enough in eleven months to carry us through a one month's trip; it will do the colleague in whose hands one leaves his practice a good he will repay in the same coin; and increased vigor will compensate for the "lost" time. With the will so to do, it can all be arranged. Nature is waiting to teach new lessons in therapeutics, and to illustrate her teaching. Seek the quiet and peace of the hill-tops, the woods, the sea-shore; go fantree for a while; recourt your wife; and delight the little folks!

**Shall Antitoxins be Taxed?**—It is stated that the officials of the Internal Revenue Department at Washington have under consideration the question whether or not antitoxins should be subjected to internal revenue taxation to meet the necessities of the present war. There should be no difficulty in reaching a decision in the negative and for several reasons. In the first place, the antitoxins, including vaccine-virus, belong in the same category as other definite therapeutic agents that

are not taxed, such as digitalis, aconite, nux vomica, and the like. Individual antitoxins are probably not more variable in activity, as they are probably not more complex in constitution than the other medicinal agents named. They differ merely in being a biologic, rather than a vegetal product, and this difference may be more apparent than real. They may not inaptly, from the pharmaceutic point of view, be compared with codliver-oil. In the second place, the antitoxins are life-saving agents, and a most important means of offense and defense in the hands of the medical practitioner. They are employed only by physicians. To tax them is to put a premium on disease and death. Finally, antitoxins are in the best sense of the word scientific preparations, with physiologic actions that may be designated specific, and they are capable of administration in well-defined and accurately determined dosage of given numbers of immunity-units. They are in no wise proprietary, and no commercial restrictions are placed upon, so that there can be no exclusiveness in, their production. From all points of view, to tax antitoxins would be an official blunder if not crime. It would be more in accord with the status of the case to encourage their employment by subsidy.

#### **The London County Council and Street-Noises.—**

A committee appointed by the London County Council to offer suggestions with regard to the better regulation of the cries that make so many London streets for so long a portion of the day hideous has submitted an excellent by-law on the subject. The by-law was aimed at the suppression of totally useless noises, such as the yells of newspaper-boys and hawkers of fish and fruit, it being perfectly well known that the public will buy these things just as readily, or more readily, from persons who do not shout as from persons who do. The by-law seemed to be in every way so reasonable that Londoners are aghast at its reception by the Council. The Council would have nothing to do with it, and rejected the adoption of their own committee's report by a majority of 2 to 1. The matter is of more importance, perhaps, to medical men than to any class of the community, so that it is not surprising to see in the medical press of London a determination not to let the matter drop.

At the present time the unfortunate invalid is liable in London to be awakened at 5 or 6 A.M. by the yelling of milk-venders. By breakfast-time the first barrel-organs arrive. They play at intervals all day, and during the intervals costers' carts come down the street, beside which walk leather-lunged fellows bawling at the highest pitch of their strident voices the virtues of their wares. In the afternoon the news-venders arrive on the scene, screaming the fact—or fiction—that they are offering for sale the latest war-news and the names of all the winners at the day's races. With dinner a German band turns up. And until any hour of the

night "special" editions (often exactly the same as the afternoon-editions) of the evening-papers are offered for sale by a howling mob. This is not an exaggerated picture. There are many London streets that suffer literally in this manner, and it need hardly be said that in these streets the sick have but little chance of rest. There is a growing resolve on the part of medical men and other influential citizens to see that the nuisance is put down, to which resolve the London County Council will sooner or later have to bow.

**Another New York Contemptuary** is, we are gratified to hear, dissatisfied with the PHILADELPHIA MEDICAL JOURNAL. It has taken this enterprising critic six months to learn of our existence, and the wry face accompanying the tardy courtesy is delightful. The objections, deduced from a peculiarly cloudy and ungrammatical English, appear to be: 1. That the JOURNAL has a known and active editorial management; 2. That it is not up to the standard of the great New York weeklies; 3. That its arrangement of contents does not please critics; 4. That its information and position as to dispensary-abuses are incorrect; 5. Finally, with charming naïvete, that exactness and interest would be greatly increased by a diligent study upon our part of the pages of the *Post-Graduate*.

The controversies of rival editors as to the relative merits of their respective journals are usually disgustingly dull reading, but in the foregoing there are points both impersonal and important:

1. Concerning the management of a journal by known and responsible persons as contradistinguished from that by a (supposedly) unknown person through a (supposedly) unknown typewriter or amanuensis, we think journalistic experience and illustrative examples hardly warrant our contemptuary's contention. The sole brilliant example to which our attention, with commendable modesty, is directed, is admitted, but it is against the world's experience, and we humdrum folk must not be charmed to our ruin by the illogical successes of genius. One swallow does not make a summer, nor does one cow-bird produce a flock of singers.

2. We fear our critic's judgment as to the standard the JOURNAL has reached is not altogether truthful, nor quite free from hidden prejudices, but we are proud of his disfavor, for has it not been said that one should be loved for the enemies he has made?

It is a pity that in order to hurt us, "the other great weeklies" should also be hit. It is written of the JOURNAL that it "lacks much in systematic arrangement, which is a characteristic of the New York weeklies." We suspect the (unknown?) chief meant to say something quite different from this; he should send his (unknown?) secretary-editor to a grammar-school, or else he should dictate verbatim.



3. Among the many expressions of praise the JOURNAL has received as to the arrangement of articles, there have been two or three indicating some doubt about its advisability. The chief feature of this arrangement consists in placing editorial comments first. We were led to this plan by the example of the greatest journals of the world, such as the *Spectator*, the *Nation*, the *Post-Graduate*, etc. We still think it a most excellent way, and the vast majority of our "less than a thousand" (according to the kind estimate of the *Medical Record*) subscribers heartily agree.

4. It is quite evident that all of our contemporary's opinions are the product of its frankly admitted bias concerning dispensary-abuses. As this bias is nothing more than a very thinly disguised financial selfishness, we may recognize its influence and rate its value wherever seen.

5. We shall take the advice of our contemptuary, and in the future, as in the past, we shall doubtless find something in its columns to interest, many lessons, indirectly at least, suggesting the advisability of exactness,—and, surely we shall find amusement.

**The Shock and Stress of War.**—On board the U. S. battleship *Texas*, off Santiago, in the recent fight, when the Spanish fleet under brave Cervera was done to death, the noise and concussion from the big guns were so great, according to an ear-witness on the ship, that the effects were disastrous. "Our own guns," says this writer, "were enough to kill delicate men." The din was dreadful, and the smoke blinding and stifling. The twelve-inch turret-guns were swung athwart ship and "turned loose." "The concussion then shook the immense vessel as if she had been a toy boat." The men near the guns were thrown on their faces, and one seaman was knocked through a hatchway and had a leg broken. But the warlike annalist concludes that the enemy suffered more than we did from the shots, and so we need not trouble ourselves about trifles such as these.

But are these things to be lightly ignored? This war will perhaps demonstrate, as no other war ever has, that a new factor has arisen in the causation of the traumatic neuroses. By a striking coincidence the same newspaper that prints the graphic report from the *Texas* states that a lieutenant in the U. S. Navy, who was watch-officer on the ill-fated battleship *Maine* on the night she was blown up in Havana harbor, has just been taken to an asylum for mental and nervous disorder caused by the shock and strain of that great disaster. We have no details by which to judge of the exact condition of this unfortunate officer, so we do not know whether any other factor has acted as a cause of his malady; but his case probably confirms the suspicion which we have had all along, that the tragedy of the *Maine* would possibly leave a long train of nervous disorders for some of the men who shared in it.

As between the *Maine* and the *Texas*, however, the conditions were radically different. The gravest forms of traumatic neurasthenia and hysteria seem to require for their causation not merely the physical injury itself, but a mental state that has been aptly called "nervous shock." This shock is peculiarly the result of violent emotion at the time of injury, such as horror, fear, grief, etc. As Mosso has pointed out, fear is a most active agent in causing these neurotic states. It has acted on soldiers in battle, as well as on the victims of great accidents in civil life.

There are few minds so stout and disciplined that they could meet the shock of such a disaster as the *Maine's* without receiving an impress, the after-effects of which might be most tenacious and injurious. CHARCOT has recorded somewhere, with apparent gusto, the cases of two German soldiers who exhibited typical symptoms of hysteria, but CHARCOT was too much of a medical philosopher not to know that all the bravest and most warlike races, without distinction of country, may furnish such examples if occasions arise. Such a display is no reflection on a man's bravery; it is only due to a molecular disturbance in the protoplasm of his neurons. The explosion of 100 pounds of gun-cotton is a physical phenomenon against which the integrity of a delicate nerve-cell is no match. The apparition of hurtling death, amidst the riven and sinking wreck of a great warship, is a specter that will not soon down in some minds, however hardy. These are medical, not martial, questions, and the solution of some of them will only be attained long after the conflict of arms.

GILLES DE LA TOURETTE and the French school especially have pointed out that the traumatic neuroses (hysteria and neurasthenia) are seen in their most aggravated types in the male sex. The effect of war in the production of these neuroses has not yet been noted as carefully as it should be. The war now waging presents conditions that are unfamiliar as yet for the reason that the new types of warships are practically having their first great tests in the hands of American and European seamen. The conditions, however, for observation will be most favorable in this country, because the medical mind is now more alert than formerly to detect these cases and to recognize their great importance.

But here the question arises whether, if we are to be such victors in the future as in the past, the necessary role of the depressing emotions will not be wanting for the causation of the grave neuroses? As already said, the case of the *Texas* was not like the case of the *Maine*. On board the victorious battleship and her fellows in the fleet, the stimulating effect of triumph must have given the prevalent tone. Still, that sense of triumph may not be able yet to entirely avert the reaction that must surely follow the intense strain as well as the tremendous concussions that were incident to the great fight.

## Reviews.

### Transactions of the Vermont State Medical Society, 1897. Edited by D. C. Hawley, M.D.

The volume contains the presidential address, delivered by Dr. F. R. Stoddard, on electrotherapeutics, the address on medicine, by Dr. Henry D. Holton, 12 scientific papers, and various reports. Altogether it is a creditable volume.

### Maternal Syphilis, including the Presence and Recognition of Syphilitic Pelvic Disease in Women. By JOHN A. SHAW-MACKENZIE. London: J. & A. Churchill. 1898.

This is a most interesting little book, in which it is maintained, on the basis of numerous observations, that syphilis is a factor in many cases of pelvic disease in females. It is noted that the virus of recent syphilis becomes more active, and that old syphilis tends to relapse, during pregnancy and at the menopause; that the primary lesion is usually modified and is temporary in duration in a non-pregnant woman, while, when acquired during pregnancy, it is usually distinct and of longer duration; and that pelvic disease is likely to arise in nulliparous women suffering from inherited syphilis. The presence of pelvic disease and relapsing tertiary lesions among parous women leads to the belief that the immunity supposed to exist in the mothers of syphilitic progeny is not as complete as is usually believed. Many other matters that are described briefly, or not at all, in most works, are treated of in a most interesting manner, and we commend the book as a very useful contribution.

### Modern Gynecology. A Treatise on Diseases of Women. By CHARLES H. BUSHONG, M.D. Illustrated. Second Edition. Enlarged. 404 pages. New York: E. B. Treat & Co. 1898.

The statement on the title-page of this book that the subject-matter comprises the results of the latest investigations and treatment in gynecologic science is not verified by a scrutiny of the book. The modern methods of minor gynecologic treatment—for it is largely minor gynecology that is presented—are, in most part, notable for their omission. For instance, the oxalic-acid treatment of amenorrhea is not mentioned; nor do we find reference to direct intrauterine treatment in suitable cases by means of the pipet, the cotton-wrapped probe being described, however, in full. The use of the dull-wire curet—an absolutely worthless instrument for therapeutic purposes—is recommended, and the illustrations, many of them photographs expressly prepared for the work, fail in most instances to show what they are intended to teach. This is especially true of the cut pretending to show the Sims' posture. The repeated spelling of Blaud's pill with an *n* shows at least an unwarranted carelessness in proof-reading. On the whole, the book does not seem to fill any much-felt want, nor does its subject-matter justify its recommendation as a modern treatise on gynecology.

### Zur Abwehr Ansteckender Krankheiten. By PROF. DR. MOSLER, Director of the Medical Clinic at the University of Greifswald, Germany. Greifswald: Julius Abel. 1898.

This pamphlet of 47 pages, whose title *Protection Against Contagious Diseases* and subtitle *Timely Suggestions for the Inhabitants of and Visitors to Bathing-places*, sufficiently indicate its purpose, owes its existence to the sad death of a near relative of Prof. Mosler in consequence of the neglect of some of the precautions that are given in the pamphlet. The booklet is written in popular style and is especially valuable as giving the German police-regulations with regard to the sanitation of places where guests are received, thus enabling the reader to decide for himself whether the precautions observed where he lives are really such as are calculated to protect him from danger of infection. The disinfection of rooms, of clothing, of furniture and the like by means of formaldehyd receives especial attention. The conclusions at the end of the pamphlet cover the main points that must serve as guides to the authorities of bathing-places if they

would surely avoid the serious inconveniences and pecuniary loss that attend an epidemic of infectious disease, and conscientiously protect the visitors who entrust themselves yearly to their care. The little work is a handy resumé of the practical conclusions that modern bacteriology dictates for self-protection in unfamiliar surroundings.

### Tuberculosis of the Genito-Urinary Organs, Male and Female. By NICHOLAS SENN, M.D., Ph.D., LL.D. Philadelphia: W. B. Saunders. 1897.

The appearance of a new work by Dr. Senn is always an event in the surgical world. We have come to expect from this distinguished surgeon books characterized by a thorough grasp of the subject treated, by evidence of broad reading of authorities, by citations of numerous illustrative cases, and by a clearness of exposition springing from a certain practical bent of intellect that pierces the fallacy of an attractive theory and finds the utility that is in every fact. This book is of the same family as its predecessors. In it we find presented all that has been discovered relating to genito-urinary tuberculosis, its etiology, pathology, bacteriology, diagnosis, and treatment. The treatise is divided into 10 parts, as follows: (1) Tuberculosis of the male genital organs (penis, urethra, spermatic cord, seminal vesicles, prostate). (2) Tuberculosis of the testicle and epididymis. (3) Tuberculosis of the female generative organs (manner of infection and general remarks on pathology). (4) Tuberculosis of the vulva. (5) Tuberculosis of the vagina. (6) Tuberculosis of the uterus. (7) Tuberculosis of the Fallopian tubes. (8) Tuberculosis of the ovary. (9) Tuberculosis of the bladder. (10) Tuberculosis of the kidney. The book is a veritable mine of information; it devotes much space to diagnosis and treatment and certainly fills a gap that has existed in medical literature.

### Transactions of the New York State Medical Association, Volume XIV, 1897. Edited by E. D. Ferguson, M.D.

The scientific section of this volume of transactions comprises 30 papers, there being, in addition, various addresses and memoirs. A most instructive critical review of recent literature on the abuse of medical charity is contributed by Dr. F. H. Wiggin, and another article bearing upon the same subject, which traces in an interesting and suggestive manner, the supposed career of a young physician, by Dr. T. J. Hillis. Dr. F. S. Milbury reports a case of brain-abscess (from chronic otorrhea) which after the development of optic neuritis, and opening of the mastoid and the skull, eventuated in recovery. A valuable paper on tetanus, with statistical reference to the frequency of the disease in certain parts of the United States, England, and Wales, is furnished by Dr. F. S. Dennis. Dr. A. G. Bennett advocates massage as an occupation for the blind. Dr. E. Van de Warker considers the development of a spur of a well defined mass of cellular infiltration transversely behind the cervix of the uterus, but below the culdesac, a differential symptom of pelvic cellulitis. Dr. H. W. Wandless describes a new form of intraocular iris-scissors. A large part of the volume is occupied by brief comments on the materia medica, pharmacy, and therapeutics of the year ending October 1, 1897, by Dr. Edward H. Squibb. The remainder is taken up by a series of papers that serve to maintain the high standard of preceding volumes of the *Transactions*.

### Atlas of Methods of Clinical Investigations, with an Epitome of Clinical Diagnosis, and of Special Pathology and Treatment of Internal Diseases. By DR. CHRISTFRIED JAKOB. Authorized Translation from the German. Edited by Augustus A. Eshner, M.D. With 182 col red Illustrations upon 60 Plates, and 64 illustrations in the Text. Philadelphia: W. B. Saunders. 1898. Price, \$3.00.

The value of this work is in the plates, which represent various subjects of interest in the clinical study of disease. There are numerous illustrations in colors, representing the different blood-diseases and bacteria, as they are found in clinical examinations. These plates are particularly valuable



to the student. Following them are a number of figures showing crystals and other sediments of the urine, and illustrations depicting the different color-tests used in examination of the urine and stool, its contents, and, finally, the latter half of the Atlas consists of illustrations showing the projection of the viscera upon the outlines of the body, and the topographic features in various diseases. All of the illustrations are exceedingly well done and will prove most attractive to the student. The subject of clinical medicine is by no means completely covered; but the diseases of the heart and lungs are satisfactorily presented, while the plates illustrative of the microscopic and chemic examinations used in clinical medicine are the strongest feature of the book. The epitome of clinical diagnosis, which forms the concluding portion of the work, is brief, but quite satisfactory. The work of translation is very well done. Altogether, this is one of the most attractive of the series of atlases to which it belongs.

**A Manual of the Diseases of Women.** By J. BLAND SUTTON, F.R.C.S. Eng., and ARTHUR E. GILES, M.D., B.Sc. Lond., F.R.C.S. Edinb. 436 pages. With 115 Illustrations. Philadelphia: W. B. Saunders. 1897. Price \$2.50.

In this compact little volume we have one of the best books on diseases of women that has recently been published. The noted attainments of the distinguished authors are only equaled by the modesty with which they offer to the profession this valuable condensation of gynecologic learning. The book is not a mere rehash of women theories, but it is replete with new suggestions and recent discoveries. Especially notable is the statement that extra-uterine pregnancy is more likely to occur in a healthy oviduct than in one the seat of preexisting disease, and this fact is advanced in the light of a large number of careful investigations from an extensive clinical practice. Tuberculous disease of the female genitalia has been studied more thoroughly by Sutton and Giles than by any other gynecologic pathologists in Europe, and their deductions are herein set down under the appropriate subheadings of that interesting and hitherto sadly neglected subject. Ovarian cystomata, with especial reference to their pathology and classification, are assigned appropriate space, while gynecologic diagnosis and technic are fully and ably presented in the closing portion of the book. A striking feature of the work, and one that adds materially to its value to students, is the tabular arrangement of diagnosis, symptomatology, and prominent features of the various conditions mentioned. The illustrations are in the main new and taken from actual specimens in the possession of the authors. The indexing has been well attended to, and a most thorough scrutiny of the entire work fails to detect any notable blemish. As a manual, for such it claims to be, the book is a worthy addition to the library of the gynecologist and abdominal surgeon.

**A System of Medicine.** By Many Writers. Edited by Thomas Clifford Allbutt, M.D., LL.D. Vol. IV. New York: The Macmillan Co. 1898. Price \$5.00, cloth.

The present volume contains discussions on the diseases of the liver, kidneys, lymphatic and ductless glands, the nose, pharynx and larynx, and a consideration of some matters relating to the respiratory organs. In the last-named portion are discussed the general pathology of respiratory diseases, the treatment of asphyxia and the physical signs obtained in diseases of the lungs and heart. The reason for inserting these articles in the present place does not seem apparent. The same might be said of the position of the article on obesity. While this is not exactly included among the diseases of the lymphatic and ductless glands it follows immediately after them. It would have been much better, according to our conception, to place obesity in relation with gout and other disturbances of metabolism. Having made these criticisms of the present volume we can add nothing but praise. The articles on the anatomy, functions and diseases of the liver, by Dr. William Hunter, are excellent. The author is so well known as a distinguished authority that we naturally expect a presentation of his individual views, but his discussions are many-sided and judicious. Another group of articles that merit special attention are those dealing with the general pathology of the renal functions, by Dr. John Rose Bradford. We cannot refer particu-

larly to other articles. They are, without exception, by writers of known merit, and in many cases by distinguished authorities. Here and there objection might be made to the manner of consideration of particular subjects, and in some cases the articles are not quite up to date. This is particularly striking in the case of that on Hodgkin's disease. No discussion of the probable infectious character, and particularly of the possible tuberculous nature of this disease is presented. The term leukemia is used with a degree of laxity that is not warranted at the present time.

## Correspondence.

### LOOMIS SANITARIUM FOR CONSUMPTIVES.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:

PLEASE allow me to make the following correction of the semi-annual report of the Loomis Sanitarium for Consumptives, as published in your issue of July 2d:—In Dr. Chappe's report, where he speaks of 19 cases treated during a period of 9 months, the reading should be: "There were 19 cases of tuberculous laryngitis under treatment during the past four months;" instead of *nine* months. This is a report of cases treated between November, 1897, and March, 1898, and comprises 19 of the 27 cases reported for 6 months, from November, 1897, to May, 1898.

Very truly yours,

J. EDWARD STUBBERT, Physician in Charge.

Liberty, N. Y.

## American News and Notes.

Unsigned items and those not otherwise credited are generally Original Contributions furnished by Physicians acting as Special Resident Correspondents of the PHILADELPHIA MEDICAL JOURNAL.

**Dr. B. Sachs**, of New York, has been elected a foreign member of the Society of Psychiatry and Nervous Diseases of Moscow.

**Harvard Medical School** has been enriched by an endowment of \$25,000 devised by the will of the late Dr. Henry L. Williams.

**Abram Jacobi, M.D., LL.D.**—The degree of Doctor of Laws was conferred on Dr. Abram Jacobi, of New York City, on June 30th, by the University of Michigan.

**Anales de la Sociedad Mexicana de Cirurgia** is the name of a promising new journal, the first number of which was recently issued under the editorial supervision of Dr. Manuel Barreireo.

**Ex-Senator Cameron**, of Pennsylvania, who is now in London, has cabled to Secretary Long, offering the Government the free use for hospital-purposes of his estate on Saint Helena Island, opposite Port Royal, South Carolina.

**Against Discrimination.**—The Senate, on July 2d, passed a resolution preventing discrimination against graduates of legally chartered medical colleges in appointments to the Medical Corps of the Army, Navy and Marine-Hospital Service.

**Fort Worth (Tex.) University.**—The following were elected officers of the medical department at a recent meeting of the faculty: President, Dr. E. J. Beall; vice-president, Dr. J. T. Field; secretary, Dr. E. D. Capps; and dean, Dr. B. Saunders.

**Filtered Water for the Soldiers.**—In an endeavor to supply the soldiers in camp with pure water and thus lessen the danger of infection, the Government has determined to supply all the camps with filters. It is anticipated that two filters will suffice for the needs of each company.

**Cold Tea as a Soldier's Beverage.**—The *Scientific American* for July 2d calls attention to the great value of cold tea flavored with a few drops of lemon-juice, and cites Sir John Hall, K.C.B., on the Kaffir war of 1852, in which a march of a thousand miles was covered by 200 men in 71 days on cold tea without either wine, spirit, or beer. The experience of Indian officers, and of Lord Wolseley is also quoted, and the example of the Canadian lumbermen is cited. It contains a maximum of thirst-quenching energy in a minimum of space.—[*New York Medical Journal*.]

**Lane Medical Lectures.**—The third course of lectures inaugurated in Cooper Medical College of San Francisco, Cal., in 1896, by Dr. L. C. Lane, President of the College, will be given in 1898 by Dr. Thomas Clifford Allbutt, Regius professor of physic, University of Cambridge, England. These lectures, on Diseases of the Heart, will be as follows: July 18th, 11 A.M., Cardiac Physics; 8 P.M., Functional Diseases of the Heart; July 19th, 11 A.M., Strain of the Heart; 8 P.M., Chronic Cardio-Arterial Disease; July 20th, 11 A.M., Senile Plethora; 8 P.M., Angina Pectoris; July 21st, 11 A.M., Aortic Valvular Disease; 8 P.M., Valvular Mitral Disease of the Heart; July 22d, 11 A.M., Pericarditis; 8 P.M., Advance of Medicine during the Nineteenth Century.

**The following official advice for soldiers in Cuba** was issued by Lieut.-Col. Benjamin F. Pope, Chief Surgeon of the Fifth Army Corps, prior to the embarkation of the troops: The chief surgeon issues the following memorandum of instructions to the soldiers of this command for the preservation of their health in the tropics: The body adapts itself readily to changes of climate. You do not require any special preparation for the climate of Cuba. You should meet the heat in the same way that you do in the summer season in the North. Avoid, therefore, the use of medicines that are recommended to protect the body against the action of climate. The danger in the tropics does not come from the direct action of the climate. The danger is due to the presence in some districts of the warm country of the microbes of certain diseases. There are no medicines that will protect us from these diseases. The chief measures for their prevention will be instituted by your commanding officer. Do not take quinin regularly when your health is good. Do not take purgatives when the bowels are regular. Drink boiled water when you cannot get natural spring-water. Stagnant surface-water is specially dangerous. If possible, drink water only at meal-time. The fruits of the country are wholesome when eaten in season. Avoid unripe and unsound fruits. Peel all fruits before eating. Use as little alcoholic beverages as possible. The clothing should be light and loose. When wet from rain or sweat remove it for drying, and rub the body briskly with a towel. Bathe in running streams, once a day if possible. Keep the body clean. If exposed to drafts when perspiring freely put on some extra covers. Sleep with dry clothes. The health of the command will depend, to a great extent, upon the strict observance of orders not to communicate with suspected people or places. All sickness should be reported at once to a medical officer.

**Beware of the Manchineal Tree.**—The following circular, prepared by Dr. J. T. Rothrock, Commissioner of

Forestry, Department of Agriculture of the Commonwealth of Pennsylvania, has been published and distributed by direction of Hon. Daniel H. Hastings, Governor of the Commonwealth:

#### SOLDIERS!

#### BEWARE OF THE MANCHINEAL TREE!!

*It grows along the seashore in Cuba, and the West India Islands generally.*

It is from 40 to 50 feet high, has oval, pointed, toothed, shining leaves, which are from 3 to 4 inches long.

When the fresh leaves are pulled off a drop of milky juice comes from the leaf stem.

The fruit is a yellowish green, fragrant, and somewhat resembles an apple in shape.

If bitten into it makes the mouth very sore for a time and may produce serious results.

After handling any part of the tree—root, leaves or fruit—rubbing the eyes may cause them to become seriously inflamed.

Mucous membranes (such as the red margin of the lips or eyes, or anus) are particularly subject to its poisonous effect.

It is said by many of the natives to cause poisonous effects even if the tree is not touched, but by simply being in its neighborhood.

Many persons are alleged to have been injured from being under the tree during a shower, when the drops of water fell upon them from the tree.

Some persons are more sensitive to the effect of this poison than others. In fact there are a few who are not affected by it at all, just as is the case with our poison-oak or poison-ivy, the chief difference being that the manchineal affects the mucous membranes, above alluded to, more than the skin proper, whereas the poison-ivy affects the skin much more frequently than it does the mucous membranes.

Many persons of experience in the tropics assert that it is unwise to camp near this tree.

If poisoned by the manchineal, and beyond reach of your surgeon's help, the best thing to do is to wash the part affected freely with salt-water.

It is sometimes called by the natives manzanilla (pronounced man-za-ne-ya).—[*Journal Amer. Med. Association*.]

**Obituary.**—DR. LOUIS E. LIVINGOOD. In the early morning of July 4th the French liner, *La Bourgogne* collided in a fog with the British steamer *Cromartyshire* and soon afterward sank. No more dreadful calamity at sea has happened in many years. Among the many who perished we note with special regret Dr. Louis E. Livingood of the Johns Hopkins Medical School. Dr. Livingood was a native of Reading, Pa., and graduate in arts of Princeton University, at which institution he afterward became instructor in Romance languages. Later he entered the medical department of the University of Pennsylvania, graduating in 1894. He then became a resident physician in the Presbyterian Hospital of Philadelphia. The next year he spent in the Johns Hopkins Medical School and Hospital, where he served in succession upon the medical staff and in the pathological department. In the latter he first filled a fellowship for one year and afterward was chosen assistant in pathology. At the close of the last academic year he was promoted to the associateship in the same branch. At the time of the sad accident that resulted in his death, Dr. Livingood was on his way abroad to spend six months in study in German universities. Dr. Livingood, although only 31 years of age, and a graduate in medicine of very few years, had made for himself an enviable position among the younger men in his profession. His published researches had already brought him attention, and those on which he was engaged at the time of his departure for Europe promised to be of still greater interest. It will be a suitable tribute to his memory for those with whom he was associated to prepare for publication these



later studies. In other fields, and notably as a teacher, Dr. Livingood gave promise of a useful and distinguished career. The loss suffered by the medical profession is therefore only less severe than that of his immediate friends and family. There are few assuaging circumstances to such an end as Dr. Livingood's, and the curtain of charity may well be drawn over the accounts of the passionate and brutal struggle for life that took place as the ship went down; but a ray of light in the general gloom is afforded by the reflection that in those last awful moments of trial his conduct must have been that dictated by his own sterling character and the courage and contempt of self that are so often exemplified in members of his chosen profession.—**DR. JOSEPH M. TURNER**, Brooklyn, July 3d, aged 82 years.—**DR. JOHN MILLSPAUGH**, Equity, Ill., June 17th, aged 83 years.—**DR. JOHN B. HAYS**, of New York City, July 11th, aged 69 years.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army.

Acting Asst. Surgeon J. C. HASKELL will proceed to Fort Bliss for duty.

Acting Asst. Surgeon M. K. KNAPP will accompany Troop K, 8th Cav. to Fort Keogh and take station at that post.

Acting Asst. Surgeon THOMAS ASH CLAYTON will proceed to Key West, Fla., and report to Maj. WILLIAM R. HALL, Surgeon, in charge of U. S. General Hospital at that place for duty.

Acting Asst. Surgeon E. H. NORTON will proceed from Boston, Mass., to Tampa, Fla., for assignment to duty.

Maj. ALFRED E. BRADLEY, Brigade Surgeon, will proceed to Fort Monroe, Va., and report to Maj. GEORGE H. TORNEY, Surgeon, in charge of the U. S. Hospital Ship "Relief" for duty.

The following-named Acting Asst. Surgeons will proceed to Fort Monroe and report to Maj. GEORGE H. TORNEY, Surgeon, in charge of the U. S. Hospital Ship "Relief," for transportation to Santiago de Cuba, where they will report to Maj. Gen. William R. Shafter for assignment to duty: JAMES T. ARWINE, JOHN R. HICKS, RUFUS D. BOSS, JESSE RAMBERG, HENRY L. BROWN, CHARLES C. MARRIOTT, JESSE M. V. MACKALL, A. A. SNYDER, and STANLEY WARREN.

Asst. Surgeon Capt. HENRY R. STILES, now on duty with the U. S. hospital train, will, in addition to his present duties, perform those of Acting Assistant Quartermaster in matters relating to the service of the train.

Acting Asst. Surgeon HUMPHREY BATE, JR., will proceed from Castalian Springs, Tenn., to Chickamauga Park for assignment to duty.

Acting Asst. Surgeon FREDERICK R. DOLSON will proceed from New Orleans, La., to Fort St. Philip, La., for duty.

Acting Asst. Surgeon SAMUEL W. KELLEY will proceed from Cleveland, Ohio, to Tampa, Fla., for assignment to duty.

Lieut. Col. CHARLES SMART, D. S. G., will proceed to Camp Alger, Va., for the purpose of making a careful inspection into and report upon, the sanitary condition of that post, giving special attention to the water-supply, and to the etiology of cases of typhoid fever occurring in that camp.

The retirement from active service of Major ROBERT H. WHITE, Surgeon, under the provisions of Section 1243, R. S., and upon his own application, after thirty years' service, is announced.

Acting Asst. Surgeon OTWAY W. RUSH will proceed from Madisonville, N. Y., to Fort Monroe, and report to Maj. CALVIN DE WITT, Surgeon, in charge of U. S. General Hospital at that place, for duty.

Acting Asst. Surgeon BAEN STREET, will proceed from Sheridan Point to Fort Monroe, and report to Maj. CALVIN DE WITT, Surgeon, in charge of U. S. General Hospital at that place, for duty.

Acting Asst. Surgeon EZEQUIEL DE LA CAELE is relieved from duty with the Seventh Army Corps, and will proceed to Fort Monroe and report to Maj. CALVIN DE WITT, Surgeon, in charge of U. S. General Hospital at that post, and there await transportation by steamer "Grand Duchess" to Santiago de Cuba, upon arrival at which place he will report to Major General William R. Shafter for assignment to duty.

Acting Asst. Surgeon H. C. CLINE will proceed to Fort Monroe, and report to Maj. CALVIN DE WITT, Surgeon, in charge of U. S. General Hospital at that post, and there await transportation by the steamer "Grand Duchess" to Santiago de Cuba, upon arrival at which place he will report to Major General William R. Shafter for assignment to duty.

The following-named acting assistant surgeons will proceed to Fort Monroe, Va., and report to Major CALVIN DE WITT, Surgeon, in charge of U. S. General Hospital at that post, and there await transportation by the steamer "Grand Duchess" to Santiago de Cuba, upon arrival at which place they will report to Major General William R. Shafter, commanding U. S. troops, for assignment to duty: JOHN D. THOMAS, EDWARD J. MEYER, CHARLES BREWER, JOSEPH L. SANFORD, and JOHN W. WRIGHT.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon H. H. I.

July 5th.

Asst. Surgeon T. G. OBELL, ordered to the "Vermont" immediately. Surgeon R. C. PERSONS, ordered to the Navy Department immediately.

Asst. Surgeon E. O. HUNTINGTON, detached from the naval recruiting rendezvous, Boston, Mass., and ordered to the Naval Hospital, Norfolk, Va., immediately.

Asst. Surgeon J. H. PAYNE, ordered to the naval recruiting rendezvous, Boston, Mass.

Medical Director J. B. PARKER, medical director, with relative rank of captain, June 15th.

Surgeon R. C. PERSONS, after order of the 6th instant is completed, to assume charge of Naval Hospital, Portsmouth, N. H.

Surgeon E. Z. DORR, relieved from temporary duty at the Naval Hospital, Portsmouth, N. H.

Asst. Surgeon McC. LIPPITT, appointed June 27th.

### Foreign News and Notes.

Unsigned items and those not otherwise credited are based on original communications furnished by Physicians acting as Special Resident Correspondents to the PHILADELPHIA MEDICAL JOURNAL.

**Dr. Victor Fossel** has been appointed professor of the history of medicine at the University of Graz.

**The prevention of tuberculosis in cattle** is the subject of an inquiry by the Government of the Netherlands.

**The Plague in the East** has declined to such an extent that the necessity of periodic returns is no longer felt by the British Home-Office.

**Prof. H. Oppenheim**, of Berlin, has been made corresponding member of the Society for Mental and Nervous Diseases of Moscow, Russia.

**The Hospital Sunday-Fund**—a sum of money collected annually for the benefit of the London hospitals—amounts this year to £30,700.

**A Chair of Public Health and Sanitary Science** is to be established at Edinburgh University, and will be known as the Bruce and John Usher Chair of Public Health.

**Dr. Geza v. Mihalkovics**, professor of anatomy and embryology in the University of Buda-Pest, has been elected rector of the university for the academic year 1898-99.

**Award of the Jenner Medal.**—The first award of the Jenner medal of the Epidemiological Society of London has been made to Mr. William Henry Power, F.R.S., Senior assistant medical officer of the Local Government Board.

**The German Otological Congress** met in annual session at Würzburg during Whitsun week, under the presidency of Professor Bezold, of Munich. It was determined that a memorial should be erected to Professor von Tröltzsch, a teacher at the University of Würzburg from 1864 until his death in 1890. The next meeting will be held in Hamburg.

**A pocket-knife blade embedded in the skull** and projecting for  $\frac{1}{4}$  inch into the cranial cavity was an unlooked-for discovery at an autopsy in the Pathological Institute of the Charité (Virchow's laboratory) in Berlin not long ago. The blade had wounded the outer, cellular or periosteal layer of the dura, but had pushed the fibrous layer before it. There had been no inflammatory reaction and no symptoms seem to have occurred. There was no history to account for the presence of the knife-blade. The friends of the patient could recall nothing that might furnish an explanation for what might easily have proved a fatal wound.

**Beiträge zur Geburtshilfe und Gynäkologie** is the title of a new journal announced for publication at the commencement of this month. It will be published in Leipzig by Arthur Georgi, under the editorship of Dr. A. Hegar.

**Cremation on the Continent of Europe.**—The Storthing, the Norwegian legislative body, recently passed a law permitting this manner of disposing of the dead. The Bavarian national legislature has just referred a law to the same effect to the Ministry for consideration, though other measures of the same kind have always been killed in committee or by being laid on the table.

**Koch and Texas Fever.**—The protest of the *British Medical Journal* as to Koch's seeming failure to give credit to others for discoveries in connection with Texas fever, is of course due to the incompleteness of the telegraphic accounts of his lecture. As stated by our Berlin correspondent, the acknowledgment of Prof. Smith's work was ample and most generous. Americans who were present were proud of their distinguished compatriot.

**Consumption of Horse-flesh in Paris.**—Because of the continued increase in the consumption of horse-flesh the Municipal Council of Paris is reported to be considering the advisability of establishing a special slaughter-house for horses. The first shop for the sale of horse-meat was opened in 1866, and during the following year 2,152 horses were consumed. During 1897, 14,840 horses, 257 donkeys, and 40 mules—a total of 15,137 animals—furnished food for Parisians.

**Obituary.**—FERDINAND COHN, Professor of Botany at the University of Breslau for the past 30 years, aged 70 years. His name is associated with the first efforts to classify bacteria and microbes generally according to botanical characters. He was one of four brothers, one of whom is professor of ophthalmology at Breslau; a second is professor of medicine in Holland, and the third is a well-known German playwright.—DR. CORNELIUS HERZ, at Bournemouth, England, July 7th, aged 53 years.—DR. ANTON KERNER, professor of botany in Vienna.

**A case of ticking in the ear,** but also objectively audible, was presented before the Verein für Innere Medizin, Berlin, at its last meeting by Prof. Bernhardt. The case was one of those rare clonic spasms of the soft palate, pharyngeal pillars and pharyngeal muscles, whose etiology neurologists have found it so hard to explain. It is sometimes associated with convulsive tic of the face, but here was absolutely a unique set of symptoms, there being no hysterical stigmata. The sound that could be heard some feet from the patient seemed to be due to the muscular opening and subsequent collapse of the Eustachian tubes. It occurred over 100 times a minute. Many of the death-watches heard in the ear and considered of such ominous significance in more superstitious times, probably had some such physical basis as this for their occurrence.

**Transportation of the Sick and Insane of Paris.** M. Chassaigne has recently laid before the Municipal Council of Paris certain propositions, in brief, as follows: An ambulance, ready to answer a call at any hour of the day or night, and to be attended by two of the hospital-staff, is to be kept at each of the 14 hospitals connected by telephone with the city-hall, the police and ambulance-stations, the principal druggists' shops, the chief factories, etc. A special course in first aid to the sick and injured for the members of

the police force will be organized. The duties of the police will be to remove the sick and injured to the nearest hospital in case the ambulance is detained. A closed carriage for the transportation of maniacs, and accompanied by attendants skilled in the management of the insane will be kept at the Police Prefecture, and will be at the disposal of the police-commissaries.

**A case of filaria medinensis,** or guinea-worm, from Prof. Senator's clinic, was exhibited recently before the Verein für Innere Medizin of Berlin. It occurred in a negro from Togo, a German colony in East Africa, who is one of a troupe of Africans on exhibition at the Panopticon (Berlin's Dime Museum). From what seemed an ordinary leg-ulcer near the malleolus, but had proved very obstinate to treatment, the end of a worm was found projecting one morning when the dressings were removed. Since then the worm has continued his egress at the rate of from 1½ to 3 cm. a day, over 25 cm. (10 inches) having so far appeared and been wound around the little stick that is kept at the wound to prevent rewithdrawal into the tissues. Great care is being taken not to injure the worm, as its death or rupture is followed by the escape of the embryos into the tissues and is often followed by severe erysipelatous inflammation that may cause gangrene or pyemia.

**Belgian Physicians and the Abuse of Medical Charity.**—Belgian medical men are said by the German medical journals to be at odds over the question that is attracting the attention of the medical profession almost universally, the abuse of medical charities. Owing to a protest on the part of the Belgian Medical Society, that the public polyclinics were treating a number of patients free who could well afford to pay for treatment, or at least could pay a small fee, and so were depriving physicians of their rights, the Belgian Minister for Medical Affairs drafted a law for the regulation of dispensaries, and of the relations of physicians to each other. This was followed by a series of resignations of prominent medical men from their positions in public dispensaries on the pretext that the government was attempting to meddle in a purely private professional matter. The Ministry has continued its effort, however, to introduce legal regulations of these matters, and there the question rests.

**Gonville and Caius College, Cambridge,** has been celebrating its 550th anniversary, and the event is one of interest for medical men all over the world, for the college, known everywhere by its brief title of "Caius," has been during over 300 years of its long life the center of medical education at Cambridge University, as Cambridge University has herself been always in the van of the medical thought of England. The second foundation of Gonville and Caius College, the date of which was 1557, conferred on it the medical stamp, for Dr. John Caius, who undertook at his own expense the re-endowment of Gonville Hall, was a distinguished physician, and while master of his college was also President of the Royal College of Physicians of London. Caius was a great classic scholar, as well as being the pupil of Vesalius, and his example of learning, as much as his munificence, raised his college at once to the high rank in the University that it at present enjoys, and that has grown more apparent than ever during the last few years, when the Cambridge University Medical School has become one of the largest and best in the kingdom.

**The Sanitary Institute of Great Britain.**—The sixteenth congress of the Sanitary Institute which will be



presided over by Sir Joseph Fayrer, the celebrated authority on snake-poisoning and late President of the Indian Medical Board, will be held in Birmingham from September 27th to October 1st. The Congress will include three sections: (1) Sanitary Science and Preventive Medicine, presided over by Dr. Alfred Hill, of Birmingham; (2) Engineering and Architecture, presided over by Mr. W. Henman, F.R.I.B.A.; (3) Physics, Chemistry and Biology, presided over by Dr. Sims Woodhead. Five special conferences will also be held: (1) Municipal Representatives, presided over by Alderman W. Cook, chairman of the Health Committee of the Birmingham City Council; (2) Medical Officers of Health, presided over by Dr. John C. McVail, Medical Officer of Health of Glasgow; (3) Municipal and County Engineers, presided over by Mr. T. de Courcy Meade, M. Inst. C. E.; (4) Sanitary Inspectors, presided over by Mr. W. W. West, Chief Sanitary Inspector, Walthamstow; and (5) Domestic Hygiene, presided over by Mrs. C. G. Beale, the Lady Mayoress of Birmingham.

**Immunity to Insect-stings.**—Dr. Langer, of Brunswick, has been collecting statistics among German bee-keepers as to the immunity, natural and acquired, against the poison introduced by the sting of bees. Of 200 bee-keepers 9 affirm that they never have suffered any inconvenience from a bee-sting, the slight prick of the sting itself being practically unnoticed and no reaction following. One hundred and forty-four bee-farmers say that they acquired their immunity to stings only in the course of the year, and after repeated stings. Twenty-six, despite many years of attendance on bees, and repeated stings, are just as susceptible now as they ever were to the bee-virus. In the cases of the remaining correspondents the details given were too unsatisfactory for statistical classification. Where immunity was acquired, various numbers of stings, from 30 to 100, were stated as necessary for its production. The favorite remedies among the bee-keepers for the stings are potassium permanganate and ammonia. These two remedies are also put forward as most effective for the stings of other insects, ants, fleas, mosquitos, bugs, etc., though for the stings of these also an immunity is said to exist, a specific immunity for each, which opens up a vista of possibilities as to the impressionableness of cells or serum that seems endless in perspective.

**The Sale of Poisons in Great Britain.**—The Duke of Devonshire has introduced into the British House of Lords a bill for the better regulation of the sale of poisons. The frequency of deaths from carbolic-acid poisoning is mainly responsible for the new bill, while the growing use of antiseptics for domestic purposes makes the demand for carbolic acid very large. The Duke of Devonshire stated in the House that of 579 deaths that had occurred in 1895 and 1896, owing to the use of carbolic acid, cresylic acid and one or two other poisons, 468 were due to suicide, and the remaining 111 to accident, showing clearly that the facilities for the purchase of these deadly substances are at present too great, and that there is carelessness on the part of both vender and public in the matter of labeling and storage. Under the new bill carbolic acid, cresylic acid, butter of antimony, zinc chlorid and its solutions, sugar of lead and other salts of lead, hydrochloric, nitric and sulphuric acids—unless diluted in accordance with the directions of the British Pharmacopoeia—must be sold as arsenic and strychnin, for example, are at present sold, in vessels bearing the label "poison," and the name and address of the vender. Lest the timid patient, however, be scared at the presence of this omi-

nous label on bottles the contents of which he has to swallow, discretion is allowed in the matter of pharmaceutical preparations, in the case of which the words "to be used with caution" may be substituted for the word "poison" on the label.

**The Case of Dr. W. M. Collins**, which has already been alluded to in our columns, came on for trial at the London Criminal Court on June 30th. Dr. Collins is charged with wilful murder of what in the English courts is termed the constructive sort, that is he is stated to have caused the death of his patient by unskilfully performing upon her an illegal operation to bring about an abortion, while it is not suggested that he bore her personally any ill will. The prosecution, which is undertaken by Sir Richard Webster, the Attorney-General, for the crown, has been able to put forward a strong *prima facie* case. Sir Richard desires to prove that the victim was a perfectly healthy young woman, and pregnant when she consulted Dr. Collins, and that from that time forward she became ill. That her illness, however caused, was due to purulent peritonitis is not in dispute. At the postmortem examination a ragged septic wound was found in the uterus. The outline of the defense has already been foreshadowed by the trend of cross-examination. It will be urged in the prisoner's behalf that the victim was at the time of her visit to Dr. Collins an unhealthy woman who had already previously suffered from peritonitis, that she was not pregnant, and that the treatment of her morbid condition by the proper process of curing the womb had unfortunately set up septic processes. The prosecution is relying upon expert medical evidence; the defense is content simply to deny the value of that evidence. The trial is causing the greatest possible excitement in social as well as medical circles, as the crime of which Dr. Collins is accused is believed—upon very slender grounds, it should be added—not to be uncommon among a baser sort of practitioners.

## Philadelphia News and Notes.

**Ptomain-poisoning in Philadelphia** has, it appears, been rather frequent of recent date. Ten persons in three families, in Frankford, are reported to have been poisoned by eating ham, but all recovered. A man in Jenkintown became seriously ill after partaking of an oyster-stew, and died, despite prompt medical aid.

**Infectious Diseases in Philadelphia** for the week ending July 9th:

Disease.	Cases.	Deaths.
Diphtheria.....	49	12
Scarlet fever.....	17	2
Typhoid fever.....	51	13
Pulmonary tuberculosis.....		41

**Dr. Archibald G. Thomson** has been commissioned major and surgeon of United States Volunteers, being assigned to the Third Pennsylvania Regiment at Tampa. He succeeds Dr. Edward Martin, who has been made Brigade-surgeon. Dr. Thomson was for 5 years assistant surgeon to the Third Regiment, subsequently becoming surgeon to Battery A, and being barred out when the National Guard was mustered into the volunteer service because of the rule that no surgeons are allowed to single batteries. He was recently appointed Brigade-surgeon of the Provisional National Guard of Pennsylvania, on General Morrell's staff. Dr. Thomson is the son of Dr. Wm. Thomson, who took an active part in the medical affairs of the Civil War.



## Society Proceedings.

### AMERICAN MEDICAL ASSOCIATION.

Forty-ninth Annual Session, Held at Denver, Col.,  
June 7, 8, 9, and 10, 1898.

(Special Report for THE PHILADELPHIA MEDICAL JOURNAL.)

(Continued from p. 95.)

#### Section on Ophthalmology.

**On the Predominance of German Influence in Modern Medicine and Surgery.**—DR. HAROLD GIFFORD, of Omaha, considers the well-known fact that the solid basis of facts upon which modern medicine rests have been contributed in an overwhelming proportion by the Germans, and in looking for the cause of this condition, he concludes that it is not due to any marked superiority of the German intellect, but that it is best explained by the greater incentive furnished the young physician by the German environment and that of this environment the prime factor in the stimulation of scientific research is the plan pursued in the appointment of university-professors. The Germans are looked upon as a nation of savants, but the rank and file of the medical men in Germany do little, if any more, research-work than is done by the average in this country. The great part is done by the younger professors, or those who hope to become such; most of all by the privat-docenten, young men, who for the best years of their lives, defer matrimony and financial advancement to devote their whole energy to original work, each knowing that with good ability, industry and sincerity, he is sure to be rewarded by a professorship, or some other important position. The German custom is to select the members of faculties from any part of the country and not from the local district in which a given university may chance to be located, bestowing the honor as a reward of merit. This eliminates social, political and institutional influences, which play such an important part in this country when a professorship is to be filled. It is questionable whether, in view of the peculiar conditions existing in this country, the German plan could be made to work satisfactorily, but it would be much better for the future of American medicine if some such a system should be made to prevail.

**Glioma of the Retina.**—DR. J. L. THOMPSON, of Indianapolis, reported 17 cases of retinal glioma, of which 5 occurred within three generations of one family. Of 7 cases not operated upon death resulted in all. Of the other 10 recovery followed in those operated upon early. In the discussion Drs. HOLMES, ALLPORT, MINNEY, ELLETT, BEARD, STARKEY and REYNOLDS all reported cases in which life had been saved by the early recognition of, and operation for, glioma.

**A Case of Mathematically Perfect Eye.**—DR. GEO. M. GOULD, of Philadelphia, reported a case of subconjunctival hemorrhages due to an error of refraction. The patient had been examined by careful men and his eyes pronounced mathematically perfect. An examination under a mydriatic, however, discovered a low degree of myopic astigmatism at reversed axes. Correction of this with proper glasses prevented further recurrence of the trouble. The use of mydriatics in refraction-work, and especially when presbyopia exists, was insisted upon. DR. C. D. WESTCOTT stated that he had been for some time using mydriatics even in very old people, and he believed it fully as important to correct the low degrees of errors of refraction after 40 years as before.

**The Galvanic Current for the Treatment of Pterygium.**—DR. H. M. STARKEY, of Chicago, advocated the use of electricity in the treatment of small pterygia that have not encroached far upon the cornea. A fine platinum needle connected with the positive pole of the battery is introduced through the conjunctiva near the apex of the growth and at right angles to the direction of its growth. The advantages claimed for this method are that it avoids loss of tissue, is painless, does not incapacitate the patient, stops the pterygial process, and is as free from recurrence as any other method.

**Faradism in Choroiditis.**—DR. R. F. LE MOND, of Denver, reported a number of cases of choroiditis with opaque vitreous and greatly reduced vision treated with the faradic current with good results. DR. LEARTUS CONNOR stated that he had used electricity in a few cases of choroiditis, but he had not been able to determine that it had any appreciable effect upon the course of the disease. DR. MINNEY suggested that Dr. Le Mond's success might have been partially due to the large doses of antisyphilitics used at the same time. DR. LE MOND replied that many of his cases had been getting worse under the use of the antisyphilitics and only improved when the faradic current was employed.

**Phlyctenular Keratitis.**—DR. D. S. REYNOLDS, of Louisville, believes that Horner's notion of the relation existing between eczematous eruptions of the skin and the anterior nares and the phlyctenular diseases of childhood is not always apparent but nearly constant. The conditions that predispose to these local disturbances are essentially constitutional and no local treatment is in any large proportion of cases to be regarded with favor. On the other hand constitutional measures are of the first importance and may alone be relied upon even in complicated cases, so far as the eye is concerned as a participating organ. Drs. HOLMES, THOMPSON and ELLETT spoke of the advantages of constitutional treatment in these cases, but all used local measures also. DR. CONNOR remarked that this disease had been much less common in the city of Detroit since the opening of their Island Park, a public resort in the Detroit River, where the children of poor people are taken frequently during the summer months. DR. YOUNG spoke of the value of small doses of calomel in these cases and laid stress upon the importance of a proper preparation of the yellow-oxid ointment for local use. Drs. BLACK and NORTON considered the importance of prescribing the diet in phlyctenular troubles.

**The Frequency of Senile Opacity in the Crystalline Lens and the Proper Definition of Cataract.**—DR. EDWARD JACKSON, of Denver, finds the great majority of senile cataracts to appear after the age of 50, and he considers among the important causative factors age, eye-strain, and diminished lens nutrition, brought about, probably, through changes in the use of accommodative power. He objects to the use of the word "cataract" in all cases of lens-opacities, as many such opacities are checked in their progress by attention to the refraction and the general health of the patient, and the patient will have been needlessly alarmed by the knowledge that he has a cataract. Drs. HOTZ and ALLPORT reported cases in which cataract had been diagnosed and the patients told to prepare for operation in the near future, and yet, after 20 or 30 years, the eyes remained in the same condition as when first seen. DR. SAVAGE spoke of the effect of the ciliary muscle upon the nutrition of the lens, and believed, that by regular exercise of the ciliary muscles old sight and cataract might be prevented. DR. CONNOR agreed with Dr. Savage as to the question of the nutrient supply of the lens, but dissented from his opinions concerning ciliary exercise.

**A Form of Corneal Turbidity Easily Overlooked.**—DR. HENRY GRADLE, of Chicago, called attention to a form of corneal cloudiness that is occasionally seen in patients complaining of asthenopic symptoms rather more severe than those usually attending refractive errors. This corneal turbidity appears to be simply an exaggeration of the normal cloudiness, and can be seen with a highly magnifying lens and lateral illumination. DR. LAUTENBACH called attention to the fact that the turbidity spoken of was best seen by means of the incandescent filament. DR. GIFFORD spoke of a form of opacity that he had been observing for some years, and which he called "normal opacity of the cornea." He thought these little cloudy spots represented the lymph-corpuscles of the cornea, and that they were more prominent at times because of their filling up with leukocytes.

**Bacteria One of the Chief Etiologic Factors in Diseases of the Eye.**—DR. E. O. Sisson, of Keokuk, Iowa, gave an extensive review of the literature to show the number of eye-diseases that had been found to be due to some specific organism.

**Conclusions from Some Clinical and Bacteriologic Experiments with Holocain.**—DR. R. L. RANDOLPH, of Baltimore, recited experiments tending to show that a solution of holocain, of the strength employed in



ophthalmic practice, possesses distinct germicidal properties. DR. WURDEMANN, HOTZ, WESTCOTT and ELLETT spoke of the clinical advantages possessed by holocain in comparison with cocain. It is cheaper, induces anesthesia as quickly and does not dilate the pupil or interfere with accommodative power. Its one disadvantage, perhaps, is that it does not contract the arterioles and hence in muscle-operations hemorrhage is more free than when done under cocain.

**Five Cases of Congenital Bilateral Dislocation of the Crystalline Lens in Three Successive Generations.**—DR. EDWARD T. PARKER, of Charleston, treated 5 cases occurring in a mother, one daughter and three grandchildren (two boys and one girl). In all the dislocation was upward or upward and outward. DR. W. H. WILDER reported a somewhat similar series of cases in which the mother, daughter and two grandchildren were affected. DR. FOX spoke of the difficulty of operating on these cases. DR. STARKEY reported a family in which the mother and 7 children had double ectopia lentis.

**An Additional Case of Double Congenital Microphthalmus.**—DR. C. D. WESTCOTT, of Chicago, reported the case of a child of two years, said to have been blind from birth, though there was evidently some vision in the left eye. Both eyes were very small and the cornea and iris defective.

**The Use of Aluminum for an Artificial Vitreous.**

—DR. D. C. BRYANT, of Omaha, suggested the use of an aluminum frame instead of a hollow ball for an artificial vitreous, contending that the hollow framework becomes filled in with new tissue and is hence less likely to slough out, as occasionally happens with the ball. DR. L. WEBSTER FOX urged the adoption both of Mule's operation and the operation of implantation. He reported some cases in which he had performed Mule's operation even after symptoms of sympathetic trouble had begun and the results were very good. He believed the glass ball to be satisfactory.

**A New Perimeter.**—DR. C. H. WILLIAMS, of Boston, described a new perimeter consisting of a Forster perimeter with a broad semicircular arc bearing an electric attachment so that one lamp, of one candle-power, can be used as the fixation-point and the other can be moved along the arc for the test-object. By using this in the dark room the illumination is a measured quantity and hence always the same. For making the color-fields colored glass may be inserted in front of the movable lamp. The mechanism bearing the charts is such as to render the instrument self-recording.

**Some Severe Cases of Tobacco and Quinin Amblyopia.**—DR. E. C. ELLETT, of Memphis, reported several cases of toxic amblyopia each having one or more peculiar features, but all being due to the abuse of tobacco, alcohol or quinin. He also exhibited charts showing the changes in the visual fields of these cases.

**Some Results in Cases of Tobacco-Amblyopia.**—DR. L. J. LAUTENBACH, of Philadelphia, related a number of cases of tobacco-amblyopia, in some of which the patients had gotten well even though they continued chewing tobacco, and he suggested the following method of treatment: absolute cessation of smoking, the use of potassium iodid and strychnin in increasing doses, frequent applications of hot lotions to the eye and general hot baths to be taken every night. He believes that these latter measures have aided him very materially in securing good results.

**Amblyopia from Autointoxication.**—DR. H. B. YOUNG, of Burlington, Ia., reported 6 cases of amblyopia in which no definite cause could be determined, but in all of which there were present marked digestive disturbances and in 4 of which he noticed that the breath had a peculiar foulness of odor that was distinctive but indescribable. DR. HOTZ reported an interesting case of tobacco-alcohol amblyopia with sudden failure of vision. The man had written out a lodge-report and two hours later was unable to read it. DR. CASEY WOOD related some animal-experiments that led him to believe that there may be an element of truth in the autointoxication-theory. DR. DUDLEY S. REYNOLDS and DR. CONNOR each reported cases of amblyopia due to the excessive use of coffee or tea. DR. BRYANT reported a case in which 15 grains of quinin would at any time markedly reduce the vision.

**On the Use of Epithelial Grafts for Replacing the Ocular Conjunctiva.**—DR. F. C. HOTZ, of Chicago,

reported some cases of pterygium and symblepharon successfully treated with the epithelial lip flaps suggested recently by Dr. Gifford. This method consists in cutting thin epithelial flaps from the mucous membrane of the lips by the use of a razor. These flaps have the advantage over Thiersch's skin-grafts that mucous membrane and not skin is applied to a mucous surface. DR. W. L. DAYTON said that at the suggestion of Dr. Hotz he had treated a case of pterygium in this way and the result was very satisfactory.

**Regular Astigmatism is not Always Congenital, Neither is it Unchangeable.**—DR. W. C. BANE, of Denver, reported a number of cases illustrating the development and changes that occur in regular astigmatism. The second and third examinations in some of these cases, at intervals of a few years, showed a change not only in the amount of astigmatism but in the axes. DR. HOTZ stated that in a recent examination of his case-book he had been surprised to find a large number of cases that had been examined a few years ago, and that recently on re-examination showed marked changes in the astigmatism. He reported some cases in which a change from emmetropia to myopic astigmatism had occurred, others of gradually increasing myopic astigmatism and still a third class in which there had been an increase in the hypermetropic astigmatism. DR. WURDEMANN called attention to the temporary astigmatism, often considerable in amount, that accompanies blepharitis and is due to lid-pressure. DR. NORTON related a case in which a marked temporary change in the astigmatism had been produced by the pressure of a chalazion. DR. JACKSON and DR. GRADLE related cases in line with those reported by Dr. Hotz. DR. GRIGG referred to the use of tablets of homatropin and cocain, and stated that he believed cocain had the effect of producing transient astigmatism.

**Some Causes of Failure in Treating Diseases of the Lacrimal Apparatus.**—DR. LEARTUS CONNOR, of Detroit, suggested that fewer failures would attend the treatment of lacrimal obstruction if the operator in each case recognized and treated the chronic constitutional disorder that caused the obstruction; removed all eye-strain; and made sure that the naris adjacent to the opening of the lacrimal duct was rendered healthy.

**The Use of Large Probes in Stricture of the Lacrimal Duct.**—DR. G. M. BLACK, of Denver, urged the use of large probes in the treatment of chronic cases and stated that he always began with as large a probe as possible at the first sitting. He then attaches the negative pole of a galvanic battery and allows a current of 2 or 3 milliamperes to pass for 10 minutes.

**The Value of Large Probes in the Treatment of Lacrimal Stricture.**—DR. H. O. REIK, of Baltimore, reported 130 cases treated with the large probes under the supervision of Dr. Theobald until pronounced cured; 40 of these were kept under observation for periods varying from 1 to 8 years and relapse had occurred in only 2 cases.

**Extirpation of the Lacrimal Sac and Gland.**—DR. C. R. HOLMES, of Cincinnati, advocated extirpation in those very severe chronic cases in which treatment of the obstruction has not been successful. DRs. REYNOLDS, ALLPORT and MINNEY insisted upon attention being paid to the general health and to disturbances in the nose. DR. GOULD spoke of the importance of relieving eye-strain in many cases. DR. WOOD pointed out that one valuable way of using the probes was to instruct the patient to introduce them himself. DR. FOX thought there was some advantage in using a cannula after the large probes had been employed to restore the passage, and he exhibited a new style of cannula.

**Report of a Few Cases of Acute Glaucoma.**—DR. H. BURT ELLIS, of Los Angeles, reported several cases of glaucoma, one of which was caused by a partial dislocation of the lens. DR. THOMPSON spoke of the fact that the pathology of glaucoma is as yet not known, and he thought there would be much work to do before a satisfactory theory could be formulated. DR. GOULD reported some cases showing the value of massage in the treatment of glaucoma, and stated that the important point in the use of massage was that, however great the pressure, there should be no quick movements.

**Officers.**—DR. CASEY A. WOOD was elected chairman of the Section for the ensuing year, and DR. C. H. WILLIAMS, secretary.



## Section on Cutaneous Medicine and Surgery.

FIRST DAY.—June 7th.

**Chairman's Address.**—DR. A. W. BRAYTON, of Indianapolis, stated that the present meeting closes the first decade of the section on cutaneous medicine and surgery which was organized at the Chicago meeting in 1887 through the zealous and indefatigable work of Dr. L. Duncan Bulkley, of New York. He argued that the Section was organized for practical work, and should be attended by members who are not specialists. He reviewed the work done, particularly at the meeting last year in Philadelphia, where many dermatologists of note attended the sessions. He expressed the belief that the Section, though small, would never be abandoned. The interest in dermatology is growing, as illustrated by the large number of new books and atlases that have been issued in the past few years and the number of colleges that have added dermatologic chairs and clinics to their curriculum. He deprecated the "unholy alliance" between cutaneous medicine and venereal diseases, saying that tuberculosis and syphilis might more properly be united in the same category. He also gave a careful resumé of the literature of the year on dermatology, particularly the works of Dr. Duhring, Dr. Hardaway, Dr. G. H. Fox, and the individual writings of others, with special reference to secretary Dr. Gilchrist, ex-chairman Dr. Regensburger, and chairman-elect Dr. Corlett. He closed by expressing a hope that the nomenclature of skin-diseases would soon be revised so as to render it more simple and precise.

**Etiology of Alopecia Prematura.**—DR. J. M. BLAINE, of Denver, after attempting to upset the theories long held by the authorities on dermatology, asserted that in idiopathic premature baldness the cause in most cases was the frequent use of the razor on the face. He argued that heredity would not account for it, inasmuch as all hereditary diseases and peculiarities are transmitted alike to both sexes. Moreover, young men have not inherited baldness, but rather a head of hair, which they afterward lose through carelessness. He asserted that idiopathic premature baldness was unknown among women and beardless nations; neither did it obtain among nations or individuals that had beards but never shaved. The reason for this lay in the fact that the facial artery, being stimulated so frequently, drew off more than its share of blood from the external carotid, leaving an insufficient supply for the anterior and posterior temporals with which to supply the scalp. In other words, shaving acts as a counter-irritant, impoverishing the blood-supply and the nerve-supply of the scalp.

**Why Sycosis?**—DR. ALFRED E. REGENSBURGER, of San Francisco, maintained that sycosis was a misnomer, as it expressed no pathologic process or clinical entity. The term sycosis may mean an acne, an eczema or a trichophytosis barbæ. Two varieties were formerly mentioned, i.e., parasitic and non-parasitic. In the non-parasitic variety an attempt was made to differentiate from an eczema. The disease might begin as a sycosis, but when the skin proper became involved it was practically an eczema. In other words, the folliculitis may have only been the first stage of an eczema. The terms parasitic and non-parasitic are not justifiable at the present day except that one is contagious and the other not. For the one condition the name of "coccogenic sycosis" was suggested, and for the other "trichophytosis barbæ." These names express the etiology of the two diseases.

**Molluscum Contagiosum with Report of a Case.**—DR. WM. FRICK, of Kansas City, Mo., said that the contagiousness of this disease is generally admitted, but the contagion is considered of a feeble character. It generally occurs in children, although adults are not exempt. The case reported had three points of interest: (1) The patient was an adult male; (2) Over 400 tumors were removed; (3) No one was known to have contracted the disease from him. Microscopic examination failed to show any connection between the molluscous tumors and any of the glands of the skin, as hair-follicles, or with the epithelium. The tumors rather resembled chronic inflammation in connective tissue. The pathologic character of the tumors is not definitely known. They are regarded by some as made up of changed epithelium; by others of degenerated connective tissue. In order to effect a cure the tumors must be carefully destroyed.

**Blastomycetic Dermatitis.**—DR. ROBERT HESSLER, of Indianapolis, narrated the case of a man who while being shaved by a barber received a slight cut on the neck just under the chin. The wound healed in a few days, but an oval, red papule, half as large as a grain of wheat, made its appearance and remained stationary for 3 months. It then enlarged to the size of a silver quarter-dollar and soon suppurated. Several cultures were obtained which upon examination proved to belong to the yeast-family. The yeast-cells were found in the pus-corpuscles and appeared as brownish, slightly oval bodies. Ehrlich's neutrophile stain was used. Cultures were made in agar-agar tubes. The case is of interest as being the fourth reported in the United States.

**Executive Committee.**—In the absence of DR. A. Ravogli, of Cincinnati, DR. W. H. DAVIS, of Denver, was appointed to serve on the Committee. The chair appointed the following committee: Drs. L. D. Bulkley, A. E. Regensburger and J. M. Blaine.

SECOND DAY.—June 8th.

**Clinical Demonstration.**—DR. J. V. SHOEMAKER demonstrated three interesting cases that had been collected for the occasion.

Case 1.—A married woman, 35 years old, with good general health, and a good history, exhibited small white spots resembling cicatrices following the use of croton-oil, on the neck, chest, back and knees, and a diagnosis of **morphea** was made.

Case 2.—A married woman, 45 years old, presented small red lesions on the face and scalp resembling tuberculids. The disease was of several years' standing and was diagnosed as **psoriasis**.

Case 3.—An unmarried woman, 28 years old, had 7 years previously an eruption appear suddenly on nose and cheeks and since she has had spots on the side of her head, back of ear, and on her upper lip. While the original lesion was probably due to a poison the present condition is undoubtedly **lupus vulgaris**. The treatment recommended consisted in the administration of tonics and codliver-oil internally and the application locally of pure carbolic acid.

**Xeroderma pigmentosum.**—DR. A. W. BRAYTON, of Indianapolis, gave an excellent resumé of the cases already reported and numbering probably not more than sixty.

The disease is one of infancy and sets in before the second year, and probably during the first 6 months. It first appears as atrophic molecules, followed by pigmentation, with later loss of nose and ears. Dr. Brayton has had two cases under observation for 6 years. The one patient is a woman, 21 years old, physically well preserved, strong and robust, with two-thirds of her nose eaten away. Numerous growths have been removed from her face, fingers, ears, cheeks, lips and lower eyelids, and at one time a fibrosarcoma the size of a goose-egg was removed from her arm. The contraction of the lids and adjacent skin has produced marked ectropion. The morbid growths were cured and recurred until Fowler's solution was applied daily during the process of healing.

The second case is in a sister of the first, the patient being 6 years old. The disease is yet in the freckle-stage, with slight ectropion of the lower lids. Nodules have been removed and arsenical solution applied. These two cases are in a family of 9 children, the remainder being healthy.

THIRD DAY.—June 9th.

**Idiopathic Multiple Pigmented Sarcoma Cutis.**—DR. A. W. BRAYTON, of Indianapolis, reported two cases of this disease. The first patient noticed when 45 years old a black patch on the left ankle, which was followed by others. In the course of 10 years a series of pigmented tumors extended up his leg to the knee, varying in size from a pea to a dollar. After from 3 to 5 years they became hard and atrophied. In his 65th year they invaded his right leg, left arm and buttocks and a few appeared on his back. Microscopic examination showed them to be pigmented sarcomata. The patient was treated with arsenic, in doses from gr.  $\frac{1}{4}$  to gr.  $\frac{1}{2}$  daily for 4 years, with good results. Under this treatment the tumors receded and the patient recovered, except that the skin remained thickened over the affected areas. The second patient presented multiple pigmented sarcomata of the abdomen subsequent to melanotic sarcoma of the liver, death resulting in two years from the latter disease.

**The Treatment of Diseases of Pigmentation.**—



Dr. J. V. SHOEMAKER, of Philadelphia, discussed systematically the diseases of pigmentation and their treatment.

**Lentigo** is removed by means of salicylic acid, mercuric chlorid, carbolic acid, or copper oleate. The best method, however, consists in the use of electricity, either in the form of electrolysis or frequent galvanism.

**Chloasma** receives the same treatment as freckles, in addition to correcting any internal disturbance.

In the treatment of **tinea versicolor** bathing is to be avoided, as water favors the development of the microsporon furfur. Any germicide may be applied, the best one being from a 10% to a 20% ointment of copper oleate.

For the relief of **jaundice** the internal cause must be corrected.

In cases of **chlorosis** a generous diet should be given with open-air exercise, and the blood should be supplied with iron.

**Morphea** is to be treated on general principles and locally massage and electricity are to be employed.

**Scleroderma** requires hygienic care, tonics and alteratives, with free diaphoresis, baths hot and often also massage and electricity.

**Malarial** discoloration is to be dispelled by the removal of the cause by means of quinin, arsenic and iron, or change of climate.

**Amlyoid degeneration** is the result of serious organic processes that require their own appropriate management.

**Exophthalmic goiter** requires hygienic regulations, together with vascular and nervous sedatives.

**Addison's disease** has improved under the use of extract of suprarenal glands and this should be given a fair trial.

**Leprosy** is but little influenced by any means of treatment at present known.

**Syphilis**.—The discoloration of syphilis will readily disappear under mercurial treatment, which should be continued, with a few periods of rest, throughout the existence of the disease.

**Nævus pigmentosus** should be removed by excision, ligature, caustic or galvanocautery.

**Xanthoma** should be removed by means of caustics, the knife, the curet, or electrolysis.

**Xeroderma pigmentosum** is a rare disease, whose treatment consists in the removal of the growths.

**Argyria**, caused by a deposit of silver in the skin, has been treated with potassium iodid, but with little success.

**Vitiligo** may be treated with irritants and blisters locally in the hope that nature will deposit more pigment.

Three agents are used in the treatment of pigmentary disorders that are placed above the action of drugs, viz.: Baths, massage and electricity. Baths soften the epidermis, tranquilize the peripheral nerve-fibers and circulation, and stimulate the absorbent vessels. Massage increases the volume and rapidity of the cutaneous circulation. Its favorable action on the skin is transmitted to the central organs and all conditions of nutrition are improved. Electricity is a powerful agent in restoring normal conditions of the skin. It quickens the action of the terminal nerves and of the bloodvessels and lymphatic vessels.

**Recent Researches on Ringworm**.—Dr. W. T. CORLETT, of Cleveland, O., said that the microsporon andonini is responsible for 90% of the scalp ringworms in children. This attacks the hairs rather than the skin and generally comes in epidemics. In the treatment of this variety energetic measures are called for. The megalosporon endothrix causes ringworm of all parts and at all ages. It produces what is called bald ringworm, which must not be mistaken for alopecia areata. In cases of ringworm the stumps of broken-off hairs can be seen dotting the patch. When the disease occurs on the hairless parts it resembles eczema. Eczema seborrhoicum is most likely to be mistaken for tinea circinata, a mild form of ringworm that attacks the face and is commonly called the barber's itch. This is also due to the megalosporon endothrix. The megalosporon ectothrix is usually derived from animals and produces ringworm on the hands and arms of persons who work with horses and cows. It may also be derived from dogs, cats, and fowl. The ectothrix obtained from animals is essentially pyogenic, while that obtained from fowls produces only a superficial eruption.

**Peripheral Tuberculosis**.—Dr. A. W. BRAYTON, of Indianapolis, related a case in a girl 22 years old, in which

tuberculous abscesses on the cheek were followed by lupus vulgaris, and abscesses on arm, neck, and thigh have since developed. The lupus remained 5 years and was cured by the use of the sharp spoon and actual cautery. In the lesions of lupus the bacilli of Koch are present only in small number, one to each giant-cell, but lupus has not been produced by direct inoculation of the tubercle-bacilli. Tuberculosis of the penis has followed circumcision. One rabbit alone is known to have inoculated 17 cases. Tuberculosis of the skin, however, arises usually from within. No case of congenital tuberculosis of the skin has been reported.

**Syphilis of the Nervous System As the General Practitioner Sees It**.—Dr. TRAVIS DRENNEN, of Hot Springs, Ark., alleges that from the standpoint of the general practitioner this condition is a rare and formidable one. Rare, because he fails to recognize it, and formidable because of its not being recognized in time. So true is this that by the time the case is referred to a neurologist or syphilographer it is too late for treatment to be of any benefit to the patient. The fact should be borne in mind that mercury and the iodids long continued may themselves do harm, and that the only safe rule is to treat the syphilitic on the old principle of nutrition and elimination.

**Officers for 1899**.—On motion the secretary was instructed to cast a unanimous ballot of the section for Dr. W. T. Corlett, of Cleveland, Ohio, for chairman, and Dr. J. M. Blaine, of Denver, Col., for secretary.

**Low Specific Gravity of Urine without Renal Disease**.—A. J. Nyulasy (*Australasian Med. Gaz.*, May 20, 1898) reports the case of a woman, 43 years old, who came to him to be operated upon for scirrhus of the breast. Examination of the urine on four different days showed a specific gravity of from 1004 to 1008 and a daily amount of about 39 ounces. No abnormal constituents could be found in the urine and no physical signs of renal disease. The operation was performed and good recovery followed.

## THE FLAG OF OUR UNION.<sup>1</sup>

BY A PATRIOTIC POET.

She scarce had been three months a wife,  
When I discovered her astir.  
With scissors, cloth, and needles rife,  
To make the banner of our life—  
The diaper!

It was not quite nine months, I think  
(Or some one's an adulterer),  
Ere I was forced with many a blink  
To wring that banner in the sink—  
The diaper!

And now, while I indite these lines,  
Full of poetic fire, as 't were,  
Those other lines are hung with signs  
Of married bliss, and of which signs—  
The diaper!

On Homer's bust, beside my door,  
Among my books, though I demur,  
All redolent upon the floor,  
I see it scattered by the score—  
The diaper!

And when I drink a health and pore  
On love's young dream and joys that were,  
The little rascal on the floor  
Pours his libation more and more—  
That diaper!

Yet should I swear—I'd strike a snag—  
My little wife would raise a stir.  
And flaunt aloft the dangerous rag,  
And call me traitor to the flag—  
The diaper!

<sup>1</sup> At the banquet of the Section of Neurology of the American Medical Association, at the recent Denver meeting, the following verses were recited in response to a toast proposed by Dr. New York on request.



## The Latest Literature.

### British Medical Journal.

June 25, 1898. [No. 1956.]

1. Mitral Stenosis, with Special Reference to Recent Investigations. A. ERNEST SANSON.
2. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. SYDNEY MARTIN. (Lecture II.)
3. The Action of Certain Drugs and Mineral Waters on the Secretion and Composition of Human Bile: An Experimental Investigation. WILLIAM BAIN.
4. The Effect of Exercise on the Hemoglobin with Reference to the Value of Rest in the Treatment of Anemia. WILFRID EDGEcombe. (With Charts.)
5. A Case of Exophthalmic Goiter with Unilateral Eye-Symptoms. JAMES HINSHELWOOD.
6. An Acute Case of Landry's Paralysis. HENRY H. HAWARD.
7. Hematemesis Treated by Perchlorid of Iron. ARTHUR PURKISS.
8. A Case of Pyemia Treated with Antistreptococcus Serum in which Living Streptococci were Found. O. B. BALL.
9. Aneurysm of Abdominal Aorta in a Boy Aged Nine Years. J. S. WATSON.
10. Remarkable Fluctuations of Temperature in Typhoid Fever. A. E. GRIFFIN. (With Chart.)
11. The Treatment of Pneumonia by Digitalis. M. EUSTACE.
12. Long Retention of a Foreign Body in the Larynx. D. W. TORRANCE.

1.—Sanson does not believe that progressive narrowing of the mitral orifice invariably results in the funnel form of **mitral stenosis**. This form cannot with confidence be predicted in the so-called pure mitral stenosis. Conversely the funnel-mitral in its typical form is found in old subjects in the degenerative period of life and associated with fibroid changes. Sanson believes mitral stenosis is most often a rheumatic affection, that it is not due to congenital malformation, but that it may sometimes be dependent upon intra-uterine endocarditis. Its rheumatic association is with the insidious rather than with the pronounced forms of rheumatism. He has shown clinically that mitral stenosis may occur in cases of mitral regurgitation, and that the mitral systolic murmur may be entirely supplanted by the evidences of stenosis. Protracted progressive endocarditis, causing a slow formation of fibrous quasi-cicatricial tissue tends, under the even auricular and ventricular pressure of the blood, to form the smooth membranous funnel that is so often found. The lesion is commonest between the ages of 14 and 15 years. It is much more frequent in the female than in the male. Sanson recognizes a relationship between mitral stenosis and tuberculosis, but he does not believe that it is causative. The circulatory starvation resulting from the valvular disease results in diminished resistance to the morbid influences of the bacillus tuberculosis, and consequently there is a marked predisposition to the development of tuberculosis, more especially when there is associated tricuspid stenosis. The probability of tubercle is greater in those cases showing marked anemia, incomplete development, or faulty nutrition. Some cases of mitral stenosis show all the clinical signs of pulmonary tuberculosis, depending upon embolism of branches of the pulmonary artery. The persistent absence of the tubercle-bacillus may be the only negative manifestation. The disease sometimes develops in advanced life as the result of a widely diffused, slowly developing fibrosis. In some few cases the etiology is unexplained. In mitral stenosis of the funnel-form, systolic apical murmurs are sometimes heard. Goodhart, Potain, and Samways attribute this to tricuspid reflux rather than to mitral regurgitation. There are no clinical evidences of mitral regurgitation, and it is probably prevented in the following manner: The apex-beat of the heart felt by the finger in these cases is not necessarily synchronous with the contraction of the ventricle. In some cases the hypertrophied auricle, extruding its blood through a moderately narrowed mitral orifice, might, through its own power, cause a pronounced elevation of the apex, the proper systole of the ventricle following, thus making the presystolic roll

coincide with the apical impulse. It is also probable that the contraction of the muscle of the auricle does not cease until the complete closure of the mitral orifice and the commencement of the propulsion of the blood of the left ventricle into the aorta, a condition that would explain the prevention of regurgitation into the left ventricle in the pure form of mitral stenosis. The contraction of the auricle is not the sole force in preventing regurgitation at an early part of the ventricular systole. The commencing phase of the emptying of its cavity occurs in the pulmonary veins, the concluding in the most muscular part of the auricular appendix. Moreover, there is another cause at work to effect the closure of the mitral orifice, diminution of the area of the auriculo-ventricular ring, and shortening and approximation of the papillary muscles. The common view that there are no valves between the auricle and the lungs is incorrect. At the moment of the auricular systole the orifices of the pulmonary veins are narrowed in the contraction of the layer of muscular fibers by which they are surrounded, and any great reflux of blood into the veins is thus prevented. These serve as a very efficient sphincter. The characteristic alteration in the left auricle in mitral stenosis is not dilatation but hypertrophy. The former is induced with the auricular breakdown. The prognosis in this disease is grave. Life is rarely prolonged beyond 40 years.

2.—Martin gives the various points of differentiation between the typhoid bacillus, the bacillus coli communis, and the bacillus enteritidis of Gärtner. He then takes up the subject of the distribution of the typhoid bacillus in the body and the various methods of its recovery from the spleen. Following this he demonstrates the virulence of the bacillus under various conditions. In the investigation of the products of a pathogenic bacterium it is essential to have virulent cultures. This is attained by utilizing cultures made from the spleen of a case of typhoid fever. A small amount of splenic pulp was ground up with salt-solution and 2 cu. cm. of this mixture were injected into the peritoneal cavity of a guinea-pig. Death occurred in 8 days, and a pure growth was obtained from the peritoneum, but none from the heart-blood or spleen. Four cu. cm. of a four-days' old culture of this splenic pulp in broth were injected into the peritoneal cavity of a guinea-pig, and death occurred in 24 hours. There was slight effusion into the peritoneal cavity, from which a pure culture of the bacillus was obtained. One-half cu. cm. of this effusion was injected into the peritoneal cavity of another guinea-pig, and death occurred within 24 hours. The effusion from the peritoneum of this guinea-pig was in like manner introduced into the peritoneal cavity of another, and so on until the sixteenth inoculation was reached, when half a platinum loopful of a 24-hour-old agar culture injected into the peritoneal cavity killed a guinea-pig in less than 24 hours. The peritoneal exudate was turbid, and there was little lymph on the surface of the intestines, with occasional ecchymoses in the spleen. The exudate was highly albuminous, and on microscopic examination it showed large numbers of short rods more or less actively motile. In the first inoculations some leukocytes were present in the exudation showing phagocytosis. As the bacilli became more virulent, the cells and phagocytosis were not observed, the exudation being simply highly albuminous, and containing enormous quantities of typhoid bacilli, sometimes in clumps, but usually single. As the virulence of the bacilli increased, death occurred the earlier. In the twenty-eighth inoculation, 3 cu. cm. of the peritoneal exudate injected into the peritoneal cavity of a rabbit caused death in 5½ hours, a result that must be ascribed to the chemic poisons present in the fluid rather than to the bacilli. There was shown a marked tendency to localization of the typhoid bacillus after these injections. In the less virulent inoculations this was absolute. The toxic action of the peritoneal fluid was determined by filtering this fluid through porcelain. One-half cu. cm. of the filtrate was injected into the marginal vein of a rabbit. Moderate fever followed for several hours, and the animal died at the end of 30 days without symptoms. The only postmortem lesion was well-marked degeneration of the fibers of the heart-muscle. Other experiments with 1.5 and 2 cu. cm. of the filtrate resulted in slight febrile reaction, with no further manifestations, indicating that the porcelain filter kept back the greater part of the poison. The poison was then examined in the fresh state in the spleen by rubbing splenic pulp



through sterile wire gauze, and treating it with 500 cu. cm. of normal salt solution. This mixture was filtered through porcelain and the filtrate was injected into the marginal vein of a rabbit on two consecutive days, 4 cu. cm. on the first, 3.5 cu. cm. on the second. No effect was noticed until the fifth day, when the temperature fell to 97.6°. The animal was collapsed and had profuse mucoid diarrhea. The temperature was 95.4 on the sixth day; the animal was motionless, lying on its side and breathing regularly. On being killed by chloroform a subcutaneous hemorrhage was found in the lower third of the abdomen extending over the thighs. There was a soft blood-clot in the abdomen, matting together the omentum and adjacent coils of intestine. There was no peritonitis. Peyer's patches were not enlarged or reddened. A chemic examination was made by precipitation of the splenic extract with alcohol, but the result was negative.

3.—The results reached in this investigation were as follows: The average daily amount of bile during the days in which no drugs were given was 775 cu. cm., of solids 15.893 grams, of bile-salts 4.197 grams. The specific gravity varied from 1007.9 to 1012. The rate of biliary secretion was very irregular, exercise and diet being the most potent factors. During digestion the secretion of bile was active, and exercise augmented the biliary secretion, unless it produced much perspiration, which annulled this effect. The color of the bile was always olive green and the reaction invariably alkaline. Potassium sulphocyanate was always present in the saliva both while taking and while not taking ox-bile. More bile was secreted during the day than at night. The conclusions reached as to the action of the drugs taken were: (1) The following substances increase both the quantity of bile and of bile-salts: Old Sulphur Spring Water, Carlsbad Mineral Water, euonymin, sodium benzoate, sodium salicylate, and Kissingen Spa; (2) podophylloresin and iridin augment the bile-salts, without appreciably affecting the bile; (3) strong Montpellier Spring Water, and podophyllotoxin appear to diminish slightly both the quantity and the solids; (4) hot water and soda-water in pint-doses do not seem to increase the biliary secretion; (5) sodium salicylate increases the excretion of uric acid in the urine.

4.—As the result of investigations into the effect of exercise on the hemoglobin with reference to the value of rest in the treatment of anemia Edgcombe concludes that (1) there is a normal daily fall and nightly rise in the worth of the corpuscle, representing a daily destruction and regeneration of hemoglobin; (2) active exercise increases the extent of the daily fall and the nightly rise; (3) active exercise stimulates a slight over-production of hemoglobin; (4) passive exercise (massage) diminishes the volume of the blood, but has no effect in diminishing or increasing the amount of hemoglobin; (5) rest reduces the extent of the daily fall in worth representing a diminished destruction of hemoglobin. These studies were made on a healthy subject, and it is suggested that to complete the investigation it would be necessary to determine by diurnal observation of the blood of an anemic subject taking considerable exercise whether the reproduction of the hemoglobin would be sufficient to make good the loss occasioned by exercise. Clinical experience suggests that construction would fall short of destruction. Rest, on the other hand, by removing the drain, would enable the constructive process to exceed the destructive, and the store of hemoglobin to be gradually built up. The instruments used in these investigations were the hemoglobinometer and hemocytometer of Oliver.

5.—As unilateral exophthalmos may be one of the first symptoms of exophthalmic goiter, its early recognition is of extreme importance. The interesting features of the case reported were the disappearance of the retraction of the upper lid (Stellwag's symptom), whilst the non-simultaneous descent of the lid and globe of eye remained unchanged (Græfe's symptom). It is evident, from this case at least, that these symptoms are independent and cannot be accounted for simply by an affection of the sympathetic.

6.—A man, 54 years old, who had been working in chemicals for 8 years, on returning from his work one morning complained of tingling in the hands and a sense of numbness. He had anorexia and inability to swallow solid food or liquids, an attempt at the latter causing violent coughing. The pharyngeal reflex was absent, the soft palate freely movable. The neck and back soon became so weak that he had to be constantly supported. Inspiration was hurried,

spasmodic and stridulous. The voice was weak and hoarse. The wrists and fingers could be moved freely; the grip was weak; movements of pronation and supination were limited; the forearms could be raised, but the arms could scarcely be moved. The knees could be raised 4 inches from the bed against some resistance. The ankles and toes could be moved in all directions. The knee-jerks were present. In the course of a day all of the reflexes were absent. The spleen was palpable in the early part of the day. By midnight all of the muscles were paralyzed. Respirations were short and gasping, the pulse 120, the temperature 95.2°, the spleen palpable 3 inches below the ribs. The patient died an hour later.

9.—Watson reports a case of aneurysm of the abdominal aorta in a boy, aged 9 years, who died from heart-disease. The aneurysm, situated at the bifurcation of the abdominal aorta, was about the size of a golf-ball, and was no doubt due to an embolus.

10.—In the case reported there were marked fluctuations beginning on the twenty-first day in the course of a usual, even typhoid temperature, which first became elevated to 105.2°, falling to normal by the next morning. The temperature rose to 104° or more each evening, falling to or below the normal each morning, and on and after the fourth day remaining at the normal. A slight bronchitis developed on the second day. It is suggested that this condition was probably due to the separation of typhoid sloughs resulting in septic absorption, and it is believed that the condition is not uncommon.

11.—In the treatment of pneumonia Eustace advises the administration of 30 minims of tincture of digitalis every fourth hour, and in severe cases every hour or two. The dose must be increased until the pulse is slow; otherwise its specific action does not take place. Alcoholic stimulants tend to inhibit the action of digitalis.

# Lancet.

June 25, 1898. [No. 3904].

1. The Chemical Products of Pathogenic Bacteria Considered, with Special Reference to Enteric Fever. Lecture II. SIDNEY MARTIN.
2. Extrauterine Pregnancy. Lecture III. JOHN W. TAYLOR. (Concluded.)
3. Blood-pressure in the Insane. MAURICE CRAIG.
4. Note on Lumbar Colotomy. LAWSON TAIT.
5. A Note on the Etiology of Beriberi. WALTER K. HUNTER.
6. Case of Fractured Spine, with Some Unusual Complications; Recovery. A. W. LYONS.
7. Three Cases of Prolonged Labor. JOHN MABERLY.
8. A Preliminary Note on the Action of Röntgen Rays upon the Growth and Activity of Bacteria and Micro-Organisms. R. NORRIS WOLFENDEN and F. W. FORBES-ROSS.
9. Notes on a Case of Puerperal Eclampsia Occurring in the Sixth Month of Pregnancy; Death. H. HOWARD MURPHY.
10. A Case of Concealment of Birth. SANDERSON MELLOR.
11. A Case of Gumma Inside the Sternum. THOMAS COLE.
12. Notes on Two Cases of Congenital Absence of the Right Eye (Anophthalmos). JOHN R. ROYSTON. (Illustrated.)
13. Note on a Case of Fatal Heart-affection in Scarlatinal Rheumatism. FRANK ROBINSON.
14. A Case of Alveolar Abscess; Death from Pyemia in Eight Days; Necropsy. (Under the care of Dr. F. WILLCOCKS.) (Illustrated.)

2.—According to Taylor, the treatment of extrauterine pregnancy is essentially operative. Operation for diffuse hemorrhage may be required in the event of (a) early rupture of the tube; (b) later rupture of the tube; (c) intraperitoneal rupture of a broad-ligament gestation-sac; rupture of a peritubal hematocoele; and (d) rupture of a tubouterine or interstitial gestation-sac. The operation here will, of necessity, involve abdominal section. Anterior colpotomy has recently been extensively practised in the treatment of peritubal hematocoele due to tubal pregnancy. The main objections to this operation are: (1) occasional insufficient space for operative work; (2) frequent inability to remove thoroughly and cleanly all products of the misplaced pregnancy; (3) inability to wash out the abdomen satisfactorily; (4) inability to drain through the anterior opening; and (5) occa-



sional inability to extract the uterus without injury, on account of its being enlarged and softened by the changes consequent on the associated pregnancy. In the presence of intra-abdominal pregnancy at term, Taylor has come to believe that it will be wiser to remove the placenta.

3.—The obscurity of the etiology in so many cases of **insanity**, even in the presence of post-mortem evidences, led Craig to a study of the condition of the **blood-pressure** in certain forms of mental disease. Barnard and Hill's sphygmometer was used, and all investigations were made at the same hour of the day, namely, between 11 A.M. and noon, this time being selected in order to avoid the influence of food. All drugs were withdrawn for some time prior to the investigations. The condition of the bowels was always noted, and each reading was verified by one or two other persons. Control-experiments were made in a series of normal individuals. As the result of his work, Craig reaches the following conclusions: (1) the blood-pressure varies in different forms of insanity; (2) it is raised in persons who are depressed and who are suffering from melancholia; (3) it varies in cases of so-called agitated melancholia; (4) it is normal upon the recovery of a patient whose blood-pressure has been raised during the period of depression; (5) it is lowered in persons suffering from excitement or acute mania; (6) it is normal after the excitement has passed off and the patient has recovered; (7) it tends to fall as the day advances, causing melancholias to be brighter and excited patients to become more excited; (8) the depression following upon an attack of acute mania is not necessarily an active depression, but rather more exhaustive in type, and the blood-pressure in these cases may remain low until it finally returns to normal upon recovery; (9) the blood-pressure is probably raised in stupor; (10) it is not always altered in delusional insanity except when there is also some emotional disturbance; (11) in healthy, active and excitable persons it is low as compared with healthy apathetic individuals; (12) from this it appears that the blood-pressure is chiefly affected in emotional or affective insanities in contradistinction to the effective or ideational forms of mental disorder; (13) the blood-pressure is raised in general paralysis of the insane when there is depression, while in the excited types of this disease it is low, as it is also in the later stages of all types; (14) there is evidence to prove that the altered blood pressure may in certain individuals induce mental aberration, although this is not complete enough to lead to the definite statement that mental disease is usually caused by altered blood-pressure; (15) the altered blood-pressure in different forms of insanity suggests the line of treatment applicable to the various kinds of mental disease; (16) the feeling of weight and pressure upon the top of the head is apparently vascular in origin, and is lessened or disappears when the blood pressure is lowered; (17) certain depressed patients improve with nitroglycerin, but there is difficulty in keeping the blood-pressure down with this drug on account of its evanescence; (18) the action of erythrol tetranitrate is more prolonged and reliable and more powerful in lowering the blood-pressure in melancholia than is nitroglycerin; (19) the prolonged bath raises the blood-pressure and hence is of more value in the treatment of excited patients.

4.—In speaking of colotomy, Tait states that he has never given countenance to inguinal colotomy except in one case, when he had every reason to be dissatisfied with it; on the other hand the arguments in favor of **lumbar colotomy**, as against the operation in the groin, are sufficiently convincing to warrant its selection in every case. As to the technique, after making the cutaneous incision, which should never be more than 3 inches long, the knife should be laid aside and the fibers of the internal and external oblique muscles be separated by blunt dissection; the transversalis fascia is then notched and the layers of fat separated with forceps until the descending colon, which should be immediately in front of the kidney, comes into view. The gut is then brought out of the wound, cut nearly through and stitched with an all-round suture into the lower angle of the wound.

5.—Hunter reports two cases of beriberi, in both of which specimens of freshly drawn blood showed microorganisms in rapid motion in the spaces between the groups of corpuscles. Of 30 tubes of culture-media (agar-agar and bouillon tubes) that were inoculated with the blood 3 growths were obtained from one case, and 1 from the other. These presented all the characters of the staphylococcus of beriberi.

Three of the cases were pure and one a mixed infection. The pathogenic properties of the staphylococci found were determined by injecting rabbits. In one case 8 injections of 10 cu. cm. of a 48 hours' bouillon-growth were given every second day before signs of paralysis showed themselves. There were no macroscopic postmortem lesions. The nerves, however, showed microscopically unmistakable parenchymatous degeneration. The second rabbit, injected with a growth from Case I subjected to a temperature of 41° C. for 24 hours, and the third rabbit, injected with a growth from Case II, made under the same conditions, each received 12 injections of 10 cu. cm. of a bouillon-broth culture extending over a period of 4 weeks. This temperature evidently destroyed or weakened the virulence of the growths, as the animals were perfectly healthy at the end of this time. After an interval of 10 days the same rabbits were injected with the same growths as those that killed the first rabbit, each receiving 9 injections of 12 cu. cm. extending over a period of 21 days. There were still no signs of paralysis. Post-mortem examination showed no macroscopic lesions, but the white staphylococcus was cultivated from the heart and the spleen in both. Careful microscopic examination of the nerves showed here and there undoubted parenchymatous degeneration of the fibers, though not so marked as in the first rabbit. These experiments raised the question of a possibility of producing an immunity or lessening the susceptibility to the poison of beriberi by such a process. Rice, split peas and dried fish, used as food by the patients, were examined bacteriologically. From the rice was cultivated a white staphylococcus having morphologic characters similar to those of the staphylococcus of beriberi that was grown from the blood of these patients. This organism was grown from rice upon liquefied gelatin in 19 days. Its pathogenic properties were demonstrated by injecting a rabbit with the bouillon-culture. The autopsy showed unmistakable signs of parenchymatous degeneration in the nerve-fibers, and cultures of the white staphylococcus were grown from the blood of this rabbit.

7.—Maberly records 3 cases of **prolonged labor**; the first was in a primipara attended by a midwife who allowed the labor to run 48 hours before assistance was called. A dead child was extracted with forceps. The second was a deutipara, with a brow-presentation, in labor 36 hours. Craniotomy was performed. The third also was a deutipara, with uterine inertia probably due to syphilis.

8.—In a series of experiments conducted to determine the action of the **Röntgen rays** upon the **growth and activity of bacteria**, it was found that exposure of the bacillus prodigiosus to the radiations of a focus-tube induces very marked increase of growth and peculiar changes in the pigment-forming powers of this particular microorganism. Similar changes were noted in some of the lower forms of vegetal life, notably in the protococcus.

9.—Murphy records a fatal case of **eclampsia** at the sixth month of gestation, associated with acute atrophy of the liver.

12.—Rolston reports two cases of **congenital anophthalmos**, in neither of which was it possible to find any rudimentary eyeball. In one of the patients, both of whom were girls, 6 years old, there was no other defect of the face, while in the other there was much flattening of the nose and imperfect development of the right nasal ala. In each instance the right side was affected.

13.—A girl, 10 years old, passed through an attack of scarlet fever of moderate severity from the acute stage of which she recovered satisfactorily. On the 21st day she had a mild attack of articular rheumatism. There was no local swelling, and but little pyrexia. Flitting pains persisted, and on the 50th day severe pain led to an examination of the heart, which disclosed the existence of an extensive pericardial effusion, the area of dulness on the 62d day extending beyond the sternum to the right and beyond the nipple to the left. There was severe cardiac dyspnea. Murmurs were audible on the 67th day over the mitral and aortic areas, and death resulted suddenly the next morning. The autopsy showed the posterior areas of the pericardium to be totally adherent. The remainder of the pericardial sac still contained some excess of fluid (though the dulness had greatly lessened) and the free surface was coated with fibrinous deposit, which was blood-stained in parts. The heart was much dilated and the edge of every valvular cusp in the left heart was lined with recent vegetations.



**14.—Pyemia** secondary to an **alveolar abscess** is probably less rare than is commonly supposed, as oftentimes the alveolar suppuration may be overlooked. In the case here recorded the external jugular vein was ligated above, at the angle of the jaw, and below, at its junction with the subclavian, but the child succumbed on the following day. On examination of the veins at the autopsy, the lingual, the ranine, and the lower part of the facial, together with the anterior and posterior branches of the temporo-maxillary vein were found to be full of pus. This is the most common route for septic clotting, although septic phlebitis may extend from the facial vein into the buccal vein and so into the pterygoid plexus of veins until it reaches the cavernous sinus. In this instance the veins of the tongue were affected through the involvement of the floor of the mouth.

### New York Medical Journal.

July 9, 1898. [Vol. lxviii, No. 2.]

1. On the Care of Crippled and Deformed Children. NEWTON M. SHAFFER.
2. The Early Recognition of General Paresis (Progressive Dementia) B. SACHS. (*Concluded.*)
3. Rhinolith, or Nasal Calculus. Report of a Case and Exhibition of Pathological Specimen. WILLIAM H. POOLE.
4. A Study of Alcohol, Tobacco, Coffee, and Tea as Causative Factors in the Production of Nervous Disorders. CHARLES E. LOCKWOOD. (*Concluded.*)
5. History of a Case of Hydrophobia. JAMES DOUGLAS.
6. Precision of Terms in Diseases of the Stomach. CHARLES D. AARON.

**1.**—Shaffer reviews the history of orthopedic surgery in its relation to the **care of crippled and deformed children**, calling attention to the necessity of affording opportunities for mental training to the inmates of the wards of orthopedic institutions. The course of treatment in these cases is often so prolonged that the child's education is seriously neglected, at a time when it should be going to school. Not only should the children be educated mentally, but opportunities should be offered each to acquire some industry that may be of service to it when discharged from the hospital. Shaffer also calls attention to the need of better educational facilities in medical schools for teaching orthopedic surgery, believing that every institution should have an orthopedic laboratory in which the student could become familiar with the mechanical principles involved in the construction of braces and apparatus.

**2.**—Sachs calls attention to the close relationship existing between specific **syphilitic infection and general paresis**. While commonly associated with it, syphilis is not considered the sole cause of parietic dementia. While probably the most important predisposing condition, it need not be sufficient to cause the disease, unless some other exciting cause, such as overwork, sexual excesses, and, above all, intense worry and excitement cooperate with it. There is need of differentiating between syphilitic dementia and typical progressive dementia. Those symptoms that point to the existence of general cerebro-spinal syphilis, such as pupillary immobility, ocular palsies, preceding and transitory apoplexies are most valuable guides in detecting the truly specific forms. The syphilitic cases sometimes, when treated early, respond well. While the disorder occurs but rarely in younger individuals, there does exist a condition at times that closely simulates it, but that is much more amenable to treatment. Parietic dementia is a convenient designation for the clinical manifestations of a number of different morbid processes affecting the brain and leading ultimately to atrophy and destruction of cerebral elements. The classic type is the severest of these diseases, and is fatal in fully 95% of the cases. There are other forms of disease closely resembling the main type which can be scarcely differentiated from it, and yet are seen at times to yield a more favorable prognosis. Careful consideration should be given to the early stages of every form of parietic dementia, and the possibility of prolonged remissions or of complete recovery should be kept in mind. Among the earlier symptoms evidences of mental derangement are of first importance. With the appearance of any of these the significance of the physical signs cannot be over-estimated. Among the

earliest of these the facial tremor, the stammering, the tremulous speech, and the abnormalities in pupillary reaction are the most characteristic. The symptoms commonly interpreted as those of progressive dementia do not necessarily indicate the presence of a fatal disease. Therefore, in every instance, the patient should be given the benefit of the proper treatment. Absolute mental rest, total abstinence, separation from irritating environment, mild sedatives, and, in some instances, a rigorous antisyphilitic regimen will be of distinct value.

**3.**—The infrequency with which **rhinoliths** are encountered and the peculiar situation of the calculus in this particular case warrant these brief notes. The patient suffered from the symptoms common to an aggravated chronic rhinitis, and in addition was subject to headaches of increasing severity, and was troubled with weeping of the left eye. There being considerable hypertrophy of the turbinates on the left side, especially of the inferior turbinal, an operation for the removal of the hypertrophied tissue was advised and subsequently carried out. Some days after the operation, when the tampon that had been introduced to control hemorrhage had been removed, the patient, while changing her position in bed, noticed that the left naris suddenly became obstructed. Examination disclosed three nasal calculi situated on the outer side of the inferior meatus, evidently causing obstruction to the flow of tears through the naso-lacrimal canal, as evidenced by the overflow from the left eye. On microscopic examination the calculi were found to be composed of amorphous phosphates, undoubtedly of calcium and sodium, which came from the tears.

**4.**—The affections of the spinal cord and its meninges due to the excessive use of **alcohol** are chronic myelitis and chronic meningitis. It also induces functional hemianesthesia, neuralgia, neuritis, muscular tremor, chiefly in the hand, lips and tongue. Insomnia is often complained of, and visual hallucinations, irritability, restlessness, loss of memory occur. Alcoholism is the most common cause of multiple neuritis and frequently aids other influences in the production of general paralysis of the insane. In toxic quantity tobacco acts as an irritant, depressor, and paralyzer of the functions of the nerve-cells of the cerebrum, cerebellum and nerves of special sense, medulla oblongata, spinal cord and sympathetic and vasomotor systems, producing various functional nervous disorders. The only anatomic lesion of nerve-tissue that is now maintained to exist by medical observers as due to tobacco is retrobulbar optic neuritis. **Coffee** acts as a stimulant or depressant to the nervous system, in accordance with the amount, strength and time at which it is taken and the condition and susceptibility of the patient. Among the manifestations to which it gives rise are insomnia, restlessness, fulness and heaviness of the head, disorders of special sense, as flashes of light before the eyes and ringing in the ears, frequent irregularity and intermittence of the heart's action, and muscular tremor. **Tea** in moderate doses is a stimulant to the nervous system, and in cases a depressant to the nerve-cells of the cerebrum, medulla, spinal and vasomotor systems. The nervous disorders produced by its use are such as are due to over-stimulation and depression, and may be grouped as follows: insomnia, restlessness, headache, vertigo, ringing in the ears, flashes of light, mental dulness and confusion, apprehension of evil, with exhaustion of mind, and disinclination to mental exertion; also increased and irregular action of the heart, increased respiration, muscular tremor, "nervousness," disinclination to physical exertion, hyperesthesia, paresthesia, heat and flushings of the body.

**5.**—A man who was bitten on the thumb by his own dog, which was supposed to have been bitten a number of weeks previously by a mad dog, although there had never been shown any signs of rabies, was twelve weeks later seized with nervousness and restlessness, the respirations having a sighing or catching character. He was greatly excited and trembling all over, and in attempting to carry a cup to his mouth succeeded only by a strong effort. Speech was slow and labored. There was difficulty in deglutition and the man believed that he had **hydrophobia**. Water did not seem to trouble him; he had no frothing at the mouth, but he secreted a great deal of a deep-brown, thick, tenacious saliva. The case was at this time considered one of **lyssophobia**. On the following day the symptoms were so much exaggerated that true hydrophobia was suspected. Two days later the patient



was having extreme mental distress and severe paroxysms of excitement. He could not sleep, complained of great weakness and thirst, and was unable to swallow medicine. He seemed to have great fear of impending danger and dread of death. He was much quieter on the following day, but during the next night he was very wild and would scream and shout wildly. He was quieted by morphin and atropin. He sat up in bed all of the time, except when under the influence of these drugs, and large quantities of the dark-brown saliva would flow from his mouth. There was muttering delirium and the man made such remarks as "I will strike you," "I will kill you." He was much weaker on the following day and very restless. He was sinking rapidly and on the next morning there was marked weakening of the heart's action and death resulted in the evening. The man never barked, never complained of pain, and never attempted to bite anyone. He had slight muscular tremor of the face, and, it was thought, paraplegia two days before death. Examination of the blood showed decided leukocytosis, with 7.4% of lymphocytes, 6.4% of large lymphocytes, 86.2% of multinuclear leukocytes, and no eosinophile cells. The autopsy showed the brain moderately congested, also the pons and medulla, and especially at the floor of the fourth ventricle. The spinal cord and the meninges were also congested. Both lungs showed hypostatic congestion posteriorly, with some bronchial congestion. Crepitation was diminished in both, but especially the right. The heart-muscle was flabby, but all the valves were normal. To confirm the diagnosis of rabies a portion of the medulla was taken to the Health Department of New York City, where some rabbits and guinea-pigs were inoculated with material from the floor of the fourth ventricle. The guinea-pigs responded promptly, and a second group was inoculated with the material from one of these pigs that had died in a condition of furious rabies. The second group of guinea-pigs all died in due time of typical rabies. Microscopic examination of specimens of the central nervous system from one of the guinea-pigs showed a few cells scattered quite evenly over the section which had stained unusually deeply. These cells appeared as deep, diffusely stained masses in which the nuclei had stained very deeply and the protoplasm contained numerous vacuoles. The outline of the nuclei was usually irregular and the chromatin-granules were poorly defined. There were many highly stained cells that were honeycombed with vacuoles, and in which the outline of the body of the cell was ill defined and often ragged, and in which there was no evidence of the existence of chromatin-granules. There were some also in which the vacuoles seemed to have formed in that portion of the cell-body surrounding the nucleus, producing about it an irregular, ragged, vacant space. Cells were also present in which no trace of the nucleus could be found. In many instances the outline of the body of the large ganglion-cells was irregular and ragged, while the cell-body itself presented a finely granular appearance with small vacuoles scattered through it. The nucleus was usually small and irregular in outline, and often quite deeply stained. The nucleolus was also often unusually irregular in outline. A goodly number of cells were also present in the spinal cord from which the nucleus was entirely absent, the center of the mass being occupied by a poorly formed granular substance, with small vacuoles scattered through it. The cortical cells in the brain showed many lesions quite analogous to those already described. The extensive vacuolation, the absence of chromatin in many instances, and the loss of the nucleus, together with an extremely granular condition of many cells and an irregularly outlined nucleus, combined to make a picture similar to that described.

### Medical Record.

July 9, 1898. [Vol. liv, No. 2.]

1. The Misuse of Colostomy. CHARLES B. KELSEY.
2. A Clinical Consideration of Herpes Zoster. LEONARD WEBER.
3. A Contribution to the Symptomatology and Diagnosis of Cholelithiasis in Infancy and in Childhood. A. V. WENDEL.
4. Multiple Neuritis. STERLING RUFFIN.

5. The Obscure Cases of Gall-Bladder Disease. EDWARD S. STEVENS.

6. Crescentic Astigmatism. NORBURNE B. JENKINS.

1.—The operation of **colostomy**, which was so enthusiastically adopted in the treatment of malignant and non-malignant ulcerations or strictures of the rectum, is nowadays too frequently advised, when one considers the perfection of technic that has been developed with reference to the Kraske operation. Kelsey in his own practice advises colostomy only in cases of incurable malignant disease, preferring in all other cases the more radical method, that is, complete extirpation. There is no doubt that from the standpoint of safety colostomy is a much less dangerous procedure, but, considering the subsequent comfort of the patient, the balance is certainly in favor of the more radical operation. A fair estimate of the mortality of the Kraske operation, when performed by one familiar with its technic, is about 5%. The radical operation should be advised just so soon as it is found that the disease will not yield to successful local treatment, bearing in mind that the earlier the operation is performed the less will be the subsequent deformity, and the better the ultimate functional result. A detailed description is given of the operation as practised by Kelsey.

2.—Weber uses bismuth subgallate and talcum in the treatment of **herpes zoster** and records 3 cases. In one there was no pain during the attack. The second was interesting because the patient had first right intercostal herpes, followed 10 days later by the same affection on the left side. In the third case there was no pain until after the eruption had subsided. Severe attacks of pain then appeared and were controlled only by quinin. The patient had had malaria previously, but it is not stated whether plasmodia or other evidences of malaria were present during this attack.

3.—While the literature of **cholelithiasis** in adults is abundant, little attention has been given to the study of this affection in infancy and childhood, probably because of the erroneous impression that it is extremely rare in children. Its symptomatology should be studied under the following captions: (1) Cholelithiasis with intermittent obstruction of the biliary passages; (2) cholelithiasis with hydrops of the gall-bladder; (3) cholelithiasis with cholecystitis, but without active symptoms of obstruction; (4) cholelithiasis with perforation of the gall-bladder and extravasation into the peritoneal cavity and peritonitis; (5) cholelithiasis with lodgment of calculi in the common duct. There are three prominent symptoms upon which the diagnosis is often based, namely pain, vomiting and convulsions. Pain is usually referred to the epigastrium and is indicated in children by paroxysms of crying attended with severe vomiting. One of the most valuable diagnostic signs is persistence of the sensitiveness of the gall-bladder after cessation of the symptoms of the colic. The best means of eliciting this symptom, often the only reliable one, is by placing the child in a warm bath, which will serve to distract its attention and at the same time relax the muscular structures. The Rentini symptom, namely pain around the xiphoid cartilage from gall-stones during their expulsion, is deserving of particular attention, as, if extended observation should prove its reliability as a sign of obstruction of the cystic duct, one of the most perplexing questions in the surgical diagnosis of cholelithiasis will be rendered more easy of solution. Vomiting is usually persistent, interrupted only by crying and by exhaustion when the attack is of long duration, its cessation being usually concomitant with the extrusion of the concretion into the bowel. Fever, chills, costal respiratory movements of a jerky character when the patient is placed in a sitting posture, are some of the other symptoms that aid in establishing the diagnosis. As to the existence of jaundice, Wendel's observations agree with those of Waring, that in young persons jaundice caused by gallstones without pain is rare. In doubtful cases the urine should be evaporated on a water-bath to about one tenth its original volume and tested for biliary coloring-matter and biliary salts. Acholic feces in children are not necessarily white; frequently they present a greenish color, with putrid odor and diarrheal tendencies.

4.—Ruffin contributes a general article on **multiple neuritis**, followed by a record of 2 cases of alcoholic neuritis and of one in the sequence diphtheria. The latter is interesting because sensory symptoms (pain and numbness)



occurred in the legs, together with loss of power and of reflexes and muscular atrophy.

5.—Stevens calls attention to some curious **reflex symptoms** that may attend obscure cases of **disease of the gall-bladder**. Among them may be mentioned palpitation of the heart and pain in the urinary bladder. In a patient with pulmonary disease it was noticed that the cough was more severe and the breathing distressed when the gall-bladder became distended. In another case spasmodic attacks of coughing followed by aphonia were wholly relieved after removal of some biliary calculi.

### Medical News.

July 9, 1898. [Vol. lxxiii, No. 2.]

1. The Tuberculin-test in Cervical Adenitis. EDWARD O. OTIS.
2. Erythroptosis: Report of a Case Following an Operation for Cataract. GLENDON E. CURRY.
3. Non malignant Stricture of the Rectum. A. E. HALSTEAD.
4. Diabetes Mellitus. H. G. NORTON.
5. The Wounded of "Roosevelt's Rough Riders." RAYMOND SPEAR.
6. The Morbidity of the United States Forces for the First Calendar Month in the Field at Tampa, Fla. HENRY I. RAYMOND.

1.—Every case of **cervical adenitis** coming under observation was tested, whether the glandular enlargement had existed for a long or a short period, and even if there existed some local irritation, such as a decayed tooth, etc. The tuberculin used was a 1% solution of Koch's original product. The temperature was taken at the time of the injection and usually from 6 to 12 hours later, but as dispensary-patients were used, it was frequently necessary to accept the statement of the patients themselves as to their sensations. If in from 6 to 24 hours after the injection there occurred weakness, sensations of heat and cold, general malaise, nausea, anorexia, severe headache, pain in the back and limbs, and if these symptoms were sharply defined in both their beginning and ending, a reaction was considered to have occurred. All cases were practically without fever at the time of the injections. No bad results followed. In only one case was the reaction excessive. It generally occurred in from 8 to 14 hours after the injection and continued for from 12 to 36 hours. From one to five milligrams constituted the usual dose. Of 29 cases there were positive reactions in 18, and doubtful in 2 (from 62% to 69%). In 6 of the 11 cases in which there was no reaction, the glands had been enlarged only for from 1 to 3 weeks; in the majority of positive cases they had existed for 6 months or more. Of the 29 patients studied 22 were females. In 17 patients the diseased glands were on the left side. General and local treatment is advised in the positive cases, the local treatment consisting in excision of the glands when possible, or free incision and drainage when suppuration has taken place.

3.—The best method of treating **non-malignant strictures of the rectum** not situated above the level of the peritoneum consists in peritoneal incision or resection after Dieffenbach and Volkmann. Halstead reports 2 cases in which this operation was performed with satisfactory results.

5.—From the hurried observations that have been made of **wounds caused by the Mauser bullet** in the American-Spanish War, it is reported that there has been much less laceration of tissues than was expected, especially at the short range (probably between 50 and 100 yards) at which the injuries were inflicted. When asked what the sensation experienced was when shot, some of the injured men said it felt as if they had been stuck with a pin, while others felt nothing and were only aware of their wounds on seeing blood.

### Boston Medical and Surgical Journal.

July 7, 1898. [Vol. cxxxix, No. 1.]

1. External Esophagotomy for Impacted Foreign Body. Two Recent Cases with Recovery in Each. CHARLES A. POWERS.
2. The American Pediatric Society's Collective Investigation on Infantile Scurvy in North America. J. P. CROZER

GRIFFITH, CHARLES G. JENNINGS, JOHN LOVETT MORSE. (Concluded.)

3. A Case of Papillomatous Urethritis. F. G. BALCH.
4. Ventrosuspension of the Uterus, Followed by Pregnancy and Labor Without Complication. J. V. MEIGS.

1.—Powers reports 2 successful cases of **external esophagotomy for impacted foreign bodies**, in one case the object being a triangular-shaped piece of bone, and in the other a wheel from a toy-train of cars. In the conclusion of these operations it is advisable to close the wound in the esophagus, but to allow the external wound to remain open. The danger of postponing operations in these cases resides in the fact that the esophageal wall may become damaged by the foreign body, so that the earlier the operation is performed the better will be the prognosis. In the 32 most recent cases reported the mortality was 15.6%.

3.—**Papillomatous urethritis** may be regarded as a comparatively rare affection. It usually gives rise to an obstinate gleet, which refuses to yield to ordinary measures. On examination with a bulbous bougie the growth may simulate very closely a stricture by the resistance offered to the passage of the instrument. The growths have been variously removed by cutting, caustics, or by the actual cautery. The prognosis must be guarded, as in many cases they are likely to recur after removal. In the case here reported the growths were removed by introducing a Brown wire endoscope; with the urethra fully distended, and with the operator's finger on the outside, pushing the growth in between the wires, the endoscope was withdrawn, the sharp edge cutting the growth off very readily. The base of each growth was carefully touched with glacial acetic acid. There were no untoward sequelae, and there has as yet been no recurrence.

4.—Meigs reports a case of **pregnancy and normal labor** occurring in a patient upon whom **ventrosuspension of the uterus** had been performed 10 months before. The baby weighed 12 pounds, and was the largest the mother had given birth to, and the labor the easiest that she had had. The uterus was 3 months later in normal position.

### Journal of the American Medical Association.

July 9, 1898. [Vol. xxxi, No. 2.]

1. Address of Chairman. SAMUEL A. FISK.
2. The Modern Treatment of Gunshot-wounds in Military Practice. N. SENN.
3. Discussion on Perforation-peritonitis. Opened by J. C. WILSON.
4. Some Pathologic and Clinical Phases of Gallstones. A. H. CORDIER.
5. A Note on the Treatment of Carcinoma of the Uterus. J. H. ETHERIDGE.
6. Chronic Phlebitis of the Saphenous Veins; Saphenectomy. E. VIKO.

2.—The treatment of **gunshot-wounds** in the present war differs from that of previous wars as a result of the modifications of weapons and projectiles and the introduction of aseptic and antiseptic surgery. The main characteristics of wounds by modern bullets will be: 1. Few bullets will be found lodged in the body. 2. Wounds will resemble more closely incised than contused wounds. 3. Range will have more influence in changing the character of the wound. 4. Diminished risk of infection. 5. Dangerous primary hemorrhage will be more, secondary hemorrhage less frequent. 6. More difficult extraction of the bullet. Senn has devised a first-aid package that contains about a teaspoonful of a powder composed of 4 parts boric acid to 1 of salicylic acid, about 1 dram of absorbent cotton, a piece of sterile gauze 40 inches square, and several safety-pins. The powder is applied by the soldier to the wound, and in the absence of hemorrhage is not disturbed until a field-hospital is reached. In arresting hemorrhage by circular constriction attention is called to the necessity of applying the bandage with sufficient firmness to arrest the arterial as well as the venous circulation. As the result of a series of experiments on dogs to determine the length of time that it is safe to continue elastic constriction without danger of gangrene, Senn considers it dangerous to extend the time beyond from 3 to 6 hours. Bullets will be best located by the use of X-rays. Every field and general hospital should be provided with an X-ray apparatus, which



should be used in preference to the probe. If a small-sized bullet is lodged in an important anatomic locality, difficult of approach and giving rise to no symptoms, it should be left with the hope that it will become encysted. Neither gunshot fractures of the extremities nor injuries of large joints furnish any longer an indication for amputation. Extension and immobilization will constitute the treatment for fractures of the femur until sufficient consolidation has taken place to make extension unnecessary, when a plaster-of-Paris bandage may be applied from the toes to the groin or higher for high fractures, and the patient be allowed to get about on crutches. Other fractures of the extremities are treated with the plaster-of-Paris bandage. In case of infection, continued irrigation with a saturated solution of aluminum acetate will often avoid the necessity of amputation. Wounds of the skull will invariably require operation, provided it holds out any encouragement of saving life. For wounds of the chest, however, nature's resources in arresting bleeding are advised, unless the source of hemorrhage is one of the intercostal or internal mammary arteries. Subsequent complications are to be treated as they present themselves. Preparatory to opening the abdomen, in case of perforating wounds, washing out the stomach and rectum and colon is advised. Median incision is usually most advantageous and in case of profuse bleeding, the blood accumulating as fast as it is sponged out, digital compression of the aorta should be made. Wounds of the liver are stitched with cat-gut, cauterized with the actual cautery or tamponaded with iodoform-gauze. In case of wounds of the spleen, or kidney, if hemorrhage does not yield to suture or tamponade, splenectomy or nephrectomy may be necessary. Inflation with hydrogen-gas will aid in finding perforations of the intestine, which should be closed by Halsted's stitch, including the fibers of the submucosa. Flushing the abdominal cavity with normal salt-solution not only clears it of infectious material but acts also as a stimulant to the flagging circulation. Drainage by means of glass tubes and iodoform-gauze is strongly advised when there is any reason to believe that contamination of the peritoneal cavity has taken place. Opium to quiet the peristaltic action of the intestines, stimulants and the subcutaneous infusion of normal salt-solution in case of shock, are needed in the after-treatment.

5.—The pathology of carcinoma is discussed in detail, the experimental work of Roncali and Sanfelice with the blastomycetæ receiving special attention. A discussion of calcium carbide and acetylene-gas follows, after which the method of using them in the treatment of carcinoma of the uterus is described as follows: Necrotic debris is thoroughly curetted away under anesthesia, hemorrhage from arterial twigs being arrested by the Paquelin cautery and oozing by means of hot water. Into the dried cavity is packed a piece of calcium carbide the size of the last phalanx of the thumb. Acetylene gas is evolved at once, filling the cavity with froth-like bubbles. The cavity and then the vagina are packed with iodoform-gauze and the patient is put in bed for 3 days, when the gauze and carbide remains are removed and a new piece used. The carbide remains are grayish clay in color, and can be sponged and irrigated away in a few minutes. After a series of such applications the ragged necrotic-faced ulcer is converted into a clean, simple ulcer, the edges of the cavity begin to draw in, the area of the crater is diminished and it appears to be of a healthy character. Further persistence in treatment is followed by progressive contraction until the cavity is entirely obliterated. There is puckering of the vault of the vagina about the small uterine os that remains, the whole field being covered by healthy pink mucous membrane. A woman of 69, whose cervix was two-thirds absent from carcinomatous ulceration, was treated in this way for 4½ months. She was not seen again for 3 months, when she was still without discharge or hemorrhage, and 1 year later she still remains well. Another woman of 53, whose cervix was entirely absent through ulceration, was treated with equally satisfactory results, remaining without discharge, odor or hemorrhage since for nearly 1 year. Several other patients are still under observation. Bacteriologic experiments by Prof. Hektoen with the calcium carbide have given negative results.

6.—A case of chronic phlebitis is reported in which there was swelling, induration and intractable eczema of 14 years' duration. Removal of a portion of the saphenous vein was followed by satisfactory recovery.

### Practitioner.

June, 1898. [No. 360.]

1. The Treatment of Consumption. SAMUEL WILKS.
2. The Susceptibility to Tuberculosis under Different Conditions. ARTHUR RANSOME.
3. The Bacteriology of Tuberculosis. G. SIMS WOODHEAD.
4. The Relation of Tuberculosis of Animals to Man. ALLAN MACADAM.
5. The Hospital Treatment of Consumption. JAMES E. POLLOCK.
6. The Sanatorium Open-Air Treatment in Pulmonary Tuberculosis. HERMANN WEBER.
7. The Treatment of Pulmonary Tuberculosis by Residence at High Altitudes. C. THEODORE WILLIAMS.
8. The Mediterranean Littoral as a Health-Resort for Phthisis. MICHAEL G. FOSTER. (With 3 Maps.)
9. Desert-Climate for Lung-Tuberculosis. F. M. SANDWITH. (With Map.)
10. The Climate of South Africa. ALFRED P. HILLIER. (With Map.)
11. Ocean-Voyages in Phthisis. F. PARKES WEBER.
12. Sanatoria for Consumptive Patients. F. RUFENACHT WALTERS.
13. The Open-Air Treatment of Phthisis in Great Britain. F. W. BURTON-FANNING. (Illustrated)
14. The Medicinal Treatment of Tuberculosis. HECTOR MACKENZIE.
15. The Causation of Tuberculosis and its Prevention by Legislation. ARCHIBALD KERR CHALMERS.
16. The Prevention and Restriction of Pulmonary Tuberculosis in the City of New York. HERMANN M. BIGGS.

1.—Wilks briefly reviews the various so-called **specifics for pulmonary tuberculosis** that have come into prominence and then passed into oblivion. The remedy he prefers is "air, air, fresh air," and he expresses his respect for Diogenes for having insisted that Alexander get out of his sunshine.

2.—The factors to be considered in studying the **susceptibility to tuberculosis** are: race, climate, local distribution of the disease, age, sex, heredity, and the relation of the soil. No race of mankind can be said to be entirely exempt from the danger of contracting tuberculosis. The same races that under one set of conditions escape its ravages almost entirely, are under another seriously exposed to attack. Thus, the Bedouins, who are usually exempt, suffer when they "exchange their tents for stone-built houses." The nomad Arabs of Algeria fall victims when they are made captive, and the hardy Icelanders frequently contract the disease on removal to Denmark, and the negroes from the interior of Africa when brought to the coast, or to Europe. On the other hand, certain races are especially liable to tuberculosis in their native countries, as, for example, the Kanakas of New Caledonia and the Maories of New Zealand, and the inhabitants of North Greenland, Newfoundland, New Brunswick, and Canada, in the last particularly the native Indians. Not only is tuberculosis a disease of all races, but it is also a disease of all countries and all climates. As Hirsch has said, it is "a ubiquitous disease in the strictest meaning of the term." In Dr. Lombard's maps of its distribution the only portions of the earth's surface from which the color is entirely absent are the Arctic and sub-Arctic regions, deserts, and high ranges of mountains, and it is precisely in those parts that human beings are fewest and most sparsely settled. In all the capitals of countries and in the chief cities of Asia, Africa, and America there is but little difference in the tuberculosis-rate, and what differences there are cannot be accounted for by differences of climate. Lombard has constructed the following table showing the proportion of deaths from tuberculosis to each thousand deaths:

London.....	121	Paris.....	143
Brussels.....	163	Vienna.....	208
Berlin.....	109	Stockholm.....	160
Christiania.....	172	St. Petersburg.....	151
Rome.....	114	Milan.....	132
Lisbon.....	115	Athens.....	183
New York.....	167	Rio Janerio.....	186
Lima.....	171		

In the light of present knowledge of the essential cause



of tuberculosis it is not surprising to thus find the disease wherever human beings are gathered together. The chief source of the organism that causes the malady is the human race itself; and hence, except in the presence of adverse conditions, it might be expected to follow mankind in its distribution over the surface of the globe. It must also be conceded that the other conditions of life under which people live are of much greater importance than the mere question of climate. The extreme variations of the disease in places geographically close together are so great and so frequent that they could not be due merely to differences of climate. This is shown very conspicuously in comparative studies of the death rate from tuberculosis in counties of England, where the difference between the highest and lowest returns is often more than 50%. In Scotland tuberculosis is almost unknown in the Western Hebrides, but in towns on the west of the mainland, with very similar climate and a similar race of people, it is very common. There can be no doubt that circumstances such as occupation, dwelling, respiration of pure or foul air, liability to catarrhal affections, etc., are of much more importance than mere climate, and that they often determine the question of infection of otherwise healthy persons; but when all these circumstances are taken into consideration, it is still possible to find that certain climates and certain localities are less likely than others to promote the development of the disease. The bacillus is best cultivated in a warm atmosphere, well charged with moisture, and containing plenty of nitrogenous organic impurity. Ransome himself has found admirable media for its cultivation in wall-paper saturated with organic vapors from the breath and from ground-air, and has ascertained that it is possible to grow it on these media at a temperature of from 60° to 70° F., though it flourishes more vigorously at temperatures of about 98°. There is ample proof of the frequency and special malignancy of the disease on the coast of continents and islands placed within the tropics and in other hot, damp, impure atmospheres. Very dry climates are comparatively immune. It is especially interesting to speculate as to the antagonism of cold climates to tuberculosis. It is probable that cold hinders the growth of the bacillus outside of the body, but it may also be surmised that the lower amount of the humidity of the atmosphere has likewise something to do with the result. It must be again remarked, however, that there is no complete immunity, even in these favored regions. Mountainous regions and elevated table-lands are also comparatively immune; perhaps the greater degree of cold in these elevated regions may have something to do with the fact, but it is probable that the less density of the population of these parts of the world is mainly instrumental in preventing pollution of the atmosphere with the bacillus and its favored cultivation-medium, organic vapor. The influence of locality, like that of climate, is intimately bound up with the habits and surroundings of the people. Most of the differences in the tuberculosis-rates of localities are due to the greater or less healthfulness of the occupations, to the amount of air-space in the workshops, the cleanliness of the surroundings, the nature of the dust to which the work gives rise; but another, and perhaps a still more important factor in the production of tuberculosis is the existence in certain localities, of infected houses, or even of infected areas. Observations of this kind have been made by Ransome, by Niven, of Manchester, and by Flick, of Philadelphia, and have been confirmed in the report of the Collective Investigation Committee of the British Medical Association. Tuberculosis is undoubtedly fostered by dampness in the subsoil of dwellings, as was pointed out as early as 1862 by Bowditch, of Massachusetts, and shortly afterward by Buchanan, of the Local Government Board. Good drainage has been found to diminish the prevalence of the disorder by as much as 50%; but it is not yet clear how a damp subsoil can increase the tendency to tuberculosis. It has been supposed by some that, as a cold, damp soil tends to predispose to catarrhal affections, these diseases may so injure the lungs as to leave them more disposed to tuberculosis. It is possible that there may be something in this hypothesis, but there is certainly no definite relation between tuberculosis and other respiratory diseases. It is well known that simple catarrhal affections of the lungs and chronic bronchitis rather diminish than increase the tendency to pulmonary tuberculosis. If it were possible to ascertain that there was a large proportion of destructive inflammations, such as bronchopneumonia, for in-

stance, in such places, it might be possible to account for these differences. There is another, perhaps still more probable, explanation of the influence of the soil in the greater or less proportion of impure aqueous vapor from the ground-air in wet or dry soil respectively. Ransome has been able to show that these vapors afford an admirable culture fluid for the tubercle-bacillus, even at ordinary temperatures, and it can now hardly be doubted that this is an important means of keeping alive or even enhancing the virulence of the organism in tubercle-infected houses. It is true that little difference in this respect is to be discovered between the vapors from pure and impure subsoil, but it may reasonably be concluded that the air of houses on well-drained soils will be less likely to allow condensation of vapor to take place on the walls or floors than it would in houses less perfectly protected from the damp. The incidence of tuberculosis in the sexes is to a great extent determined by the occupation of the individual and the age at which it is pursued. When the whole population of England and Wales is taken there is no discrepancy between the sexes. The influence of excessive drinking and unhygienic surroundings is very potent; thus the comparative mortality-figure for inn and hotel servants (London) is 607; that for coal-miners is 69, and for clergymen 67. Yet in spite of the overpowering influence of occupation and other conditions there are some traces to be found of a true sexual susceptibility to tuberculosis. There is some special proclivity toward tuberculosis in the male infant. The male death-rate in the first year of life is more than twice as high as the female. In the third, fourth, and fifth years of life the female rate is slightly the higher. This extra liability of older females to tuberculosis continues to about 35 years of age. After this the male death-rate is constantly the higher. Pulmonary tuberculosis is a disease of youth and middle age, the largest number of deaths taking place between 25 and 35; but no age is entirely exempt. It is true that congenital tuberculosis is extremely rare. At the age of 75 and upward Ogle gives the tuberculosis rate per million as over 500. There are at least three modes in which tuberculosis is regarded as hereditary: (1) Direct infection of the child with the disease in an active state before birth; (2) congenital implantation of the tubercle-bacillus or of its spores, which may remain latent in the system for a variable period; (3) transmission of an undue vulnerability of the system. It may be concluded that congenital tuberculosis is at least a rare disease and that it cannot account for more than a very small proportion of the cases of alleged hereditary transmission of the disease. The second hypothesis, well known as that maintained by Baumgarten, may be rejected as untenable, and even as regards the third mode it is highly improbable that heredity has much to do with the liability to tuberculosis. A large proportion of cases arises without any tuberculous family-history in the past. Healthy families leaving the country to reside in crowded towns often lose some members subsequently from tuberculosis. It may be concluded, therefore, that, with the exception of soil, none of the influences that have been passed in review have much to do with the spread of the disease, and that other causes are of much greater importance.

**3.—Woodhead** reviews the well-known facts of the **bacteriology of tuberculosis**. He thinks hereditary tuberculosis may be left out of account, and reiterates his belief that tuberculosis of children is due to the ingestion of tubercle-bacilli, probably with the milk of tuberculous animals.

**4.—Tuberculosis in man and animals** is the same disease, and on this account the kind of animals most generally affected by it becomes an important consideration. The disease is most commonly encountered in cattle, swine, and poultry. In the last instance opinion still differs as to the identity of fowl-tuberculosis with the human affection; but in any event the bacilli found in both diseases are closely related. The carnivora and the horse come next in order of frequency. Among goats and sheep the disease is comparatively rare. Cows are more frequently affected than oxen. In North Germany from 1 to 4%, and in South Germany about 1% of the swine are found tuberculous. The disease in swine is closely related to the tuberculosis of cattle, inasmuch as the feeding of pigs with milk from infected cows gives rise to tuberculous disease in the former. The pig is readily infected through the intestines. The proportion of tubercu-



lous persons contracting the disease through food is probably larger among children than among adults. Children are more susceptible to intestinal tuberculosis than adults, and to children milk is the main source of danger. Extensive tuberculous disease may exist in animals that appear to be in perfectly good health. In such cases tuberculin is a most valuable means of diagnosis. The parts of animals used for food that are the most likely to contain the tuberculous matter are the meat-substance and the milk. The tuberculous matter is found principally in the organs of the animal and as a rule most abundantly in the lungs, lymphatic glands, and the serous membranes. The bacilli are seldom encountered in the muscles or muscle-juice. Of 21 tuberculous cows in which the meat-substance was examined only 2 gave evidence of tubercle. Nevertheless there still exists the probability of the meat becoming contaminated from the actual tuberculous lesions present in other parts of the carcass and conveyed thence to the proper meat substance by the hands, knives, and clothes of the butcher during the process of flaying and dressing. It would thus appear that when meat is infectious, it has probably become so through contamination with tuberculous material during its removal by the butcher from the carcass. The same slaughterer might in this way also contaminate other healthy animals slaughtered by him. As regards milk the problem is a simple one. The milk furnishes a soil suitable for tubercle-bacilli and a favorable vehicle for their transmission to other soils. Regarding the condition necessary for the contamination of the milk, the Royal Commission concluded that there must be tuberculous disease of the udder of the cow, but other observers do not confirm this opinion, and hold that milk may be infectious without visible signs of udder-disease in the tuberculous animal. In conclusion Macfadyen states that tuberculosis must be strenuously fought by preventive measures and adequate inspection of cattle by veterinary surgeons; removal of suspected animals must be required in the first instance. The milk on its passage to the consumer must be more carefully controlled; and, finally, a more general use of the pasteurizing process is advisable on the part of dairy-farmers.

5.—The hospital treatment of pulmonary tuberculosis was inaugurated at Brompton Hospital. It is interesting to read at this late day that the project of the founders met with strenuous opposition from the profession. The hospital was established in 1842 and then contained 30 beds; it now has 321. The report for 1891 shows the results of treatment in recent years. The total number of cases of tuberculosis, excluding acute and casualty cases, was 1070, with 222 deaths, or 20.7%; the total mortality in 1885 was 18.3%; in 1886-87, 15.9%; in 1888, 16.4%; in 1889, 17.1%. During the tuberculin-furore this remedy was used in 28 cases, without satisfactory results. The physicians and nurses of the hospital come, of course, into more or less intimate contact with hundreds of tuberculous patients, and the frequency with which the disease is contracted by them is a matter of importance and interest. Of 4 resident medical officers, none developed tuberculosis; of 150 house-physicians, 8 became tuberculous, but only 1 contracted the disease in the hospital. Of 6 matrons, each serving for many years, none developed tuberculosis. Of the 101 nurses, 3 died of tuberculosis after leaving the hospital. One only suffered from the disease while in the hospital. Of the gallery-maids who swept and cleaned the floors for several hours daily, and of 20 porters who had to wait in the out-patient room and in the post-mortem room, and who had to carry the bodies from the wards, none had tuberculosis. Of the 22 dispensers three died of this disease, but only one in the hospital. Of physicians and assistant physicians there were 29, of whom 8 died, 1 from tuberculosis. This evidence negatives the idea, it is thought, of tuberculosis being an infective disease for persons under such circumstances as being grouped in a hospital, breathing the same air, and living under the same conditions as others similarly affected. Pollock seems to be somewhat lukewarm in his belief in the etiologic relation of the tubercle-bacillus.

6.—Pharmaceutic and other special treatment offers, as far as present experience goes, less satisfactory results than hygienic and dietetic treatment. The main points of this are the almost constant stay in the open air at localities where the air is pure; abundant nutrition; careful arrangement of rest and exercise, and exclusion of injurious influ-

ences acting on mind or body. It is important in sending a patient to a **climatic resort** to place him in charge of a local physician, for although open air is one of the greatest curative agents, the manner in which the patient is to avail himself of it requires the careful consideration of the physician in attendance. The same is the case with regard to exercise. It is in all cases advisable that the patient be seen every 2 or 3 days, if not daily, by a physician well acquainted with pulmonary tuberculosis, who will prescribe at every visit the kind of food the patient is to take, how long he is to be in the open air, whether he is to walk and how much, whether in exposed or in sheltered places, etc. This can scarcely be done satisfactorily in a great many cases excepting in a well-arranged sanatorium with resident medical men. The sanatorium-building ought to be thoroughly hygienic. As to climate, sheltered Alpine slopes are decidedly preferable. A good cook is an important element in a sanatorium. The majority of physicians directing such institutions are in favor of frequent meals of moderate amount. Weber himself advocates in addition to 3 moderate meals, 3 or 4 supplementary meals consisting mostly of milk. Alcoholic stimulants are eminently useful in some cases and in some stages of the disease, while in others they are not. At Falkenstein and at Davos almost perfect rest is enjoined until the disease is arrested and pyrexia has entirely ceased. At Gorbardsdorf and at Nordrach moderate walking on slightly rising ground is permitted. From an experience of many years, Weber is convinced that treatment at good sanatoria promises more than ordinary treatment at hotels and "pensions" without strict medical supervision. There ought to be sanatoria for the wealthier classes, for those without means of their own, and for those with slight means. There are a number of sanatoria in different countries for the wealthy, particularly in Germany and Switzerland. A few have been established recently in France, in Norway, and in Russia, and there is an excellent one at Saranac Lake in the Adirondacks under Dr. Trudeau. England has been very backward with regard to sanatoria for paying patients, though it is in the vanguard in provision for the poor. In addition to the sanatoria for the cure of the tuberculous poor, it is an imperative necessity to establish asylums for the incurable, though, of course, the term "incurable" should be avoided.

7.—The **high-altitude treatment of pulmonary tuberculosis** originated in Peru and Bolivia, where tuberculosis of an acute form prevailed at the sea-level, and where it had long been the custom to transport tuberculous persons to towns and valleys in the Andes at elevations of from 8,000 to 12,000 feet, where after prolonged residence they gradually recovered. The publications of Archibald Smith, of Guilbert, and of Hermann Weber, did much to influence the minds of the medical profession in favor of the climatic treatment of pulmonary tuberculosis. Mountainous climates possess certain characteristic qualities: (1) Diminished barometric pressure and consequent rarefaction of the atmosphere; (2) diathermancy of the air, or increased facility with which the sun's rays are transmitted; (3) asepticity, or freedom from organic germs. Mountainous climates are, as a rule, drier than lowlands, but their hygrometric qualities depend on various considerations, such as their relation to the sea, or to lakes and rivers, or whether they lie in the track of certain winds. The effects of mountain-air on the organs and functions are as follows: The skin becomes tanned by the solar rays. The circulation is at first quickened and the heart's impulse becomes more powerful, but the pulse-rate at the end of 6 or 8 weeks is found to have lessened, and even to have fallen to a lower rate than the normal. Respiration is at first quickened, but after an interval of 6 or 8 weeks it gradually slows and falls, like the pulse, below normal. Breathing becomes deeper, inspiration longer and expiration more complete. All this is accompanied by a reduction in the blood-pressure and in the amount of the urea excreted by the kidneys, but on the other hand more carbonic acid and water are eliminated by the lungs. When acclimatization is complete the urea appears in full quantity in the urine and the blood-pressure increases. Accompanying the reduction in the rate of pulse and respiration there is an expansion of the thorax in several directions. An experience of over 350 cases treated at high altitude sanatoria leads Williams to the conclusion that the general effect on selected cases of chronic tuberculosis



is excellent, improvement taking place in 83%. There is considerable gain of weight. The general appearance of the patients is striking, and it is difficult to recognize in the bronzed and vigorous individuals the pallid invalids of a few months before. The local improvement is perhaps more striking; cough and expectoration diminish, and in the majority of cases disappearance of the tubercle-bacilli follows. In cases of complete arrest of the disease the thorax expands and hypertrophy of the healthy portion of the lungs takes place. Chronic local vesicular emphysema is developed around the tuberculous masses, which undergo fibrosis. Cases with tuberculous consolidation of one or both apices do best. When on the other hand, softening and excavation are present, patients do not prosper quite so well. Both sexes profit by the treatment. Patients over 40 do not benefit so much as those under that age. Women under 20 and men over 30 do less well than those between 20 and 30. The treatment seems to be especially indicated in cases in which hereditary predisposition is a marked feature. It is most effective when the disease is of recent origin, though it often benefits cases of long standing. High altitudes have proved useful in the treatment of hemorrhagic tuberculosis, and the theory that diminution of barometric pressure promotes hemorrhage is not confirmed by experience; and, if there be risk of hemorrhage, it is more generally on descending too rapidly from the mountains than in ascending, or during the time of residence. Patients with pyrexia and with extensive involvement of the lungs do not do well. Mountainous climate is also contraindicated in cases of double cavities and in all advanced forms of pulmonary tuberculosis, in catarrhal and laryngeal tuberculosis, and in acute tuberculosis of all kinds, and especially when there is great irritability of the nervous system. To insure the full advantages of the treatment, a sojourn of at least 6 months is necessary, and it is not uncommon for patients who are benefited largely by the climate to make the mountains their permanent home. This is the case in the State of Colorado.

**8.**—The coast of the **Mediterranean** presents a variety of climates, but there are certain characteristics common to all. These are warmth, abundant sunshine, and rarity of fog. For the tuberculous patient the principal advantages of the climate are the large amount of time that can be spent out of doors, owing to the dry, sunny days and the aseptic quality of the air. The physiologic effect of the climate is most marked on the nervous system. Though in most people productive of a sense of well-being, the effect is often exciting, and may be harmful to hysteric and high-strung individuals who lose sleep and are in a constant state of nervous tension. The early case of limited mischief, slight fever, fair constitutional vigor, and a good pulse, will probably do well on the Riviera, but its progress will be quicker and more certain in the Alps. When the chest-walls are very rigid, high altitudes should be avoided. When the bronchitic element is marked, the Riviera, with the exception of Egypt, will probably yield the best results. Hemorrhage forms no contraindication. Insomnia is invariably aggravated in the Riviera; the constitutional irritability that often precedes tuberculosis is likewise intensified. The time of year available is from the middle or end of October until May. Foster describes the special advantages of the various places, such as Hyères, Grasse, Monte Carlo, Mentone, Bordighera, San Remo, Ajaccio, etc. Nice possesses two disadvantages: (1) it is a large town; (2) it is much wind-swept. The advantages and disadvantages of the North African health-resorts are also detailed.

**9.**—The chief physical advantages of a **desert-climate** are warmth, sunshine, dryness, freedom from rain, presence of ozone, and absence of germs of all kinds. The popular idea of a desert is erroneous. The desert itself is generally a hard rock, sometimes covered with gravel. To lead a Bedouin life in tents in the freshest and purest air is an ideal thing for any tuberculous patient, but many are deterred from this by the expense, others by loneliness, or by banishment from the luxuries of life. Only a rich man can afford to camp out in the desert, but any individual in Egypt can determine to sleep with his windows open at night and to pass as many hours as possible out of doors by day. There are only two important problems to be solved: the head must be protected from the sun when necessary, and the body must in all cases be sheltered from the wind. Wind is the chief objection to the Egyptian climate. The cases of

tuberculosis likely to derive benefit in Egypt are the non-febrile, hemorrhagic, chronic, quiescent types, and those associated with bronchitis; also early laryngeal disease. Cases of acute tuberculosis with a tendency to fever, diarrhea, or repeated pleurisy, or advancing disease of both lungs are unsuitable. The best season for arriving in Egypt is November, the time for leaving, the middle or end of April. Numerous Egyptian towns offer advantages as health-resorts, but the accommodations are, with the exception perhaps of Helouan, Mena House, and Luxor, yet inadequate.

**10.**—There are 3 kinds of **climate in South Africa**, those of the coast-terraces, the mountains, and the plains of the interior. Most favorable for the treatment of tuberculosis are the Karroo districts, then the grass-plains of Griqualand West, Orange Free State, and South Bechuanaland, Bloemfontein, Kimberley, and Vryburg; then the higher plateaux of Southern Rhodesia; less favorable are Johannesburg, the Upper Coast terraces, as Queenstown, Grahams-town, etc.; unfavorable, the coast-towns.

**11.**—The chief characteristics of **ocean-air** are its tolerable degree of humidity and its equability and freedom from dust, microbes, and other impurities. The mean relative humidity is about 73.5%. The midday temperature is seldom above 85° F. Heat on the ocean is less complained of than it might be at the same temperature on land, and even within the tropics it is seldom found to be very oppressive. A sea-voyage is contraindicated in advanced cases of any kind, as well as in those complicated with laryngeal or intestinal tuberculosis, or with advanced arterial sclerosis or cardiac disease; in acute cases with fever at any stage; in feeble patients with little resistant power; and in all those who would naturally bear the voyage badly. It is suitable (1) for prophylaxis; (2) for persons otherwise eligible for a long voyage in whom slight signs of pulmonary tuberculosis have become apparent after specially debilitating circumstances; (3) to improve the general health in quiescent or healed cases of pulmonary tuberculosis.

**12.**—**Sanatorium-treatment** is based on the careful regulation of each patient's daily life in all its hygienic and medical details. He is gradually trained to stand a life in the fresh air in all weathers, while the tendency to chill is removed by simple hydrotherapeutic applications and other common-sense precautions. The nature and the amount of daily exercise are regulated according to the weather and to the patient's momentary state of health in an ascending scale, beginning with absolute rest in bed. His food ranges from fever-diet to a rich and varied dietary. England, by her far-reaching sanitary improvements and the establishment of special hospitals for tuberculous patients, has enormously diminished the mortality of pulmonary tuberculosis, while the average of life in tuberculous patients has been materially lengthened. More money should, however, be devoted to the establishment of sanatoria than to the founding of hospitals in towns. On the Continent the first sanatoria were founded on commercial principles, while those for the poor and the less wealthy middle-class patients are of recent date. Until 1892 there was none for the poor excepting in America. In Dr. Brehmer's sanatorium at Gœrbersdorf, founded in 1859, from 24 to 44% of the cases were apparently cured or had the disease arrested. Alpine sanatoria show even better results. The general uniformity of results attained at foreign sanatoria, with diverse climates, shows that modes of treatment are more important than climatic conditions. There is some reason to believe that a cure effected in more genial climates is less assured than one that has been obtained in the native country of the sufferer. All the foreign sanatoria are so placed as to have natural shelter on the colder or windier sides from woods or higher hills. Most of them also have very extensive grounds, which are laid out so as to provide walks at various gradients to facilitate graduated exercise. Foreign sanatoria fall into two groups: in one the patients are quartered in a single large building, while in the other they inhabit a number of detached cottages or villas. The first group is represented by Gœrbersdorf, Falkenstein, Hohenhonnef, and Rupperts-hain; the second by Nordrach and Reiboldsgrün, in Germany, and by the Adirondack and Loomis sanatoria in America. Each of these has its advantages that need not be specified here. The nature of the ground and the climate will have to be taken into account in adopting one or the other plan. In considering the possibility of danger arising



from the aggregation of a number of tuberculous patients the opinion is expressed that such risk is entirely prevented by very simple precautions, and there is not a single well-authenticated instance of the spread of infection from a tuberculous patient in such institutions when the proper measures have been adopted. There is a strict rule in all the foreign sanatoria as to the disposal of the sputa. Spitting elsewhere than in the cups provided is forbidden, usually on pain of instant dismissal. Linen is disinfected by steam or by boiling. Rooms are constructed so as to be readily cleansed without raising any dust, all unnecessary angles and ledges being avoided, while the corners are rounded. The furnishing is, in theory at least, also done with the idea in view of ready cleansing and disinfection and the avoidance of dust. Unnecessary hangings are hygienically indefensible, but a few curtains of washable material are unobjectionable and are useful in preventing drafts. The patients' rooms in the best sanatoria are on the south side of the building. The cubic capacity is large and the window-space considerable. Ventilation is effected chiefly by means of the windows, which are constantly left open, special screens being sometimes provided to keep out rain or avoid drafts. Central heating by means of low-pressure steam or sometimes by hot water is the rule. Closed stoves are at times used. In America open fireplaces are preferred. Every sanatorium should be damp-proof, with solid foundations. The removal of the sewerage at Continental sanatoria is sometimes a trifle primitive. When hydrotherapy is employed the water must be cold and at a certain pressure. Many sanatoria have completely equipped douche-rooms. Milk forms an important part of the diet and is supplied in abundance. As tuberculous patients are usually nauseated by disagreeable smells, the kitchen and dining-saloon are often placed in a separate block. Mental repose is a great help to recovery, and at many sanatoria special measures are adopted to attain this and also to amuse and occupy the patients in harmless ways. At the Loomis sanatorium there is a separate building entirely devoted to billiards and other amusements. Every foreign sanatorium has its own laboratory, where the sputa are regularly examined. The Roentgen rays are also employed in a few sanatoria. The medicinal treatment is for the most part modeled on that which prevails in each country. Drugs are used only sparingly. Codliver-oil is but little employed. Coughing at mealtimes is exceptional, as patients are taught to avoid useless coughing. The duration of treatment depends upon the progress made by the patient and on the conditions of his home-life. It is seldom less than 3 months. In some, as in Nordrach, at the Adirondack and Loomis sanatoria, the patient stays until the disease is apparently cured or arrested. In the Alpine sanatoria residence is recommended lasting over two winters and one summer, and at least 2 years are considered necessary in Colorado. It would not, however, be necessary in every case to have the treatment carried out entirely in the sanatorium. Patients would stay until all active disease was arrested and then continue the treatment in a modified form at home, if the place of residence were satisfactory. The hygienic training received in the sanatorium would be an important help in the final restoration to health.

**13.**—Climate is of great utility in the treatment of tuberculosis, but the success of the open-air treatment does not depend wholly upon it. The natural conditions most conducive to the **open-air treatment of pulmonary tuberculosis** are (1) the purity of the air; (2) the air should be cool and bracing; (3) abundance of sunshine; (4) dryness of the soil; (5) very humid atmospheres are probably prejudicial, but a moderate amount of moisture offers no insuperable objection to satisfactory treatment, as is proved by the beneficial effects of sea-air and of residence at such places as Falkenstein, where the mists are found to have a sedative action on laryngeal and bronchial irritability. Winds are, on the whole, unfavorable from their chilling effects, and from the embarrassment they cause to respiration. Elevation above sea level is advantageous, but cannot be obtained to a marked degree in Great Britain. This feature can, however, be dispensed with, as there are good reasons for believing that, as regards healing properties, the air of altitudes differs from that of low-lying resorts only in degree and not in kind. Fanning has had 3 years' experience in the open-air treatment of tuberculosis in a convalescent-home at Cromer, England, and has seen nothing but

benefit accrue to the 24 patients subjected to the regime. Two were cured, 4 relatively cured, and 12 improved. During the winter months they were able to spend 6½ hours a day on an average in their shelter. The disadvantages arising from the uncertainty of the English winter-climate can be overcome to some extent by proper buildings and shelters. An illustration of the latter is appended to the article.

**14.**—Nothing new in the way of treatment is advanced. Mackenzie believes in the use of codliver-oil, which is given at Brompton Hospital in doses of one or two teaspoonfuls twice a day. Extract of malt is most useful in masking the taste. Creosote, guaiacol, creosotal, guaiacol carbonate, benzozol, and piperidin guaiacolate are mentioned and their doses given. The majority of the newer of these preparations are well borne by the stomach, but they are very expensive. Fowler's solution is held in high esteem. Iron is not so valuable as arsenic. It increases the tendency to hemoptysis and is contraindicated in the presence of pyrexia. Zinc oxid in doses of 5 grains is preferred for the night-sweats. For the cough lozenges of gum acacia and licorice are used at the Brompton Hospital; also certain dry inhalations, as, for example, saturated alcoholic solution of menthol or a mixture of equal parts of creosote, guaiacol, and spirit of chloroform. When there is excessive secretion belladonna and codein may be employed.

**15.**—From 1860 to 1895 there has been a reduction in the deaths from tuberculous disease of 39.1% in England and Wales; in Scotland, of 36%. In children under the age of one year the death-rate is greater than at any subsequent age, and a diminution goes on until the fifteenth year, after which there is an increase until the fifth decade of life is reached. Nearly three-fourths of all deaths from tuberculosis are due to disease of the lungs. In Glasgow, where Chalmers is one of the medical officers of health, there has been a reduction in the death-rate from tuberculous disease of 19% since 1890. Even away from the large centers of population there has been a decrease in the mortality from this disease. This good result is due to the adoption of general measures of sanitation, largely fostered since the passage of the Factory Acts and the Housing of the Working Classes Act. The influence of occupation on the prevalence of tuberculosis is exhibited in a series of interesting tables. In one it is shown that while the agricultural classes are less subject to respiratory diseases than the industrial classes, the ratio between pulmonary tuberculosis and the other respiratory affections is 38% in the latter, and 54% in the former, *i. e.*, 54% of all respiratory diseases are due to pulmonary tuberculosis. The influence of foul air, especially that of respiration, is shown in a table of 15 classes of workers—in all, except the butchers and the shopkeepers, the mortality from pulmonary tuberculosis exceeds that from other respiratory diseases. Among metal-workers this relation is reversed in all except locksmiths. The important features in the relationship of tuberculosis to food are detailed in an interesting way, and rules are given that should guide inspectors of meat in rejecting carcasses or seizing diseased parts. The incompetency of some of the British inspectors is lamented, whose previous occupation leads us to infer that the political boss is not unknown in England. In one town, for example, four plumbers, and three carpenters; in another, two plumbers, one carpenter, one compositor, one bricklayer, a florist, a builder, a surveyor, and a stonemason exercise the office of inspector. Advanced ground is taken with regard to the milk-supply, the belief being expressed that every udder-disease, whatever its apparent nature, should be notifiable, and the milk should not be used. Houses should be constructed on a dry soil and should be protected against dampness of site, foundation, and walls. A house should be open on at least two sides, and should be freely exposed to the sunlight. The habitable rooms and the entire interior should have free movement of air by night and by day, and free access of daylight. It is also shown how with the increase of room-density (the number of persons per room of occupied houses) there goes hand in hand an increase in the death-rate from pulmonary tuberculosis. Praise is expressed for the steps taken by the New York health-department to limit the spread of tuberculosis.

**16.**—Biggs describes the regulations now in force in New York. Pulmonary tuberculosis is ranked as "an infectious and communicable disease," and physicians are required to report all cases coming under observation. The data are



recorded, but private patients are not visited by the inspectors and receive no circulars. Cases reported by public institutions may or may not be removed to a hospital. Premises vacated by the death or removal of tuberculous patients may, if it is deemed necessary by the inspectors, be ordered renovated—that is, scrubbed, repainted, repapered, whitewashed, etc.—measures that are more efficient than disinfection. Bacteriologic examination of sputum is made free of charge for private physicians. The efforts of the Department have been most successful—a higher intelligence prevails among the inhabitants, and spontaneous precautions are often taken. The mortality has steadily decreased since 1886.

### Münchener medicinische Wochenschrift.

May 31, 1898. [45. Jahrg., No. 22.]

1. Clinical Experiences with the Therapeutic Employment of the New Tuberculin T. R. H. REINHOLD.
2. Psychic Conditions of Imperative Impulse. L. LÖWENFELD.
3. Deodorization with Formalin. DR. TIPPEL.
4. A Case of Fatal Poisoning with Essence of Vinegar. J. STUMPF.

1.—During the year 34 cases were treated with the new tuberculin of Koch; in 10 the dose was pushed to the maximum recommended (from 16 to 20 mg.). Transient treatment was given to 14 others. Of the 34 cases, death resulted in 2, but not until several months after the treatment had ceased. The local effects were generally redness and infiltration, never abscesses. The variability of the preparation, preventing complete accuracy in the dosage, is a great disadvantage. It is only in incipient cases without mixed infection, that the remedy is applicable, but even when the local processes are extensive, it may be used, provided the patient is permanently free from fever. The use of the old tuberculin as a means of early diagnosis is not approved of, treatment being based entirely on the finding of tubercle-bacilli in the sputum. Only such patients were subjected to the injections as had shown no febrile rise of temperature for a period of 2 weeks. The following conclusions are announced: 1. Tuberculin (T. R.) produces unmistakable toxic effects, consisting in fever, malaise, and occasionally albuminuria. The effects are also cumulative; the degree of reaction is largely governed by individual susceptibility. 2. Whether the remedy exerts a favorable influence on the course of pulmonary tuberculosis cannot as yet be decided. Good results were observed in 7 cases, but they might have taken place equally well had tuberculin (T.R.) not been employed. [Though Reinhold does not seem to feel that he has weakened the position of Koch's remedy, he has, in our opinion, not strengthened it in the least, and v. Ziemssen's dictum that nothing is to be expected from tuberculin as regards the cure of tuberculosis is probably correct.]

2.—States of obsession (*psychische Zwangszustände*\*) have only of late begun to attract the attention they merit. They may be divided into (1) Obsessional sensations; (2) Obsessional or imperative concepts; (3) Obsessional emotional states; (4) Obsessional hallucinations; (5) Obsessional impulses, instincts, acts, and inhibitions. It is not an easy matter to give an inclusive definition for all these classes, but their common characteristic is their irresistibility, their compulsory nature; they ensconce themselves with an uncontrollable power in the individual's consciousness, and he is helpless in dislodging them. Another alleged characteristic is the recognition on the part of the individual of the obsessional state, but this recognition is not always present. Not rarely various imperative states are combined.

1. *Obsessional Sensations*.—Sensory obsessions are merely a species of obsessional concepts, *i. e.*, they are concepts of the character of sensation or perception, in which, however, the corresponding external impression is wanting and in which the incongruity between the obsession and the external conditions is realized. They are divisible into those concerning external objects and those concerning the body or bodily

parts of the individual. The latter are the more common. The former present themselves as sensations of approach or withdrawal, enlargement or diminution, torsion, or obliquity of objects; corporeal sensations are such as those of lifting of the body, floating or sinking, a sensation of shrinking of the body, of disappearance or absence, of tumefaction, of enlargement, at times of enormous enlargement of special parts, as the head, tongue, arm, hand, penis, testicle; a sensation of crookedness of one side of the body, of rising of the viscera, which differs in its localization from the common globus; sensations of dribbling of urine, etc. These states often begin already in childhood; they are especially prone to occur at the oncoming of sleep, in the horizontal posture, and they disappear on elevating the trunk.

2. *Obsessional Concepts in the Narrower Sense*.—These are most variable, often quite absurd; they may be occasional or there may be a temporary complete subjugation of thought by the imperative concepts. Single obsessions occur, but complex ones are more frequent. Forms of morbid fear constitute a prominent group—such as the fear of an existing or approaching disease, mysophobia, the fear of defiling oneself, the fear of touching certain objects, as metals, because one may become poisoned thereby (*délire du toucher*), the fear of swallowing needles, pieces of glass, etc., the fear of burglars, of fire, of infraction of the rules of etiquette, etc. To this class belong also the erotic obsessions common among masturbators; further, the obscene and sacrilegious concepts pursuing persons of the most correct habits and religious fervor; concepts of a jealous nature (marital infidelity) in men with lessened sexual power; musical imperative concepts, etc. Frequently the concepts take the direction that the association of ideas assumes ordinarily; they obtain through this a formal similarity. The Germans express these states as *Fragesucht*, *Grübelucht*, *Zweifelsucht* (*folie de doute*). Many patients torture themselves constantly with all sorts of questions, in some instances, of the profoundest or the absurdest character—the nature of God, of the devil; why man walks on his legs and not on his head; why the sky is blue instead of green, etc. To this class belongs also the impulse of counting or calculating. The doubts in mild cases are such as whether a letter-address is correct, whether a prescription is properly written, etc. The instance of one physician is cited who had to give up practice because he was in constant doubt as to the correctness of his prescriptions. Different opinions are held as to the mechanism of *Zweifelsucht*. Löwenfeld believes that a weakening of the attention is the factor in many cases; in others the principle of association of contrary ideas makes itself felt unduly. Many morbid fears, especially the topophobias, have unconscious or subconscious ideas as their basis.

3. *Obsessional Emotional States*.—Most important among these are the states of fear which have been dealt with extensively in the literature. Others are attacks of motiveless anger, wrath, jealousy. The not infrequent complete yielding of socially and at times intellectually high-standing men to unworthy, morally debased women, is to be referred generally to imperative impulses in the form of love. States varying from simple displeasure or *Weltschmerz* to the most profound melancholic depression with complete disgust with life are very frequent; such unhappy states being specially common in women during the catamenia. The fully developed emotional fears are divisible into two groups: (1) Simple, primary, undefined fear; (2) special phobias evoked by definite external causes or special ideas. Several subdivisions of the second class are made: (a) phobias with constant ideational content, for example, the nosophobias; (b) phobias with changeable ideational content, for example, agoraphobia; (c) phobias in which the fear arises from a concept that is not obsessional in character, and the fear is really undefined, *e. g.*, the fear of small insects, certain forms of anthropophobia, as gynecophobia. (The article is to be continued.)

3.—Tippel finds that solutions of formalin (a tablespoonful to the quart of water) are useful for destroying certain disagreeable odors of the body, as of the anal and genital regions; of the feet and axillæ in cases of hyperhidrosis; of the secretions in cases of vaginal catarrh, and of urine in certain forms of cystitis; also in cases of decubitus, in which the agent also seemed to hasten the sloughing of the dead parts. It also removes the odor remaining on the hands after making autopsies. For deodorizing floors, walls, bedsteads, commodes, etc., it answers

\* It is difficult to find a proper English equivalent for the German phrase "psychischer Zwangszustand." While we have the term *imperative concept*, with a specific connotation, we are devoid of a generic phrase. Probably "obsessional state," after the example of the French, which Löwenfeld himself endorses, supplies the need.



very well. The upper parts of rooms and upholstered furniture are deodorized by means of formalin-vapor. Scherching's formalin-lamp is highly recommended for the purpose.

4.—Stumpf reports the case of a mason, 32 years old, who drank 3 glasses of beer and ate some sausage, then went home and retired. At midnight he was seized with abdominal pain, vomiting and purging. When seen on the following day, the heart's action was extremely feeble, the pulse could not be felt, the skin was cold and clammy, and the patient was so dull that he could give no history. Toward evening the epigastric pain became excruciating; the stools were ricewater-like; thirst was marked. The next day the patient was able to speak and stated that he had eaten a boiled potato on which he had poured about a tablespoonful of essence of vinegar and a tablespoonful of water, being too lazy to rise to get more water in order to dilute the essence properly. On the following day he seemed to improve somewhat, but he gradually became somnolent, had difficulty in drinking, and died. At the autopsy the stomach was found empty, the mucous membrane dark gray, with punctiform, linear, and insular ecchymoses, most marked at the fundus and pylorus, and in the upper half of the duodenum. The epithelium appeared edematous. There is but little in the literature concerning poisoning with vinegar-essence, or, what amounts to the same, with acetic acid. The symptoms produced by poisoning with Villat's solution most closely resemble those in the present case. Essence of vinegar is pure acetic acid colored with caramel; it is a powerful caustic.

#### Wiener klinische Wochenschrift.

May 26, 1898. [xi. Jahrg., No. 20.]

1. Serum-Therapy and Death from Diphtheria. RICHARD KRETZ.
2. A Contribution to Lymphosarcomatosis of the Small Intestine. RUDOLF SCHMIDT.
3. Ethyl-Chlorid Narcosis. JOSEF FIRCHER.
4. A Case of Hour-Glass Stomach Cured by Gastroanastomosis. J. HOCHENEGG.
5. A Convenient Method for Estimating the Agglutinative Activity of the Blood of Sick Persons. MEINHARD FRAUNDLER.

1.—Kretz's investigation covers 1,989 cases of diphtheria with 607 deaths, observed during a period of 5 years, in the first 2 of which antitoxin was not used. With the introduction of the curative serum went hand in hand not alone a reduction in mortality, but also a marked change in the period at which death took place. While in preantitoxin days 60% of the deaths were due to recent diphtheria, in 33% the cause of death was diphtheria complicated with some other affection; and nearly 8% of the fatal cases succumbed to sequelæ. Under the antitoxin-treatment less than one-fourth of the deaths were due to primary diphtheria, nearly one half died of complications, and in the remainder death was postdiphtheric. No influence of the antitoxin on the development and course of tuberculosis could be observed, nor was any deleterious effect on the kidneys noted. In cases in which albuminuria already existed, serum-injections caused no increase. The increase in the percentage death-rate from complications should not be attributed to the antitoxin directly—not even in the cases of sudden cardiac paralysis—but it should be considered that it is only because of the use of the serum that a late death, as from cardiac paralysis, became possible, the patients heretofore dying in many instances early in the disease. An interesting cause of death, not noticed previously to the use of antitoxin, is that which, following Palttauf, may be designated *postdiphtheric marasmus*. It consists in general of marantic wasting of the body, and has been made possible in certain cases that survived in consequence of the use of antitoxin, and is not directly attributable to this substance. Regarding the secondary effects of the serum, such as dermal eruptions, Kretz has little to say, but he refers to a possible valuable differential sign by which a scarlatiniform exanthem due to the injection may, perhaps, be distinguished from true scarlet fever. In the former there was in one case no eruption in the pharynx, while in all cases of the latter such an eruption was observed. There is no postmortem sign or lesion by which in any given case the pathologist can determine that antitoxin has been

used. The last part of the paper is taken up with speculation on the mode of action of the antitoxin and its relation to the toxin.

2.—Schmidt reports the case of a man, aged 47 years, whose family and personal history were negative. For nearly 14 years he had been subject to diarrheal attacks, although he considered himself in fair health. For 3 months he had suffered from meteorism, colicky pains, and borborygmi, especially after taking coffee. Eventually very extensive edema of the lower extremities, abdomen, thorax and face developed. The colic-like pains came on at intervals and were accompanied by peristaltic movements of the bowel and borborygmi. Succussion-splash was obtainable in the flanks. The stools were profuse, offensive and mucous, urobilin was abundantly present in the urine. The blood showed mild chloranemia; the hematoblasts were increased; there was no leukocytosis. A diagnosis of malignant stenosis of the intestine was made, but **lymphosarcomatosis** was excluded on account of the obvious existence of stenosis, Kundrat having shown that this disease is generally accompanied by an expansion of the intestinal lumen. At the autopsy the upper ileum was found to be constricted for a distance of 3 or 4 cm., so that it just permitted of the passage of the index-finger; at this point the intestine was somewhat bent, the two limbs of the loop being united by bands of adhesion. The wall was diffusely infiltrated, especially in the submucosa. Above the constriction the caliber was much widened and the wall infiltrated. The mucosa here was the seat of numerous ulcers. Below the constriction the bowel was of moderate width, and the mucosa in places exhibited a slaty discoloration. The vermiform process was the seat of a diffuse sarcomatous infiltration. The second case was in a man of 25 years, with a tuberculous family-history; he himself had enlarged lymph-glands and apical tuberculosis. Three months before coming under observation he began to have epigastric pain an hour after meals, with rapid emaciation, although the appetite was good. Soon edema made its appearance. The epigastrium was very tympanitic, the lower parts of the thorax expanded. A diagnosis of tuberculosis of the peritoneum was made, but the autopsy revealed lymphosarcomatosis of the upper jejunum, together with glandular and pulmonary tuberculosis. The affected part of the bowel was transformed into a dilated, stiffened tube, which at one point was perforated; the mesenteric glands were only slightly enlarged, but very soft. In connection with this case Schmidt enters upon interesting reflections as to the relation between tuberculosis and lymphosarcomatosis and pseudoleukemia. Under the influence of chronically acting noxious agents the lymphatic system may undergo quantitative (*hyperplasia*) or qualitative (*alloplasia*) changes. These changes, acquired in the struggle for life, it is believed, are susceptible of hereditary transmission, and the descendants are born with a hyperplastic and alloplastic or with only an alloplastic lymphatic system. From these considerations it is urged that attention be paid in cases of lymphosarcomatosis to the family-history, the state of the glands, the color of the hair of the head, of the mustache, and of the pubic hair. In a number of cases of lymphosarcoma, Schmidt has noted dark-brown hair and a reddish mustache and reddish pubic hair. His general conclusions, finally, are these: (1) As peritoneal tuberculosis and lymphosarcomatosis of the intestine present a similar appearance, the latter should also be considered when the question of the former arises. (2) Among the symptoms to be noted are the early advent of edema, the cachexia, the color of the hair, especially as an evidence of a possible tuberculous diathesis; the abundance of hematoblasts, the absence or insignificant leukocytosis; abdominal pains, especially in the epigastrium; absence of tenderness, at least in the two cases reported. Marked tympany was noted in one case; a tumor was not felt except in a case reported by Nothnagel. The condition of the bowels varies—diarrhea was present in the first case and in one of Nothnagel's; the bowels were generally regular in the second case and in one reported by Nothnagel.

3.—Fischer reports his experience with 141 cases of **general anesthesia induced by ethyl chlorid**. The operations that were performed under this form of anesthesia included, among other minor surgical procedures, osteoclasis for genu valgum, reduction and dressing of fractures, reduction of luxations, and various operations requiring the use of



the Paquelin cautery. Among the chief advantages claimed for this method are the rapid inducement of anesthesia, with immediate loss of consciousness, and the equally rapid recovery of consciousness upon the withdrawal of the drug. Of equal advantage is the short period of excitation that was almost constantly observed. From the physiologic standpoint the drug seems to affect first the psychic center and later the reflex center. In the entire series of cases no alarming symptoms appeared at any time during narcosis. This method is recommended only as a substitute for chloroform-anesthesia, especially when the age of the patient and the condition of the lungs, kidneys and other organs would contraindicate the employment of chloroform. It is impossible to prolong the period of narcosis indefinitely, the longest time in this series of cases being 25 minutes.

**4.—Congenital hour-glass contraction of the stomach** is so rare that the report of this case is of exceptional interest. A man, 25 years old, presented a desperate condition. When the diagnosis was established the question arose as to which of the following operative procedures was to be selected: resection of the constricted portion, pyloroplasty as for pyloric stenosis, or gastroanastomosis as carried out by Wölfler. The last method was chosen as the most rational and the safest and its execution was followed by the happiest results. It is recommended as a typical procedure for hour-glass contraction of the stomach, as it establishes a broad communication between the cardiac and pyloric ends, and at the same time lightens the task of expelling food from the already dilated cardiac portion by the deep location at which the anastomosis is established. For the last reason especially it is to be preferred to resection and pyloroplasty, with the establishment of the anastomosis nearer the small curvature.

**5.—Pfaundler** uses the white-cell counter of the Thoma-Zeiss apparatus. First, he prepares an emulsion of typhoid-bacilli by mixing 3 loopfuls of a 24-hour culture of bacilli with a half test-tube full of bouillon. He then draws blood into the mixer up to the mark 1.0 and dilutes with the emulsion up to the mark 11.0. After agitation he blows the contents of the pipet into a sterile test-tube. He now prepares a dilution in which blood is drawn to the mark 0.5 or 0.3, or even 0.1. The test-tubes are then allowed to stand until sedimentation has taken place, or better, they are centrifugated. A drop of the serum of each is then examined by the hanging-drop method. As 100-volume parts of blood contain 67.762 parts of serum, the volume of serum is practically equal to two-thirds that of the blood. When the blood is drawn to the mark 0.1 the dilution is 1:150; when to the mark 0.5, 1:30, and when to the mark 1.0, 1:15. Sedimentation and centrifugation do not disturb the emulsion of the culture.

### Berliner klinische Wochenschrift.

May 23, 1898. [35. Jahrg., No. 21.]

1. Concerning General and Local Withdrawal of Blood in Pediatric Therapeutics. **AEOLPH BAGINSKY.**
2. Dural Infusion. **PAUL JACOB.**
3. Diabetes and Mental Disturbances. **RUDOLPH LAUDENHEIMER.**
4. Concerning Blood-corpuscle Enumeration and Atmospheric Pressure. **A. GOTTSSTEIN.**

**1.—Baginsky** discusses the propriety of **venesection in young children**, and questions whether there are any indications for which its employment would now be sanctioned. In answer he gives the details of 3 cases. The first was in a girl, 7½ years of age, suffering from inflammation of the lungs and valvular disease of the heart, who was brought to the hospital profoundly cyanosed, and in extreme dyspnea. Stimulants failed to afford relief, and it was finally decided to abstract a certain amount of blood from the median vein. About 120 cu. cm. were thus obtained, with the immediate disappearance of the cyanosis, improvement in the force of the pulse and almost complete relief of the dyspnea. Later in the day the breathing became again difficult and a leech was placed over the left mastoid process. From this time rapid improvement occurred, the edema disappeared, the urine became normal and the patient was discharged cured. The second case was in a boy, aged 9 years, suffering from fibroid pneumonia and bronchi-

ectasis. From time to time he suffered from attacks of asthma, in one of which he was brought to the hospital cyanotic and profoundly dyspneic; 100 cu. cm. of blood were withdrawn from the median vein, with disappearance of the cyanosis, although the dyspnea remained extreme. As a result of convulsive movements the child tore off the bandage and caused a second hemorrhage, after which the pulse became stronger and the general condition improved greatly. He was ultimately discharged much improved. The third patient, a girl of 7, was brought to the hospital suffering from extreme dyspnea and profound cyanosis. As it was impossible to obtain blood from the veins, the radial artery was cut and about 80 cu. cm. of blood were allowed to flow. There was immediate and pronounced improvement, and in the course of a few days an eruption of measles appeared on the skin. Baginsky calls attention to the fact that the 3 cases were very different in nature and resembled each other only in their symptoms. He believes that venesection is a purely mechanical measure, and should be used only when the heart appears to be incompetent to force blood through the circulation. He recommends in all cases the free dissection of the median vein before it is cut. Local blood-letting, particularly by leeches, may sometimes be practised with advantage, and a case is mentioned in which the application of 6 leeches to the head was the only measure that seemed to control the convulsions.

**2.—Discouraged** by the therapeutic results of lumbar puncture, Jacob has undertaken to investigate the possibility of applying medicinal agents directly to the membranes by means of **subdural injections**. For this purpose he instituted a series of experiments upon dogs. Before detailing these he reviews the literature of the subject and describes Quincke's experiments, who found that a small quantity of pigment injected into the subarachnoid space was soon uniformly distributed over the membranes of the brain and cord. His own experiments were made by injecting various substances into the subdural space of dogs, the needle being inserted between the sixth and seventh lumbar vertebrae, and the solution injected through a long cannula with 2 branches and 3 stopcocks. As soon as the trocar was withdrawn, the tube was attached to the upper branch for the purpose of measuring the pressure, and the injection was then made through the lower. (The paper is to be continued.)

**3.—Laudenheimer** has studied 1,250 cases in the **psychiatric clinic** at Leipzig with regard to the presence of **sugar in the urine**, with positive results in 30 cases. The cases are divided into 2 groups: those of chronic diabetes, which was usually associated with chronic brain-disease of the type of dementia, and those of transitory glycosuria, usually associated with acute forms of insanity, particularly of a maniacal type. Often the excitement precedes the appearance of sugar in the urine. Four possibilities may be considered: (1) the glycosuria may be merely an accidental complication of the mental disturbance; (2) diabetes may be the result of insanity, or it may be the cause, or the two conditions may be the result of some common cause. The first possibility is of little clinical interest; the second, of course, sometimes occurs because excessive emotional disturbances have been known to produce diabetes; this is probably the nature of the glycosuria that attends delirium tremens. (The paper is to be continued.)

**4.—Gottstein** continues his article upon the effect of **atmospheric pressure** upon the results obtained with the hemocytometer. He calls attention to the very considerable error caused by the slightest inequality in the level of the cover-glass. Thus an alteration of 0.01 mm. causes an increase of the capacity of  $\frac{1}{3535}$  cu. mm., giving rise to an error of 500,000 of blood-cells if the factor is 4,000. Reduction in temperature also causes a considerable variation. Thus, if the same mixture of blood be counted at 10° C., then at 40° C., and then again at 10° C., it will be found that the count at the higher temperature will be from 8% to 12% greater than either of the other two. The effect of air-pressure upon the count was tested by making a suspension of lycopodium-powder in water, and it was found that diminution of the pressure in the enclosed chamber produced much higher results. Objections have been made to the application of these results to the explanation of the change occurring in blood-counts at high altitudes, because all the procedures are performed in exactly the same atmospheric pressure. However, an experiment that was carried out under these



conditions with a pressure of 760 mm., 560 mm., 1,020 mm. with the same mixture showed a variation equivalent to that of 84-100-115. However, it must not be forgotten that the values obtained experimentally are not so great as those actually found at high altitudes. The increase at high altitudes does not take place at once, and therefore it is not entirely due to atmospheric pressure; and finally animals kept at low pressure for considerable periods of time continue to show increase in the number of blood-cells after being replaced in normal atmosphere. Gottstein concludes that the increase of the red blood-cells at high altitudes is the result of two factors, the first being the air-pressure, and the second the climatic influence upon the blood and the hemoglobin.

### Revue de Médecine.

May 10, 1898. [18. Ann., No. 5.]

1. Active Suggestive Impulse, or Psychic Dynamogenesis Against Psychic Paralysis or Functional Impotence. *BERNHEIM.*
2. Albuminuria and Lesions of the Kidney in Cases of Vari-  
ous Fevers. *FRANÇOIS ARNAUD.*
3. Note Upon Epileptic Narcolepsy. *CH. FÉRÉ.*
4. The Hepatic Reflex of Malarial Origin. *NAAMÉ.*

1.—Bernheim details the histories of a number of cases to show the effect that **suggestion** may have upon **functional paralysis** when other treatment has failed. He insists that simple suggestion is often unsuccessful, but when accompanied by those movements that the patient performs with difficulty, if at all, such active suggestion will frequently result in success. He divides these functional cases into 3 main classes. In the first, there is simply muscular weakness without any notable lesion, and consequent upon prolonged disease. The nervous impressionability of the subject exaggerates this weakness to the point that he believes it impossible to walk. In such cases it is only necessary to make the patient walk with aid, the assurance that walking is possible gradually resulting in thorough cure. In the second category there is actual spinal or nervous lesion, autosuggestion causing the patient to believe that the slight paresis is complete paralysis. Suggestion here will re-establish the function so far as its loss is dependent upon the mental state of the patient, the weakness depending upon organic lesion, of course, remaining. In the third category a painful sensation, combined with autosuggestion, causes inhibition of power. In a fourth class is described what is called nervous anorexia, in which there is inhibition of desire to make any movement. The last two forms are usually much benefited by suggestion.

2.—As the result of a study of the **urine** of 1,400 cases of **smallpox**, Arnaud states that albuminuria should be considered an almost constant accompaniment of smallpox if one makes use of reactions that are sufficiently delicate, and includes those cases in which there is but a trace of albumin. Positive reactions were obtained in 95% of the cases, and in 32% abundant quantities were present. There were frequent daily variations in the amount of albumin, even to the point of its complete disappearance, showing the necessity for repeated examinations before concluding as to its absence. The maximum amount corresponded in general to the early febrile period. Rarely the curve of the albuminuria reaches its acme at the time of suppuration or during desquamation. Such cases were of more unfavorable prognosis, and frequently had an exacerbation of the albuminuria during convalescence. It was frequently observed that there was an increase in the amount of albumin at the time of the urinary crisis and under the influence of increase in diet, or of leaving the bed. Albuminuria persisted in 75 out of 100 cases in small amounts, even during convalescence. As a general rule, albuminuria is more abundant in grave cases, and the grade of the albuminuria is a useful factor in prognosis, giving a good indication of the local renal condition and of the general condition of the patient. Sudden uremic symptoms may occur, either in the acute period of the disease or during convalescence, so-called late variolous nephritis, or nephritis of convalescence, being but an aggravation of the remains of that present during the disease, and all such cases would have shown albumin previously had searching exami-

nations been made. It is believed that the albuminuria of smallpox is not simply functional but due to an alteration of the tissue of the kidneys. Pathologic examinations of the kidneys of 13 cases are reported; several in the cases of individuals who had been free from previous disease. There was diffuse nephritis, tending to be most severe in certain locations, namely, about the bloodvessels, or the epithelium of the convoluted tubules; disease in both of these situations constantly coexists, but in variable degree. Albuminuria was most marked when the epithelial lesions were predominant. The inflammation of the kidneys is susceptible of recovery in mild cases, but more frequently a slight permanent lesion persists, usually a sclerosis, followed by some degeneration of the epithelium, and with this there exists albuminuria or a tendency to albuminuria. Arnaud states, as his strong belief, that cases of so-called functional albuminuria may be usually attributed to slight renal lesion remaining from renal irritation in some previous infectious disease.

3.—Féré speaks of the difference in opinion as to the existence of an **epileptiform narcolepsy**. To support his belief in it he reports 3 cases. In the first the patient presented indubitable manifestations of epilepsy without habitual somnolence. His crises of sleep came suddenly, like epileptic crises, and were preceded by an aura. There was profound sleep, though the man manifested slight consciousness if briskly aroused. The crises of sleep were less numerous when the convulsive attacks were most frequent, and the reverse. In the second case, likewise, the patient had a sudden powerful impulse to sleep, taking a position comfortable for sleeping, without any vertigo, and passing into profound slumber, such attacks lasted usually but a short time, and were frequently repeated. It was interesting, too, that in this case there were attacks of violent trembling preceding the crises of major epilepsy. The third case was interesting in having attacks, with the epileptic crises, of a double form of delirium, first of a tranquil character and then loquacious and exclamatory. The patient had also an attack of erysipelas, the epilepsy being not in the least influenced by it. He had attacks of profound sleep, sometimes short, sometimes prolonged, and preceded by a feeling of immediate necessity for sleep. The periods in which the narcoleptic attacks were more prominent were those in which the convulsive attacks were few or absent. Féré believes that the expression narcolepsy is justified by the occurrence of such brusque attacks of sleep independent of any habitual somnolence. The latter is a symptom of a great number of morbid conditions, but epileptiform narcolepsy is a separate affection.

4.—Naamé reports the case of a woman, 40 years old, who had **pulmonary emphysema with chronic malaria**, both liver and spleen being much enlarged. There was no edema. Slight dyspnea existed, and there were attacks of palpitation. The pulse was small, irregular, and arrhythmic. There was epigastric pulsation and dilatation of the right side of the heart, with a slight systolic murmur. Under large doses of quinin the arrhythmia of the pulse and the enlargement of the heart disappeared. These phenomena are considered analogous to the attacks seen in cases of biliary lithiasis, the latter occurring, however, in neurotic individuals, and cases like that reported occurring in emphysematous individuals who are the subjects of malaria.

**Hydatid Cyst Simulating Pelvic Hematocele.**—Greathhead and Troup (*South African Med. Jour.*, May, 1898) report the case of a woman who was brought for operation for supposed pelvic hematocele. In addition to her pelvic symptoms she suffered from cough, and had nummular expectoration and a temperature ranging from 99° to 102° F. Operation was deferred because of the patient's weakened condition, and death occurred in the course of a few days. At the necropsy a cavity was found at the apex of the left lung, with milary tuberculosis elsewhere. A hard, calcareous mass that could be felt on vaginal examination was found behind the peritoneum, projecting into the pelvis at the level of the sacral promontory and measuring 3 by 2½ by 2 inches. On section this proved to be an hydatid cyst whose outer wall was calcified, and containing several daughter-cysts in various stages of degeneration.



## Original Articles.

HEMOPTYSIS. WITH A REPORT ON THE USE OF ATROPIN HYPODERMICALLY IN ITS TREATMENT.<sup>1</sup>

BY JOHN D. THOMAS, M.D.,  
of Washington, D. C.

HEMOPTYSIS, from its derivation, means "to spit blood;" but in our treatment of the subject we shall limit its application to the "spitting of blood from the lungs." Nor can we use the term "pulmonary hemorrhage," for it would include those hemorrhages into the lung-tissue without any external signs of blood, as infarcts, emboli, petechiæ, etc. The blood may appear as simply tinging the sputum; or from this mildest form, through the different degrees of severity to the pouring of a bright red stream of blood from the mouth and nose, causing suffocation, as is seen in the rupturing of an aneurysm.

ETIOLOGY.—Hemoptysis being of itself only a symptom, its etiology would naturally extend over quite a wide range of diseases; and hence any specialization must be more or less general in its scope.

(1) There seems to be quite a small percentage of cases in which there is *no apparent cause* for the bleeding, or at least none can be demonstrated. Ware,<sup>2</sup> in his excellent essay "On Hemoptysis as a Symptom," in which he reports 386 cases in private practice, mentions 62 cases of this character. Osler<sup>3</sup> refers to 3 cases. Johnson<sup>4</sup> records a case in which there occurred frequent attacks of hemoptysis, with recovery from each attack, and no signs of disease between the attacks. Duffield<sup>5</sup> reports a case from sympathy with a brother who was having quite severe hemorrhages. The patient was healthy before and afterward. The bleeding occurred at about the time of her menstrual period. Bürger<sup>6</sup> has recorded a case of *fatal* hemoptysis without any disease of the lung being found. Flint<sup>20</sup> also has recorded several cases.

(2) In by far the largest proportion of cases the hemorrhage is caused by *pulmonary tuberculosis* in one of its stages. Hence, the prevalent public opinion that hemoptysis is synonymous with consumption. It may occur sometimes very early in the disease, being the first evidence of the pathologic condition of the lung—a congested point of infection; this is frequent in California.<sup>7</sup> It may occur also late in the disease, from erosion of a vessel-wall, or rupture of an aneurysmal dilatation in a cavity. Powell<sup>6</sup> concludes from autopsies in 19 fatal cases of hemoptysis in advanced tuberculosis "that the hemorrhage of fatal cases almost invariably comes from rupture of a branch of the pulmonary artery in a cavity, either traversing its walls, or crossing it embedded in a trabecula. In some cases there is a gradual exposure and invasion of the wall of the artery on one side.

In others (which are rare) the artery is surrounded and involved by acute inflammation, such as the breaking down of acute tubercular or pneumonic consolidations."

(3) Sir Andrew Clark,<sup>8</sup> some years ago, called attention to a class of cases of hemoptysis usually in *elderly people*, which etiologically are neither tuberculous nor cardiac, the patients usually presenting a rheumatic history. The cause is to be found in minute structural alterations in the terminal blood-vessels of the lungs, probably of fibroid nature. The condition is aggravated or maintained by astringents and indulgence in liquids to quench thirst. Three additional cases have been reported by an Italian physician,<sup>9</sup> one of which was fatal. T. J. Mays,<sup>19</sup> reports several cases of hemoptysis occurring in connection with acute attacks of rheumatism, one in a young man 18 years old; in all the bleeding was checked by salicylates.

(4) While one extreme of life is marked by a class of cases peculiar to it, the other is just as notable for the rarity of hemoptysis. It is very rare in children under 10 years old. Cumston<sup>10</sup> reports a fatal case in a child only 16 months old. The autopsy showed a tuberculous cavity, with a branch of the pulmonary artery opening into it on one side, and a bronchus on the other. He collected a few cases of hemoptysis in children. To these I am able to add only one, which occurred in the service of Dr. Adams, at the Children's Hospital; and also a case of gangrene of the lung, with hemoptysis, mentioned by Jackson.<sup>11</sup> Hemoptysis is considered an important diagnostic sign of gangrene in children.

(5) Hemoptysis may occur in cases of severe *heart-lesions*, especially mitral disease with consequent passive congestion of the lungs. Cotton<sup>12</sup> reports its occurrence after excessive exercise, in a case that upon investigation proved to be one of mitral obstruction that had not been recognized before; and I am able to report an additional case through the kindness of Dr. Cook. The case is doubly interesting because of a history of severe hemorrhage at the age of 17 years, following the lifting of a heavy weight, with no subsequent attack until January of this year, 37 years after the first attack. The patient is 54 years old, and has enjoyed ordinary good health during his life, with the exception of a quite severe attack of rheumatism some years ago. He has always done heavy work, following his trade of blacksmith for a number of years. He had never had any lung-trouble. He has a marked mitral systolic murmur, and has had frequent attacks of hemoptysis since January, spitting up a gill or more of blood at each attack. A more detailed report of this case appears later in my series of cases.

(6) A rather rare factor in the causation of hemoptysis in women is *vicarious menstruation*, occurring usually when there is some interference with, or suppression of, uterine menstruation. Sometimes no lesion of

<sup>1</sup> Read before the Medical Society of the District of Columbia, March 1888.

the lungs can be found to account for it. Thomas<sup>13</sup> reports a case in a woman, 40 years old, who menstruated normally for 20 years, when hemorrhages from the lungs began to appear, with many of the accompanying symptoms of pulmonary tuberculosis, but no physical signs referable to the lungs. The cause was discovered in an occluded cervical canal, opening of which was followed by relief of the patient. Chadbourne<sup>14</sup> reports a case in which periodic hemoptysis took the place of the regular menstrual flow for 15 months. The case has been under observation for almost 2 years, and there are no signs of any lung-disease.

Cases have been reported by Ford<sup>15</sup> and by Flint<sup>16</sup> in which hemoptysis occurred at the menstrual period for years without immediate or remote lung-disease. The prognosis in these cases, however, should be very guarded, because so many of them terminate in pulmonary tuberculosis, although the physical signs may be entirely masked for some time. A case is mentioned by Stuart<sup>17</sup> in which signs referred to the lungs could not be made out for 7 months after hemorrhage had occurred although early death from tuberculosis resulted. Kober<sup>18</sup> reports a case in which the hemorrhage from the lungs at the menstrual period was the first sign of any lung-disease. No tubercle-bacilli could be found in the sputum. The hemorrhages continued and the patient died of tuberculosis in a few months. It is thought that there existed in this case a primary tuberculous point in the lungs, which, being a spot of least resistance, gave way at the menstrual period on account of the high arterial tension. While that may have accounted for the hemoptysis in this case, it can hardly be accepted as the explanation of vicarious menstruation in general; for the point of least resistance would most probably be in the lungs in the cases of severe pulmonary tuberculosis that are, as a rule, attended with amenorrhea, and hence pulmonary hemorrhage would occur in these cases much oftener than the records show. Ware,<sup>2</sup> while conceding that there are some cases without determining signs or symptoms of tuberculosis, says of this form of vicarious menstruation that "hemoptysis does not often take place in such cases except in those who are predisposed to phthisis, and the disturbance in the function of the uterus rather determines a symptom than produces a disease." The cause determining the vicarious hemorrhage from the lungs must evidently be sought further than the diseased point of lung-tissue; and, from the well-demonstrated fact of hemoptysis caused by brain-injury alone, showing vasomotor influence over the vessels, and the well-known intricate nervous mechanism of the uterus, some theory of nervous causation seems more probable.

(7) Any disease that causes *degeneration of the lung-tissue* may be more or less marked by hemoptysis, as abscess, gangrene, carcinoma, syphilis, and chronic pneumonia. In a case of the last, reported by Powell,<sup>6</sup>

of 2 months' standing, which had gone on to excavation, but was improving, fatal hemorrhage took place.

(8) *Rupture of an aneurysm* of some vessel extraneous to the lungs can hardly be included among the causes of hemoptysis as defined here. While it is true that the blood makes its escape through the lungs, there is not, properly speaking, a hemorrhage from the lung-tissue; the growth having worn away true lung-tissue in the progress of its development. The hemorrhage is usually fatal in a few moments. But, as mentioned in speaking of pulmonary tuberculosis, there may be formed in the cavities of diseased lungs aneurysms of the branches of the pulmonary arteries as they traverse the walls or stretch across in the trabeculae, being devoid of the supporting tissues that usually surround them. It is the rupture of such aneurysms that causes, in the majority of cases, the profuse hemorrhage of pulmonary tuberculosis.

(9) *Diminished atmospheric pressure* is a causative factor in cases of hemoptysis, as in mountain-climbing, balloon-ascensions, etc. This may occur if the lungs are perfectly healthy when very high altitudes are reached.

(10) *Hematodyscrasie* may, to a greater or less degree, be the cause of blood-spitting, as in cases of hemophilia, scurvy and the purpuric diseases. In the infectious fevers, as malaria, the condition of the blood may be such as to cause a slight hemoptysis.

(11) *Asthma* has also been given as a cause. Ware<sup>2</sup> reports 3 cases as due to this cause.

(12) *Injuries*, direct or otherwise, may cause hemoptysis. Wounds, blows, severe straining in lifting, coughing, blowing wind-instruments, long and loud speaking, inhalation of irritating gases, as chlorin, bromin, etc.

(13) Finally, it is a demonstrated physiologic fact that hemoptysis can be caused by *injury to certain parts of the brain*, showing that there is a vasomotor connection with the vessels of the lung. The appearance of hysterical hemoptysis would still further confirm the relation, though a slight one, that exist between the central vasomotor system and the blood-supply of the lungs.

In looking over the records of cases of hemoptysis, especially in connection with pulmonary tuberculosis, I have been struck by what appears to be a hemorrhagic tendency in some of the cases, the whole course of the disease being marked by attacks of hemoptysis more or less severe; while so many of the most severe cases of pulmonary tuberculosis have no hemorrhage at all; and a number of the hemorrhagic cases are not otherwise very severe ones. A case in point is reported by Newman,<sup>86</sup> in which attacks of hemoptysis occurred for 3½ years, although no signs or symptoms of pulmonary tuberculosis were present. Later, tubercle-bacilli were found in the sputum, and physical signs of pulmonary tuberculosis appeared, with death in 8 months.



Another case, but not demonstrably of tuberculous origin, is the one reported by Johnson<sup>4</sup> and already cited, in which there occurred frequent attacks of hemoptysis, often quite severe, with apparent entire recovery from each attack.

**DIFFERENTIAL DIAGNOSIS.**—As the spitting of blood is in itself only a symptom of some disease it would be confusing and unscientific to speak of the symptoms of a symptom; but there are a number of points of differentiation between cases of blood-spitting from the lungs and those in which the blood may come from the larynx, pharynx, mouth, nose, esophagus or stomach; and upon these can be based a differential diagnosis. Often it will require the combined differential points to make a certain diagnosis. Sometimes even with these it is almost impossible to determine the source of the hemorrhage. From the standpoint of treatment it is absolutely necessary to know whether the blood comes from the lungs or elsewhere.

The following points suggest themselves as aiding in the differential diagnosis: 1. The previous condition of the patient with regard to the existence of pulmonary or gastric trouble. 2. The manner of onset. When the blood comes from the lungs there is often a feeling of welling up in the trachea, with tickling, coughing, a salty taste, and, when profuse, a choking sensation. 3. The blood from the lungs is alkaline, whereas that from the stomach is nearly always acid; but when hemorrhage from the stomach is very profuse the blood may not have time to be changed in its reactions by the gastric juice. 4. Blood coming from the lungs is frothy from admixture with the air, and is usually bright red. That from the stomach is oftener of a dark coffee-ground color, and it contains particles of food. These signs are sometimes deceptive, for blood from the lungs may be swallowed and vomited afterward, and vomited blood may be drawn into the trachea and bronchi, and be coughed up. 5. When hemorrhage from the lungs is profuse the blood is usually from a ruptured vessel; when the sputum is merely stained the blood is from the mucous membrane. 6. Auscultation of the chest will sometimes disclose mucous rales, sometimes crepitant or subcrepitant rales; but percussion is to be avoided, as it may start the hemorrhage anew. 7. Microscopically the blood may contain tubercle-bacilli, or fibers of the elastic tissue of the lung-substance in the presence of degenerative disease of the lungs. 8. Early morning cough with expectoration of blood-tinged sputum often attends chronic pharyngeal catarrh. Therefore, an examination of all the air-passages should be made in doubtful cases. I remember being called hurriedly on one occasion to see a girl who was said to be having a hemorrhage from the lungs. I found the patient in a semi-dazed condition, with some blood around and in the mouth, and a very little on the bed-clothes. Questioning elicited nothing more than that she had suddenly spit up a lot

of frothy blood. In my presence the patient had a typical epileptic attack, which the attendants said was similar to the one she had had before. Ignorance, fright, or design on the part of those around her came near making quite a difference in the treatment of the case. A correct diagnosis of hemoptysis is to be made from no single symptom, but from a judicious consideration of all; and rarely it is impossible to say definitely whether the case is one of hematemesis or hemoptysis.

**RESULTS.**—The results of hemoptysis may be regarded in the light of their *immediate* and *remote* effects; the immediate being those that occur at the time of the hemorrhage or not longer than an hour or two afterward; and the remote including the series of results that follow from several days to years afterward.

**Immediate Results.**—The result most feared by the patient and his friends, viz., immediate death, is rare. Ware<sup>2</sup> saw only 4 deaths among 386 cases caused directly by the hemorrhage; and I have been able to find reports of comparatively few deaths that could be attributed directly to the hemorrhage. Powell<sup>6</sup> has recorded some 19 cases of death from hemoptysis, but in 8 of these the patients succumbed to exhaustion from the loss of blood in from one to several days. The case reported by Bürger<sup>6</sup> and mentioned by Powell, of fatal hemoptysis without any disease of the lungs being found at the autopsy, is a most interesting one. Two of the cases I report later were fatal ones, suffocation resulting from the profuse hemorrhage. Flint,<sup>20</sup> in over 670 cases of pulmonary tuberculosis with hemoptysis in over 100, reports only two instances of immediate death from hemorrhage—one from suffocation in a boy 14 years old; the other from syncope from continued loss of blood for three days. Duffield,<sup>5</sup> Cumston,<sup>10</sup> Wethered<sup>21</sup> and Adams all report cases of death due to hemorrhage from the lungs. A very free, profuse hemorrhage often acts as a check upon itself. The sudden loss of so much blood from the circulation weakens and slows the blood-current and thus aids in the formation of a thrombus at the point of rupture. In the great majority of the rare cases in which the hemorrhage is due to rupture of an aneurysm of a large vessel within or without the lung the patients are drowned in their own blood. Excessive or continuous hemorrhages are very weakening, and especially to patients who are already in a debilitated condition from exhaustive diseases, as pulmonary tuberculosis; and yet, on the other hand, it is sometimes remarkable how quickly these patients recuperate from some of the most severe hemorrhages, when as much as 1 or 2 pints of blood are lost.

**Remote Results.**—In some cases of severe hemoptysis, although the patients may recover from the immediate effects, they will be so exhausted that they succumb in from 12 hours to a few days. The remote effects of a hemorrhage of such amount as to cause

insufflation of some of the blood into other portions of the lungs may be of quite a serious nature. Gluzinski,<sup>21</sup> in his experiments upon dogs, showed that effused blood in the lungs is *not* harmless. In 24 hours after the experiment reaction sets in, with desquamation of the alveolar epithelium and an inflammation around the smaller bronchi. On the sixth day the lungs are atelectatic, and desquamative pneumonia results. Again, it is more than probable, as Wethered<sup>21</sup> says, that inhaled tuberculous hemorrhage may set up numerous foci of infection throughout both lungs. It seems to me that in this can be found the explanation of the fact, so noticeable in the record, that the occurrence of primary hemoptysis in some cases of tuberculosis seems to light up the disease anew, and lead to a rapid fatality; while in others, the majority, the patients improve after a slight hemoptysis. In regard to the latter fact Flint<sup>20</sup> has this to say:—"The majority is so large of the cases in which clinical observation shows hemoptysis to be of not unfavorable import, that we are warranted in stating the latter to be the rule, the cases in which the event is notably unfavorable being the exceptions." Not so very many years ago hemoptysis was looked upon in the light of a causative agent of pulmonary tuberculosis in those cases in which it was the first sign of any pathologic condition. It is very generally conceded now that in these cases it is the first evidence of a *preexisting* point of tuberculous infection; and it is a question of grave doubt if, in many of the cases of hemoptysis with no apparent cause, in which complete recovery ensues, the cause does not exist in some point of beginning tuberculous infection that is fortunately located in contact with a vessel, the walls of which being weakened give way and the blood-stream washes away the nidus of infection, or enough of it to allow the normal tissues to regain their supremacy. This brings us to the question of prognosis in cases of early hemoptysis. It should always be a guarded one, especially until years of good health have intervened, from the time of hemorrhage; but it is hardly justifiable to state, with Ware,<sup>2</sup> "that no patient who has once had hemoptysis, however slight, can ever afterward be regarded as entirely secure from the development of tubercular disease." There are too many authenticated cases on record of patients having had quite severe hemorrhages in their youth and yet living to a good healthy old age. Case VI of my series is an instance of this kind. The patient had a profuse hemoptysis in his early youth, but lived a long and healthy life until heart-trouble developed.

The insurance-companies appreciate the fact that entire recovery from an attack of hemoptysis is possible. From 7 to 10 years is the length of time they accept as excluding any chance of disease developing from a hemorrhage from the lungs.

**TREATMENT.**—It is with somewhat of a feeling of bewilderment that I enter upon the field of the treat-

ment of hemoptysis. It is so narrow as to objects aimed at, yet so wide as to remedies used, and with such seemingly antagonistic actions. Practically, the one object is to secure a coagulum at the point of hemorrhage and thus check the bleeding. Surgical interference to reach and ligate the bleeding-point, though mentioned by one or two writers (2 fatal cases have been reported), is hardly justifiable, except in certain cases of injuries, when the exact point of hemorrhage can be located, and in some cases with degenerative processes in the lung-tissue. In 306 operations on the lungs collected and analyzed by Tuffier<sup>24</sup> at the Moscow Congress, not one is mentioned as having been performed for hemorrhage. The great modern weapon of the profession—*prevention*—which has forestalled the time honored one of *cure*, must be borne in mind here as elsewhere, and such causes as rheumatism, pulmonary tuberculosis, syphilis, etc., must receive their proper treatment. These means being disposed of, let us look more closely into the object of our immediate treatment, viz., the formation of a coagulum at the bleeding-point sufficient to check the flow of blood. This may be accomplished in two ways: 1. By some chemical ingredient in the blood to cause it to coagulate quickly; 2. By a diminution in the amount and retardation of the flow of blood at the bleeding-point so that coagulation will take place normally. The first, theoretically, is ideal, but practically it has not yielded the brilliant results expected. Condemned as useless by most clinicians, it is yet practised by some who administer gallic acid, tannic acid and other astringents; and Wright<sup>25</sup> has suggested the use of calcium chlorid to obtain this result. The second holds the key to the situation—to diminish the amount and retard the flow of blood at the point of hemorrhage. To accomplish this the heart's action must be modified; or the vessels of the lung constricted; or the general systemic vessels dilated, thus causing a collateral anemia of the lungs; or the whole amount of blood lessened.

The vasomotor nerve-supply of the lungs is deficient as compared with that of the general systemic vessels. "The pulmonary circulation is much less dependent upon the nervous system than the systemic circulation," says Landois;<sup>26</sup> and, again, "the vessels of the pulmonary circulation are very distensible and their tonus is slight;" so that occlusion of one branch of the pulmonary artery does not raise the blood-pressure in the aorta, being compensated for by the distention of the remaining pulmonary vessel. Sir James Andrews in the Harveian oration for 1890 presented some views and experiments upon the treatment of hemoptysis that set at sea some of the accepted methods of treatment. The experiments seemed to show that the pulmonary and systemic circulations responded differently to the same drugs. It is not my desire to add another to the already too lengthy list of useless drugs recommended



for hemoptysis, but to report some cases of my own markedly benefited by the hypodermic injection of atropin, and to call attention to many other reports of the same tenor. My excuse for so doing, if any is needed, is that this use of the drug is mentioned in only one or two recent works on the subject; and its beneficial results demand for it a more extended and thorough trial. The mode of action of atropin when given in large doses (from gr.  $\frac{1}{30}$  to gr.  $\frac{1}{25}$ ) is evidently through lowering the blood-pressure in the general arterial system. Openchowsky<sup>27</sup> claims to have demonstrated by a manometer in the pulmonary artery of lower animals that drugs which affect the blood-pressure in the aortic arterial system, exert no effect upon the pulmonary system except indirectly through an influence upon the systemic arteries. Thus ergot, so often used for hemoptysis, would rather be contraindicated, as it would constrict the whole aortic vascular system, throwing more blood into the pulmonary circulation, the vessels of which are unaffected by the drug. W. T. English<sup>28</sup> lays great stress upon the element of fear in cases of hemoptysis, and says that atropin hypodermically quiets this fear, in addition to its action in dilating the peripheral vessels, and he advises giving it for the former even if it is not believed that it will check the hemorrhage.

In a report to the American Climatological Association, in May, 1896, upon the treatment of hemoptysis, Dr. Robert H. Babcock<sup>27</sup> expresses the belief that if anything will promptly arrest profuse pulmonary hemorrhage hypodermic injections of atropin in doses of gr.  $\frac{1}{30}$  to gr.  $\frac{1}{25}$  will. Dr. Winslow Anderson, of San Francisco, in his article on "Hemoptysis" in the *Twentieth Century Practice of Medicine*, says: "Atropin, gr.  $\frac{1}{100}$  hypodermically, has proven invaluable in stopping the hemoptysis of phthisis;" and in reply to a recent letter he states that he has found nothing better than gr.  $\frac{1}{100}$  of atropin hypodermically in rather more than 50 cases of hemoptysis.

In 1892 Dr. N. W. Soble<sup>29</sup> reported 4 cases of hemoptysis treated with atropin with excellent results. Dr. Soble writes me that since then he and his friends have used the drug in the same manner with most satisfactory results. When he desires a prompt effect he gives gr.  $\frac{1}{60}$ , and if necessary he repeats the dose in 15 minutes.

Hausmann, of Meran,<sup>30</sup> reports 3 cases of recurring hemoptysis in which the bleeding would not yield to other remedies, tried *ad nauseam*, but was arrested promptly by atropin hypodermically.

R. A. Stirling,<sup>31</sup> at a meeting of the Medical Society of Victoria on November 14, 1888, reported a case of very profuse hemoptysis that would not yield to ergot and other commonly used agents. The patient being *in extremis*, atropin gr.  $\frac{1}{150}$  was given hypodermically, and the hemorrhage was controlled at once. The injections were continued every 6 hours for 24 hours,

when, thinking perhaps the arrest might have been accidental, the injections were stopped for 12 hours, with the result of a fresh severe hemorrhage, which was at once controlled by the renewal of treatment. Tacke<sup>32</sup> seems to have been the first to call attention to the use of atropin in this condition, as well as in menorrhagia, in preference to ergot. He reported in 1881 having used it 5 times in two cases. Most of the cases that I shall report were seen in Gouverneur Hospital, New York City, and were treated with injections of atropin, on the suggestion of Dr. Charles E. Nammack, who was then the attending physician. In a lettersome time ago he stated that he is still using it at Gouverneur Hospital and also in his service at Bellevue Hospital and in private practice, and he reports many cases thus treated with excellent results. Case VI was seen at Garfield Hospital through the kindness of Dr. G. Wythe Cooke. Case VII is reported from the workhouse of the District of Columbia through the kindness of Dr. Hickling. I wish to take this occasion also to thank Dr. Cook, Dr. Hickling, Dr. Lieber, Dr. Stuart Johnson and Dr. James for courtesies extended in affording me opportunities to study cases under their care.

If the time for preparing this paper had not been so short I could have had more cases to report.

CASE I.—W. B., a man 20 years old, was brought into the hospital in January, 1894, with profuse hemoptysis. The family history was tuberculous. The patient had never had cough or other symptoms of tuberculosis. Two days before entrance into the hospital, he had a sudden attack of coughing and spitting of blood while walking on the street. The spitting of blood continued until his entrance into the hospital. Morphin, ergot, an ice-bag to the chest, etc., had been used for two days, but the hemorrhage continued and was at times quite severe. On the third day, during a hemorrhage, atropin gr.  $\frac{1}{60}$  was given hypodermically and continued every two hours for several doses. The hemorrhage was checked and did not return. The temperature was 102.6° F., on entrance. The man was discharged well 7 days later.

CASE II.—E. S., a man 21 years old, was brought into the hospital January 16, 1894, having had pulmonary hemorrhage at home. Atropin was given in this case, but usually together with other drugs. In one or two severe hemorrhages it was given alone, gr.  $\frac{1}{60}$ , and repeated at intervals of 3 hours with good results. The patient died from a profuse hemorrhage causing suffocation.

CASE III.—J. S., a man 35 years old, had a cough for some years, and a slight hemorrhage once before. He was brought into the hospital January 22, 1894, with severe hemorrhage. Morphin was given and an ice-bag applied to the chest. In a few hours small hemorrhages occurred. Atropin, gr.  $\frac{1}{60}$ , was given; the hemorrhage was checked. The injection was repeated in 2 hours; in a few hours another hemorrhage took place, and was checked by atropin, gr.  $\frac{1}{30}$ . There was no return of the bleeding. Symptoms of atropinism were noted.

CASE IV.—A patient was brought into the hospital August 12, 1894, with hemorrhage. Atropin, gr.  $\frac{1}{60}$ , was given; the hemorrhage ceased in 4 minutes and did not return.

CASE V.—Occurred in a man, about 45 years old. The history has been lost, but the action of the atropin in checking the hemorrhage was so marked that I remember it distinctly. The patient had rapidly progressing pulmonary tuberculosis, with frequent and very profuse hemorrhages, no less than 8 or 9; and each time the bleeding was checked in from 4 to 5 minutes by the use of atropin, gr.  $\frac{1}{30}$ , hypodermically repeated in from a  $\frac{1}{2}$  to 1 hour. To humor him the man was given finely crushed ice to swallow. He was finally suffocated by a profuse hemorrhage. The autopsy showed the right lung adherent to the chest-wall and the seat of several large

cases and in the present case. The patient also had a history of hemorrhage.

CASE VI. P. H., a man, 4 years old, was seen at the Philadelphia Hospital through the kindness of Dr. G. Wythe Cook. He had been seen previously through the kindness of Dr. G. Wythe Cook, 17 years old, after lifting a heavy weight. He had had no lung-trouble before this. He had been healthy and strong. The patient has been strong and healthy, with the exception of a severe attack of rheumatism 16 years ago, and one or two slight attacks since. In January of this year he had a slight hemorrhage, which continued at intervals for one day. About February 20th another slight hemorrhage took place. There was a loud systolic murmur heard over the heart. Dyspnea was present at times. The lungs were normal. The man entered the hospital February 23d, and he had several hemorrhages which seemed to be controlled by atropin, gr.  $\frac{1}{60}$ , hypodermically continued thrice daily for a day or two after the hemorrhage.

CASE VII.—A woman, about 28 years old, was seen in the workhouse at Washington, D. C., and her case is reported through the courtesy of Dr. Hickling and Dr. Stuart Johnson. The patient was tuberculous and had had an attack of hemoptysis. At my suggestion, atropin gr.  $\frac{1}{60}$  was given the hypodermically and the hemorrhage was arrested.

In all these cases the atropin was seen to have acted promptly and well (except in Case II, in which it was given only incidentally), and often when all other remedies had failed. While it is true that it is very difficult to determine positively that any one drug always benefits a certain disease, even with a very large number of cases in evidence, yet when both physiologic and clinical evidence of the action of a drug is supported by the number of cases collected and reported by me, it must be admitted that the weight of evidence is sufficient to justify the continued use of atropin hypodermically for the relief of a serious condition so little amenable to other remedies.

The ice-bag to the chest is of doubtful utility, except in so far as it quiets the mental state of the patient by representing a tangible evidence of something being done for his relief. The exhaustive experiments of W. Gilman Thompson<sup>23</sup> upon the effect on the lung of breathing air cooled to 37° F., show conclusively that the temperature of the lungs cannot be reduced, even though inhalation be kept up for 1½ hours. How then can cold applications to the chest-wall affect the temperature of the lungs? It rather acts deleteriously by contracting the cutaneous vessels at the point of application.

The pendulum of *venesection* has been caught on its backward swing into favor and fearlessly used by W. Ewart,<sup>24</sup> with quick relief, in a case of hemoptysis, with high-tension pulse, which would not respond to frequent and profuse purgation and morphin. The principle upon which its use is based, viz., depletion, and hence slowing and quieting of the circulation, is a good one, and one nature often takes advantage of, as in those cases of very profuse hemorrhage in which the amount of blood lost is so great that the blood-current is slowed, so that a chance is given for a clot to form at the bleeding-point. But it is a heroic measure that would require a heroic physician to perform it in this day. From a theoretic point of view both nitroglycerin and

aconite should also be of great value in relieving blood-pressure in the lungs by causing dilatation of the peripheral vessels. Aconite was recommended by Sir James Andrews in his Harveian oration; but I have seen no reports of cases treated with it.

In a recent medical journal there is a report<sup>25</sup> of 4 cases of hemoptysis treated with nitroglycerin very successfully. These are the only cases on record, so far as I know. Since first studying this subject, in 1894, I have held that nitroglycerin should be very beneficial in this trouble, and if for any reason I could not use atropin I should certainly employ nitroglycerin.

The list of drugs and other remedies used and recommended for hemoptysis has by no means been reviewed. It was my intention only to call your attention to the treatment upon a theoretically and clinically scientific basis; and to add my report of the use of atropin to those already on record. I trust I shall not be understood to claim that atropin will cure the cause of the hemoptysis; or that it will invariably check all hemorrhages; but as a means to a most desirable end, it has proved itself to be a potent and valuable aid.

#### BIBLIOGRAPHY.

- <sup>1</sup> John Ware, On Hemoptysis as a Symptom.
- <sup>2</sup> Wm. Osler, *Practical Medicine*, 1896.
- <sup>3</sup> George Johnson, *Brit. Med. Jour.*, 1870, vol. i, p. 149.
- <sup>4</sup> Duffield, *Physician and Surgeon*, 1892, xvi, p. 54. Case II.
- <sup>5</sup> R. Douglas Powell, *Trans. Path. Soc.*, London, vol. xxii, p. 45.
- <sup>6</sup> Anderson, *Diseases of the Lungs*, 19th Century Practice of Medicine.
- <sup>7</sup> Sir Andrew Clark, *Med. Record*, January 4, 1890.
- <sup>8</sup> Busuttil, *Archives of Surgery*, London, 1892, p. 180.
- <sup>9</sup> C. G. Cumston, *Boston Med. and Surg. Jour.*, vol. cxxxi, No. 8.
- <sup>10</sup> Henry Jackson, *Transactions of the British Association of Physicians*.
- <sup>11</sup> Cotton, *Canadian Practitioner*, vol. 22, No. 1.
- <sup>12</sup> Thomas, *Am. Jour. of Obstet.*, xix.
- <sup>13</sup> Chadbourne, *Jour. Amer. Med. Assoc.*, January 22, 1898, p. 187.
- <sup>14</sup> Ford, *Amer. Jour. of Obstet.*, xxii.
- <sup>15</sup> Flint, *Practice of Medicine*, 1886.
- <sup>16</sup> Stuart, *Jour. Amer. Med. Assoc.*, ix.
- <sup>17</sup> Kober, *Med. Record*, vol. xlviii, p. 179.
- <sup>18</sup> T. J. Mays, *N. Y. Med. Jour.*, June 27, 1896.
- <sup>19</sup> Flint, On Phthisis.
- <sup>20</sup> Wethered, *Clinical Jour.*, London, vol. iv, No. 21.
- <sup>21</sup> Gluzinski, *Boston Med. and Surg. Jour.*, vol. cxxxi, No. 8.
- <sup>22</sup> Omboni and Delorme, *Rev. de Thérap. Méd.-Chir.*, November 1, 1895.
- <sup>23</sup> Tuffier, *Jour. Amer. Med. Assoc.*, vol. xxx, No. 3, p. 169.
- <sup>24</sup> Wright, *British Med. Jour.*, vol. ii, 1891.
- <sup>25</sup> Landis and Sterling, *Pharmacology*, Phila. 1889, p. 174.
- <sup>26</sup> Openchowsky, quoted by Babcock, *Medicine*, vol. ii, p. 721.
- <sup>27</sup> W. T. English, *Penna. Med. Jour.*, Pittsburg, 1897, i, pp. 311-316.
- <sup>28</sup> N. W. Soble, *Med. Record*, June 2, 1892.
- <sup>29</sup> Hausmann, *Med. Record*, 1887, vol. xxii, p. 134.
- <sup>30</sup> R. A. Stirling, note in *Med. Record*, vol. xxxv, p. 243.
- <sup>31</sup> Tacke, *Berliner klin. Wochenschr.*, 1881, xviii, p. 82.
- <sup>32</sup> W. Gilman Thompson, *Med. Record*, April, 1890, pp. 456-462.
- <sup>33</sup> W. Ewart, *Lancet*, London, iv, 1897, p. 539.
- <sup>34</sup> Lawrence F. Flick, *PHILA. MED. JOUR.*, vol. i, No. 8, p. 344.
- <sup>35</sup> David Newman, *Trans. Glasgow Path. and Clin. Soc.*, vol. iii, 1886-1891.

**Exophthalmic Goiter as a Cause of Delayed Union of a Fracture.**—G. B. White (*Med. Press and Circ.*, May 25, 1898) reports the occurrence of a simple fracture at the junction of the lower and middle thirds of the humerus in a young woman who was affected with exophthalmic goiter. After keeping the parts in perfect apposition for a month, great mobility was felt and the X-rays showed that no union had taken place. Under the use of iron and lime, together with proper local treatment, a useful arm was obtained after five months of treatment.



ABERRANT TENDINOUS CORDS OF THE HEART.<sup>1</sup>

(from Dissections in the Pathological Laboratory of the Rush Medical College.)

BY HENRY L. LEWIS, A.B. HARV. M.D.

In the cavities of the human heart are to be found numerous bands and cords of fibrous tissue stretching across the chambers and along the walls, some normal, some clearly abnormal, and others about which there might be question. There may be considered 5 varieties of such tendinous cords. First are those connecting the papillary muscles with the mitral and tricuspid valves and connecting these valves with points on the ventricular walls. The second are the short cords running along the muscular trabeculæ, chiefly in the lower part of the ventricular cavities. Both of these are normal and to be found in all hearts. In this connection let me make mention of the term "moderator band" often met in the works of English writers. Quain<sup>2</sup> says that a fibrous band, sometimes muscular, is often found stretching across the cavity of the right ventricle from the base of the anterior papillary muscle to the septum. This band is said to be always found in the heart of the ox and most other mammals—and in that of man may be taken to be analogous. M. Brown<sup>3</sup>, in an article on the structure of the mammalian heart, takes the ground that this band is normal also in man, stating that he never found it absent in 100 hearts examined by him, although only faintly marked in 15. He thinks its function is to pull the anterior papillary muscle towards the septum and thereby prevent insufficiency of the tricuspid when there is a tendency to overdistention of the right ventricle which may often occur physiologically. I have not observed it in any marked form in any of the hearts which I have dissected, although there were in most of the cases short, fibrous cords about the bases of the papillary muscles of both ventricles and not particularly marked on the right side. Other English observers apply the term moderator band to any band or cord running across the upper part of either ventricle.

The aberrant cords may be divided into 3 classes: First are those often found running along the wall, usually of the ventricle, without any connection with the valve-curtains or the trabeculæ. Second are to be considered the cords or bands which stretch across the chamber from one wall to another or from a papillary muscle. These are said by most authors to be found only in the left ventricle,<sup>4</sup> but I have found them also in the right and a few have been reported in an auricle. This variety of aberrant cord is the one which may cause physical signs before death, namely, the high-pitched musical note heard during systole or at the beginning of diastole.<sup>5</sup> Third is a rare class of anomalous cords extending from the auricle into the ventricle, usually connecting the valve of the foramen ovale with

a leaf of the mitral. I have met with no example of this kind and only a few cases are recorded.<sup>6,7,8</sup> Since this variety would be strikingly brought to the view of one performing an autopsy, it would not be so easily cut in opening the heart as the second variety. It is unlikely to be missed and would be more often reported unless very rare. I think that the cords of the other kinds are often overlooked because not in the mind of the operator and also because so easily cut in opening the heart.

In Professor Hektoen's laboratory of Rush Medical College I have dissected 80 hearts from the collection in the Pathological Museum. Some were the hearts of monsters, a few were abnormal only as to their tendinous cords, and the rest pathologic for various reasons; 51 show anomalous cords.

The monsters were one cyclops, one omphalopagus, and seven anencephali. The heart of the cyclops had a rudimentary pulmonary artery, an aorta arising from both ventricles, a defect in the ventricular septum, and a widely open foramen ovale, but no aberrant tendinous cords. The larger heart of the omphalopagus had no aberrant cords. The smaller heart had numerous short ones running along the walls of the left ventricle and several stretched across the lower half of the cavity of the same chamber. Of the anencephali, three exhibited no abnormal cords; one had several running longitudinally in the left and one such cord in the right ventricle; another had several similar cords in the left ventricle only; another had a few stretched across the cavity of the left ventricle near the apex and one across the middle of the right ventricle, with five branches at one end and connected at its middle with another cord running down to the apex; another had a thin muscular band running from near the apex of the left ventricle to the middle of the anterior papillary muscle of the mitral valve.

An analysis of the 51 hearts showing anomalous tendinous cords reveals some facts of interest:—32 in the left ventricle had abnormal bands of the second variety, viz., across the cavity of the chamber from one wall to another. In 12 of these cases there was more than one such cord, and some were branched or formed a network strung across the ventricular cavity. In 12 of the 51 hearts were one or more such fibrous or muscular bands across the cavity of the right ventricle; multiple in 5 cases. Six of the above hearts showed aberrant chordæ tendineæ of the second class in both ventricles. As examples of the first class, viz., tendinous cords running longitudinally from one point on the wall to another, there were 5 in the left ventricle, 3 in the right, and 1 in both. In 6 hearts there were one or more cords, or, more often, a network of fine fibers running vertically across the opening of the posterior appendix of the right auricle. In 8 cases, in addition to the valve of the coronary vein (*valvula Thebesii*), or, in place of it, were thin cords singly or in network. Four hearts

<sup>1</sup> Read before the Chicago Pathological Society, March 14, 1898.

had bands or cords stretching between the papillary muscles.

Some of the cases may be worthy of more detailed mention. The hearts of the monsters have already been described. In one of the other cases there were numerous small transverse cords from the bases of papillary muscles in the left ventricle, and, in the right chamber, a muscular band 2 mm. thick diagonally across from the apex to the ventricular wall, with two tendinous cords running from it to other parts of the wall, also a network of three or four strands across the cavity of the ventricle. Another had, in the right ventricle, a muscular band 1 mm. thick, from a little below the pulmonary cusps across to the opposite wall, branching at one end, and also, in the left, a cord 35 mm. long diagonally across and upward from between the bases of two papillary muscles to a forked termination just below the aortic valves. Another showed several branching and coarsely meshed cords across from the base of one of the tricuspid papillary muscles to the ventricular septum, a sort of composite moderator band.<sup>8</sup> Another had, on the middle of the septum in the left ventricle, a muscular mass which received several branching cords from the apex and one long cord with two branches across from the left wall. In another heart a thick cord 20 mm. long, with two muscular branches, ran across the cavity of the left ventricle to join a longitudinal muscular band along the septum. Branching cords were common and so were reticulated masses, the latter especially numerous in the right ventricle. Chiari<sup>9</sup> describes a series of reticulated structures found by him in the right auricle and connected with the Eustachian or Thebesian valves. Such marked examples as he describes I have not seen, but several of the hearts examined by me showed a network of fibers across the opening of the posterior auricular appendage of the right side, and others showed several thin cords or fenestrated membranes in place of the Thebesian valve or situated just beyond it and across the opening of the coronary vein.

Among my cases there was none showing a cord across the cavity of the left auricle. Apparently such are very rare. Fowler<sup>10</sup> in 1882 exhibited to the London Pathological Society a heart in the left auricle of which was a band from  $\frac{3}{4}$  inch to 1 inch wide, containing some muscle-fibers. It was continuous with the membrane covering the foramen ovale and ran across the cavity of the auricle, to be blended with the endocardium, just beyond the opening of the auricular appendix, and between the inferior pulmonary veins. It appeared to be an overgrowth of the valve of the foramen ovale. The case occurred in a woman of 42, who died of carcinoma of the liver, without showing any cardiac symptoms. Before the Anatomical Society of Great Britain and Ireland, in 1896, were reported two similar cases, both without antemortem signs.<sup>11, 12</sup>

In considering the origin of aberrant tendinous cords

of the heart the development of that organ must be reviewed. The endocardium, like the endothelial lining of the blood-vessels, probably arises from the entoderm. At least for a considerable time the endothelial heart is distinct and forms a sac by itself, inside the fibro-muscular portion of the cardiac tube. The latter grows inward, finally occupying and filling the interspace. The elongated spindle-shaped cells of the embryonic muscular tissue of the heart are arranged in bundles running in different directions. Some of these bundles are closely packed together to form the walls of the different cavities, while others are more or less widely separated from each other to form the trabeculæ and tendinous cords, being covered and invested by the endothelial cells as the outer and inner sacs of the primitive heart finally coalesce. Before this coalescence takes place the space between the mesenchymatous and endothelial portions is filled by a gelatinous layer through which the network of mesenchymatous fibers pushes towards the center. Thus, particularly in the ventricles, the cavity is nearly filled with a sponge-like mass of muscular trabeculæ.<sup>13</sup> The endothelium later becomes depressed between these bands and into the interstices, while the trabeculæ in general become arranged closer to the compact muscular tissue of the wall of the heart, except where they are developed into the columnæ carneæ, the papillary muscles and the tendinous cords. A mass of soft, thick tissue forms at the auriculo-ventricular orifice in the region of the septum intermedium and connected with the spongy mass filling the ventricle below. The soft, thick tissue thins out and becomes the curtain of the auriculo-ventricular valve, and at its free margin retains its connection with the muscular and fibrous tissue in the ventricle. The latter becomes differentiated into the papillary muscles and the normal chordæ tendinæ. The chordæ change from muscular to fibrous tissue at about the fifth month.<sup>14</sup> As the spongy mass of the trabeculæ becomes invested with the endocardium and retreats toward the compact muscular wall it may happen that occasionally some band or bands of the reticulated structure are left stretched across the cavity. The condition is somewhat analogous to that in the heart of the serpent, where the trabeculæ exist all over the surface of both ventricles and even form the imperfect cribriform septum.<sup>8</sup> Some of the aberrant cords are seen by the naked eye to be largely muscular, and the microscope has discovered muscle-fibers in many others, so that there is little doubt of their origin from muscular tissue.<sup>15</sup> Such thin muscular cords, removed from vascular connection with the rest of the heart-muscle, and stretched in the cavity, may easily atrophy and become fibrous. The reticulated masses observed by Chiari in the right auricle can, I think, be explained similarly as overgrown trabeculæ which have lost their muscular character and become fibrous. The aberrant cords of the third class which were seen by Feigl<sup>6</sup> and Browicz<sup>6</sup> to run from the



valve of the foramen ovale to be attached to the free margin of the atrio-ventricular valve, I think, can be explained as being merely exaggerations of those overgrowths of the valve of the foramen ovale observed by Turner<sup>16</sup> and Fowler.<sup>10</sup> The development of the foramen ovale in man is still somewhat in dispute between the followers of His and of Born. His thought that the atrial septum arose from a sickle-shaped process growing from above and behind, and another growing from in front and below, leaving between them the foramen ovale, the former process forming the limbus of Vieussens and the latter the valve of the foramen ovale. Born, studying the hearts of rabbits, thought that the atrial septum grew entirely from behind and above, and that the foramen ovale arose as a new opening, just before the atrial septum united with the septum ventriculorum below. The foramen ovale became closed after birth by the limbus of Vieussens, which had grown down from above and behind as an independent sickle-shaped process of the auricular wall. The appearance in the adult, in whom the valve of the foramen ovale is a distinct valve, would, in my mind, point to the truth of His' theory. Also the occurrence of the anomalies described by Fowler and Turner are best explained on the former hypothesis. The folding in of the valve from the atrio-ventricular septum below might cause also irregular foldings of the endocardium in the neighborhood of the atrio-ventricular valves and the production of the anomalous bands running from the edge of the valve of the foramen ovale along the floor of the auricle towards the mitral curtains, and even extending upon them, as in the exaggerated examples reported by Feigl and Browicz. There is, however, still so much that is vague in the embryology of the septa and the valves of the heart that further investigation is needed before the final word is said.

It is obvious that the only variety of aberrant tendinous cord which can have clinical significance is the second, viz., the cord extending across the cavity of the chamber, unless indeed those of the third class might possibly interfere with the full opening of the mitral valve. The only reported cases are the former. The apparent cause of the clinical signs which may be observed when a diagnosis is made during life is the vibrating of the tense thread by the action of the blood-stream. The cords so diagnosticated have almost always been in the left ventricle and stretched across its upper part. In this situation only could the blood-current between aorta and ventricle act upon them so as to cause enough vibration to give forth the characteristic murmur. This murmur is a high-pitched musical note exactly resembling the twanging of a bow or fiddle-string. Huchard expressed the conceit that the blood-current plays the role of the archer in vibrating the bowstring. In most of the cases recorded the murmur is heard best at the base of the heart or over the xiphoid. The propagation of the sound is

usually upwards towards the neck. It is usually systolic in time. In a case of Reynaud's, however,<sup>17</sup> the musical sound due to the cord accompanied the diastolic souffle of a coexistent aortic insufficiency. Probably in this case the tightened string was set in vibration by the recurrent stream through the regurgitant aortic valve. The section showed a cord running across the upper part of the left ventricle from the anterior columna carnea to the ventricular septum, thus lying directly in the way of the returning blood from the aorta.

At a meeting of the New York Pathological Society held in 1892, three cases were reported of chordæ tendineæ across the cavity of the left ventricle, wherein during life musical murmurs had been heard at the base transmitted into the vessels of the neck, and in one also a diastolic murmur heard only at the base.<sup>5</sup> Huchard<sup>4</sup> reports three cases confirmed by autopsy after antemortem diagnosis from physical signs. These signs were musical systolic murmurs and vibratory thrills. In one of the cases there was coagulation about the cord. Huchard says these cords are usually congenital, but may rarely be due to sclerous atrophy of the muscular trabeculæ and they always occur in the left ventricle. In the last statement he is clearly in error, for others besides myself have observed such bands in the right ventricle, and, as before stated, in the left auricle. Sir William Turner<sup>18</sup> mentions two hearts with fibrous cords—moderator bands, he calls them—in the left ventricle, and in one of these cases there was also a fleshy moderator band in the right ventricle.

In most of the cases in which an antemortem diagnosis was made, there coexisted some valvular lesion, with more or less marked hypertrophy and dilatation of the left ventricle. There is often a distinct vibratory thrill to be felt over the region where the musical murmur is best heard. Whether this thrill is due to the vibrating of the cord, or to the condition of dilatation itself is, perhaps, questionable. That the cardiac hypertrophy is essential to the presence of the musical murmur is evidenced by one case of Huchard's<sup>18</sup> in which the hypertrophy existed with the musical murmur, although the sound diminished and finally disappeared *pari passu* with the advance of asthenia of the heart.

Hamerujk,<sup>19</sup> in 1843, first observed that musical heart-murmurs might arise solely from the chordæ tendineæ. Before that time general opinion had agreed with Lænnec, who said such sounds were heard only in the vessels and never in the heart. The musical murmur caused by aberrant cords cannot be said to differ much from the musical murmur heard in some cases of aortic stenosis, osseous or calcareous concretions on the valve, or by rudimentary supernumerary valves.<sup>20</sup> Mayne<sup>21</sup> reports a case in which there was a loud, high-pitched, musical sound heard even at some distance from the chest. This was systolic and most intense at the apex.

The man was free from signs of other cardiac anomaly until 5 or 6 years later, when he came under observation for marked symptoms of aortic stenosis. The autopsy, two years afterwards, showed a much narrowed aortic orifice and two cords crossing the left ventricular cavity, just below the aortic entrance. These were, doubtless, set in vibration by the direct stream from ventricle to aorta, and, consequently, the characteristic musical bruit was heard with systole. A similar case was reported in 1879 by Verardini.<sup>24</sup> In a case of Engel's<sup>22</sup> the murmur was prediastolic, and was probably caused by the regurgitant stream through an insufficient aorta. There was in this case a fine string of fibrous tissue across the aortic orifice and attached at one end to a pocket of the aortic valve. Schroetter<sup>23</sup> thinks that such a cord might arise in consequence of endocarditis, where one end of a normal tendinous cord might become torn away and be attached again by its free end in an abnormal situation.

Potain,<sup>25</sup> in 1876, observed a case of mitral insufficiency, with its characteristic systolic murmur at the apex, and, in addition, a musical murmur at the base. A cord ran from the anterior mitral curtain to the ventricular wall, just below the aortic orifice. Demange,<sup>26</sup> in an admirable article on the causes of musical heart-sounds, records a similar condition of things in the right ventricle. A woman of 70 had chronic emphysema and other conditions, giving rise to a dilatation of the cavities of the heart and a consequent relative insufficiency of the tricuspid, causing a slight systolic souffle at the point of the sternum. Also, towards the base of the sternum there was a loud musical twang heard with the systole. The autopsy revealed, among other conditions, a tendinous cord across the right ventricle running in front of the tricuspid valve and attached to the opposite walls. This is the only case I have found in which clinical signs were given by a cord in any other cavity than the left ventricle.

Besides adding murmurs to obscure the cardiac sounds, these aberrant tendinous cords of the second class may have other clinical significance. They may serve as points on which the blood may clot<sup>18</sup> or possibly might interfere with the complete opening or closing of the mitral or tricuspid valve. They might rupture when diseased in the same way that the normal cords of the mitral valve sometimes do.<sup>27</sup> Indeed, the cords may sometimes have a beneficial influence in preventing undue dilatation of the ventricle.<sup>16,3</sup>

In recapitulation we may remember that the aberrant tendinous cords of the heart may be divided into three main classes : First, those running longitudinally along the wall ; second, those running across the chamber, and, in some cases in which they are situated in the upper part of the ventricle, giving rise to definite clinical symptoms ; and, third, that rare class extending from auricle to ventricle and not, as far as observed, giving rise to

antemortem signs. Since some of the hearts which I dissected were preserved for dissection solely because of their aberrant cords, I have no right to make deductions as to frequency, but I think that it will be admitted that these cords will be found oftener than is generally supposed if carefully looked for in an unmutilated heart. They are usually congenital, although in some cases it seems probable that they may arise from sclerous degeneration of a muscular band or trabecula, along with a general fibrosis of the cardiac muscle. Possibly some few may arise from rupture of a normal cord and reimplantation of the free end. The characteristic murmurs usually occur in hearts hypertrophied and dilated from coexisting valvular disease, and only then when the cord is stretched in the course of the direct or regurgitant blood-current which sets the string in vibration.

## BIBLIOGRAPHY.

- <sup>7</sup> Quercus, *l.*, *l.*, published, vol. II, p. 846.
- <sup>8</sup> Murchison & Bower, *J. Linn. Soc., Zool.*, 1839, p. 20.
- <sup>9</sup> Huet, *Bull. Mus. Nat. Hist. Nat.*, Paris, No. 9, 1820.
- <sup>10</sup> Staudes & Byrd, *Trans. Acad. Med. Sci.*, N. Y., Sept., 1862.
- <sup>11</sup> Brachet, *F. Arch. Anat. Microsc.*, Bd. 145, Heft 1, 1896.
- <sup>12</sup> Eschscholtz, *J. Naturgesch. Phys. Inst. Königsb.*, 1871.
- <sup>13</sup> Engel, *Ibid.*, p. 11, *Comp. Rend. Acad. Sci. Paris*, 1875.
- <sup>14</sup> Chaurin, *Recherches sur la pathologie de l'organe génital*, Paris, Bd. XX1.
- <sup>15</sup> J. K. Fowler, *Trans. London Path. Soc.*, 1882, p. 77.
- <sup>16</sup> Rolleston: *Proc. Anat. Soc. Gt. Brit. and Ire.*, 1896, p. v.
- <sup>17</sup> W. Griffith: *Ibid.*, p. vi.
- <sup>18</sup> Schaeffer: Quain's *Anat.*, vol. I, pt. I, 10th ed., p. 145.
- <sup>19</sup> Meissner, *Hist. Anat.*, p. 154.
- <sup>20</sup> Oehl, *Mém. Méd. Nat. de France*, Torino, vol. 20.
- <sup>21</sup> Sir Wm. Turner: *Jour. Anat. and Phys.*, 1895-6, p. 568.
- <sup>22</sup> Schmidt, *Presb. Path.*, 1870.
- <sup>23</sup> Huchard, *Bull. Mus. Nat. Paris*, 1896, p. 113.
- <sup>24</sup> Hammerik, *Méd. Jahrb.*, Wien, Bi. xlix, 184.
- <sup>25</sup> Banks, *Diseases of the Heart*, sec. 21.
- <sup>26</sup> Mayne: *Dublin J. M. S.*, 1870, p. 496.
- <sup>27</sup> Hugo Engel, *Priodisches Med. Presse*, Mar. 8, 1881, p. 4.
- <sup>28</sup> Schroetter: *Wiener med. Blätt.*, No. 1, 1883 (see 22).
- <sup>29</sup> F. Veradini: *Bull. delle Sc. med.*, Bologna, 1879, p. 305.
- <sup>30</sup> Potain, *Bull. Soc. Anat.*, 1876, p. 244.
- <sup>31</sup> E. Demange, *Bull. Soc. Anat.*, 1878 et 1878-80, p. 21.
- <sup>32</sup> S. West: *Tr. London Path. Soc.*, 1882, p. 75.

# IS THE URIC-ACID DIATHESIS AN IMPORTANT FACTOR IN PATHOLOGY?¹

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In being asked to take part, from the clinical standpoint, in a discussion of the question "Is the Uric-Acid Diathesis an Important Factor in Pathology?" I take it for granted that it is desired also that I do so as far as possible from the standpoint of personal experience. To such expectation I shall endeavor to conform. On this account it may happen also that I shall pass by some of the conditions which are supposed to illustrate the office of uric acid in the respect queried after. Should this be the case it will be because I have not had enough experience with such conditions to justify

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their treatment at my hands. I shall endeavor also, as far as possible, to deal with actual conditions.

At this point I will also state what I have come to regard as the sign of the uric-acid diathesis, interpreting my own observations by those of contemporary and previous observers. I regard that person as the subject of the uric-acid diathesis who secretes habitually or frequently, a scanty, high-colored urine, of high specific gravity and decided acid reaction, a urine which promptly deposits either at the temperature of the body or at a slightly lowered temperature, a copious sediment of uric acid and mixed urates to which oxalates may be added. Such a urine may contain a trace of albumin and even a few hyaline casts. I do not say that this constitutes the uric-acid diathesis. It is rather its sign or perhaps one of its consequences whence we may infer its presence. It matters not from the clinical standpoint whether such person ingests more uric acid, manufactures more uric acid within his organism, or does not take in enough water to hold the uric acid in solution—he is the subject of a condition which produces this result. It may also be well to say at this point that when the word uric acid is used, not only uric acid and its compounds, but all the alloxuric bodies of modern chemistry are intended. I will not attempt to differentiate them, leaving this to the chemical referee.

I. The most manifest of the results of this diathesis is the tendency to *uric-acid gravel* and *uric-acid calculus*, a result so commonly recognized that it is scarcely necessary to make any extended reference to it. Less manifest, though scarcely less unanimously conceded, is an irritative effect of the urine of such cases on the kidneys and urinary passages, as the result of which arise in the course of time a nephritis of the chronic interstitial type, and in the larger urinary passages a catarrhal inflammation, of which cystitis is the commonest form, a cystitis rarely of high degree.

II. It is, however, true of the uric-acid diathesis, as intimated, that it means something more than a scanty urine readily depositing urates and uric acid. It is something of a less tangible character. As to what constitutes this condition more precisely, I also leave the chemical referee to decide. It, however, leads to some results that are scarcely less tangible than gravel in its effects, and one of these is *gout*. Whatever may be the reasoning as to the sources of uric acid, it is commonly acknowledged that it is this substance either within or without the blood, that is, in the tissues, which is the direct cause of true gout as constituted by an attack of podagra or gout in some other joint. It has not, however, been clearly settled whether the painful symptoms are due to uric acid within or without the blood-vessels; for although a deposit of urates in the vicinity of joints without the blood-vessels is acknowledged to be the most infallible sign of a gouty process, yet such deposits are well known, at times at least, to be absolutely pain-

less. The frequent association of chronic interstitial nephritis with gout is due also to the irritative effects of the same agent which operates from within the renal vessels and superadds its effects to that of the uric-acid-charged urine, already referred to. This is also a matter of general acknowledgment. I do not forget that with the supervention of nephritis in gout the urine is increased, its specific gravity is lowered and uric acid may cease to be a sediment, being held in solution by the more copious urine.

III. As undoubted in my own mind as that gout is the result of uric acid, is it that the uric-acid diathesis is frequently responsible for an idiosyncrasy in which depression of spirits is a constant symptom. Extreme modesty, a want of self-reliance and a disposition to avoid society, moodiness, irritability, and bad temper are a part of the same condition. To this is often added what is called biliousness, and we commonly say the liver is torpid, but when we say this we do not always have a definite notion of what we mean. It is certain, however, that there is often constipation and the pulse is often slow. This with the scanty, dark-hued urine and copious sediment, already alluded to, constitutes the well-known condition to which the word *lithemia* in its more limited application is given, the term being also used as synonymous with uric-acid diathesis. The symptoms of this well-known condition I assign to an accumulation or retention of uric acid and allied substances in the blood. This proposition has its most satisfactory proof in that which constitutes its successful treatment, viz: measures to increase the elimination and diminish the ingestion of uric acid.

IV. That uric acid is responsible for certain cases of *migraine* I am also ready to admit. I could cite many cases from my own experience which attest this, of which the following may be regarded as a type, being one tolerably well studied.

F. R., a gentleman of large means and abundant leisure, but leading an active life, consulted me when he was 50 years of age. His father had had sick headaches almost all his life, although towards the close of it they disappeared. The attacks lasted a day or two, during which he was also sick to the stomach. Mr. R., Jr., began to have similar attacks after he was 30 years old. He would rise in the morning with headache which gradually grew worse, until by noon he was compelled to go back to bed. He would finally fall asleep and sleeping until 9 or 10 o'clock at night, would wake up and find the attack gone. The pain would be around the eyes and in the temples and he could stop it for the moment by yawning and by pressing the great vessels of the neck. The attacks were associated with nausea and accompanied by pains in the legs, and stiffness, a sort of ache or throb, coming with inclination to stretch the legs. This sensation would come on rather towards the end of the attack. The next day he would generally feel uncommonly well, although there would be a little sore feeling remaining in the head. He would also have a little tenderness over the submaxillary glands when he had the headache. For 5 or 6 years, or since he was 45, these attacks had been so far modified that he had no nausea, which was replaced by a tendency to looseness of the bowels. Before the attacks became milder, they lasted longer, generally extending over 2 days. Until the last 5 years he perspired very little, even with active exercise, but lately the tendency to perspiration has increased somewhat. He had 4 or 5 attacks a year and was some-

times awakened in the night. He is now taking almost a totipot. He has no quantity of uric acid attacks especially on the right. In 1873 when in England he experienced painful sensations in the neck and shoulders which extended to the end of the penis.

The urine at all times was typically lithic, the specific gravity ranging from 1021 to 1032, while it deposited a copious sediment of uric acid and urates. It contained no albumin, casts, and usually no sugar. The quantity was always small, commonly about 32 to 34 ounces in the 24 hours. On two occasions the urine was purified by the lead-process, subsequently to which sample No. 1 contained  $\frac{1}{4}$  of 1% of sugar, No. 2,  $\frac{1}{4}$  of 1% of sugar. Neither of the specimens contained any sediment at the time of their examination. No quantitative analysis for uric acid was ever made, but the characters of the urine were typically those described as representing the uric-acid diathesis.

After some preliminary treatment with alkalis the man was ordered to use the true French Celestins Vichy, as an habitual drink, never to take less than a quart a day, often more. Under this treatment the headaches grew less and less frequent, until they have practically disappeared. Mr. R. is now about 65 years old. It has been a year or two since I have heard from him, but when I did hear he was in excellent health, but he continues to take his Vichy as originally ordered, feeling safe as long as he does so.

By no means every case of migraine is, however, due to uric acid. It is commonly admitted that eye-strain causes a large number. After this, reflex causes of various kinds, especially when of pelvic origin, are active factors.

V. I believe also that uric acid in solution may be the cause of *high tension in blood-vessels*, causing contraction of the arterioles and capillaries; also that its continued presence in the blood may produce *endarteritis* with *degeneration* and *sclerosis* of the vessel-walls, together with the accidents which grow out of such degeneration, viz., rupture and apoplexy, as well as renal disease and hypertrophy of the left ventricle. The last I regard in part as compensatory, and intend to make up the lost power furnished in health by the contractile arterial walls.

VI. *Vertigo* in most distressing forms is also at times a result of the presence in the blood of the alloxuric bodies. It may occur alone or associated with other symptoms.

In all these conditions, save lithiasis and gout, and possibly in the latter also, I believe that the offending uric acid or allied substances are operating in solution through the blood, it may be in concentrated solution, but nevertheless in solution.

In the causation of the processes above described I believe that uric acid plays a decided role, but leaving them we enter upon more debatable ground. Does uric acid produce rheumatism as something distinct and separate from gout? Does it produce sore throat, asthma, and bronchitis? Does it produce gastric and intestinal symptoms? Does it produce glycosuria and diabetes?

First. Does uric acid produce rheumatism as something distinct and separate from gout? At this stage we enter on a question most difficult to treat satisfactorily, indeed impossible to discuss in such a way as

to meet all objections. The chief difficulty lies in the absence of a generally accepted notion as to what constitutes subacute and chronic rheumatism. I say subacute and chronic rheumatism because it is these as to which the difficulty lies. At the present day acute rheumatism is generally acknowledged to be an acute infectious process, and I am unable to recall from my own experience, at least, any influence of the uric-acid diathesis on its causation. I therefore omit it from my part of the discussion.

The question hinges further on the diagnosis between gout and rheumatism. Every one who has had experience knows that there is a class of cases, not at all rare, including especially well-to-do persons past 40, in whom attacks of arthritis and even muscular pain, succeed on errors in diet. Such a diet may include an excess of proteids, or it may be acid fruits, or wine and beer which cause the mischief. I acknowledge I have seen many cases of so-called rheumatism, especially muscular rheumatism, among my friends as well as patients, who as they grow older have had to substitute whisky for wine and beer, because they found the latter produced lumbago and even articular rheumatism. In some of these the urine presented the characters constituting the uric-acid diathesis, in others not. In others a gouty ancestry was their portion, or a history of an attack of true gout existed. I do not know how these causes act. Alexander Haig alleges that beer and external cold act alike in diminishing the alkalinity of the blood and driving the uric acid out of it into the joints and tissues (*Uric Acid*, 3d ed., p. 505). There are many objections to this reasoning, and Haig's statements themselves are conflicting. Thus he says also: "The urates which cause acute arthritis are in solution, not in suspension, and they are deposited from solution later on, when they are unirritating." Again, on p. 469, he says, "When uric acid fails to be excreted, it is retained in the joints and irritates them." Also, "that the absence of uric acid from the joints after death is no reason why it is not present before death." I prefer to call these cases gout rather than rheumatism, but not on such reasoning as this. Proof as to the local presence of uric acid is practically wanting. I call them gout, because they fulfil the conditions of gout, either by hereditary, by the previous presence of undoubted gout, or by presenting the conditions defined by the uric-acid diathesis. I know this reasoning is not invulnerable, but I can adduce no better. The term rheumatic gout, which has recently been reapplied to some of these cases, by one of our members, B. K. Rachford, seems not an inapt one. On the other hand, the term has been of late so generally associated, though with much less foundation, with another chronic rheumatoid condition, viz., rheumatoid arthritis, that I fear an attempt to restrict it to the cases in question would lead to more confusion.

In strong contrast with these is another class of



chronic cases found among the poor, in which no such cause brings on acute attacks. In these cases there is no hereditary history of gout, and there has never been an attack of gout. Nor does the urine present the characters of the uric-acid diathesis. In these cases it has not been my experience that a meat-diet interferes with a cure or causes relapses in cases in which convalescence has set in. Nor do wine and beer interfere with their recovery. On the other hand, I believe that chronic rheumatism in such forms is a disease that should be well fed, and for this class of cases I would rather have good food than medicines. My experience justifies this conclusion. It is, of course, not always easy to separate these two classes of cases. They sometimes so shade into each other from the standpoint of symptomatology, that it may be impossible to tell to which category they belong, but I am sure that the latter group has nothing to do with the uric-acid diathesis, as I understand it.

A word as to rheumatoid or deforming arthritis, also known as rheumatic gout. This disease, I also believe, is something quite apart from gout and the uric-acid diathesis, the conditions of which are not commonly associated with it. It is a disease of definite morbid anatomy, consisting mainly in destruction of the inter-articular cartilages and in new formations about the joints, associated with trophic changes, manifested most strikingly in muscular atrophy. Deposits of sodium urate constitute no part of it. It is much more closely allied to true chronic rheumatism than gout. Occurring more frequently in my experience among the poor, it is a disease of comparatively early life, setting in usually between 20 and 30, and even at an earlier age. Acute rheumatism and gout rarely precede it, while worry, grief, and anxiety do. The studies of our member, James Stewart, of Montreal, have shown that in fully 50% of cases it succeeds upon infective processes, while the nervous origin originally suggested by J. K. Mitchell, and further elaborated by Remak and by Ord, has much to support it. It is, however, wanting the support of anatomical changes in the spinal cord, though Pitres and Vaillard claim to have found them in peripheral nerves.

Does the uric-acid diathesis produce sore throat, bronchitis, and asthma? So far as these conditions are associated with the requirements of the gouty diathesis, it may. But there is no proof of it, except that derived from analogical reasoning. It is *prima facie* unlikely. Yet if they occur in persons who are hereditarily gouty, who have had true gout, or fulfil the conditions of the gouty diathesis, and are not otherwise explainable, they may be thus caused. On the other hand, there is nothing so peculiar in their symptoms that a diagnosis of gout dare be made from the presence of such sore throat, bronchitis, and asthma. The same is true of numerous other conditions ascribed to gout, such as gastric neuroses—what is known as gout of the

stomach—gouty diarrhea, and the like. Their relation to the uric-acid diathesis is an assumption justified when the conditions named are fulfilled, but there is nothing in these conditions themselves which is in any way distinctive or indicative of gout, or of the uric-acid diathesis.

With epilepsy depending in any way on the uric-acid diathesis I have had no experience, nor with neurasthenia, alleged to be due to the same cause.

Now as to the relation of uric acid and diabetes. It is one of the best recognized clinical features of the latter that uric-acid sediments are frequently found in diabetic urine. But here the resemblance between typical diabetic urine and the urine of the uric-acid diathesis ceases. For although the specific gravity of diabetic urine is high, yet it is high not from the presence of uric acid and urates but from sugar; and instead of being scanty, as is the urine of the uric-acid diathesis, it is copious. I have always regarded the sediments of uric acid in diabetic urine, which by the way are almost always limited to the early stages, as a result of the rather marked acidity of these urines, which decomposes the urates and deposits the uric acid. I have no absolute proof of this.

On the other hand it cannot be denied that there is some sort of relation between diabetes and gout, shown by the fact that at times these two affections are present in the same subject, either successively or simultaneously. Most frequently, perhaps, the gouty patient acquires glycosuria and the gouty attacks may cease. In other cases, attacks of gout and glycosuria alternate. In other cases still gout and glycosuria are simultaneously present. Least frequently gout supervenes on diabetes. A case illustrating the first category has been under my care for nearly 12 years. It is accompanied by a mild degree of interstitial nephritis. It is, moreover, commonly conceded that these cases are almost invariably of the mild form, easily controlled, as a rule, by dietetic treatment only. In my experience the number is not as large in this country as it appears to be in Germany, England and France, or as noted at least at the Spas where diabetics and gouty patients resort. Furthermore, I believe that a certain number of cases are supposed cases, by which I mean cases in which the reduction of cupric oxid is due to uric acid and allied substances and not to glucose. This is such a frequent event in my experience, and I so often find mistaken conclusions drawn from it that I am quite confident it is true. Admitting, however, the occurrence of gout and diabetes in the same person in some one of the ways described, does it follow that uric acid is the cause of both? On no grounds except the reasoning of Haig that what he calls uricacidemia, or an excess of uric acid in the blood due largely to its alkalinity, causes enlargement of the liver, derangement of function, and consequent glycosuria. Gout and diabetes are both nutritional disorders and may be the

result of the same cause, but that cause is not uric acid in the case of glycosuria.

This is further seen in the absence of like consequences of the two diseases. Nephritis is a very common affection in gout, manifested almost exclusively in the granular atrophic form, and very rarely the same form appears in diabetes, but it is only in the obese and gouty and in the last stages of the disease in these that it is met. The renal changes which may be said to be characteristic of diabetes are functional and hypertrophic, the result of extreme work thrown on the kidney in eliminating the water, sugar and salts. These are never found in gout.

Cardiac changes are rare in diabetes. When present they are hypertrophic but moderate. They are very common in gout and of the same kind. In both diseases they are probably due to the same cause, viz., extra work thrown upon the heart partly to overcome irritative contraction of the blood-vessels, to which is superadded in gout arterial sclerosis, very rare in diabetes, except the form associated with gout. The irritant in gout is uric acid and its congeners, in diabetes, sugar, acetone, and kindred substances. These may be a cause, too, of arteriosclerosis, occurring late in diabetes. When sclerosis is present, as already intimated, the cardiac hypertrophy is partly compensatory. When sclerosis occurs early it is a question as suggested by Van Noorden, whether it is not primary, possibly of syphilitic origin and itself the cause of diabetes through nutritive disturbances in the pancreas or nervous system. Finally the very fact that when the uric-acid factor asserts itself, the diabetic subsides, and *vice versa*, is in my judgment a strong point against uric acid being the cause of both.

Admitting, therefore, as every one must, a somewhat intimate relation between the two conditions it would seem at present, that we must also admit with Van Noorden, who has given us by general acknowledgment the most satisfactory treatise on diabetes yet written, that an insight into it has not yet been vouchsafed us.

## THE RELATIONS OF NERVOUS DISORDERS IN WOMEN TO PELVIC DISEASE.

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Read at the meeting of the Philadelphia Academy of Medicine, September 10, 1897.  
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A DISCUSSION of this subject is ever fraught with danger of misunderstanding, and as I stated in a paper read before the Iowa State Medical Society during its session in the spring of 1896, no other in the whole range of gynecologic affections is so difficult to treat satisfactorily, and in no class is it so impossible to approach a fixed standard from which to determine

surgical treatment as in so-called ovarian neuroses. The whole matter resolves itself almost entirely into a question of *diagnosis* rather than into one of surgery, and the all-important point to determine is whether or not the woman's symptoms arise either directly or indirectly from pelvic disease. This point being settled in any given case in the affirmative, the question of surgical *versus* medical management is much simplified, and there should be little trouble in arriving at a correct conclusion. On the other hand, if it be concluded that pelvic disease does not enter into the case further than as one of many other groups of symptoms, the case belongs more properly to the neurologist, and surgery is no longer a factor to be considered. It is just this point of difference that renders the whole subject so complicated, and which has been the means of throwing so much discredit upon legitimate surgery; and it is just here that the difference between the true surgeon and the operator stands out in marked contrast; any one may, by diligence, become an operator, but how many fall short of being surgeons in the fullest and better sense of the word, all know. In no class of patients can the operator do more harm; in none can the conscientious surgeon so frequently prevent irreparable damage to the patient and lasting injury to surgery.

Does local organic disease of the pelvic organs of itself act as a primary factor in the causation of nervous disorders in women? I am fully aware that the implied answer to this question is heresy to all the traditions and teachings of gynecology, and yet who is there with a large experience with this class of patients who can look back and honestly answer it in the affirmative? Has not the time arrived when we must squarely face the fact that nervous diseases, such as neurasthenia, ovaralgia, ovarian dysmenorrhea, nerve-exhaustion, hystero-epilepsy, insanity, and reflex nervous symptoms of all kinds, in but rare instances arise from diseases of the sexual organs, and only then from such conditions that would give rise to nerve-manifestations did these same conditions exist in any other part of the body?

Epithelioma of the cervix, with the accompanying infiltration of carcinoma-cells and inflammatory deposits, is notoriously free from nervous manifestations until the disease has progressed to such a stage that the patient begins to show the later symptoms of the affection; and yet we unhesitatingly believe that scar-tissue in a healed lacerated cervix or perineum gives rise, years afterward, to profound nervous symptoms. Fibroid tumors of the uterus, accompanied as many of them are by grave fibroid changes in the ovaries, rarely give rise to complicating nervous diseases, and yet we unhesitatingly attribute all the nervous symptoms present in a given woman to a possible tender ovary, and this in the face of the fact that, with rare exceptions, all nervous or insane patients have ten-



der ovaries, and that the majority of cases of ovarian disease (excepting the inflammatory) are comparatively painless.

And what of that large and ever increasing class of women with uterine displacements, supposed to be suffering from nervous reflexes, in spite of the fact that many of the displacements are congenital or have existed for years without producing any symptoms? No patients suffer more or for a longer period with less prospect of relief than do those affected with hysteria, neurasthenia, ovaralgia, ovarian dysmenorrhea, nerve-exhaustion and reflex nervous symptoms of all kinds. None, as a rule, are more convinced than they that their suffering arises, if not primarily at least secondarily, from pelvic disease, and only too frequently is this hallucination fostered by some one or more medical attendants in the minds of themselves and their friends. In fact this idea of the cause of their suffering has only too often originated in the ignorance of their medical adviser, and the local treatment applied daily and weekly with wonderful persistency has finally thoroughly convinced them that their whole trouble lies in the pelvis, when originally they probably had no thought in this direction. The ever-present headache, the more or less constant backache, the bearing-down feeling, the continual worn-out and tired feeling, combined with pain more or less constant in the iliac regions, are generally accepted as probably indicative of pelvic disease, but when these symptoms are accompanied with disordered menstruation and leukorrhea the probability resolves itself into a certainty. Not infrequently the trouble has originated at the time of marriage, a miscarriage or child-birth, a fact that is an additional reason for looking askance at that ever-offending organ—the ovary. As years pass, such a woman's condition is truly pitiable, and one is justified in resorting to almost any extremity in order to obtain relief for the sufferer. The all-important question arises, however, as to whether surgery is an advantage or a disadvantage; whether it does the patient good or harm. The answer to this, as already stated, rests upon the diagnosis. A large personal experience has impressed me with certain undeniable facts in this connection.

1. We often see hysteria in individuals in whom the anatomic and functional condition of the sexual organs is wholly normal.

2. On the other hand, all sorts of diseases of the sexual organs may occur without the presence of hysteria.

3. Cases of hysteria in which cure has been effected through local gynecologic treatment alone are rare.

4. There are women who have never been hysterical in whom hysteria has developed after gynecologic treatment, and after their attention has been drawn to the condition of their sexual organs.

5. Many women are cured in whom the sexual organs remain unchanged.

6. Chronic neurasthenia almost invariably produces a train of symptoms referable to the pelvic organs.

In view of all this we are forced to regard cases of hysteria or neurasthenia as rare which are dependent exclusively upon abnormalities of the sexual organs.

In considering the advisability of surgical treatment in these cases it is necessary to study certain questions in connection with the past history as well as the present condition. Has the patient a physical disorder that can be demonstrated by a pelvic examination? If there be pelvic disease present, did the present sufferings begin prior to its contraction, or did they come simultaneously? Are the pelvic organs the only ones through which the symptoms manifest themselves? The answer to these questions is of supreme importance. The point of this will probably be better understood by applying the test to one of many cases.

A married woman, 35 years old, was referred for the purpose of having her uterine appendages removed for chronic pelvic inflammatory disease. She was emaciated, had the appearance of being very sick, suffered from constant headache, backache and pain in both iliac regions. Constipation, and frequent and burning urination were present. Digestion was bad and she had but little appetite. She frequently suffered from palpitation of the heart. Her strength was greatly impaired and she had little inclination for exercise. Menstruation was painful, frequent and profuse. There was considerable leukorrhea. There existed a feeling of weight and bearing-down in the pelvis, a drawing pain beginning about the clitoris and extending down the leg; cotton was painful. Pelvic examination disclosed adhesion of the head of the clitoris, retrodisplacement of the uterus, with prolapse of both ovaries. The appendages were apparently normal. The pelvis and abdomen were exceedingly tender to the touch. The diagnosis was neurasthenia, pure and simple. The woman's physician was informed accordingly, and at the same time it was agreed that she be admitted to the hospital in order that her physical ailments might be corrected, with the hope that the diagnosis might prove incorrect, or that the moral effect of an operation, together with thorough rest, proper feeding and nursing, might prove of benefit to her. The diagnosis was reached in the following manner, and in spite of the adhesion of the clitoris and the retrodisplacement. To begin with, although the woman had emphatic symptoms of uterine and ovarian disease, she had also symptoms referable to the bladder, intestines, stomach, heart, and brain. It was found during the pelvic examination that she drew away from the hand whenever and wherever she was touched. By engaging her attention closely with leading questions and insisting upon immediate answers, and by cautiously continuing my manipulations, in spite of her apparent great suffering, a marked difference was noted, and parts which at first could barely be approached could now be handled with freedom. Close questioning elicited the facts that she had been, to a certain extent, a nervous, hysterical girl. She grew worse after becoming a wife and was at times during her married life more neurotic than at others, but she did not finally break down until just after the next to the last of her pregnancies. This seemed to prove that the displacement of the pelvic organs had nothing to do with her present condition. The displacement probably occurred after her first confinement. This conclusion was fortified by the subsequent treatment. She was etherized and the clitoris freed from all adhesions, but no relief was afforded. A week later the uterus was curetted and suspended from the abdominal wall. The pelvis was found to be perfectly healthy. The patient obtained a few weeks' apparent relief, but her old symptoms, without exception, gradually returned, and she went home as miserable as she came.

It had been folly to have removed this woman's ovaries. How many cases similar to this one have we not all seen after the ovaries have been removed? In

my experience they are just as bad as before, if not worse. If the menstrual flow has ceased, which is not always the case unless the uterus be removed at the same time as the ovaries, the dysmenorrhea is cured; but not infrequently it will be found that other symptoms have taken its place, or old ones are intensified; ovarian pains are replaced by painful stumps, or possibly, as suggested by a distinguished neurologist, the pain simply remains where it originally was—in the abdominal walls or in the deeper pelvic nerves; back-aches continue and the general nerve-reflexes are increased by the addition of the depressing nerve-storms of the menopause. A miserable woman is no better, and is most probably more miserable on account of the presence of the menopause, the knowledge of the loss of her ovaries and the keen disappointment of failure instead of expected cure.

The justification most frequently offered for the operation in cases like that related is the fact that the ovaries are diseased. In this connection the old question arises, Is the diagnosis correct? Is there actual disease present? I find wide differences of opinion as to what constitutes a diseased ovary, and to these differences I am inclined in part to attribute the past excess of surgical treatment in women belonging to the class under consideration. A careful study of those cases, triumphantly reported either for the purpose of justifying operation in this class of patients, or found included in a general report of statistical tables, leads to a similar result: a clinical history of general neurasthenia with specimens of either cystic or cirrhotic ovaries.

Are cystic and cirrhotic ovaries pathologic? I ask this question in all sincerity, and from the standpoint of these specimens as I have many times seen them in jars, at society-meetings, and have had them described to me, I just as sincerely answer in the negative. Who has seen, more than rarely, an ovary that has not had one or more small cysts (hydrops folliculi) visible on its surface? Who has not repeatedly heard such an ovary pronounced cirrhotic, without even a pretense of a microscopic examination? I venture to say that nine out of ten of such organs removed are normal. By normal I mean that they are in no worse condition, as far as cystic and cirrhotic degeneration is concerned, than are the ovaries of the vast majority of women who never suffer a pain or an ache. What good can be expected from their removal, and oftentimes, what an amount of harm?

If, on the other hand, actual disease be present and can be plainly demonstrated by a physical examination, who is there so careless of the welfare of his patient as to deny her the possible benefits of their proper surgical treatment? But even here a word of caution is necessary. It is always well to bear in mind that actual disease at times exists coincidentally with neurasthenia, hysteria, hystero-epilepsy, or insanity, the one

entirely independent of the other. It is no infrequent occurrence to see the removal of a neoplasm or diseased appendages fail to affect the neurotic symptoms.

One is often astounded at the number of patients suffering from hystero-epilepsy reported cured by oöphorectomy. The subject is an exceedingly delicate one, and one in regard to which hard and fast rules cannot be laid down. A small group of gynecologists report many cases of this kind and there are few operators who cannot record one or more at least temporary good results. On the whole the trend of opinion is in favor of non-surgical interference. It has been the exceptional case in my personal experience that has by the result warranted such treatment, and in great part my observations have taught me largely what has been observed by those who are opposed to the operation; on the other hand, I have seen a small group of patients who have apparently after several years retained the relief which they undoubtedly experienced soon after operation. A careful consideration of these cases brings to light an almost universal similarity. The epileptic seizures occurred at the time of the menstrual epoch and only then. This then is our guide. A patient presenting the symptoms of hystero-epilepsy occurring only at the time of menstruation, the attacks not having taken place prior to puberty, but beginning at or about that period of life, is a fair subject for the operation of double oöphorectomy, after every other method of treatment has been first thoroughly and systematically tried and exhausted. Even then no surprise need be occasioned if a majority of the cases fail to obtain relief. One fact in this connection is worthy of serious consideration: the pathologic condition of ovaries removed in the majority of cases for this cause have been reported as cystic and cirrhotic.

In the case of insanity I am well convinced we are treading upon even more uncertain ground. Of late years, in certain quarters, removal of the ovaries has been strongly urged for this condition. The rather pertinent question is asked, "Why should an insane woman remain unrelieved from pelvic disease any more than her sane sister?" The position is perfectly rational and sound, the only question being, Has the woman pelvic disease, and if so is that disease the cause of her mental condition or is it seriously affecting her general health? It is upon the answer to this that the whole subject hinges. The frequency with which gastro-intestinal disturbances accompany insanity has been pointed out, as has also the occurrence of hypochondriasis dependent upon a diversity of morbid conditions of the physical organism, as well as the frequency with which nephritis is so associated. It has also been demonstrated beyond question that pelvic disease is a frequent accompaniment of insanity. To show the frequent association of certain physical ailments with insanity and the demonstration of their causal relation are, however, two entirely different



matters, and the advocates of this theory have lamentably failed in proving their case.

One of the strongest advocates of this position as regards pelvic disease can, for instance, show that fully 60% of the women admitted to the Maryland Hospital for the Insane have some lesion of the genital organs. One hundred women were examined and in 40 the local lesions found were believed to justify operation. The uterine appendages were removed in 30 of these. The frequency of pelvic disease in insane women cannot be successfully disputed, but it must be borne in mind that the same percentages hold good also in mentally healthy women. Alice Farnham conceived the idea of comparing the results of the pelvic examinations of a certain number of the female patients of Willard's Asylum with the same number of mentally healthy women of the same pauper class obtained from a neighboring almshouse and penitentiary. She succeeded in making examinations of 30 women of each class taken consecutively as they came to hand. Out of the 30 mentally healthy women, but 4 were found in whom the pelvic organs were in a condition of health. "Out of the same number of insane women taken *seriatim* from the patients in two wards, 6 were found in whom the pelvic organs were in a condition of health." What then becomes of the supposed causal relation between these physical conditions and insanity as far as the frequency of their coexistence is concerned?

Of the 30 women operated upon in the Maryland Hospital for the Insane, "4 absolutely mental recoveries" occurred. Four cures in this number of operations would be encouraging could we depend upon these having been effected by the operation. The various and unaccountable transitions from insanity to sanity are so familiar, however, that we can only view the results with caution. Is it not possible that part of these results at least, if not all, are explained by the words of the operator himself? "The number of my cases is too small to allow me to draw any conclusions, but if anything of practical value can be deducted from them, it is that *puerperal insanity*, *melancholia* and *simple mania* offer the best chances of cure from the proper treatment of local lesions in the pelvis. *Of course, it may be said that these forms of mental disorder are just those which yield in the majority of cases to the usual methods of management of insanity.*"

My personal experience in this matter has not been favorable to operative interference, with any idea of restoring the patient's mental condition by the direct effects of the operation. I have frequently been asked by relatives of patients in some one of the asylums in and about Philadelphia to examine their insane friends in order to determine whether or not there was pelvic disease of such a character as to warrant the assumption that the insanity was due to those lesions. In not a single case have I been able to decide in the affirmative.

The aspect of the case that deserves careful attention is the physical suffering of the insane from gynecic troubles. Relief should not be denied these women any more than sane patients. In fact, it is here even more important, as every element that contributes towards a perfect physical condition is a strong factor in the ultimate recovery of the patient's mental faculties. That their physical condition is improved is amply attested to by reported results. To what extent this will occur remains for the future to develop. In the meanwhile its determination should rest wholly in the hands of experts—neurologists and clinicians, as well as gynecologists.

## REFLEX DISTURBANCES OF NASAL ORIGIN.<sup>1</sup>

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I HAVE chosen the subject indicated by my title because reflex disturbances originating within the nasal cavity may, as I hope to show, not only bring their unfortunate victim under the grasp of the specialist, who has that for his particular field, but may cause such symptoms to arise in far-distant organs as to mislead the attending physician into completely overlooking their nasal origin.

It is not necessary for me to detail to you the physiologic mechanism of a reflex act. I will merely refresh your memories as to the nervous and vascular supply of the nose. The olfactory, as you are well aware, is the nerve of the special sense of smell. Its terminal filaments are found in the mucous membrane covering the superior and middle turbinated bones and the upper half of the nasal septum. There is, besides this nerve, the nasal branch of the ophthalmic division of the fifth, or trigeminus nerve, and numerous small branches from Meckel's ganglion. The important point to be borne in mind is that the mucous membrane is endowed with general sensation through the fifth nerve, which is also that by which vasomotor control is exerted in the vascular mechanism underlying it. We thus get a clue to the reason why vasomotor disturbances result, as in hay-fever, from disturbances of sensation in that region. The arterial supply of the nose is derived chiefly from branches of the ophthalmic and internal maxillary arteries, which interlace beneath the mucous membrane. Some of the veins from the nose empty into the ophthalmic vein, and some terminate in the veins within the cranium.

My attention was first forcibly directed to nasal reflex phenomena by an occurrence in my private practice which caused me considerable worryment, although

<sup>1</sup> Read before the Jackson, Daland Medical Society of the University of Pennsylvania, in February, 1898.

not serious in its ultimate outcome. I have already reported the case.<sup>2</sup>

A gentleman, aged 37 years, of muscular build, and without neuropathic taint, came under my care for a hypertrophic rhinitis of severe grade. He had been treated by several specialists in diseases of the nose and throat and had undergone many minor nasal operations during the immediately preceding few years. The hypertrophic tissue had been treated with the galvano-cautery, chemical caustics, and by removal with the cold wire snare. During February, 1897, I used the cold wire snare to remove a small piece of hypertrophied tissue from the anterior extremity of the middle turbinated bone of the left side. Two days later the patient returned and informed me that on the day following the operation he had, while writing, suddenly become blind in his left eye. He had gone at once to the office of a well-known oculist, and while waiting in his ante-room to see him found that his vision was beginning to return. Before the doctor had finished his examination sight was almost completely restored to the eye. The period of complete left-sided blindness was stated by the patient to have lasted between 20 and 30 minutes. The oculist has since informed me that careful examination had failed to reveal any cause for this condition. When I saw the patient after the occurrence, the site of the operation presented a perfectly normal appearance. I have subsequently used the cold wire snare in the further treatment of the case, and have also employed chromic acid, with no results out of the ordinary. Of course the transient blindness can only be considered as a reflex amblyopia, the result of the intranasal operation.

In connection with the report of this case, I reviewed in my article the literature of the subject, and in doing so called attention to the many curious phenomena that have manifested themselves after operations within the nasal cavities.

In 1885, Ziem<sup>3</sup> wrote a lengthy article on the evil results of reflex origin after intra-nasal operations, in which he reported a number of cases of visual disturbances under such circumstances, and also several of delirium. Lermoyez<sup>4</sup> classified the accidents which follow intranasal operations as follows: 1. Of infectious origin; 2. Of nervous origin; 3. Of mechanical origin. Of course we must carefully exclude cases belonging to the first or third groups, before we ascribe any case to the second. He speaks of the following complications of nervous origin after operative procedures within the nose, namely: neuralgia, migraine, vertigo, syncope, visual disturbances, asthma, laryngeal spasm, exophthalmic goiter, and general depression.

The first to forcibly direct the attention of the profession to the nasal reflex, as such, was Voltolini<sup>5</sup>, who reported a case of spasmodic asthma which was dependent for its origin on the presence of polypoid growths in the nose, and was cured by their removal. This observation was speedily followed by the reports by other physicians of a number of cases of asthma of similar origin.

Among the earliest to report a different sort of reflex disorder of nasal origin was Carl Seiler,<sup>6</sup> who published two cases of reflex cough due to hypertrophic rhinitis.

Before 1877, however, Richet is cited by Casabianca<sup>7</sup> as having reported a case of convulsive tic douloureux, which was cured by the removal of an enchondroma of the nasal septum.

John N. Mackenzie<sup>8</sup> reported a case of spasmodic cough due to a fibrous nasal polyp, and Hack<sup>9</sup> had a similar case.

According to Hack, Schaeffer<sup>10</sup> was the first to generalize the rule that other nasal disorders were accompanied by the same reflex disturbances as nasal polypi. Many isolated cases of nasal reflexes due to other sources than polypi had been published, but Schaeffer was the first to clearly establish the generalization. In 1882 Hack<sup>11</sup> attempted to systematize and classify the knowledge at that time attained of the nasal reflexes. His article was translated by J. E. Michael<sup>12</sup> and is most interesting. In it he records observations of reflex disturbances in organs apparently far removed from the domain of nasal pathological conditions. Heretofore almost all the cases reported had been of reflex influence exerted upon the respiratory tract, such as asthma, spasmodic cough, etc. Hack now, for the first time, reported a case of epilepsy occurring in a man who had applied to him for treatment of a nasopharyngitis of severe grade. He told Hack incidentally of his epilepsy, saying that he had succeeded in keeping the attacks down to one in two weeks, by the constant use of the bromids. Hack says that the idea of there being any connection between the nasopharyngeal condition and the epileptic seizures never presented itself to his mind. He cauterized the granulations with silver nitrate, and the patient went on his way. Long afterwards he received a letter from the man in which he informed him that in the first week after his treatment he had had an epileptic fit every day, but that afterwards they had gradually become less and less frequent and at the time of writing he was only suffering from an attack about once in every two or three months.

In relation to this case Hack calls attention to the often observed symptom-complex, epilepsy and asthma. He also reported the case of a woman who suffered for 20 years with attacks of sneezing and migraine. Her condition had been pronounced hysteria by the numerous physicians whom she had consulted. A nasal examination revealed an area of congestion over the right middle turbinated bone, pressure on which provoked a sneeze. A single application of the galvano-cautery caused the complete disappearance of all her symptoms. He had a somewhat similar case in an army-officer, of sneezing accompanied by violent attacks of bronchial asthma, in which relief followed galvano-cauterization of congested areas over the middle and

<sup>2</sup> *Med. Rec.*, November 3, 1887.

<sup>3</sup> *Med. schreib.*, 1885, vol. 1, Berlin, 1885, xix, p. 20.

<sup>4</sup> *Ann. de Med. et de Chir.*, 1886, Paris, 1891, xviii, p. 8.

<sup>5</sup> *Die Anwendung der Galvano-Kauterik*, Vienna, 1872.

<sup>6</sup> *Archives de laryng.*, vol. iii, No. 3, p. 240.

<sup>7</sup> *This. de Paris*, 1877.

<sup>8</sup> *Am. Jour. Med. Sci.*, July, 1883.

<sup>9</sup> *Beitr. zur. Kehlkopf-Heilk.*, 1882, xix, 379.

<sup>10</sup> *Beitr. zur. Kehlkopf-Heilk.*, 1873, No. 13.

<sup>11</sup> *Wien. med. Wochenschrift*, 1882, xix, 339.

<sup>12</sup> *Maryland Med. Jour.*, 1882-3, ix, 220.



lower turbinated bones. He also reported two cases of laryngeal spasm, one cured by removal of a nasal polypus, the other by cauterization of a congested nasopharyngeal mucous membrane.

Cases of epileptic attacks dependent upon intranasal conditions have been reported by many other observers since Hack's original observation. Among them may be mentioned Frincke,<sup>13</sup> Salinger,<sup>14</sup> McBride,<sup>15</sup> Lennox Browne,<sup>16</sup> and B. W. Richardson,<sup>17</sup> who reports a case of epilepsy in a woman of 34, which was completely cured by the removal of a nasal fibroma.

In connection with Hack's cases of laryngeal disorders the result of intranasal disease, might be mentioned the case reported by Max Schaeffer<sup>18</sup> in which there was complete aphonia without pathologic alteration in the larynx, dependent upon hypertrophic rhinitis and completely recovered from after treatment of the nasal condition.

The two following cases reported by C. H. von Klein<sup>19</sup> also bear upon this point:

The first case was that of a schoolmistress of 28, who complained of intense pain in the throat. She had been told that she had laryngitis and pharyngitis. By examination he found the larynx and pharynx normal. Examination of the nasal cavities revealed an ulcer in the left nostril  $\frac{1}{2}$  inch in length and about  $\frac{1}{4}$  inch in breadth, just anterior to the entrance to the Eustachian tube. Recovery from the pain in the throat promptly followed the healing, under appropriate treatment, of the ulcer in the nose.

The second case was in a man whom he was called to see one night suffering from an asthmatic paroxysm in whom the removal of some polypi which completely blocked his nostrils gave relief.

Hack drew particular attention to the fact, since abundantly supported by other observers, that it is the, comparatively speaking, unimportant nasal diseases, such as catarrhal inflammations, that cause little or no alteration in the nasal mucous membrane and which give rise to but little stenosis, that furnish us with the most striking examples of nasal reflex disorders, more than do polypi, or other nasal tumors. As he points out, under these circumstances the nerve-endings, where they are spread out over a hyperemic or but slightly swollen mucous membrane, are much more accessible to direct irritation, than they are covered by hypertrophied connective tissue, or nerveless tumors, such as polypi. Likewise the existence of stenosis lessens the access of irritant impulses to the nerve-endings.

Migraine and neuralgic headaches the result of intranasal disease have been reported by Hack, Bosworth, and many others. Harrison Allen,<sup>20</sup> in a paper read before the Philadelphia Neurological Society on the headaches associated clinically with chronic nasal catarrh, divided them into three classes: reflex, neu-

rotic, and inflammatory. He said that the reflex headache was confined almost exclusively to the forehead, temple, and vertex, and that it was due to pressure exerted upon one of the surfaces of the nasal chambers.

Lennox Browne cites a case related by Bobone,<sup>21</sup> in which the patient suffered from violent attacks of sneezing. Twice the sneezing attacks followed one another so closely and were of such violence that the patient nearly died. In the attacks severe vertigo supervened upon the sneezing. There was marked hypertrophic rhinitis, treatment of which resulted in cessation of the attacks. Bosworth<sup>22</sup> reports two cases of salivation resulting reflexly from nasal disease. The patients were advanced in years and a very curious and prominent feature in both the cases was very pronounced mental depression. There was a constant flow of saliva, resulting in incessant expectoration. In both cases appropriate treatment secured a successful result. Bosworth says that E. Fränkel is cited by Rualt<sup>23</sup> as having seen a case of salivation under such circumstances. A. B. Thrasher<sup>24</sup> also reports two cases of salivation occurring as a nasal reflex. John Dunn<sup>25</sup> reports two cases of tic douloureux of reflex nasal origin. The first case was of 15 years' duration and was cured in a few minutes by the removal of some hypertrophied tissue from the inferior turbinated bone of the affected side. The second case occurred in a man of 60 who had suffered from it for 12 months. Dr. Dunn removed a septal spur with the saw and snared off some hypertrophied tissue in the right nostril and the tic disappeared entirely in a short time.

Chorea as a result of intranasal disease has been frequently observed. Elsbeg<sup>26</sup> reports a case in which it depended upon a hypertrophic rhinitis, and Jacobi,<sup>27</sup> Salinger,<sup>28</sup> and Bosworth<sup>29</sup> report similar cases.

In 1887 Guye, of Amsterdam, first described the condition to which he gave the name aprosexia.<sup>30</sup> The case he described was that of a boy of 3, who had adenoid growths in his nasopharynx, and associated with this pathologic condition there was inability to fix the attention upon a subject for any length of time. After a year of vain effort it was found to be impossible to teach the child the first three letters of the alphabet. After the removal of the adenoid tissue from the nasopharynx the child learned the whole alphabet in one week.

I had a case of this character last spring, occurring in a boy of 9, who was brought with the history of having been a mouth-breather from infancy. His

<sup>13</sup> *Mouveau de la Polyclinique*, June 7, 1885. Bosworth, *Med. Record*, Jan. 1887.

<sup>14</sup> *Philadelphia Polyclinic*, June, 1887.

<sup>15</sup> *Med. Record*, xxix, p. 137.

<sup>16</sup> *Diseases of the Nose and Throat*, p. 545.

<sup>17</sup> *Asclepiad*, Jan., 1887.

<sup>18</sup> *Monatsschrift f. Ohrenhe.*, No. xi, 1885.

<sup>19</sup> *Columbus Med. Jour.*, 1891, x, 441.

<sup>20</sup> *Med. News*, 1887, xlviii, p. 288.

<sup>21</sup> *Bulletin Bourg.*, July, 1880.

<sup>22</sup> *Dis. of the Nose and Throat*, vol. i, p. 89.

<sup>23</sup> *Gaz. des Hôp.*, Dec. 10, 1887.

<sup>24</sup> *Clin. Laryng. Rhinol.*, 1890, xiv, p. 503.

<sup>25</sup> *Virginia Med. Monthly*, Feb., 1892; also vol. xiv, p. 671.

<sup>26</sup> *Trans. Am. Laryng. Assn.*, 1887, v, p. 79.

<sup>27</sup> *Internat. Jour. Med. Sci.*, April, 1890.

<sup>28</sup> *Phila. Poly.*, June, 1887.

<sup>29</sup> *Med. Record*, Jan., 1887.

<sup>30</sup> An English translation of his article may be found in the *British Medical Journal* for 1889, vol. xi, p. 903.

mother said that though going to school regularly he had never been able to learn how to read and write and that he was now in the same grade in which he had been for several years. Examination revealed an enormous adenoid mass descending somewhat below the level of the soft palate and almost completely occluding the nares. I removed this and within a few months his mother informed me that the child had made the most amazing advance in his studies and was graded in the school with other children of his age. Dr. Hill<sup>31</sup> found adenoid growths in the nasopharynx in a large proportion of the idiotic and backward children in the Earlswood asylum. Spicer<sup>32</sup> has observed in connection with nasal stenosis derangements of temper, spirits and intellectual power.

Dr. North<sup>33</sup> reports neurasthenia of reflex origin from nasal disease and makes the somewhat startling statement that he has never met with a case of neurasthenia in which there was not present some catarrhal trouble. In this connection we might recall the fact that so many authorities insist upon the presence of a catarrhal nasal disturbance and a neurotic disposition as two factors always associated in the victims of hay-fever.

Max Thorner<sup>34</sup> reports a curious case of loss of memory and a peculiar mental state in a boy from whose middle turbinated bone some hypertrophied tissue had been removed. He recovered completely in a few months.

Reflex disturbances of the eyes from pathologic conditions in the nasal cavity are of great frequency. I have already mentioned my own case of this character and referred to the cases of visual disturbance after operation reported by Ziem. Max Thorner, in his article quoted above, reports a case very similar to mine. Cheatham,<sup>35</sup> Bresgen,<sup>36</sup> and Rosenberg<sup>37</sup> also report such cases. E. Gruenning<sup>38</sup> reported a number of cases of congestion of the eyelids with excessive lacrimation, in all of which the eye-condition was associated with a slight catarrhal affection of the nose. All the cases were cured of the ocular affection by relief of the nasal condition. He gives as a test of the dependence of these conditions of the eye on intranasal disease, the instillation of cocain into the nose. If this relieves the ocular symptoms he says that we may assume that treatment of the nose will suffice for the cure of the eyes.

Lennox Browne<sup>39</sup> reports the remarkable case of a woman of 30, who, in the spring of 1885, had been suffering from severe and constantly increasing glaucoma, for which iridectomy had been performed on one eye without beneficial result. Early in 1886 she

had an attack of pneumonia followed by severe asthma. On her recovery it was discovered that both nostrils contained polypi. These were completely removed in 10 or 12 sittings. Browne then lost sight of her until May, 1887, when she came to him again. Her nostrils were free from polypi and she had had no return of her asthma. She told him her eyes were free from pain and her sight had greatly improved. This change in her ophthalmic condition had taken place without any further treatment of her eyes and had dated from the cure of the nasal disease. More recently H. Gradle<sup>40</sup> has demonstrated the dependence of asthenopia in many cases upon intranasal disease. In 3% of all his observed cases of asthenopia a pathologic state within the nasal chambers played a greater or lesser part in the production of the condition. Most of his patients had an ordinary catarrhal rhinitis with hypertrophy of the tissues, or with stenosis due to septal deviations, or outgrowths. The subjective eye-symptoms were a dull feeling on using the eyes, and a feeling of heaviness, discomfort or burning in them. He thinks that adenoid growths in the nasopharynx are capable of producing asthenopia.

Reflex disturbances of the sexual apparatus in both the male and the female are quite common occurrences as the result of intranasal conditions. In 1883 J. N. Mackenzie,<sup>41</sup> in an article entitled "Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease," mentioned the fact that in a number of women there occurred, physiologically, at the menstrual period, marked congestion of the turbinated bodies. Lennox Browne supported his statement by the clinical fact that in many women suffering from nasal disease the symptoms are much aggravated at the menstrual periods. He had noticed the frequency with which epistaxis occurred in boys and girls at puberty. A. S. Hobbs<sup>42</sup> reports several cases of priapism in connection with disturbances of a vasomotor nature within the nose. Grayson<sup>43</sup> reports a number of observations made upon cases of a similar nature and especially bearing upon the influence of sexual excitement as an etiological factor in rhinitis vasomotoria. Mackenzie,<sup>44</sup> in a very recent article, reiterates his assertions as to the important relationship existing between nasal disease and sexual disorders and quotes many ancient and modern authors, both medical and lay, as affording support in their writings to his views.

<sup>31</sup> *Jour. Am. Med. Ass'n*, March 6, 1897.

<sup>41</sup> *Jour. Am. Med. Sc.*, July, 1883.

<sup>42</sup> *Jour. Am. Med. Ass'n*, April 24, 1897.

<sup>43</sup> *Jour. Am. Med. Ass'n*, Feb. 19, 1898.

<sup>44</sup> *Johns Hopkins Hospital Bulletin*, Jan., 1898.

<sup>35</sup> *Brit. Med. Jour.*, Sept. 28, 1889.

<sup>36</sup> *Brit. Med. Jour.*, Sept. 14, 1889.

<sup>37</sup> *Medical Record*, May 14, 1887.

<sup>38</sup> *Jour. Am. Med. Ass'n*, Sept. 26, 1896.

<sup>39</sup> *Am. Pract. and News*, 1887, 411, p. 195.

<sup>40</sup> *Archiv. f. Ophth.*, Wiesbaden, 1885-87, XLV, p. 293.

<sup>41</sup> *Berlin klin. Wochenschr.*, 1889.

<sup>42</sup> *Medical Record*, 1886, XLIV, p. 122.

<sup>43</sup> *Disease of the Throat and Nose*, 1893, p. 548.

A. M. Cartledge (*Med. Times*, June, 1898) reports the performance of **ovariotomy in a woman of 82**. A multilocular cyst of the right ovary, weighing about 40 pounds, was removed, with no appreciable shock, and the patient made an uninterrupted recovery.



# The Philadelphia Medical Journal

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**Philadelphia!**—To the establishment of the PHILADELPHIA MEDICAL JOURNAL our local medical profession is indirectly indebted for an unwonted though justifiable interest in the sanitary and professional matters of this city upon the part of medical journals published elsewhere. In one issue of a valued contemporary we recently counted as many as ten indexed items relating to Philadelphia. In the language of Lear,

“There was a young lady whose bonnet  
Came untied when the birds sate upon it;  
But she said, ‘I don’t care!’ All the birds in the air  
Are welcome to sit on my bonnet.”

**A little war-anecdote**, illustrative of the method in which affairs may be managed, comes to us by way of a private letter from Cuba. A junior officer was assisting a transport in disembarking his troops, and discovered that one of the men was so ill that he could not stand. The officer took the sick man to a steamer flying the Red Cross flag; but the authorities refused to receive him, as he had no ticket—was not *officially* ill. The officer put the man aboard and refused to take him away. “We can’t have any guns aboard here,” cried out the Red Cross military surgeon, and proudly heaved the sick man’s gun and ammunition-belt overboard!

**The Summer-Months Change-of-Hour Advertiser.**—Certain physicians utilize well the opportunities offered by the frequently recurring change of seasons, or of residence, to inform, by means of fine stationery or big-type notices, both patients and profession that their office-hours are so and so for such days, and thus and thus for other days, etc., and that their “practice is limited to diseases of etc., etc.” We see how wise is the rule of one of the most reputable of American medical societies that any notice on sign or card of the limitation of practice to a specialty is contrary to good taste, not to say ethics. The last thing desired by the advertiser is to convey the impression that his practice is limited. His practices, as well as his foolish cunning, are surely limitless!

**The Admission of Women to the Practice of Medicine.**—We present in another column the arguments of Prof. Penzoldt, of Erlangen, against the admission of women to the practice of medicine, without feeling under the necessity of taking issue with

them. It seems abundantly demonstrated, in this country at least, though not alone here, that woman is fully able to take care of herself in the medical profession, as well as in the many other avenues of activity which, with the progress of the world, she has undertaken to enter upon; nor has her womanliness, on the whole, suffered in consequence of her strivings. The success of every life consists in doing best that which is given it to do, and on this principle men and women alike will succeed or fail in accordance with their abilities and not with regard to their sex. Prof. Penzoldt’s address and the action of the Aertztetag show that Germany is far behind the times on the woman-question. The question of the admission of women to the practice has long been settled.

**A Reference-Librarian.**—We observe in a recently issued circular to the alumni of Brown University, notice of the appointment of a reference-librarian, whose chief duty is to assist and advise the students in their reading and reference-work. After a year’s service the aid of this adviser has been found so helpful as to be considered indispensable. This idea seems worthy of practical application in medical as well as in general libraries. Perhaps the greatest benefit would accrue to the medical student and to such busy practitioners as may be unfamiliar not only with medical literature but also with the use of the great indices to such literature. However, everyone who does medical literary work understands the loss of time involved in looking up references, even with the aid of our splendid Surgeon-General’s *Index-Catalog* and the *Index Medicus*. The amount of time thus expended is often much greater than that of using the literature when found. Of course, even a special reference-librarian could not be a complete encyclopedia, but the saving in time to the many who would profit by his services would be out of proportion to the small additional expense that would come to the individual members of our larger medical-library associations.

**Medical Inspection of Schools.**—Some months ago attention was called in these columns to the praiseworthy efforts that were being made by the Public Education Association of Philadelphia in behalf of the medical inspection of schools, and in a recent number the need for such inspection and the excellent results

that have come from the system in other cities were ably discussed and some of the best ways of accomplishing medical supervision of school-children were pointed out by the chairman of the Association's committee on this subject. Facts were adduced showing conclusively that the commingling of children in our public schools is one of the most important factors in the spread of contagious diseases. An attending physician of one of our large hospitals relates a case that came under his observation in dispensary-practice: A child had not been feeling well for some time, but had been attending school more or less regularly. Suspecting the possible existence of some contagious disease, the child was stripped, and the whole body was found covered with scales of scarlet fever. Three days later the child was dead from scarlatinal nephritis; and yet for several days, though suffering from a mild form of the disease, it had associated freely with schoolmates and had been sowing widely the seeds of disease and death. School-attendance is compulsory, but have we a right to force people to send their children into danger? Whilst not of equal importance, because not concerned with loss of life, the spread of parasitic skin-diseases and of contagious conjunctivitis, and the bearing of defects of mind, vision and hearing on education, are matters of very great importance, in the treatment of which medical opinion and supervision should be considered indispensable. The citizens of Philadelphia are to be congratulated that, through wise and prompt action on the part of its Board of Health, this important hygienic measure has been once more adopted, and this time to stay we believe, in this city, where it was first enforced. The Board of Health and the medical inspectors should receive the support and co-operation of every citizen, particularly that of physicians, who appreciate the importance of the matter. But the movement should not stop here; it has passed the experimental stage in several cities already and it should be introduced into *all* schools and recognized as a precaution of as much importance as general vaccination.

**Expert Testimony.**—In the discussion, recently published, on expert testimony, before the Philadelphia County Medical Society, the few points that were made clear are of great importance. In the first place, the attitude of mutual understanding, so much to be desired, between physicians and lawyers, was in a degree attained by having members of the bar contribute to the discussion. The debate was far removed from the arena of the court-room, and therefore lifted to a higher plane of intelligence and impartiality than is always afforded at the trial of cases. There were no "jury-points" to be made, no hypothetical questions to be asked, no life or property at stake.

The difficulties in the way of arriving at exact knowledge, especially in cases of alleged insanity, were

frankly stated by some of those present. There was little disposition to claim infallibility in such cases. The points were made clear that some latitude for variations of opinion may be granted without assuming that of two experts who testify on opposing sides one is necessarily either disingenuous or incompetent. The uncertainties of legal processes themselves were pointed out, and it was well claimed that the precedents set by the courts themselves, in the system of appeal from a lower to a higher court, and in the practice of advocates to assume opposing sides without reproach to their knowledge or their conscience, may be cited by experts when they themselves take sides and attempt to sift and to allot due importance to a mass of confusing facts. It was made clear that it is not the part of an expert witness to be an advocate, much less to decide the issue. That he is ever put in such a position is usually as much the fault of the court and the lawyers as his own. He is simply a diagnostician, and with the bearing of his diagnosis upon the issue of the case, he has, or should have, nothing to do.

As for the various panaceas offered now and then for the evils attendant upon expert testimony, the view seemed to be that none of them is likely to be either efficient or practicable. It was pointed out that a State board of experts, or a commission of experts appointed by the court, or a consultation of experts agreed upon by counsel, would be no more competent to deal with the vexed and obscure questions of insanity and trauma than are medical witnesses as now employed. There would still remain the same grounds for variations of opinion, and, what is more nearly vital, the same inalienable right of a prisoner or a litigant to call his own witnesses. The most that can be attained—and it is surely sufficient—is a high standard of practice, governed by the same laws of ethics and of science inside the court as out of it; and for his special fitness to conform to such a standard every expert is to be judged according to his own qualifications and his repute as a man and a scientist.

**The Faith-cure Impostor.**—The *Philadelphia Press* calls the attention of the physicians of this city to the doings of a man in our midst, who, it is alleged, under the guise of healing by faith, has been practising his "blasphemous imposture" in a church loaned to him for the purpose. The man is represented as denouncing practitioners of medicine as frauds, and as claiming that he can cure all forms of disease by laying on of hands and anointing with oil. As usual in such cases, he has the support, it is alleged, of some wrong-headed clergyman and, we presume, of some ignorant church-members. The *Press* rallies the members of the profession on their supineness and their neglect of their own rights in permitting this libeler and zealot to assail their practice and to push his own practice without a license in defiance of the laws of the State.



We cannot state too emphatically that the only way to treat such rank fanaticism is that furnished by the law. It is useless to argue or reason with it. The appeal to reason or to conscience goes for naught with extremists who have never developed the one and have subverted the other to their own selfish dogmas and interests. They can only be made to understand that there is a limit to their invasion of other men's rights—and whether they understand the justice of it or not, they can be made to feel that the privilege to mislead simple minds and to jeopardize human life is promptly and forcibly denied them. The chance that they will thus be held up as martyrs is a small one in these hustling days of science and common sense, while the chance that they will be effectually silenced and held up to public reproach as defamers and law-breakers is much greater.

The practice of medicine is recognized by the law as a business; no one is allowed to engage in it in this State without a license, to obtain which he has had to undertake an expensive preparation. Every practitioner, therefore, has a right to expect the protection of the law. This law is not only for his own benefit, but also for the protection of the citizen. The physician, in the fiction of the law, is a skilled laborer, entrusted with the care and repair of the most important and valued piece of mechanism that a man possesses—his body. For this function not only great skill is required, but also the highest probity in the physician and the absolute confidence of the public. To in any way interfere with the proper coöperation of these forces is, and should be, a grave misdemeanor. The immense responsibility put upon a doctor's shoulders, and usually borne without dissent, demands as a condition the absolute protection of the law. In the case referred to by the *Press* a test might be made by the Philadelphia County Medical Society, which is, or could be, empowered for such action.

We consider the claims of freedom of speech and religious liberty in such a case as entirely out of place. It is simply a question of the rights of a large body of citizens. The right of one man ends where the right of another man begins. When freedom of speech and religious liberty or fanaticism endanger human interests and even life itself in a peaceful community, they are always put down soon or late. History has given that lesson too often for us to need to repeat it here; we merely refer to it for the benefit of licensed clergymen and others who think that under the guise of a pious benevolence they can resort with impunity to the manners and tricks of the charlatan.

**A Nursing-bottle Ordinance** may have a new sound to some of our sanitarians, but it has certainly proved its efficiency in the hands of the Buffalo (N. Y.) Health-Department. Dr. Ernest Wende, the Health-Commissioner of that city, is one of the best-posted

men on the subject of infant-mortality in this country. The study of causation showed him that no prohibitory measures would be effective that did not include the nursing-bottle. Accordingly, on November 16, 1890, he had the following city ordinance enacted:

It shall be unlawful for any person or persons to enter or engage in the sale of any bottle, mechanism, or other contrivance for the artificial feeding or nursing of infants or children under 3 years of age, that has connected therewith a rubber tube, hose, or similar contrivance.

The object of this ordinance, as is readily seen, was to banish the long-tubed nursing-bottle from the market. Copies of this ordinance were published and sent to all druggists and dealers, with the injunction that it would be rigorously enforced. Five convictions have since been secured by the Buffalo Department. With the advent of the present hot season the Commissioner sent a lady-inspector to the various drug-stores of the city, with instructions to purchase one of the prohibited bottles wherever one could be had. In most cases the inspector was informed that the article was not in stock, as an ordinance prohibited its sale. However, of 74 places visited, 30 were found sufficiently obliging to sell the long-tubed bottle. The experience of this lady-inspector was varied. In some cases she would be subjected to a rigid examination by the druggist or clerk, with the evident intent of ascertaining whether it would be safe to make the sale. In other cases the bottles were handed over without reservation, while still in others the salesman stated that he did not keep them in stock, but would make one, with any desired length of tube, while the lady waited. Each purchase was carefully marked by the inspector with the place of purchase, date, time, etc. Before the tour of the city was completed, however, she was recognized in a place where she was about to make a purchase, and the entire association was immediately warned.

Warrants were issued for all the delinquents and they appeared in court. Three pleaded guilty to the charge and made statements to the court, who allowed them to go on payment of costs; one stood trial on a general denial, was convicted and fined. The others asked for an adjournment and combined to secure some of the best legal talent to fight the case.

On learning this, the County Medical Society held a special meeting and unanimously adopted the following:

WHEREAS, The Medical Society of the County of Erie, in common with the profession of medicine and other well-informed and right-minded persons, maintain the following principles, to wit:

That the preservation of the public health is the first duty of the State;

That the prevention of the communicable diseases is the plain and imperative duty of the sanitarian;

That the responsibility of the State to afford protection to its citizens increases with the ignorance, carelessness, and helplessness of such citizens;

That of all our objects of protection none is more helpless, or in more constant need of wise and discriminating care, than the newly born, who must be reared by artificial feeding;

From the death of a child—the artificially fed newly born, marks the level of the sanatory enlightenment of the community.

WHEREAS, Competent medical opinion has, and does, unhesitatingly and unanimously condemn a certain type of feeding-bottles as frequent use, and

WHEREAS, Inspired by such well-founded conviction, ordinances forbidding the sale of this apparatus were recently enacted by the proper authorities of this city; and

WHEREAS, The relations between the professions of medicine and pharmacy are, and should be, most reciprocal and harmonious, the pharmacist being a conspicuous citizen, learned in medicine, with singular opportunities to form and develop aright public opinion; therefore be it

*Resolved*, That we commend to the druggists and pharmacists of our city our health-ordinances in general, and with greater particularity the ordinance forbidding the sale of a certain class of feeding-bottles, as timely, wise, and in the best interests of the public health—and that we invite them to join us in supporting these ordinances with their earnest and constant efforts;

*Resolved*, That we commend to all those in authority the subject of the preservation of the lives of the newly born and those of tender years, as of the highest practical importance, as deserving this incessant and sleepless vigilance;

*Resolved*, That we approve, in the most hearty and unqualified terms, of the ordinance prohibiting the sale of any nursing-bottle that has connected therewith a rubber tube, hose, or similar contrivance.

Thus it is seen that the medical profession of Buffalo is on the side of its health-authorities. The entire proceeding is unquestionably a move in the right direction. It is an undeniable fact that under the ordinary means employed for the artificial feeding of infants, it is practically impossible to keep the long tubes in an aseptic condition. A united effort on the part of the medical profession and the health-authorities would soon banish the evil that is responsible for more deaths than all the modern means of warfare. At the same time it is seen that the pharmacist, or dealer, bears an important relation. Human nature naturally rebels against anything that even has the appearance of an infringement on personal rights. The question as to right of the State to adopt proper measures for the preservation of the life and health of its citizens has, however, been sufficiently determined by competent authorities and admits of no argument.

Reviews.

**Hay-Fever and Its Successful Treatment.** By W. C. HOLLOPETER, A.M., M.D. 16mo. Pp. 137. Philadelphia: P. Blakiston's Son & Co., 1898.

This is a compilation, industriously and somewhat intelligently made, of opinions concerning the causation and pathology of hay-fever, with original remarks upon treatment. The author states that during ten years he has treated more than 200 patients, and has given them complete relief.

In the discussion of the possible bacteriology of the affection, we note that the author has had a somewhat unusual experience in the study of the nasal secretions. We quote his own language:

"Some years ago, in the dispensary, I made a somewhat prolonged bacteriologic study of the nasal secretions of young children waiting for treatment for various simple disorders, and it was found that, although a child might have no constitutional indication of the disease whatever, often the bacteria of diphtheria, scarlet fever, measles, whooping-cough, or tuberculosis, were present in the nasal secretions."

There are not many bacteriologists in any part of the world, who have "often" seen the bacteria of scarlet fever, measles, and whooping-cough. Dr. Hollopeter is certainly to be congratulated upon his good fortune, and it would be a service to medicine for him to publish an account of the technic through which he achieved these discoveries, together with descriptions of the respective organisms and the criteria of identification.

Concerning treatment, which is the original portion of the book, the author states that for the last ten years he has used the ordinary Dobell's solution (sodium bicarbonate, sodium borate, carbolic acid, glycerin, rose-water) in the proportion of a teaspoonful to an ounce of warm water, thoroughly sprayed into both nostrils by means of a hand-ball atomizer; after which the same solution is used on cotton, and, again to quote the author's words, "I scrub most carefully every portion of the mucous membrane, being sure to reach between the turbinated bones and all around and over every slight prominence. I then as carefully dry the membrane with clean cotton, and use freely a mild solution of menthol in [petrolatum], loosely plugging the nose for a few minutes to retain the oily application."

Such hygienic and constitutional treatment as the individual peculiarities may suggest is used additionally. We know of no other author who makes claim to invariable success in the treatment of this most distressing group of affections, and, as Dr. Hollopeter's methods are very simple, it should be easy for any physician to observe for himself what their effect would be in his hands.

**An American Text-Book of Genito-Urinary Diseases, Syphilis, and Diseases of the Skin.** Edited by L. BOLTON BANGS, M.D., and W. A. HARDAWAY, A.M., M.D. Philadelphia: W. B. Saunders, 1898.

This is a formidable volume of 1229 pages, containing 300 engravings and 20 colored plates, and written by 47 contributors. As is inevitable in a book that contains the product of so many minds, the articles vary widely in character and merit, although it may be safely asserted that, taking the book as a whole, it is a full and excellent presentation of the subjects of which it treats. Lydston's article upon urethritis is excellent, and contains many statements showing the fallacy of the panaceas and quick cures for gonorrhea. Lydston shows that the disease is incurable by alleged specifics; that no system of treatment has lessened the average duration, except those measures based on the knowledge that the disease is self-limited; and that if a remedy is ever discovered that will cure gonorrhea in from 3 to 6 weeks, "the event will be hailed as a surgical millennium." Lydston discusses stricture elaborately and shows the danger of internal urethrotomy in the treatment of stricture of the deep urethra.

Eugene Fuller writes upon diseases of the testicle, its coverings, the cord and seminal vesicles. He prefers to operate for varicocele by the old subcutaneous method, and likewise treats most hydroceles by the ancient plan of tapping and injection. Fuller's discussion of diseases of the seminal vesicles is of much value.

Among the notable articles we would mention those on the diseases of the prostate, by J. W. White and A. C. Wood; diseases of the bladder, by Edward Martin and A. E. Taylor; vesical calculus, by Francis Watson; and diseases of the ureter, by Christian Fenger. We regret that Watson, in his article on vesical calculus, does not mention the striking experiments of Forbes on the mechanical force necessary to crush calculi and the lithotrite best adapted to apply it.

The article on skin-diseases includes about 450 pages. It is complete and practical, and contains many useful illustrations.

The book, in spite of some omissions and shortcomings, can be recommended to the student and practitioner.

**The Blood: How to Examine and Diagnose Its Diseases.** By ALFRED C. COLES, M.D., B.Sc. of Public Health, Edinburgh; Fellow of the Obstetrical Society, London; formerly Senior House-Surgeon at the County Hospital, York. With 6 colored plates. 8vo, pp. xii. 260. London: J. and A. Churchill, 1898. Price \$3.68 net.



Hematology has become an approved means of diagnosis, and its possibilities have not yet been exhausted. This book, like the few on the same subject that have preceded it, deals principally with the cellular elements and the coloring-matter. Only in connection with the consideration of typhoid fever is reference made to the study of the serum, as in fact it is only here that we have as yet definite knowledge in this almost virgin field of investigation. It is fair to hope that in the not remote future we may learn much of a practical character from studies of the chemie and physiologic nature of the blood, as well as of other of its physical properties. The volume under review is a satisfactory exposition of the subject, based largely upon personal observation, in conjunction with the published experiences of others. First, are described methods of examination, then the general morphology, and next the pathology of the blood. Of parasites in the blood only the hematozoa of malaria are described and illustrated. It would have been well to have included a consideration of the specific gravity of the blood and the means of estimating it, and also the use of centrifugal apparatus, such as the hematokrit, in the determination of the corpuscular value of the blood. The volume is well printed in large and clear type, and the six colored plates faithfully portray the normal and most of the abnormal morphologic appearances of the blood-cells.

**Über die Resultate der Radicalbehandlung des Gebärmutter-Scheidenkrebses mit dem Glüh-eisen.** Von Dr. GEORGE GELLHERN. Mit 3 Abbildungen im Text. Pp. 92. Berlin: S. Karger, 1898. Price, 2 Marks.

The author reviews the results of operative treatment (extirpation) of uterovaginal carcinoma, especially with reference to recurrence of the disease, and compares these results with those obtained by igniextirpation. He reports 39 cases operated upon by himself from March 1, 1895, to January 1, 1898, with most gratifying results. Anything that will contribute to our knowledge of the proper management of this dread disease will be most acceptable, but we feel that no definite conclusions as to the value of any one mode of treatment can be deduced from such a limited number of cases.

**Über Puerperale Psychosen. Für praktische Ärzte.**

VON DR. OSWALD KNÄUER, Oberarzt der Dr. Kahlbaum'schen Heilanstalt in Görlitz. Mit einem Vorwort von Prof. Dr. A. Martin. Pp. 54. Berlin: S. Karger. Price, 1.80 Marks.

Instead of adopting the usual classification of the puerperal psychoses into the gestational, puerperal, and lactational forms, Knauer divides them into 3 groups, as follows: The infection-psychoses, or those that arise directly from infection during the puerperium; the idiopathic psychoses, without any fever or appreciable bodily disorder; and the intoxication-psychoses, occurring after eclampsia or following uremia without eclampsia. Under each of these three headings he relates typical cases. The study is an interesting one and is presented attractively.

**Das Studium der Frauenheilkunde, Ihre Begrenzung innerhalb der Allgemeinen Medicin.** The Study of Gynecology; its Limitations Within General Medicine. Von A. MACKENRODT. Pp. 35. Berlin: S. Karger, 1898.

The question as to the proper field and limitations of gynecology has been a source of contention among surgeons since gynecology first began to assume the proportions of a separate and distinctive specialty. Professor Mackenrodt has won such high encomiums by his high-class scientific researches that his views on the question cannot but command the most earnest and attentive consideration. When one weighs the numerous and unexpected complications that the gynecologic surgeon is constantly encountering in his work upon the pelvic viscera, including, as they do, affections of the intestines, appendix, stomach, pancreas, and kidney, the position taken that gynecology is only limited by the walls of the entire abdominal cavity seems fully justified.

**Die Anatomie und Behandlung der Geburtsstörungen nach Antefixierung des Uterus.** The Anatomy and Treatment of Abnormalities of Labor Following Antefixation of the Uterus. Von Dr. W. RÜHL. Mit 15 Abbildungen im Text. Pp. 82. Berlin: S. Karger, 1897. Price, 2 Marks.

The operation of ventrofixation, or, better, ventrosuspension, of the uterus for the correction of posterior displacements and prolapse of that organ, has given much satisfaction to gynecologists through the excellent results that have followed it, as far as the gynecologic condition is concerned. From obstetricians, however, the world over, has come a note of warning, and the recorded cases of dystocia, and of disturbances of gestation that have accumulated, have induced Rühl to prepare and publish in this brochure the results of his investigations upon the subject. This task he has accomplished with evident skill, and he gives a careful review of the Continental history of the complications of labor subsequent to the operation. There is, however, a notable absence of reference to the American literature on the subject. The illustrations are appropriate and instructive, and the methods of treatment are those that are approved by progressive obstetricians.

**Medical Diagnosis.** A Manual of Clinical Methods, by J. J. GRAHAM BROWN, M.D., F.R.C.P.E., F.R.S.E., Assistant Physician to the Royal Infirmary, Edinburgh; Lecturer on the Principles and Practice of Medicine in the School of Medicine of the Royal Colleges, Edinburgh. Fourth Edition. Revised and Enlarged. With 112 Illustrations. Pp. 428. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$2.25 net.

The appearance of the fourth edition of a book is of itself a sufficient index of its value. The present edition of Dr. Brown's manual is considerably increased in size, in consequence not only of revision of the chapters dealing with the examination of the gastric contents, the blood, and the urine, and with the investigation of the nervous system, but also by the addition of many illustrations. The latter are, for the most part, diagrammatic and serve a useful purpose, though, in subsequent editions, some of them might serviceably be replaced by others of a superior quality. The size of the volume precludes more than a reference to many important methods of investigation; the statements are necessarily terse, though quite reliable. As heretofore, the book will doubtless continue to fill a useful sphere, and it can be thoroughly recommended. In many respects, however, it will be found merely suggestive of what the student should look for elsewhere in more satisfactory detail.

**A Preliminary Arrangement of the Species of the Genus Bacterium.** By FREDERICK D. CHESTER. (From the Ninth Annual Report of the Delaware College Agricultural Experiment Station, 1897, Newark, Delaware, U. S. A.)

The author has made a laudable attempt to classify the species of bacteria according to their cultural characteristics, their fermentative and pathogenic properties, and the chemie relations of their products. By means of abbreviations, a little cumbersome we fear, he has arranged a condensed scheme somewhat after the manner of a botanical key. A total of 354 bacterial species are classified.

**Psychological Phonetics of Laughing.**—The *Reform* (editor for May 28th quotes the *Journal of Hygiene* for April 21st as authority for the following: Persons who laugh ha! ha! are frank, loyal, love uproar and action, and are always of a versatile and mutable character; those that laugh in "A" are of a phlegmatic and melancholic temperament; children, simple-minded folk, and those of servile, devout, timid, and irresolute character, laugh in "E;" a laugh in "O" indicates generosity and ardor; while those who laugh "hoo! hoo!" are to be avoided as cynical.—[*New York Medical Journal*.]

## War Correspondence.

**Dr. Senn Suggests Improvements on the Hospital-Ship "Relief."—The Danger from Yellow Fever.—The Influence of Heat and Humidity on the Healing of Wounds.—Sending the Wounded North.—Firing by Sharpshooters on the Medical Corps and the Wounded.—Sufferings of the Wounded.**

NEARBY SANTIAGO DE CUBA, July 7, 1898.

Our voyage here was without incident broken only by a short stop at Fortress Monroe, where we met the Surgeon-General of the Army and took on board a number of surgeons for whom Gen. Shafter had telegraphed on finding the casualties far in excess of what he had at first supposed. Among those who joined the ship was Dr. Nicholas Senn, of Chicago, who goes to Cuba as chief of the operating staff with the army in the field. He will give naturally special attention to the perfecting of the newly established system of division-hospitals, and he is also instructed to do all in his power to see that the records are carefully and promptly prepared. Dr. Senn's distinguished ability is so well known that it needs no emphasis from me, but surely our army is fortunate in having a man of his commanding knowledge in this position.

Dr. Senn expressed himself as delighted with the general arrangements of this ship, though he has made some suggestions for its improvement in certain details. The cots, for instance, are fitted with wooden fenders to prevent patients from being thrown out; these, the Doctor said, should, without doubt, have been of canvas, as men would not be bruised if thrown against them; nor would harmful pressure be exerted on the limbs when in sleep a leg or arm was thrown over the canvas guard.

As I said in my last letter, the hurricane-deck is to be used for typhoid or other infectious fever that may develop on board. Dr. Senn called attention to the fact that in all properly appointed hospitals the fever-wards were on the lower floors, and not on the upper, as in this ship. He is of the opinion, however, that under no circumstances should cases of infectious disease be allowed to remain on board ship; they should at once be removed to a shore-hospital.

In preparing a ship such as this, it is of course impossible to think of everything. The fact that unless we are anchored in a quiet harbor we shall have great trouble in bringing the sick and wounded on board in our launches is now painfully recognized. To do this properly at anchor off shore steam-lighters are absolutely necessary, and there are but one or two of these with the fleet. Our hope is that by the time we actually arrive, Santiago will have fallen.

We were shocked on arriving at Fortress Monroe to hear that there had been over a thousand killed and wounded in the first fight at Santiago. The painful fact was forced upon us that if the casualties continued in this proportion we should be woefully in need of more hospital-space; which only goes to emphasize the necessity, not of one, but of many such ships as this. Of course, it is another case of hindsight; but one cannot but wonder that the Government did not fit out half a dozen, or even more. The truth is, that neither the powers that be nor the people appreciated for a moment what they had undertaken in this war. Then, too, the extraordinary freedom from casualties that characterized the operations of our fleets in the Atlantic and the Pacific led to the belief that the Spanish could not shoot and would not fight; in

short, that we would have an easy time of it. The casualties at Santiago and the fight put up by the Spaniards fell like "amazing thunder" upon us; we suddenly awoke to the fact that Spanish bullets and "the devouring pestilence which hangs in Cuba's air" mean terrible suffering and many deaths, and that we have not made sufficient provision for the sick and wounded. This conflict, indeed, is not

"The trial of a woman's war."

The utterance of two eager tongues."

Santiago itself is a hotbed of yellow fever, and a high authority, whom I cannot quote by name, said that if we invest the town we are sure to have an outbreak of this dread disease, with a loss of 25%. I asked Dr. Senn if the climatic conditions around Santiago were likely to lead to bad results after amputations and other operations. He replied that, other things being equal, heat and humidity did not militate against rapid healing; that, on the contrary, the Eastern surgeons performed operations with success that they would scarcely think of doing in other climates, and he quoted Appolloni, of Athens, in confirmation. One of the nurses also told me that she had often heard London surgeons comment upon the remarkable results that they obtained in Jamaica. It will doubtless be a source of gratification to those who have loved ones in the field to know that the after-results of operations in this climate are, as a rule, so satisfactory.

We arrived at Siboney this afternoon, to find that about 2,000 men had been killed and wounded. It is impossible to state the exact number killed. Several hundred wounded had already been forwarded North on transport-ships, and Dr. Appel, one of the surgeons in charge of the shore-hospitals, who came aboard shortly after we arrived, told me the wounded would continue to be sent away as rapidly as they could be moved. There are now over 300 in the hospitals here, and a continuous stream is coming in from the front. The poor fellows have suffered frightfully, for they have to be brought about nine miles over the only rough, hastily constructed road that leads from Siboney to the trenches about Santiago, where the entire force is now encamped. There has been no fighting for several days, an armistice of 72 hours having been agreed upon. It seems that the fighting was very fierce. Dr. Torney and Lieut. Crobbs, who spent the afternoon ashore, reported 130 officers killed and wounded. The medical corps suffered severely. The Spaniards *did not* respect the Red Cross, having fired repeatedly upon the ambulances and at *wounded men on stretchers*. This is a severe charge, which I make unreservedly upon the authority of a dozen men, surgeons and officers who were at the front.

They tell me that our men found that the Spanish sharpshooters, having obtained the U. S. uniforms from our dead soldiers, placed themselves in trees, and from this point of vantage, the dastardly rascals picked off not only the ambulance-corps but wounded men.

Colonel Dickinson was shot twice, once while being carried to the tent, and a second time, and this time fatally, just as he was entering the tent. Two surgeons and a hospital-steward were killed in the same way. When Dr. Torney and Lieutenant Crobbs went ashore they wore the Red Cross brassard. The first remark the wounded men and the surgeons made to them was to advise its removal, for, far from being a protection, it but served as a shining mark for the Spanish.

This conduct on the part of the Spanish was in the face of the fact that *they* had Red Cross flags flying all over Santiago.



The condition of the wounded on shore here is beyond measure wretched and excites the lively indignation of every one. I content myself with mentioning this fact—it is not the fault of the medical corps. The quartermaster's and commissary departments are to blame.

We were distressed not to be able to take the sick and wounded on board this afternoon, but owing to some official red tape Dr. Torney was not given an anchorage. This should, of course, have been prepared for the ship, but why this was not done, when the wounded so sorely needed the comforts and attention we can give them, is a mystery officialdom will have to explain.

I am told that the condition of things on the line of battle is perfectly shocking. Dr. Appel, who has been several times over the route, said that thousands of dead and many wounded Spaniards had been left where they fell and that the stench of rapidly decaying bodies was awful. Our hospital-corps were almost overwhelmed with our own wounded, but were doing what they could for the wretched Spanish left to die by that *honorable* (sic) nation's commander in the field.

Dr. Senn left the ship with Dr. Torney and at once took charge, and was in a few minutes operating with all the rapidity and skill of which he is capable. We are all thankful, indeed, that he was here. I hope to join him to-morrow morning at 5 o'clock.

As for the loss in the naval engagement, of which you know more details than we, the entire personnel of the Spanish fleet, amounting roughly to 3,000 men, were killed, with the exception of between 500 and 600, now prisoners on board the *Harvard*, which passed us this afternoon on her way North. It seems that they attempted a mutiny a day or two ago. Seventeen were killed and wounded in the abortive effort.

We lost *one* man killed in this engagement.

Speaking generally, Dr. Appel told me the wounds were not so severe as he had been led to expect from the Mauser bullets.

We begin to take on the wounded to-morrow morning at 4 A.M. I close this to catch the transport about to sail. There is no sickness on board the *Relief*.

FRANK DONALDSON, M.D.

#### From Tampa to Daiquiri.—The Attack on Caney.—Experiences in a First-Aid Dressing-Station.—Comparative Effects of Mauser and Remington Bullets.

IN CAMP ON THE HILLS, near Santiago, Cuba,

July 6, 1898.

I AM glad to be able to write you, after the hot engagement we had recently with the Spanish. Our trip from Port Tampa, Fla., to Daiquiri, Cuba, east of Santiago, where we effected our landing, was uneventful, but very slow. If the health of the men on our transport during the sea-voyage can be taken as an average, there was very little sickness, not even much *mal de mer*. The navy supported our landing by shelling the surrounding hills. The march overland was hot and dirty, everything being transported over the single road that could be used for the purpose. Everything packed along that road, the men carrying their packs, blanket-rolls and pieces and several days' rations. When these last were used we had to wait until the pack-mules and wagons brought up more before advancing. In this way we reached the hills opposite Caney, where we first went into action on the morn-

ing of July 1st, shelling the town with artillery. The Spanish replied with shrapnel, wounding and killing some of our men. We were at a disadvantage for the reason that our powder was black and exposed our position, while the enemy used smokeless powder and were difficult to locate. Some pieces of artillery were planted on the other side of the town and kept up the bombarding, while we pushed on toward Santiago. We proceeded without adventure as far as the San Juan River, about two miles from the city. Here the army prepared for action, as the enemy were only a few hundred yards away after we forded the stream. I established a first-aid dressing-station at this point on the bank of the river. It was but a very few minutes before the firing began on both sides, and the wounded came pouring into the station. Heavy loss was inflicted on both armies, and the battle continued all next day. During the second night, the enemy attempted a surprise and endeavored to force back our lines, which had steadily advanced and taken their outer works, but they were repulsed with heavy loss. The fighting continued until about noon on July 3d, when a truce, or rather an intermission of hostilities, was declared and the surrender of the city was demanded. There has been no fighting since, except on the sea. In the meantime we are strengthening our works with bomb-proofs, etc., and in a very few days we expect Gen. Miles with large reinforcements and 6 batteries of artillery under Gen. Randolph. The women and children have been sent out of Santiago to the hills for safety. The garrison is practically starving, and eggs, I hear, sold for 15 cents each several days ago and are probably priceless by this time. It is difficult to say yet whether there will be more fighting or not. It is to be hoped that we will get the town without more bloodshed.

As regards the wounds inflicted: The Spanish are using two kinds of rifles, the one loaded with the Mauser steel-jacketed bullet similar to our bullet, but of slightly smaller caliber and more pointed, caliber 27.+; and the other with the Remington brass-jacketed bullet, caliber 44. The firing has been mainly at medium range, about 700 or 800 yards. The main thing noticeable was the slight amount of shock following injury by the Mauser bullet and the great amount of shock with the Remington. As my work was altogether that of first-aid, I know nothing of the damage done internally, but in the cases handled by me, which were many, the Mauser balls appeared to make nothing more than a clean punctured wound, that of exit being hardly if any greater than that of entrance. The amount of bleeding was practically *nil*, even in perforating wounds of the lung. The percentage of killed was small as compared with the number of wounded, and in consequence of the small degree of shock the majority of the latter are doing well and some are already back on the firing line. There was very little shattering of bone; personally, I did not see a single case. Some men with brain-perforations lived 48 hours after reaching the division-hospital. The penetrating abdominal wounds were necessarily serious and the shock severe. It will be interesting to follow their history when report can be had of their subsequent behavior after reaching the hospital. A number of the wounded were hit several times before becoming disabled sufficiently to prevent fighting. The results from the larger bullets were more like those from our bullets during the late war: large wounds of exit, great shock, and probably considerable damage along the track of the ball. I saw several of these bullets with torn, jagged jackets, which made severe injuries.

It is said that protest has been made against the use of

the brass jacket bullet with the copper and the foreign attachés here with us, as a violation of the article on projectiles in the Geneva convention, for the reason that the brass jacket is an irritant to the tissues and the soft lead core in it is liable to make it spread and inflict injuries like those made by express bullets. It is believed that this bullet is used by the guerrillas among the Spanish.

GEO. J. NEWGARDEN, M.D.,  
Captain and Assist. Surgeon, U. S. Army.

## Correspondence.

### THE IMPORTANCE OF METHOD IN TEACHING MATERIA MEDICA.

*To the Editor of THE PHILADELPHIA MEDICAL JOURNAL.*

THERE are few men now graduates who do not refer to their studies of materia medica as a bore of the largest caliber, and when one considers the method, or rather the lack of method, by which the student was supposed to be taught in years past, one does not wonder at the universal comment. I remember well the large volume, the one or two lectures a week, principally a repetition of the matter in the book, and then the "demnition grind" for examination that meant an attempt to memorize several thousand words descriptive of several hundred drugs and preparations, any one of which might be asked on examination. There was no attempt to make the study interesting; no helpful hints as to classification or other aids to memory, and no private quiz, the student's quiz the only means of knowing how much or how little one really knew.

In the first place, to thoroughly familiarize the student with the United States Pharmacopeia is one of the most important duties of a medical student's Alma Mater. If he is to give drugs, he should know them; if he is prone to let nature do her part and only assist, so much the more must the practitioner know his drugs that he may the better judge what not to give. The feeling rampant in nearly every student's brain regarding materia medica is usually formulated something like this: "What is the use of studying all these drugs; my preceptor has been practising for fifty years and only uses about thirty drugs." The reason for this is obvious to every practitioner, but few students realize the corollary to the fact that the older man had many more drugs in his list in his earlier days, and kept them there until experience taught him what he could discard safely; but neither he nor any other teacher has a right to lay down a certain list of drugs and say these and no others are of service. Every man should know his materia medica thoroughly, so that he can choose his drugs with a knowledge of what they may do when introduced into the human body; and how any one can urge the uselessness of many drugs, knowing how many conditions modify the action of drugs, is difficult to understand. In view of the addition of so many derivatives and artificial active principles, there is no doubt our next pharmacopeia could very well lose one-third of its present formidable array without being deprived of much valuable material; and it is easy to look far enough ahead to a time when the Pharmacopeia will contain nothing but active principles and their preparations; but teachers have a problem before them now that has puzzled past generations, *i.e.*, the adoption of a method of teaching a remarkably dry subject, so that the student may learn the largest

possible amount with the smallest possible expenditure of time and brain-effort.

Given a four years' course, with forty weeks in each course, a class that could not pass a most stringent examination in this branch should not be allowed to study medicine any longer, and I would not cut out one single official drug or its preparations, providing always it was taught properly. I firmly believe that poor teaching is responsible for the lack of interest in the study of materia medica on the part of students. No man should undertake to teach such a branch whose love for it is not so strong as to impart some degree of enthusiasm to his class. A man, however well equipped, who goes to a class-room, recites several pages parrot-fashion about a certain number of drugs and their preparations, and leaves the room thanking Providence that another hour has passed ought to give up his branch. Enthusiasm, however, does not cover the entire ground; there must be a method, and I believe that Dr. Geo. H. Rohé, Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons of Baltimore, has formulated a practical method of teaching this entire subject.

Having started a four-years' course this college early recognized the necessity of establishing up-to-date methods of teaching all branches of medicine, but in no one branch was any greater improvement made than in materia medica and therapeutics. First, the two branches were made four, *viz.*, materia medica, pharmacy, pharmacology and therapeutics, the course, however, being completed in three years. In the first year the men get a series of lectures that gives them a thorough set of notes, covering every official drug and its preparations. This occupies about half the course, the remainder being occupied three hours per week in a quiz that drills, preparations and doses, natural orders, botanical names, active principles, habitat, etc., until even the drones begin to learn something; and it is not only amusing but instructive to see the growing interest in the work as the students begin to realize that their efforts are bearing fruit. The foundation-principle of this method is, first, to present the subject in a manner that will give the student a chance to learn methodically a quality in which almost every textbook in the market is wanting, whether quiz-compend or the more pretentious volume on the subject. Not one book treats materia medica from the student's standpoint; the matter therein is suitable for the graduate, but the first-year man comes to these studies many times fresh from the plow, or at least without preliminary knowledge that will enable him to choose from these portentous volumes, all that he must have, not only to pass his college-examinations but those put up for him by erudite State Boards. These books are all right as authorities, even though the differences in dosage are enough to make even the greenest student wonder which is correct, they are all right as encyclopedias from which lots of good material can be drawn, but the poor student has neither time nor experience to enable him to digest this and assimilate it. To further this object the Baltimore college has had prepared an interleaved syllabus to be used as a note-book containing such essentials that, combined with what the student gets from his instructors' talks and the subsequent quizzes, he will have a vade-mecum, systematically arranged, easily learned, and a volume that will be of value to him at any time later when he wants to rub up.

Now, having a thorough acquaintance with the Pharmacopeia, the student, in his second year, has a course in pharmacy, in which his knowledge of preparations and doses is further drilled into him and supplemented by practical train-



ing in the ordinary manipulations of the drug-store, with drills in prescription-writing. During this year he is taught the toxic and the physiologic actions of drugs, and in his third year he comes to the study of their therapeutic application with some ability to know what his teacher is talking about. This didactic course in pharmacology also covers about half a year. Then comes another half-year of quizzing.

It is not claimed that improvement cannot be made; only that steps have been taken away from the beaten track of the past, and some attempt made to get down to the level of the student, instead of firing over his head, and trusting to spent shots to make an impression. He is treated as a student, not as an intellectual prodigy, whose mental processes are capable of assimilating any amount of instruction, no matter how applied.

Attention has been called to the fact that few, if any, textbooks on the subject of materia medica are of value to the student, from a teaching standpoint, and the thought comes: Why is not our Pharmacopeia, the authority by courtesy of our text-books, made the standard text-book of the United States? Why should it be confined to a mere working standard for the pharmacist? Would it not be easy to arrange the official drugs under their natural orders, give the botanical names, common names, habitat, active principle or principles, preparations, and doses, including in the dose, the amount in minims or grains, etc., by the metric system as well as the old style, and the *maximum daily dose*? Both teachers and students would then have a standard, and much time could be saved from mere didactic work and given to class-recitations, which, after all, form the only true method of teaching a subject that a man, to learn, must exercise his memory, without regard to judgment or reason.

The fact that every graduate must pass a State examination in materia medica brings this matter home with still greater force, for the questions asked in these examinations are not, as a rule, practical every-day questions, aiming to find out whether the applicant being examined knows enough to practise medicine, but apparently to find out what he does not know, and any one acquainted with the range of the present Pharmacopeia can readily understand how easy it is to ask questions whose answer would puzzle even a teacher. A question given out in the last Maryland State Board Examination was, "What is Elaterium, its preparations and doses?" This may have been a misprint or a joke. In any event, however, it was in bad taste, as the drug is not official and has no official preparations; and if a State Board condescends to ask such a question as a "catch" question, reform is not only needed in teaching materia medica, but in the personnel of such Boards.

Respectfully,

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Ellicott City, Md.

**Strychnin Nitrate in Locomotor Ataxia.**—E. Altman (*Post-Graduate*, July, 1898) reports the case of a man of 49, with a syphilitic history, who presented typical symptoms of tabes dorsalis. The disease had advanced to such a stage that the patient could not walk or control his bowels, and the pains were severe. After trying other treatment without results, strychnin nitrate was administered in ascending doses beginning with gr.  $\frac{1}{48}$  and increasing to gr.  $\frac{1}{8}$ ; then beginning at gr.  $\frac{1}{8}$  and running up the dose again. Improvement continued until the patient's bowels were regular and he could walk with a cane and the pains were relieved. It is not claimed that strychnin is capable of effecting a cure, but that it relieves a number of symptoms and tends to arrest the progress of the disease.

## American News and Notes.

**Dr. H. C. Dalton** has resigned the professorship of abdominal surgery in the Marion Sims Medical College, of St. Louis.

**Typhoid Fever at Fort McPherson** has already claimed at least one victim; the other patients are said to be progressing favorably.

**The Hospital-corps at Camp Alger** still needs over 300 men to complete its formation. Druggists and medical men are wanted most urgently.

**Yellow fever at McHenry**, Mississippi, has entirely ceased. The last patient has been discharged, but strict sanitary precautions are still observed.

**President James Mason Crofts**, of the Massachusetts Institute of Technology, has received the honorary degree of doctor of laws, from Harvard University.

**Daily Medical Inspection of the Schools** of the District of Columbia is being agitated in view of the continued prevalence of diphtheria and scarlet fever.

**Antistreptococcic serum** is now offered for sale by the New York Board of Health. It is put up in vials containing 10 or 20 cu. cm. each, and retails for \$1 and \$2 respectively.

**Dr. George J. Preston**, of Baltimore, has been elected secretary of the State Lunacy Commission of Maryland, to fill the vacancy caused by the death of the late Dr. William T. Lee.

**Dr. R. A. Harper**, of Lake Forest University, has been appointed to the chair of botany in the University of Wisconsin, made vacant by the resignation of Professor Charles R. Barnes.

**Dr. Horace Tracy Hanks** has resigned the position of professor of diseases of women in the New York Post-Graduate Medical School and Hospital, and has been appointed emeritus professor.

**Mr. James Armstrong**, of New York, has offered to the Red Cross Society, for use as a hospital, his country-house, containing twenty rooms, located at Center Hill, Fla., about 70 miles from Tampa.

**Mail-matter to be Fumigated.**—In view of the prevalence of yellow fever at Santiago, the postal authorities have determined to thoroughly fumigate all mail-matter leaving that province.

**Medical Martyrs to Duty.**—Among the non-combatants recently killed before Santiago were Drs. Danforth and Troval, who were murdered by Spanish sharpshooters firing upon the ambulances.

**Lieutenant-Colonel Nicholas Senn** has been detached from his duties as surgeon to the Fifth Army Corps at Chickamauga, and appointed Chief of the Operating Staff of the Sixth Corps now before Santiago.

**The Formation of Reserve-Hospitals.**—Col. Girard is to organize reserve hospitals, which will be fitted out exactly as are brigade-hospitals. When the men are marching the reserve hospitals accompany the wagon-train. If a hospital be crowded after an engagement, it does not continue to travel, but remains with its sick and wounded at the point where it happens to be, and the reserve hospital is called on to take the place of the one left behind.

**The "Missouri" as a Hospital-ship.**—It is reported that the Government has purchased the steamship "Missouri" of the Atlantic Transport Line, and that the vessel will immediately be converted into a hospital-ship.

**Joseph M. Mathews, M.D., LL.D.**—The degree of Doctor of Laws was conferred upon Dr. Joseph M. Mathews, president of the American Medical Association, by Waynesburg (Pa.) College at its commencement, June 30, 1898.

**The Consolidation of Medical Colleges.**—This commendable practice having been inaugurated, we are pleased to note its recurring frequency. The Niagara University and the University of Buffalo are the institutions most recently to join forces.

**The Lawrence and Beaver County Medical Societies** held a joint meeting on July 14th at Ellwood City. Dr. William M. Beach, of Allegheny, read a paper on "Constipation in Infants." A discussion was held on "The Treatment of Appendicitis."

**The Protestant Home for Aged Women at Kansas City, Mo.**—The *Medical Herald* announces that a wealthy Kansas City woman has given to the Board of Managers of the Protestant Home for Aged Women at Kansas City a large plot of ground upon which a new home will be erected.

**Death from Trichinosis.**—Six members of a family, living near Binghamton, N. Y., died recently from trichinosis. The disease, as so frequently happens, was diagnosed as typhoid fever, and not till an autopsy was made upon the last victim was the exact condition known.—[*Medical News*.]

**Surgeon Pursens**, until recently at the recruiting station at New York, has been assigned by Surgeon-General Van Reypen to take charge of the wounded Spanish prisoners at Seany Island, Portsmouth Harbor. Six surgeons will be associated with Surgeon Pursens in this duty, two of whom are Spanish.

**Transportation of the Sick and Wounded Soldiers and Sailors.**—The hospital-ships *Solace*, *Relief*, and *Olivette*, and the hospital-train, have recently been doing excellent service in the transportation of the sick and wounded American and Spanish soldiers and sailors from the torrid South to more salubrious Northern points.

**Typhoid Fever at Camp Alger** is serious enough to engage the attention of the authorities. Up to the time of going to press there had been reported over 50 cases. The exact number of deaths was not stated, though 5 patients are said to have succumbed during two days. Many of the troops have been removed from Camp Alger to a location near Dunn Loring.

**The Auxiliary Cruiser "Resolute"** sailed from New York, July 19th, with surgeons and nurses for General Shafter's army, and with provisions and ammunition for Sampson's fleet. There were on board, in all, 150 surgeons and nurses, a number of them being immunes and having had experience in the treatment of yellow fever. The supplies included 4,000 suits of underclothing, 10,000 pairs of socks, 2,000 linen suits, 2,000 pairs of shoes, 2,000 blankets, 1,500 hospital-cots, forty mess-tables and 500,000 three-grain quinin-pills. In addition, the vessel carried Rev. Drs. Henry C. McCook and Joseph Krauskopf and Colonel Charles H. Gibson, members of the National Relief Commission.

**A Phonographic Record of the Cardiac Sounds.**—We learn from the *Riforma medica* for June 11th that Professor G. Rummo, whose efforts had been directed toward the adaptation of the telephone to making permanent records of cardiac and other vital sounds, and who wrote thereon to Thomas Edison, has received a reply from him stating that he also is working along that line, but that it will be some time before the apparatus is finished.—[*New York Medical Journal*.]

**The United States Sanitary Commission**, which has been organized to care for the sick and wounded in the present war to furnish nurses and to provide all possible comforts to the soldiers, has elected the following officers:—President, Benjamin Harrison, Indiana; first vice-president, Robert T. Lincoln, Illinois; second vice-president, Lew Wallace, Indiana; third vice-president, Henry Watterson, Kentucky; treasurer, Daniel E. Sickles, New York; secretary, M. D. Ellis, Indiana.

**In Memory of Dr. Joseph O'Dwyer.**—At the meeting of the Section on Diseases of Children of the American Medical Association, held recently at Denver, it was moved and carried unanimously that a memorial committee be appointed to commemorate the name of the late Dr. Joseph O'Dwyer, with suitable powers, etc., to collect moneys, and to act with other bodies for the same purpose. The committee is composed of the following: Dr. Louis Fischer, New York, chairman; Dr. J. P. Crozer Griffith, Philadelphia; Dr. F. E. Waxham, Denver.

**Pure-food Law in Minnesota.**—After a trial of 6 months the operation of the pure-food law of Minnesota is said to be meeting with success. The most effective requirement of the law is that which makes it obligatory that adulterated foods be so labeled. This has resulted in the withdrawal entirely by some manufacturers of their products. An unforeseen effect of the law, however, has been an increased demand for impure products properly labeled. Thus, there has been an increased sale of alum baking-powder, at a reduced rate, and the people of the State are said to "have saved \$20,000 in baking-powder this year, by not paying cream-of-tartar prices for alum."

**Obituary.**—DR. CHARLES LORENZO KNOWLTON, Northampton, Mass., July 5th, aged 74 years.—DR. F. G. SEAMAN Seneca Falls, N. Y., July 12th.—DR. WILLIAM H. HODGMAN, Saratoga, N. Y., July 15th, aged 47 years.—DR. A. G. REGER, Fairmount, W. Va., July 3d, aged 54 years.—DR. EDWARD J. BURD, Snowshoe, Pa., July 14th.—DR. WILLIAM H. PARKS, Reading, Mass., June 21st, aged 75 years.—DR. JOHN HEWITT WILSON, New York, July 17th, aged 80 years.—DR. DAVID B. NELSON, Laconia, N. H., July 5th, aged 75 years.—DR. WILLIAM H. DECAMP, Grand Rapids, Mich., July 4th, aged 73 years.—DR. A. E. FARNHAM, Pittsfield, Me., July 2d, aged 42 years.—DR. N. C. COWGILL, Logansport, Ind., June 26th.—DR. SAMUEL McNAIR (of Kalamazoo, Mich.), at Elburn, Ill., June 30th, aged 75 years.—DR. A. L. MICHAELS, professor of electrotherapeutics in the College of Physicians and Surgeons, Kansas City, Mo., June 29th, aged 44 years.—DR. H. C. HIMOUE, Albuquerque, N. M., July 3d.—DR. T. ARCHIBALD TAYLOR, Washington, D.C., June 30th.—DR. JACOB BOONE, Glenolden, Pa., July 18th, aged 61 years.—DR. W. C. GLINES, Norwalk, Conn., June 27th, aged 73 years.—DR. EDWARD D. MCDANIEL (of Coy, Ala.), at Denver, Col., June 27th, aged 76 years.—DR. ALAN P. SMITH, Baltimore, Md., July 18th, aged 58 years.



**Hospital-abuse in Canada** seems as prevalent as in the United States. In an attempt to remedy some of these abuses the following resolution was passed at a recent meeting of the Toronto Medical Society:

*"Resolved, That in the opinion of this Society no one should receive free treatment as an in-door patient in our public hospitals except those receiving their hospital maintenance from the municipality to which they belong."*

Drs. Wilson, McKenzie, and MacMahon were appointed a committee to confer with representatives of other societies and endeavor to formulate some plan that would further the opinion set forth in the resolution.

**The Adulteration of Wheat Flour** seems to be a frequent and growing evil. When the adulterant employed is corn, this, though an imposition upon the public, is not harmful and does not especially affect the food-value of the product. The Maine Board of Agriculture has discovered that a business-concern is extensively advertising a substance called mineraline, which is asserted to make the flour "whiter and nicer," and not to injure it in any way, and to be not at all injurious to health. It is supplied in various grades—from \$8 to \$20 per ton, and is asserted to net the dealer from \$400 to \$1,600 a carload. Upon examination mineraline is found to be ground soapstone, a substance absolutely valueless as a food, and whose use may be quite prejudicial to health.

**Yellow Fever at Santiago.**—The past week has been replete with very disquieting news concerning the prevalence of yellow fever in and about Santiago de Cuba. The first reports of the extent of the infection among the American troops were greatly exaggerated, but the official reports seem to indicate that there were at least 300 cases. These included at least one officer, General Duffield. It is reported also that one of the Red Cross physicians, Dr. Lesser, and his wife were sick with the disease. Fortunately, most of the cases are said to be mild, and there have thus far been but few deaths. It has been impossible to ascertain the exact number. All sanitary precautions possible under the circumstances are being observed, and it is confidently hoped that the epidemic may be held in check.

**The American Medical Association and the Requirements for the Degree in Medicine.**—The following is the text of a circular issued by the permanent Secretary of the American Medical Association:—

At the recent meeting of the Association the following was unanimously adopted:

WHEREAS, the American Medical Association did, at Detroit in 1892, unanimously resolve to demand of all the medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of doctor of medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

WHEREAS, this demand was sent officially by the Permanent Secretary to the dean of every medical college in the United States and to every medical journal in the United States, now therefore the American Medical Association gives notice that hereafter no professor or other teacher in, nor any graduate of any medical college in the United States, which shall after January 1, 1899, confer the degree of doctor of medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, be allowed to register as either delegate or permanent member of this Association.

*Resolved,* that the Permanent Secretary shall within thirty days after this meeting send a certified copy of these resolutions to the dean of each medical college in the United States and to each medical journal in the United States.

**The Diseases of Cuba.**—We are informed that Dr. de la Torre, formerly clinical assistant in the Hospital of Havana, has been giving instruction upon tropical diseases to the medical officers of the American forces at Tampa. Yellow fever is but one of the dread diseases prevalent in Cuba. Tetanus is extremely common, and frequently very fatal, and the infection difficult to avoid. Malignant pustule and dysentery are also very common and very fatal, the latter in fact being responsible for more cases of sickness and death than yellow fever. In addition, there is the plague of insects. Among the most dreaded of these is the *pulex penetrans* or *nigua*, the sting of which is said to frequently lead to tetanus. The mosquito is also extremely annoying, and in accord with the results of modern investigation, is regarded by Dr. de la Torre as the chief medium for the conveyance of malarial infection.

**Hospital-service in Alaska.**—Through the efforts of Dr. Frank H. Booth, of Chicago, Alaska is to have a hospital-service. The first hospital in the territory has been erected in Skaguay, and this is to be one of a chain of such institutions from Seattle to Circle City. Contracts have been let for buildings at Juneau and Victoria. Other places selected are Lake Bennett, White Horse Rapids, Stewart River, Dawson City, and Circle City, and the service will be further extended as gold-discoveries lead to the creation of new settlements. About 10% of the patients thus far treated are charity cases. It is intended to accept any sick person, regardless of his ability to pay, but the enterprise is, nevertheless, a commercial one. It depends for its support on the annual membership fee of \$12, which entitles the member to free treatment, and for the growth in membership it relies upon the natural fear entertained by people of being sick and unattended in a new country.

#### **Sanitary Condition of the Spanish Army in Cuba.**

—Dr. Angel de Larra y Cerego, Chief Medical Officer of the Spanish Army in Cuba, has recently published his official report of the sanitary condition of the Spanish troops in Cuba during 1896. The four principal affections that decimated the Spanish soldiers are yellow fever, malaria, dysentery, and typhoid fever. Disease was more common in the provinces of Havana and Santiago de Cuba than elsewhere. In the former there were 95,691 cases of disease and 3,898 deaths; in the latter, 47,177 cases and 2,031 deaths. Yellow fever attacked 24,590 men, of whom 7,339 succumbed; malaria, 33,402, with 306 deaths. There were 3,193 cases of dysentery, with 351 deaths; and 1,528 cases of typhoid fever, with 366 deaths. Of the 200,000 troops taken to Cuba, 100,000 were obliged to enter hospitals within the first two months after their arrival. The Spanish Army suffered a loss of 10,610 men through disease. On the other hand, but 363 succumbed to wounds acquired in battle.

#### **The College of Physicians and Surgeons of the Province of Quebec**

held its triennial meeting in the Laval University, Montreal, recently, between 400 and 500 doctors being in attendance. The election for officers resulted in a complete victory for the Reform party, every one of whose candidates was elected. The new board is pledged to abolish (1) the proxy system of voting for governors; (2) to establish electoral districts instead; (3) to decentralize the agency for dealing with quackery and unlicensed practice; (4) to regulate the system of the control of University examinations by assessors. After the election the board went into private session and elected the following officials:—President, Dr. Lachapelle; first vice-president, Dr. Craik, dean of McGill

to the Surgeon General of the Army for instructions.



Major George R. FOWLER, division surgeon, will proceed to this city and report to the Surgeon-General of the Army for instructions. Acting Asst. Surgeon ROBERT E. BULL will proceed to Fort Monroe and report to Major CYRIL DE WITT, surgeon, in charge of the U. S. General Hospital at that post, for duty.

Acting Asst. Surgeon JOHN S. DONALDSON will proceed to Tampa, Fla., for duty.

Acting Asst. Surgeons WILLIAM B. SAVAGE, EUGENE T. HANCOCK, and WILLIAM E. WEST, will proceed to Tampa, Fla., for duty.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon C. F. PERKHAM, ordered to the "Ajax" immediately.

Asst. Surgeon R. O. MARCOUR, ordered to the Key West Naval Station for duty in connection with the marine guard.

Asst. Surgeon A. F. GRANT, ordered to the "Yale" immediately.

Asst. Surgeon S. H. McKIM, detached from the Norfolk Navy Yard and ordered to the "Nahant."

Asst. Surgeon J. S. TAYLOR, ordered to the Naval Hospital, Boston, Mass.

Medical Inspector J. C. SPEAR, retired, ordered to additional duty at Baltimore, Md.

Asst. Surgeon J. G. FIELD, retired, detached from recruiting duty at New Orleans, La., and ordered to recruiting duty at Savannah, Ga.

Surgeon W. R. DR. BOSE, ordered to the Naval Hospital, New York.

Passed Asst. Surgeon N. H. PIERCE, ordered to recruiting duty with Lieutenant Commander Hawley.

Asst. Surgeon L. B. BALDWIN, ordered to recruiting duty with Lieutenant Commander Hawley.

Passed Asst. Surgeon G. H. BARBER, detached from the Naval Hospital, Philadelphia, Pa., and ordered to the "Glacier" immediately.

Medical Inspector R. C. PERSONS, medical inspector from June 18.

Surgeon F. A. HESLER, surgeon from May 7.

Surgeon L. W. ATLESS, surgeon, with the relative rank of lieutenant, from June 18.

Asst. Surgeons A. G. GRUNWELL, D. G. BEEBE, and C. D. LANGHORNE, appointed July 7.

Surgeon General W. K. VAN REYPER, ordered to Norfolk, Va., and return.

Passed Asst. Surgeon L. L. YOUNG, detached from the "Brutus" and ordered to the "Baltimore" immediately.

Passed Asst. Surgeon L. MORRIS, detached from the Portsmouth Navy Yard and ordered to the Naval Hospital, Portsmouth, N. H.

Asst. Surgeon R. K. SMITH, detached from the "Baltimore" and ordered home to await orders.

Asst. Surgeon J. C. THOMPSON, detached from the "Mohican" and ordered to the Asiatic Station immediately for duty on the "Brutus."

Asst. Surgeon R. T. ORVIS, detached from the "Independence" and ordered to the "Philadelphia" immediately for passage to the "Mohican."

Asst. Surgeon C. H. DELANEY, ordered to the "Cassius" immediately.

Asst. Surgeon J. STEPP, ordered to the "Justin" immediately.

Asst. Surgeon T. G. ODELL, detached from the "Vermont" and ordered to the "Cesar" immediately.

Asst. Surgeon T. M. LIPPITT, ordered to the Naval Hospital, Boston, Mass., immediately.

Asst. Surgeon J. S. TAYLOR, detached from the Naval Hospital, Chelsea, Mass., and ordered to the "Leonidas" immediately.

Asst. Surgeon C. R. BURR, request for examination for passed assistant surgeon not granted.

**M. Louis Salvator**, a resident of Marseilles, France, has bequeathed the whole of his fortune, amounting to \$1,400,000, to the Marseilles hospitals.

**A Medical Centenarian.**—*Progrès Médical* notes that Dr. Mavroyenis, a resident of Paris, has celebrated the one hundredth anniversary of his birth.

**Sir Samuel Wilks**, Bart., President of the Royal College of Physicians, London, has been elected a member of the governing body at Guy's Hospital.

**St. Thomas' Hospital**, London, has been enriched by a bequest of \$175,000 from the late Sir Robert Rawlinson, chief engineer inspector of the Local Government Board.

**Professor Goldscheider**, of Berlin, and **Professor Benedikt**, of Vienna, have been elected foreign members of the Society of Psychiatry and Nervous Diseases of Moscow.

**A Hydropathic Institute** will shortly be added to the **University of Berlin**. It will be similar to those already established at the Universities of Vienna, Heidelberg, and Würzburg.

**Professor T. H. Puschmann**, author of works on the history of medicine, on medical education, etc., has been elected Dean of the University of Vienna for the academic year 1898-99.

**The Royal College of Surgeons of England.**—Mr. Henry Morris and Mr. John Langton were recently re-elected, and Mr. Richardson Cross was elected to the Council of the Royal College of Surgeons of England.

**Professor E. von Leyden**, of Berlin, has just been elected corresponding member of the Academy of Medicine of Paris. The other candidate voted for at the election was Professor Zambaca Pacha, of Constantinople.

**Sir William Tennant Gairdner**, K. C. B., attended the Court at Windsor on July 4th, and was formally admitted by the Queen to the honor of Knighthood, and invested by her with the Riband and Badge of the Order of the Bath.

**The Jenner Memorial.**—At a recent meeting of the executive committee for the institution of a Jenner Memorial, the president, Lord Lister, announced that the fund subscribed amounts to \$50,000, Lord Iveagh having donated the magnificent sum of \$25,000.

**M. Peytral**, who recently endeavored vainly to form a French Cabinet, and who has now accepted the portfolio of Minister of Finance, made his fortune in the manufacture of nostrums, and is said to be the first patent-medicine man who ever attained such high office.

**Professor von Bergmann**, president of the new **Berlin Ambulance Society**, with a view to insure uniformity of method in the dressing and first treatment of wounds, burns, fractures, etc., will give a free course of four lectures during the month of July to the 800 doctors who are members of the society.

**The Annual Congress of Prussian Medical Officers** will be held at Berlin, September 26th and 27th. The following is the program announced: Disinfection in Midwifery; Puerperal Fever as a result of Infection brought by the Midwife; the Serum-test in Typhoid Fever, and its Importance from the point of view of the Sanitary Police; Ankylostomiasis; Transmission of Pemphigus Neonatorum; Intoxication by Colchicin; the Field of Work for School-Doctors; the Supervision of the Insane in their own Homes.

## Foreign News and Notes.

**Professor Wölfler** has been elected dean of the medical faculty of the University of Prague.

**An ambulance-corps** is about to be established in connection with the Fire Brigade of Dublin, Ireland.

**Dr. Julius Weisner** has been elected rector of the Vienna University for the ensuing academic year.

**Dr. Tschirwinsky** has been appointed ordinary professor of pharmacology in the University of Dorpat.

**Dr. Kolossow** has been appointed ordinary professor of histology and embryology in the University of Warsaw.

**Professor Kratter**, of Gratz, Austria, has been elected corresponding member of the Medico-Legal Society of New York.

**A New Hospital in London.**—The south of London, which is very badly provided with hospitals, is to have a new Children's Hospital. The Belgrade Hospital, already a flourishing institution in Pimlico, S. W., is to be moved to Kennington, a populous district of London on the Surrey or south side of the water.

**The Etiology of Pertussis.**—Recent investigations of Behla, which seem to have been confirmed by Deichler and Kurloff, indicate that the exciting cause of pertussis is not of bacterial character, but an ameboid form which increases by fission and sporulation. The organisms are said to be distributed in either the blood or the epithelium, but never in the intercellular spaces.

**A Biologic Institute in Paris** is about to be erected in the Rue Dutot, opposite the Pasteur Institute. Some years ago a wealthy lady bequeathed the ground, and more recently the Baroness Hirsch has given \$400,000 for the erection and partial endowment of the institute, which it is anticipated will be completed in 1900. A hospital will be built in connection with the institute, wherein suitable patients will be treated by Dr. ROEX.

**German Congress of Scientists and Medical Men.**—Announcement is made that at the congress to be held in Düsseldorf, from September 19th to 24th, there will be four exhibitions. One will illustrate the history of medicine and science; the second the services rendered by photography in scientific investigations; the third, new instruments and apparatus pertaining to medicine and science; and the fourth, apparatus for teaching physics and chemistry.

**Bubonic Plague.**—PROFESSOR KOCH addressed the Deutsche Gesellschaft für öffentliche Gesundheitspflege, in the large hall of the Berlin Zoological Garden, on July 7th, on the spread of the bubonic plague. The address was followed by a banquet in which many of the prominent medical men of Berlin and some distinguished professors from German medical centers participated. We hope to present a detailed abstract of this address in our next number.

**Obituary.**—HENRY ALFORD, F.R.C.S., Taunton, England, July 17th, aged 92 years.—Surgeon-Captain ARCHIBALD WILLIAM FORBES RUSSELL, I.M.S., in India, of sunstroke, aged 29 years.—Surgeon-Major-General JOHN CHARLES MORICE, I.M.S., London, aged 63 years.—DR. AUGUSTE VOISIN, physician to the Salpêtrière, aged 54 years. He was well known for his work on mental diseases and hypnotism, and was the author of a book on idiocy.—DR. LEVIEUZ, formerly physician to the Bordeaux Hospitals.—THOMAS LANT SMITH, M.R.C.S., Eng., L.R.C.P. Edin., Alcester, Warwickshire, England, June 29th, aged 91 years.

**Medical Supervision of Pauper Children in Berlin.**—The magistrates of Berlin have decided to exercise careful medical supervision of pauper orphan children under 2 years of age out at nurse in private families. During the hot months each "municipal orphan baby" is to be visited by the *Armenarzt* of its district twice a week, and for the rest of the year at least twice a month—oftener when necessary. Specially appointed female inspectors are to supervise the execution of the doctors' directions, and to report to the doctors periodically. Each female inspector is to have charge of 10 or 12 babies. If this plan be conscientiously and sensibly carried out, it is hoped that it will go far to abate the present enormous mortality—especially from infantile diarrhea—among pauper babies.

**Liquefied Air as a Beverage.**—The Paris correspondent of the *British Medical Journal* states that at a public dinner in Paris the other day, at which M. d'Arsonval was present, the guests were astonished by having liquefied air poured into their glasses of champagne. A year ago the Emperor of Germany was offered a glass of liquefied air. He raised the glass in honor of science, but refrained from putting it to his lips; the liquefied air in it would have burned them like hot coals. The liquefied air poured into the champagne became dispersed in white clouds, and mingled with the surrounding atmosphere. A bottle of air, if liquefied, can bear a transit of 60 hours without volatilization taking place.

**Physiologic Observations at a Decapitation.**—At a recent meeting of the Société de Biologie de Paris, Capitan reported the results of some physiologic observations that he had made at the execution of a criminal named Carrara. As he arrived at the guillotine, Carrara was deathly pale, and apparently almost lifeless, and made not the slightest movement of resistance. It appeared as though his body shrank back as he was laid on the plank, but he made no motion afterward. When the knife fell, the section of the neck remained perfectly bloodless. As the body was being tilted into the basket it hit against the side of the plank, and then two jets of red blood spurted into the air to a distance of about a yard. The opinion was expressed that cardiac syncope probably occurred before the decapitation, whence the absence of hemorrhage immediately afterward. Hemorrhage ensued, however, when the powerful nervous excitation provoked by the knife acted upon the heart.

**The Unqualified Assistant.**—The various questions affecting the general practitioner by the decision of the General Medical Council not to allow unqualified persons to assist in medical practice are still being keenly debated in the English medical press. It seems undoubted that by the sudden abolition of the unqualified assistant many medical men have been put to grave inconvenience. They cannot obtain a qualified medical man to help them at anything like the pecuniary terms that they used to pay the old-fashioned assistant, and they assert that they cannot afford to pay more. The unqualified assistants who have been summarily dismissed from employment have had nothing done for them by the General Medical Council, and a certain proportion of them, emboldened by the laxity and obscurity of the Medical Acts, have gone into practice quite frankly as quacks. The younger medical men, for their part, refuse to accept the salaries that are offered by their seniors and are not seeking employment to any extent as assistants. They consider that the General Medical Council was fighting their battle in abolishing unqualified assistants who were placed under the old system in unfair competition with men who had paid fees and passed examinations; but they do not see that they have gained much if no better pecuniary reward is offered to them, being *bona fide* medical men, than was offered to their unqualified predecessors. The blunder that all these classes are making is to consider that the General Medical Council is primarily concerned with the status of medical men. It is not. Its duty is toward the public and it was clearly for the public good to suppress unqualified practice. For the rest, the public will always pay as many medical men as it requires, and the scale of pay will be regulated by the supply. At present too many medical men in England compete for public favor and consequently the pay is very bad; and no amount of legislation by the General Medical Council can alter this elementary situation in economics.



**A Noble Tribute.**—The *Daily Chronicle* has from time to time published a series of extremely clever poems in the Cockney dialect. Last week it published one dealing with the subject of lead-poisoning, and in pursuance of a crusade against that cruel and unnecessary form of trade-intoxication. The poem pays a noble tribute to the medical profession, as will be seen from the following verse culled therefrom:

"WHORT FUR"

"Theer's the doctors' tikes their chawnces when the fever's 'spreadin' far;

Risk o' life it ain't no bar,

And theer ain't no lanners dyin' when they cops it and lies dyin'.

Nor no medal nor no star,

When chaps awsts yer whort's the sense?

Whort's the yoose?

Fur why?"

Sye the work they did were noble, though it meant they 'ad ter die,  
Sort they are

Knows the work they does is wuth it, though it means they 'as ter die."

[*Medical Press and Circular.*]

**Heart-disease and Pregnancy.**—At a recent meeting of the Charité Aertzte there was a discussion of this interesting question, concerning which Professor Gusserow and Professor v. Leyden some years ago expressed widely divergent views. Prof. v. Leyden's statistics of patients with valvular lesions who became pregnant, showing a mortality of 55%. Prof. Gusserow's statistics were much more favorable, and for the last 4 years he has given special attention to the question. During this time he has had under his care 70 pregnant women with valvular lesions, of whom but 4, about 6%, died. There were 44 deliveries at term. Prof. Gusserow thinks that while pregnancy is to be avoided most carefully by those with cardiac lesions only the most serious disturbance of compensation should be thought sufficient to justify the induction of abortion. The most serious strain on the heart comes during delivery, and this is liable to be as severe or severer when artificially induced than would be the strain of months of pregnancy and natural labor. Gusserow considers that when nature really requires abortion she will, as a rule, induce it unaided, and such a termination of the pregnancy runs a much more favorable course than the most skilfully induced abortion. The means at hand for the induction of abortion are sadly ineffective, at times often untrustworthy, and the after-course of the case is almost never the simple natural one it is sometimes thought to be.

**The Verdict in the Sensational English Abortion-case** was, as most of our readers may have already learned from the lay press, recorded, after but little delay, against the prisoner Collins on the charge of manslaughter, although he was acquitted of the graver charge of murder. It was a foregone conclusion that he should escape conviction on the capital offence, for the Attorney-general, Sir Richard Webster, prosecuting for the Crown, went out of his way to define the law for the jury, explaining to them that it would be open for them to return a verdict of manslaughter *if the act which led to the death was not necessarily a dangerous one*. This was a novel definition of the English law, and from the moment that Sir Richard Webster showed the jury a method by which they could logically escape from finding Collins guilty of murder it was certain that they would adopt that method. For although the law of England is that whoever causes a death while doing an illegal act is guilty of murder, it is certain that no jury will ever desire to convict a man of murder who has not had in his heart any desire to do his victim to death. Now, if the

Attorney-General's law is sound, a jury can consider if the illegal act is necessarily dangerous to life, and if they decide that it is not, it will be open to them to call the crime manslaughter. Collins was sentenced to seven years' penal servitude, which cannot be considered a harsh sentence, when it is remembered that he had at the time of his conviction for abortion been already convicted for forgery under particularly lurid circumstances.

**A University for Birmingham.**—Birmingham, probably the most go-ahead city in Great Britain, has decided that it will have a university of its own, or, better, that it will be the seat of a university for the Midlands of England. The medical profession is deeply interested in the scheme, for Birmingham is the center of an excellent provincial medical school, the students at which have hitherto been compelled to migrate elsewhere if they desired to obtain medical degrees. Of course they could take the diplomas of M.R.C.S. or L.R.C.P., or the higher grades in these diplomas at the Royal College of Surgeons and Physicians, etc., but they could not become M.D.'s without considerable difficulty; nor, to speak a little generally, without going into residence in another town. It is not a bad thing for a young medical man to have lived in more than one place and to have seen the practice of more than one school, but the hard-headed men of Birmingham do not see why travel should be imposed upon their students if they desire a medical degree—why in fact a Birmingham lad should not enjoy the same facilities as a lad in a university town of Scotland or the United States. At a public meeting held in Birmingham recently under the presidency of the Lord Mayor of the town, the Right Honorable Joseph Chamberlain, M. P., Colonial Secretary and one of the representatives of Birmingham in Parliament, made an excellent speech in favor of the institution at Birmingham of a university on modern lines, and quoted with great effect on his audience the *extreme advantages offered by local universities to their communities in so many towns of the United States*. The example of Birmingham might well fire the citizens of London to take an interest in the reconstruction of the University of London. The measure for the reform of the University of London has passed its second reading in the House of Commons, and if solemn pledges mean anything it should be proceeded with immediately in committee. But the inhabitants of London do not take the faintest interest in the scheme. Those concerned in the present management of the university, or who expect to be affiliated with it under the reconstruction-scheme know the whys and wherefores of the measure now before Parliament, but the mass of Londoners are perfectly ignorant about the matter and apparently are content to abide under the stigma of being citizens of the *only great capital in the civilized world possessing no backing university*.

**The German Doctors' Day and Medical Study for Women.**—Germany has remained the stronghold of conservatism in opposition to the movement in favor of equal rights for women, especially in the matter of education. When the most important subject for discussion on Aertztetag, however, is the question of permitting women to enter upon the study of medicine, it may be realized what inroads the woman's movement is making even against the supposedly thoroughly protected German conservatism. For to formally discuss is to admit that the question has come into such prominence, that a halt must be called in order to impress upon the rank and file the position that is to be taken in the matter.

There is no doubt that in Germany opinion is gradually

shifting into the feeling that at least a trial of the higher education of women will have to be made. When it was announced that Austria had opened the doors of her Universities to women, there were any number of asseverations that this was an example Germany would never follow, but such a step must inevitably be made. Already the conditions on which women can do post-graduate work at German universities have become much easier than they were, and a number of women have, during the past year, taken advantage of them.

When Professor Schulze, of Bonn, at the German Medical Congress at Wiesbaden this year, said incidentally that the question of women studying medicine was, like other questions in medical education, one that could not be settled theoretically, but would have to be worked out on its merits, the statement was greeted with a smile, but certainly not one of derision or disapproval. The movement for the higher education of women is, it would seem, irrepressibly advancing and is destined to penetrate even the triple-armed conservatism of German universities. Even the resolutions of the Aertzetag, while they oppose, contain a confession of weakening opposition, inasmuch as they dictate the terms on which alone women may be allowed to practise. Popular feeling in Germany is gradually losing its bitterness on the question and the time seems not far distant when this will be a strengthening element for the women's cause. An indication of this may be seen in the recent elections in Canton Zurich. There, in German Switzerland, on the last day of the Doctors' meeting, a neighboring German community, whose experience with women in the professions has been larger than that of most communities in Europe, voted to admit them to the privileges of practising law and of filling such positions as that privilege carries with it.

## Philadelphia News and Notes.

The Medico-Chirurgical Dental College has recently added to its faculty Dr. Robert H. Nones as dean, and Drs. Walter H. Neall and James D. Price as adjunct professors.

St. Agnes' Hospital is at present being improved by the erection of a new building, which will contain a central heat and electric light plant, a new laundry, and a disinfecting-room.

Dr. Joseph Sailer has been commissioned Acting Assistant Surgeon in the United States Navy, and has been assigned to duty on the *Arctic*. Dr. Sailer is also a member of the Pennsylvania Naval Reserve.

Dr. Leonard Pearson, State Veterinarian, has been appointed by Governor Hastings representative from Pennsylvania to the International Congress on Tuberculosis, which will convene in Paris from July 27th to August 2d.

The Woman's Medical College of Pennsylvania is to be materially improved by several noteworthy additions. A new wing will be added to the hospital-building and a new laboratory-building, three stories in height, is to be erected. The basement of the latter will contain a central heat and light plant; the first story will be devoted to a gymnasium and hygienic laboratory, the second to a lecture-hall and a physiologic laboratory, and the third to laboratories of normal and pathologic histology.

**The Mary Jeanes Museum Fund.**—The Academy of Natural Sciences of Philadelphia has received from Miss Anna T. Jeanes a gift of \$20,000, to be invested and known as the Mary Jeanes Museum Fund, the income to be used for general museum purposes.

**Infectious Diseases in Philadelphia** for the week ending July 16th:

Disease	Cases.	Deaths.
Diphtheria.....	75	14
Scarlet fever.....	27	0
Typhoid fever.....	59	5
Cerebrospinal meningitis.....		1
Pulmonary tuberculosis.....		27
Total mortality.....		493

**Obituary.**—JOHN B. SCOTT, who had just completed the third year of his medical course at the University of Pennsylvania, and who was president of the Houston Club, died at his residence at Overbrook, Pa., July 15th, of florid tuberculosis. His illness was contracted while in the naval service, aboard the auxiliary cruiser *St. Paul*. He was a graduate of Wesleyan University, and was active in the affairs of the Young Men's Christian Association.

**The Water-supply of Philadelphia.**—DR. BENJAMIN LEE, secretary of the State Board of Health, presented to that body at its recent meeting at Swiftwater, a full report of his inspection of the sources of pollution of the Schuylkill River, begun April 10th. The report describes fully the many appalling observations of the party. In part, Dr. Lee says:

"The course taken after leaving Manayunk was up the canal to Flat Rock Dam, thence up the Schuylkill to Conshohocken, a distance of 5 miles. The banks on either side were carefully examined, as well as the outlets of sewers and streams, and samples of water were taken for examination at the various points of pollution. The place at which the most serious pollution was found was near Lafayette station and Shawmont, near the pumping station of the Germantown water-supply; Mill Creek, Rose Glen, and Gulf Creek.

At Conshohocken, both the canal and Schuylkill River were found to be receiving many kinds of filth. At Plymouth Creek pipes were found conveying sewage laid under the water-quarter across the canal, and discharging themselves into the water, which presented the appearance of indigo-blue mixed with tar. The odor was such that the committee were compelled to turn away. From this point all the way to Bridgeport the water was thick with decaying vegetable matter and refuse thrown from the houses, and the stench arising therefrom was almost unbearable. Numerous refuse-heaps also drained into the stream. The committee found that the further it went up the canal the worse became the pollution. Not only were no means whatever taken to prevent the household-drainage and human excreta from entering the river, but apparently nothing was left undone to perfect arrangements for the conveyance of such matter to the canal. All seemed to consider the canal a common receptacle for everything they wanted to get rid of which might cause disease if allowed to remain on land.

"Pottstown, which for many years past has been considered one of the chief sources of pollution, was found to be contributing largely. A large population of Hungarians, living in huts along the creek on property owned by one of the large manufacturing firms, made use of the stream as a receptacle for garbage and refuse of every description. The privies for these people had been placed by the owners of the mills on bridges and platforms directly over the water. In addition to Manatawny creek, which at a number of points was badly polluted, are Tan Yard Run and Tubley's Run, both of which discharge into the river an immense quantity of house-drainage.

"At Birdsboro nearly all of the houses were found to drain into the canal and into Hay Creek, which empty into the Schuylkill.

"There are undoubtedly many other streams in the State, used as sources of water-supply for domestic purposes, which are equally as badly polluted as the Schuylkill. This fact, together with the demonstration afforded by the city of Reading of the possibility of purifying sewage on a large scale, should make an argument so convincing for the necessity of the passage of a law for the protection of the purity of our streams that the coming Legislature should not be able to ignore it, especially as there is reason to suppose that, as a result of the showing thus made, the city of Philadelphia will unite with the State Board of Health and other Boards throughout the State in making a demand upon the Legislature for the passage of such an act."



## Society Proceedings.

### DEUTSCHER AERZTETAG (DOCTORS' DAY).

Held at Wiesbaden, June 28 and 29, 1898.

#### Free Choice of Physicians by Members of Benefit Societies. The Admission of Women to the Practice of Medicine.

What is called in Germany the Aerztetag, an assemblage of delegates from medical societies all over Germany, who meet to discuss the physician's personal relations to his professional brethren, to his patients, and to the world at large, was held this year at Wiesbaden, June 28th and 29th; 130 delegates were present, representing 13,086 medical men.

PROFESSOR AUB, of Munich, presided. The discussion of what is known as free choice of physicians, which occupied an important place on the program, had reference to the legally recognized societies for the care of workmen in the various trades that are so common in Germany, and the right of physicians to demand for the members of these societies that they may select any physician whom they desire, who shall receive the regular compensation allowed for such attendance from the society, and that the members be not compelled to go to some physician arbitrarily selected for them by the officials of the society. The agitation on this effect has become very general among German medical men, and societies have everywhere come into existence whose object is the establishment of this privilege of free choice.

A most practical resolution, drawn up by the committee of the Berlin Society of Physicians (Standesverein, *i. e.*, society for the regulation of physicians' personal relations, and protection of his rights and privileges), was adopted by the meeting and referred to the committee having charge of the German Pharmacopœia. This resolution asked for the incorporation into the pharmacopœia as an official (official) preparation *pure ice*, so that apothecaries would be required to keep it and physicians be sure that it would be obtained when prescribed. Freezing does not destroy bacteria, as has been thought, and the dangers from impure ice, especially when used by the non-resistant sick, have been growing clearer from year to year.

The important subject for discussion at the Congress, however, was the question of women studying medicine. PROFESSOR PENZOLDT, of Erlangen, to whom the subject had been referred for special consideration, opened the discussion. He believes the present movement to secure for women the privileges of medical study at the German Universities is actuated by two considerations: First, the desire to increase the number of pursuits that women may be allowed to take up; and second, the furtherance of the claim that women shall have equal rights in everything.

As to the question of equal rights in general it might be said that the good of the race seems to be bound up, not with the production of educated or half-educated women, but with the assurance of mentally balanced and physically healthy women, who were in suitable condition to take up the duties of wife and mother, which must constitute, so far as can be prognosticated, the vocation of the vast majority of women in time to come, as it has been in the past.

As to the need of occupations for women, there is no doubt of the crying necessity for opportunities by which women might be enabled to make an independent living. There is every reason, however, why this opening up of new vocations in life for women should not begin with throwing open the doors to medical study. Woman's supposed natural fitness for medicine rather than for the other professions is an illusion, founded on a misunderstanding of the circumstances.

Everyone thinks he knows something of medicine and so its study is liable to be taken up with the idea that it is easy, without the realization of the intense irony in the thought. Medicine is extremely difficult, its study long, tedious, and expensive, and its rewards, under present conditions, comparatively very small, and sure to be less if the present overcrowding of the profession continues and is added to by allowing women to enter the profession. Women have shown themselves capable of doing the medical work of a univer-

sity, but in general their entrance into the profession will not benefit the profession, nor the science of medicine. For the memory-work of a medical course they are capable, but their habit of mind is unsuited for original investigation. The exceptions to this rule are few, and women who have distinguished themselves in medicine are the pick of the sex, on whose success no argument can be founded. As students women are industrious to a greater degree than men, but this is in itself a sign of a certain lack of that well-balanced moderation in all things so essential for scientific work.

The success of women-physicians in practice, as can be seen where they exist in numbers, is far behind that of men, whose position is not the most enviable in the world. Under present circumstances the obtaining of the proper preliminary education is very difficult, and yet there can be no question of admitting women to study medicine, except with the same previous education as men. There can be no objection to admitting them to the practice of certain limited specialties in the profession. There is in dentistry and pharmacy perhaps an opportunity for women. There certainly is in midwifery and trained nursing a field for woman's natural sympathies much more suited to her natural capacity for mental and physical work than the medical profession. There are other occupations in life, in the commercial and industrial worlds, to which entrance is easier, for which the preparation is not so rigorous, the work not so arduous, the rewards better and more certain, that women might take up. Certainly it would not be in accord with the dignity of the medical profession to open its doors before the other professions of law and theology have done so.

The reason sometimes given that in the present state of affairs women's natural modesty often keeps them from consulting physicians until their diseases are too far advanced for proper treatment, or radical, organic change had taken place, is without foundation. German physicians are extremely regardful of the modesty of their female patients, and experience shows that this is thoroughly appreciated, so that such a reason never restrains patients from seeking needed medical advice. The same delay in consulting a physician occurs where women-physicians are plentiful, and is due, as Prof. Müller has pointed out, (1) to the fact that women's diseases often begin with symptoms that do not indicate the importance of the process at work; (2) that women are very commonly careless of symptoms at first; and (3) that they fear to learn the truth and dread the operation that may eventually be needed.

After Prof. Penzoldt's address, Sanitäts-Rath BECKER, of Berlin, in discussing the question, demanded for women equal rights with men in the matter of seeking their intellectual development and choosing an occupation in life. DR. HENIUS, of Berlin, did not think that women are suited to a life of intellectual work at all. They are not fitted to be jurists and theologians, and certainly not to be judges and preachers; and scientific and practical medicine would suffer if their admission was not denied, for the doors, once opened, could never be closed. After the discussion the following conclusions of Prof. Penzoldt's paper were adopted by a large majority of the delegates:

I. If under present circumstances women should be admitted to the practice of medicine under the same conditions as men, no great demand for the privilege is to be expected, and so neither special good nor harm would come of it. (This is not to be taken to mean that this would not happen if medical and other schools for women were allowed at the Universities.)

II. If a large number shall demand the privilege, however, then there will result (1) no special benefit to patients; (2) more harm than good for the women themselves; (3) least of all any benefit to the German Universities and to science; (4) undoubtedly a lessening of the dignity of the medical profession; (5) in general no advantage to the common weal.

An additional resolution proposed by Prof. REICH, of Breslau, was likewise adopted. It demands that before any question of admitting women to the practice of medicine is raised the preliminary training required must be equal to that of men. The methods of education and the examinations must be the same. Particularly must there be no question of allowing women to neglect the study of general medicine to devote themselves from the beginning of their studies to special branches.



## The Latest Literature.

## British Medical Journal.

July 2, 1898. [No. 1957.]

1. The Etiology and Educative Treatment of Convergent Strabismus. (Illustrated.) PRINCELY SMITH.
2. Growth as an Agent in the Production and (2) the Removal of Deformity. (Illustrated.) HOWARD MARSH.
3. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. Lecture III. STANLEY MARTIN.
4. Professional Recollections of a Visit to Canada. HAYNES S. ROBINSON.
5. A Case of Malarial Enteric Fever. THOMAS F. RAVEN.
6. Compound Dislocation of Ungual Phalanx of Thumb. C. W. HALL BROWN.
7. Dislocation of Testis. A. D. KEITH.
8. Case of Multiple Prostatic Stones. (Illustrated.) C. H. GORDING BIRD.
9. External Dislocation of the Elbow. A. E. NORMINGTON.
10. Two Cases of Resection of Bowel Treated with Murphy's Button. ARNOLD H. WATKINS.
1. Report on a Case of Gunshot-Wound of Throat Received in Action at Tirah; Recovery. W. C. T. POOLE.

2.—Natural animal growth is an agent that must be taken into account by every surgeon who wishes to be successful in the treatment of the deformities in children. It is well known that growth in animal life is governed chiefly by the law of conformity to type; when the influence of the latter is either interrupted or inhibited by some other influence of a stronger kind, growth will produce deformity. On the other hand, however, when these adverse influences are removed or disappear spontaneously, the law of conformity to type, which was, for the time being, overruled, will again assert itself, and growth will be an agency for the removal of deformity. Applications of these principles may be illustrated by a case of marked rachitic curvature of both femora, in a child 7 years of age, which entirely disappeared in the course of 12 months, during which time the weight of the body had been removed. The instances in which deformities following green-stick fractures in childhood disappear in course of time, at once suggest the uselessness of attempting to correct the deformity at once. The influence of growth in the removal of deformity is displayed in the spine in cases of scoliosis in a remarkable degree. The applications of the principles involved in the question of animal growth to the treatment of deformities, while all tending in the direction of conservatism, will be attended by the most gratifying results.

3.—In studying the production of the poisons of the typhoid bacillus in artificial culture-media, two different kinds of media were employed; ordinary peptone broth, to determine the presence or absence of secretory products of the bacillus, and broth containing no peptone but mixed with some proteid solution—either blood-serum, alkali-albumin made from the spleen, or an extract of lymphatic glands—in order to determine the presence of digested products of the bacillus. In some cases liquid blood-serum sterilized at 60° C. was used, without the addition of broth. In this latter solution most commonly the bacilli, after growing for a time, sank to the bottom in clumps and ceased growing, although they were still alive and active. When the bacillus was grown in a liquid medium containing a small proportion of alkali-albumin, and especially that made from splenic pulp, the virulent bacillus had a slight digestive action, which explains the presence of albumoses in the spleen in cases of typhoid fever. If the non-virulent bacillus was grown in a solution containing digestible proteid instead of peptone, a poison was formed that had an action like that of the poison formed in broth. The digestion that took place in the proteid solution was extremely slight, the toxic body thus being mainly an excretion of the microorganism. The toxic products were most evident when the bacillus was grown in peptone-broth. The experiments in this direction showed that a poisonous substance was present in the broth, apart from the bacillus itself, and that it produced a lowering of temperature and diarrhea, as well as a loss of weight, and after death there was found distinct degeneration of the

cardiac muscle. The longer the broth-culture was grown the more poisonous it became, and the more virulent the bacillus the more toxic was the broth. The toxic action of the bodies of the bacilli themselves was tested by killing the bacillus with chloroform. After the culture became sterile the chloroform was removed in a vacuum and the liquid used for injection. Experimentation showed that the retention of the dead bodies of the bacilli in the broth rendered it more poisonous. The effect of the poison on different animals varied somewhat. There seemed to be some individual peculiarity in the animals as regarded their resistance against the poison. A temperature of from 60° to 64° C. did not destroy the poison contained in the bodies of the bacilli, but rather increased its effect. It is therefore suggested that the heat breaks up the bodies of the bacilli and liberates the contained poison. Experiments did not suggest the existence of two kinds of poisons, namely an extracellular and an intracellular, possessing different actions. The production of diarrhea was one of the most marked and constant actions of the bacillus. Characteristic intestinal appearances were almost always found. The mucous membrane was a little soft on the surface and there was a large increase in the number of globular cells. Peyer's patches were unaltered. Loss of weight was another constant symptom. The more virulent the poison the more marked was the emaciation. There were no naked-eye changes produced by the poison in the organs of the body. When death was slow, degeneration of the muscle fiber of the heart was well marked. Experiments with the bacillus enteritidis of Gärtner were conducted in the same manner as with the typhoid bacillus, and this organism was found to differ from the latter in that it induced gas-formation in glucose-agar or glucose-gelatin; both agreed in not coagulating milk and in forming but little or no indol in broth. The virulence of the bacillus was increased in the same manner as the typhoid bacillus. Intraperitoneal injections caused the exudation of a highly albuminous fluid containing numbers of bacilli. In the earlier cases there was also exudation of leukocytes, which later on disappeared. In cultivations made from the peritoneal fluid of each animal, the growth was always typical and pure. The bacillus enteritidis was more constantly present than the typhoid bacillus throughout the organs of the body. The peritoneal fluid was highly toxic. Filtered, it was not so toxic as that unfiltered from which the bacilli had been removed by centrifugation. The growth of the bacillus in broth was precisely similar to that of the typhoid bacillus. The bacillus coli communis differs from the two other forms in that it causes putrefaction of proteids, forms indol in proteid solutions, is found in foul water, in soil, and is a constant inhabitant of the intestines. After death it sometimes penetrates the different abdominal organs and is one of the causes of putrefaction of the body. Martin believes that there are many different forms of this bacillus that differ in minute particulars. The one with which he worked was obtained from the spleen of a case of typhoid fever. Its virulence was increased much more readily than was that of the typhoid and Gärtner bacilli. As the result of experiments it was found that cultures obtained from the peritoneal fluid were pure and always gave the typical reaction of the bacillus coli. The effects of injection of the bacillus into the peritoneal cavity was markedly different from those obtained from injection of the other two bacilli, the effusion being blood-stained, more so at first than later on when the bacillus became more virulent. The blood-staining was due to the exudation not of corpuscles, but of the coloring-matter of the blood, being observed in the liquid that was highly albuminous. Numerous petechiæ were also observed beneath both the peritoneum and the mucous membrane of the ileocecal region and the cecum. No peritonitis was observed at any time. The toxic products of the bacillus were investigated by growing it in broth—in proteid solutions. The type of action of the poison in the bacillus coli appears to be the same as that of the other two bacilli investigated, in some cases producing a great fall of temperature and in other cases a rise. Heating the dead bodies of the bacilli suspended in the broth culture-fluid increased the toxicity of the solution as in the case of the other two bacilli, but a temperature of the boiling-point of water was required. This temperature with the typhoid and Gärtner bacilli rather diminished than increased the toxic action. The bacillus grown in proteid solutions digested the proteids present and



produced an abundance of albumoses, a much greater quantity than the other two. After having been grown in proteid solution for some time it precipitated a proteid in the form of a clot, more particularly in the solutions of diluted serum and in Marmorek's fluid. This was not constant, but occurred in the majority of cases. It was shown not to be due to the increased acidity of the culture-medium, and was considered a special action of the growth of the bacillus coli.

5.—Raven reports a case thought to be one of typhoid fever, in which the patient during early convalescence had a severe chill and a rise of temperature to 105°, falling on the following day to 101°. This recurred on the next day. Quinin was administered and the attacks were controlled. A week later there was a recurrence. Quinin was again administered and there was no further trouble.

7.—**Dislocation of the testis** is an accident that has rarely, if ever, been recorded. The patient had been run over by a heavy cart-wheel; there was marked tumefaction of the scrotum and groin, and it was noticed that the right testicle was absent from its normal site, and that there was a firm, resistant swelling over Poupart's ligament. When the parts were freely exposed at an operation, the testicle was found lying in its vaginal tunic, underneath the deep layer of the superficial fascia, partly over the external abdominal ring and partly in a rent in the external oblique tendon. The epididymis was sutured to the base of the scrotum and the rent in the external oblique was closed.

8.—In the case reported a diagnosis of **prostatic calculi** was made. With the aid of the Röntgen rays and the clinical manifestations, lateral lithotomy was performed, the knife only penetrating the prostate, and 130 stones, of phosphatic composition and weighing altogether 20.75 gm., were removed.

9.—In the case reported an **external dislocation of the elbow** was sustained by the patient, in dismounting from a bicycle, and striking her arm, which was fully extended, against a curbstone.

### Lancet.

July 2, 1898. [No. 3905.]

1. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. Lecture III. SIDNEY MARTIN.
2. The Relationship of Some Forms of Combined Degenerations of the Spinal Cord to One Another and to Anemia. J. S. RISSEN RUSSELL. (*Illustrated.*)
3. Hematuria as a Symptom; Methods Employed in Making a Differential Diagnosis; with 19 Cases Illustrating Points of Interest in the Diagnosis of Renal Affections Characterized by the Presence of Blood in the Urine. DAVID NEWMAN.
4. The Pathology of Neuropathic Keratitis. PERCY FLEMING.
5. On the Heart-radial Interval and a Hitherto Unknown Method of Compensation in Aortic Regurgitation. PAUL M. CHAPMAN. (*Illustrated.*)
6. The Diagnostic Uses of Percussion of the Vertebral Spines, with General Remarks on "Pleximetric" Bones and Viscera. WILLIAM EWART.
7. Cobra-Poison in Relation to Wassermann's New Theory of Immunity. WALTER MYERS. (From the Pathological Laboratory, Cambridge.)
8. Some Remarks Upon a New Mydriatic. SYDNEY STEPHENSON.
9. A Case of Malignant Pustule; Death; Necropsy. (Under the care of E. W. ROUGHTON.)
10. Two Cases of Ectopic Pregnancy; Recovery. (Under the care of STANMORE BISHOP.)
11. A Case of Amenorrhœa for two years; Small, Solid Tumor in the Left Ovary; Removal of Tumor; Return of Menstruation; Pregnancy. (Under the care of W. H. JALLAND.)

2.—Russell reports 3 cases, dealing especially with the morbid changes in the spinal cord, and discussing the etiology and pathology of these and similar cases, and finally adducing reasons for considering that the affection is the same as that which has been described as **ataxic paraplegia**. The clinical manifestations and the nature and dis-

tribution of the morbid processes agree with those that have been described as typical of a group of cases in which symptoms indicating the existence of disease of the spinal cord are associated with profound anemia. A close association is believed to exist between the changes in the spinal cord and profound anemia, although it is not thought that the cord-changes can be directly attributed to the anemia from an etiologic point of view. Anemia may, however, play a part in reducing the resisting power of the nerve-elements so as to render them less able to withstand the influence of some toxin, but it is more reasonable to suppose that the anemia and the spinal-cord changes are the result of a common cause in the form of some toxic state of the blood. The changes in the white columns of the cord are not considered attributable to a primary affection of the gray matter, nor are the degenerative changes in the various affected tracts of the cord supposed to be due to small hemorrhages. The hypothesis assuming that degenerations in the cord are of vascular origin, in the sense that the degeneration commences in the immediate vicinity of vessels with altered walls, is considered untenable. It is rather believed that the morbid condition owes its topographic distribution to the vascular distribution. Thickening of the vessels, which sometimes occurs, cannot fail to affect the nutrition of the parts supplied by such vessels, but that this condition is the primary cause of the degeneration of the nerve-elements is not admitted, as many cases have been recorded in which there was extensive degeneration of the nerve-elements without such changes in the vessels. These vascular changes are considered due to the same cause as the parenchymatous degeneration of the nerve-elements. The only part played by the vessels in the initiation of the morbid changes in the nerve-elements is that of bringing the toxic material to them. It is argued that if, as seems highly probable, the combined degenerations of the spinal cord owe their origin to the action of some toxic substance, there is no reason why such degenerations should not present all degrees of variation in their rate of progress, and why the same poison should not generate the more chronic process of "ataxic paraplegia" and the more acute changes in precisely the same tracts of the spinal cord in the cases of anemia and of cachectic conditions in which the resisting powers of the nerve-elements must of necessity be lessened, whether these states of the general system were in existence before the poison commenced its special destructive action on the nerve-elements or only became pronounced subsequently to this. There is thus much that suggests a close relationship between ataxic paraplegia and the acuter forms of postero-lateral degeneration, but it would be premature to regard them as identical, for there are some links in the chain of evidence that are still wanting.

3.—Much valuable information may be obtained, as an aid in the **differential diagnosis of genito-urinary diseases**, from the careful study of the symptom **hematuria**. In order to determine the source of the hemorrhage the physical characteristics of the urine and of the blood-clot should be observed, as well as the mixture of other deposits with the blood, the time at which the blood appears in the stream, the frequency and duration of the attacks, and the effect of movements and exercise or of complete rest in the course of an attack. No positive rule can be laid down as to the color of the blood, but in general it may be said that the nearer the source of hemorrhage is to the external orifice of the urethra, the less is the blood altered in appearance; that is to say when the blood is of vesical origin it is usually of a bright color, and when of renal origin it presents a smoky or coffee-colored appearance. There may be exceptions, however, to the first instance, as, for example, when there is considerable residual urine, in which case the freshly oozed blood may rapidly become smoky. Some information may be gathered from a microscopic examination of the blood-clot, which during its formation may entangle some of the histologic elements of the structure in which the clot is forming. The relative size and shape of the clot give in some instances a clue to the origin of the hemorrhage, as for example, when round clots are found that correspond to the diameter of the ureter. When the clots are of considerable size it is safe to assume that they are not of renal origin, but are formed in the bladder. Such deposits in the blood as pus, mucus, or tuberculous debris furnish additional information, as will the character of the epithelium that may be



present, or small fragments of tumors, parasites, or bacteria. In cases of renal hematuria the blood usually appears suddenly and disappears just as suddenly, soon to be followed by a profuse recurrence. Such sudden transformations are in some cases accompanied by the expulsion of long worm-shaped clots, which lead to the belief that the sudden coloring of the urine was due to obstruction of the ureter. This history of the appearance and disappearance of blood has been noted in cases of movable kidney as well. When hematuria becomes more pronounced after active exercise it disappears after a period of rest; it is usually due to the presence of stone in the renal pelvis, in the bladder, or in the prostate. It behaves in the same way in cases of movable kidney, or of passive hyperemia of the organ. By catheterizing the ureter one can determine whether the blood is derived from one or both of the kidneys or from neither of them.

5.—Chapman endeavors to show that the **heart-radial interval** may be excessively increased in the presence of pure aortic regurgitation. Observations were made upon a patient with a dilated heart and a loud and solely regurgitant aortic murmur accompanied by a characteristic pulse. A tracing was obtained by the transmission apparatus, and a chronographic simultaneous tracing was taken from the harmonium reed, vibrating 64 times in a second, the accuracy of which had been recently tested. The tracing showed a marked heart-radial delay of 0.53 second, whereas the normal heart-radial delay ranges from 0.17 second to 0.2 second. Another point shown in the tracing is the encroachment of systolic on diastolic time, the systole being of 0.40 second duration and the diastole varying from 0.36 second to 0.39. The second tracing, taken when the patient was in a much better state of health, showed the heart-radial delay to be 0.4 second and the pulse-rate 70. The duration of systole, which, for a pulse-rate of 70, should be 0.32 second to 0.33 second, was 0.50 second, the diastolic rest being 0.33 second. Normally, whatever the pulse-rate may be, the diastolic rest exceeds systolic labor. At a pulse-rate of 70 there should be 15 hours 5 minutes of rest to 8 hours 55 minutes of work. In this instance there is about 14½ hours of work to 9¼ hours of rest. This is believed to be a form of compensation that has not been hitherto recognized in any sort of heart-lesion. In explanation of the increased heart-radial delay it is pointed out that in pure aortic regurgitation the intraventricular blood-pressure is already great at the commencement of systole. The contraction is therefore comparatively a very slow one, as is shown plainly in the cardiac tracing. This is the first condition in the production of the heart-radial delay; and the second is that the pulse-wave arising from the slower contraction of the ventricle is, in consequence, a slow wave and can only be rapid when the arteries are comparatively empty and the ventricular pressure is slight at the commencement of contraction. As a substitute for the term "presphygmie interval" (the time during which the intraventricular pressure rises during systole), the term "isodynamic interval," which suggests the time of activity occupied when attaining balance of blood pressure, is advised.

6.—Normally the spine is always resonant from the occiput to the coccyx. The occurrence of any considerable dulness at any point is therefore highly suggestive. Slight causes cannot bring about even localized spinal dulness. Greater significance is of course attached to marked degrees of dulness. This dulness conveys information from an otherwise inaccessible depth as to mediastinal conditions that may be of the first importance, such as the upper thoracic glandular enlargements, aneurysm, esophageal disease, infratracheal glandular swelling, or pericardial effusion, "the lower dorsal patch," which is invariably an accompaniment of the latter, always including dulness of the eleventh and twelfth spines. Lower down abdominal and pelvic disease may in the same way be indicated by local dulness. The clavicle, the sternum, and the scapula are more especially pleximetric bones. Especial stress is laid upon scapular percussion. Pleximetric visceral resonance is shown by the spleen, the left lobe of the liver, and more especially by the right lobe of the liver.

7.—The theory of Wassermann, to which reference is made, is, that "the toxin is neutralized (a) *in vitro* and (b) *in corpore* by saturating its toxophoric atoms with those cell-substances for which these atoms have a specific affinity."

Meyer's method for testing the antidotal properties of normal tissues was to emulsify the various organs of a susceptible animal (a guinea-pig being used in most cases) with physiologic saline solution, to mix the emulsion with cobra-poison, and then test the action of the mixture on guinea-pigs. Guinea-pigs were also employed for inoculation. The experiments showed that the suprarenal capsules were the only organs that invariably influenced cobra poison, and the medulla was inactive in this respect, the cortex alone protecting it. Tests were made also with the tabloids of various organs and suprarenal tabloids were found to be the only ones having any action, and that their action was less than that of the fresh glands. This action of the suprarenals, not being shared by any other organ in the body, suggests that mechanical precipitation of the poison is not an important factor in their protective power. As the suprarenals, even when administered in large quantities, only influence amounts of poison just above the minimum lethal dose, and cannot protect against multiple doses, it must be concluded that they do not contain an antitoxin; that is, a substance which neutralizes the poison *in vitro*. They probably contain another of those substances such as bile-salts, cholesterol, tyrosin, which somehow raise the natural resistance of the animal and so prevent death from doses slightly above the minimum lethal.

8.—From a series of experiments with **mydrin**, which is a combination of ephedrin hydrochlorid and homatropin hydrochlorate, Stephenson has reached the conclusion that it was capable of doing all that had been claimed for it, namely, its capability of causing moderate dilatation of the pupils without involving the function of accommodation. He believes it to be a valuable agent in the hands not only of the ophthalmologist, but also of the physician desirous of examining the fundus oculi with a dilated pupil.

9.—Roughton reports a case of **malignant pustule**, in which the infection was traced to the hides that the patient had handled. The pustule formed on the right side of the neck, and was treated by free incision and applications of pure carbolic acid, the case, however, terminating fatally. While anthrax-bacilli were found in the serum from the original vesicles, none was found in cultures taken from the blood, one from the left index-finger and the other from an edematous area on the chest.

10.—Bishop records two cases of early **ectopic pregnancy** relieved by operation. He states that the older methods, such as electricity, are being discarded, and it is more and more recognized that the best results are obtainable by early celiotomy. The operation should be performed as soon as the diagnosis is made with any fair degree of probability. Delay of even a few days may lead to a fatal issue.

11.—Jalland records a case of **amenorrhea** that persisted for two years, and was the result of a small, solid tumor of the left ovary. After operation and removal of the growth menstruation returned, and the patient shortly afterward became pregnant.

### New York Medical Journal.

July 16, 1898. [Vol. lxxviii, No. 3.]

1. Cesarean Section. W. H. MARCY.
2. A Case of Epithelioma of the Larynx. Laryngectomy and Partial Pharyngectomy; Death on the Eleventh Day from Exhaustion. E. L. SHURLY.
3. The Anatomy and Physiology of the Nervous System and its Constituent Neurons, as Revealed by Recent Investigations. (Continued) LEWELLYS F. BARKER.
4. The Common Reagents for the Detection of Albuminuria: Their Application and Comparative Efficiency. JOHN MILTON GARRATT.
5. The Ultimate Results of Thyroid Therapy in Sporadic Cretinism. HENRY KOPLIK.
6. An Experimental Study of the Toxic Properties of Indol. C. A. HERTER.

1.—Marcy records the successful performance of **Cesarean section** on a dwarf, 4 feet 3 inches in height, whose pelvic measurements were as follows: Between iliac spines, 25 cm.; between iliac crests, 24 cm.; external conjugate, 15 cm.; internal conjugate (diagonal), 8 cm.; true conjugate



(estimated), 5½ cm. The patient was in the ninth month of gestation.

2.—The growth was unmistakably an **epithelioma of the larynx** and its removal was advised, despite the fact that the patient was very much emaciated and in no way a fit subject for serious intervention. The case was an urgent one, however, and 10 days after tracheotomy was performed, a formal **laryngectomy and partial pharyngectomy** were performed, the latter because of involvement of the pharyngeal wall. The case terminated fatally on the eleventh day from exhaustion, and not, as is usual, from pneumonia or septicemia. The tampon-cannula, which was used in this case, gave satisfaction and is deserving of further trial.

3.—Barker discusses the changes that occur in the **central stump of divided nerves**. Various investigators have been able to demonstrate extensive degeneration in the nerve fibers, and Nissl was among the first to show marked alterations in the ganglion-cells of the nuclei of the motor nerves after their division. These regressive alterations may occur if the nerve-fiber is not destroyed, but is rendered functionless temporarily. This is called the method of primary irritation, and is particularly useful, for example, in distinguishing the various groups of cells in the oculomotor nucleus. Barker reproduces the illustrations of cells in the facial nucleus of a rabbit, 15 days after section of the nerve-root, showing extensive degeneration. These results throw an entirely new light upon peripheral neuritis, for if the process continues long enough, changes in the central nervous system will certainly occur. Attention is called to the great liability to error in estimating the results of changes in the nerve-cell by Nissl's method, and skepticism is expressed as to the results reported by inexperienced investigators. The alterations in the neuron produced by injury of the dendrites are at present only imperfectly understood. The most important changes are those observed by Monti, who found the dendrites running toward a diseased bloodvessel, varicose. The nerve-cell, however, seems to be the most important element, and its disappearance leads to degeneration of all the processes. Perhaps in cases in which deleterious agents act upon the whole neuron, the most distal portion is the first to exhibit degenerative changes.

4.—Garratt discusses the various reagents used for the detection of albuminuria. He has employed 5 tests in 50 cases of very slight albuminuria as follows: Nitric acid, Roberts' solution, Millard's formula, potassium ferrocyanid, and heat. Two methods of application may be recognized—contact and diffusion. For either, it is necessary that the urine should be perfectly clear, and it may be made so by simple filtration, or, if this is insufficient, by adding an excess of ammonium hydrate, and then a solution of magnesium sulphate and hydrochloric acid. In this the earthy phosphates are precipitated, carrying down with them all the other impurities. Garratt suggests a new form of apparatus for the purpose of making the contact-test with the minimum amount of diffusion. This consists of a U-shaped tube, the curved part having a diameter of about  $\frac{1}{8}$  inch. One end is filled with urine as far as the capillary tube, and a finger is placed over the top. The other arm, which should be longer, is then partially filled with the reagent, and the two liquids are allowed gradually to reach the same level. The actual efficiency of the various reagents in the 50 cases was as follows: With Millard's, a reaction was obtained with 48 specimens; albumin could not be found in the other 2 by any other method, although in one case there were casts in the sediment; with Roberts', a reaction was obtained in 43 cases; with potassium ferrocyanid in 36; with nitric acid in 30; and with heat in only 26. With experimental solutions of serum-albumin, all the tests responded to a solution of 1 part in 320. A solution of 1 part to 640, or to 1280, only responded to Millard's test. This test also induced a reaction with a solution containing a considerable quantity of peptone, but with smaller quantities it failed to react, so that this need not be a source of error.

5.—Koplik reports several cases of **sporadic cretinism** treated with thyroid extract. The first was in a child, one month of age, a sister of a fully developed cretin. The rectal temperature was 96° F. Under thyroid treatment there was gradual improvement in all the symptoms, and after 6 months the child resembled in every way a normal child. The second patient was 9 weeks old; under treatment it, too, rapidly became normal. When, however, at the age of 6

months thyroid extract was omitted, the cretinoid characteristics reappeared. The third patient, a girl, 3 months old, presented the usual characteristics, with subnormal temperature. Rapid improvement attended thyroid treatment. These three examples all belonged to the early stage of the disease. When the disease is fully developed, the results are not nearly so satisfactory. Koplik reports 2 cases, one in a boy, 15 months of age, and the other in a girl 20 months of age, both of whom improved, but showed slowness of gait and deficiency of intelligence, and had evidently failed to become normal. The third class of cases is formed of those recognized only in later life or developing at this time. In these but slight benefit may result, although in them, as well as the others, the immediate results of thyroid treatment are usually brilliant.

6.—Herter gives a brief description of the chemico characteristics of **indol**, which has a formula of  $C_8H_7N$ , melts at 52°, is a weak base, and when treated with sulphuric acid and potassium nitrite gives the red reaction due to the formation of nitroso-indol. The indol absorbed from the intestines is oxidized in the body, and ultimately forms potassium indoxyl-sulphate, or indican, as which it is secreted. Where this reaction occurs is not known. If a solution of indol is injected into the intestines of a rabbit, the pupils become contracted during the injection, and there is some twitching of the muscles for several hours. If such a solution is injected into the femoral vein, the action of the heart becomes feeble, the respiration weak and the pupils contracted; and the animal dies in about 2 hours. This experiment was repeated upon other rabbits and upon dogs, usually with the same result, but in one instance recovery ultimately occurred in a dog weighing 25 lbs. No characteristic morbid changes were observed. Chronic poisoning was produced by the daily injection of small quantities. A rabbit receiving 10 cu. cm. of a 0.1% solution for 6 days, died on the sixteenth day after profound emaciation. Similar results were obtained with other animals. (The paper is to be continued.)

### Medical Record.

July 16, 1898. [Vol. liv, No. 3.]

1. The Lodge-Doctor: His Advent, his Methods, and his Influence on the Practice of Medicine. THOMAS J. HILLIS.
2. General Evolution and Natural Selection as Exemplified by Man. LAWRENCE IRWELL.
3. Anomalous Lobulations of the Liver. W. MOSER.
4. Angina Pectoris and Cardiac Palpitation—Their Speedy Relief. BEVERLEY OLIVER KINNEAR.
5. New Self-Retaining Vaginal Speculum. A. W. ABBOTT.
6. A Device for Turning off the Carotids in Operations on the Head and Neck. ROBERT W. JOHNSON.
7. A Portable Operating-Room for Field Service. L. E. COFER.

3.—Moser calls attention to the normal fissures and **lobulations of the liver** and the differences between these and anomalous conditions. He has often noticed, in the anomalous fissures, intralobar adhesions, which are fine and readily broken up, and are evidently not a product of disease but remnants of structures. In two instances, he has observed a small accessory lobe; not merely a subdivision of the others, but an added lobe.

4.—Kinnear believes that **angina pectoris** is due to hyperemia of the spinal sensory centers. He bases this belief upon the facts that such centers induce sensation, which is always exalted by the presence of an excess of blood, and that, in a large number of cases of neuralgia and in one of angina pectoris, he has cured attacks by applying cold over the sympathetic ganglia and the spinal cord, believing that he thus expels the blood from the centers. He therefore recommends this treatment for angina pectoris, and he also suggests the use of oxygen-inhalations. Such inhalations will, he believes, dilate the coronary arteries and thus supply a proper amount of blood to the feeble heart-muscle, stimulating it to more vigorous action. Cardiac palpitation he treats in the same way.

6.—Johnson devised an apparatus for **turning off the carotids** (by this is meant temporarily cutting off the arterial stream in the common carotid arteries) in operations



above the clavicle in the vicinity of the air-passages, when there is danger of the blood entering the trachea or lungs. It has been shown that either carotid artery may be held up alternately without injuring the brain-structure, and that both may be held up for a short period of time, or intermittently for a longer time, without injury to the patient. The procedure is therefore a safe one; the device for its execution consisting of a soft wooden bobbin, into the split ends of which are fastened the silk ligatures that are passed around the common carotids at the point of election.

### Medical News.

July 16, 1898. [Vol. lxxiii, No. 3.]

Practical Anesthesia. S. ORMOND GOLDMAN.  
Suture and Ligature Material; Absorbable or Non-Absorbable. SEYMOUR CHASE GORDON.

Rheumatic Pharyngitis. LEWIS S. SOMERS.  
Notes on the Ambulance Company. HENRY I. RAYMOND.  
The Soldier and Sailor in Active Service in Time of War. S. W. ABBOTT.

Tubercular Meningitis Preceded by Acrodynic Erythema. JOHN A. BARKER.

To Determine the Thickness of the Pad Used in Pes Planus. DAVID TRUMBULL MARSHALL.

1.—The ill-effects of anesthesia with chloroform or ether are more often attributable to an inexperienced anesthetizer than to the anesthetic itself. Referring to the proper preparation of a patient for anesthesia Goldman recommends, in addition to other routine procedures, that the patient drink plentifully of water and that if hemorrhage or shock be expected, he should receive daily an infusion into the colon of 2 quarts of normal saline solution for several days immediately preceding the operation. The use of the so-called prophylactics, atropin, morphin, is regarded as not only unnecessary but distinctly harmful. The closed ether-inhaler is to be preferred, and Goldman has constructed one in which he claims certain advantages; it consists of a rubber mouth-piece, a long cylinder, within which is a metallic basket for gauze, and a thin rubber bag of fullest respiratory capacity, which is attached to the cylinder. With this inhaler the patient can be anesthetized in one-third the time, while the quantity of ether employed is reduced to two-thirds or three-fourths that required with the open inhaler. The continuous administration of ether is not approved of; when the patient is fully anesthetized the cone should be frequently removed. If properly administered, ether is not contraindicated for children or for elderly people with chronic bronchitis; as it is a cardiac and vasomotor stimulant it is particularly indicated in old age. [This paper on practical anesthesia is based upon observations in 1400 cases of narcosis with ether and chloroform. There are few practical points, however, that are strikingly novel.]

2.—Since 1894 Gordon has used no suture or ligature that was not absorbable, with the single exception of silk-catgut, and that only for closing the abdominal wound. From these four years' experience he declares strongly in favor of absorbable as against non-absorbable material both for ligatures and sutures. The profession at large would prefer absorbable material if they were satisfied on two points: (1) That it would not be absorbed until complete union has taken place or until there is no further danger of hemorrhage; and (2) that the material is aseptic and remains so till it is absorbed. As in all cases, except in abdominal wounds, union is firm enough to allow of the removal of the suture within the first week, catgut meets all the first of these requirements; finally it is possible to obtain commercial gut, or to prepare a gut oneself, on which reliance can be placed. In summing up the arguments in favor of an absorbable material, it may be said, (1) that all suture unabsorbed must necessarily induce more or less exudate; (2) such exudates are of lower vitality than the tissue formed in the reparative process; (3) inflammation excited by non-absorbable material is always destructive to complete repair; (4) catgut has a certain amount of elasticity that prevents undue strangulation of the part.

3.—Somers reports a case of peritonsillar abscess in which peculiar symptoms appeared, the pain persisting after the opening of the abscess being relieved by antirheumatic

treatment. He considers it definitely settled that rheumatism may be a cause of tonsillitis, and, on the other hand, that rheumatism may result from infection through the tonsils. He details the symptoms of these conditions, gives a brief description of the throat-appearances, and states that repeated attacks lead to the development of a chronic form of the affection, the manifestations of which are of a very mild type. Relapses of the pharyngeal condition are frequent. Treatment should be antirheumatic, together with hot applications to the throat. Pharyngeal massage in long-standing cases is useful.

5.—Abbott speaks of those points which appear worthy of consideration as affecting the health of the young recruit while in active service, such as food and drink, clothing, shelter, special diseases to which he is subject. His remarks are based on personal reminiscences of the War of the Rebellion.

6.—A boy, 4½ years old, had, at the age of one year, some form of spinal disease, necessitating the wearing of an apparatus. When he came under observation he was suffering from enlarged and swollen turbinated bones encroaching upon the nasal septum and completely occluding the chambers. The superficial lymphatic glands were enlarged. The nails were clubbed. There were no special pulmonary symptoms. Rapid improvement ensued, but a month later, after exposure to cold, the condition recurred. The submaxillary glands were at this time enormously swollen and tender. The patient was unable to speak or to hear. The temperature was normal. On the following day there developed a swelling of the left foot and leg which was painful and covered with a scarlatiniform rash that shortly changed to a bluish color. On the same evening the right leg had become affected, while there did not remain a trace of the condition described in the left leg. On the next day the pain, swelling and rash had subsided in the right leg and foot and had moved to the left side of the body. On the succeeding day the left side of the body was normal and the right side affected. A day later the right side of the body was normal and the left arm affected. On the next day the right arm was affected and the left normal; on the next the face and both ears were attacked, the ears having a darkish-blue color. The palpebral and ocular conjunctivæ were hyperemic and there was slight ptosis. These phenomena recurred several times, and the right ear eventually assumed a blackish-blue color, having the appearance of gangrene. Sloughing did not occur. The pain was intense and the ear continued to present the appearance of gangrene for 4 days, when all the symptoms gradually subsided. Ten days later the child had several attacks of vomiting, and complained of pain over the frontal sinuses and of partial loss of sight. The pupils were equal and responded to light, but not in accommodation. Examination with the ophthalmoscope revealed hyperemia of the discs, and there was concentric contraction of the visual field, with convergent strabismus. The vomiting ceased in 2 days. There was amaurosis, complete deafness, clonic spasms of the left leg and arm. On the next day there was complete hemiplegia and clonic convulsions of the right arm and leg, and on the next there was a general convulsion followed by coma. Several days later, after several general convulsions, profound coma ensued, and death followed on the next day.

### Journal of the American Medical Association.

July 16, 1898. [Vol. xxxi, No. 3.]

1. The Differentiation of the Cardiac Incompetency of Intrinsic Heart Disease and of Chronic Nephritis. FRANK BILLINGS.
2. Diabetic Gangrene. N. S. DAVIS, JR.
3. The Differential Diagnosis between Dengue and Yellow Fever, with Some Account of the Epidemic of 1897 in Texas. H. A. WEST.
4. Rare Cases of Arrhythmia. JAMES M. ANDERS.
5. The Present Status of Vaccine and Vaccination. W. F. ELGIN.
6. The Medical Law of New Jersey. E. L. B. GODFREY.
7. Gonorrhea in the Male. J. O. MALSBURY.

1.—See this JOURNAL for June 11, 1898, p. 1088.

2.—See Vol. I, p. 1087.

3.—See Vol. I, p. 1083.

4.—See Vol. I, p. 1089.



**Boston Medical and Surgical Journal.**

July 14, 1898. [Vol. cxxxix, No. 2.]

1. Appendicitis. Remarks Based upon a Personal Experience of 750 Cases; Including 150 Consecutive Cases Successfully Operated Upon "in the Interval." MAURICE H. RICHARDSON and G. W. W. BELWSTER.
2. Army Medical Organization. JOHN VAN R. HOFF.
3. Some Modern Methods of the Treatment of Phthisis and its Symptoms. EDWARD O. OTIS.
4. The Relation of Epilepsy to Other Diseases. EDGAR J. SPERRING.
5. Results of the Immunization of Children at St. Mary's Infant Asylum with the Antitoxin of Diphtheria. W. P. COUES.

**1.—The 756 cases of appendicitis** seen by Richardson since January 1, 1894, are divided as follows: 220 chronic cases, of which number 151 were operated upon with success and 69 were not operated upon; 433 acute cases, including 149 that recovered without operation (some being operated upon afterward in the interval), and 221 that recovered after operation, and 63 fatal operative cases. The total mortality was 21%, this high mortality being due in a great measure to the general peritonitis that existed at the time of operation. A careful study of the fatal cases may point out important facts bearing upon questions of treatment. This leads to a discussion of the subject of peritoneal infection, which is responsible for so many of the fatal cases. In many instances, despite the greatest care, a localized infection is converted into a general one, and, though the patient's general condition is apparently good at the time of the operation, this type of case, seen most frequently on the third or the fourth day, almost surely terminates fatally. Some fatal cases, on the other hand, bear the immediate effects of the operation well, general infection not occurring for 2 or 3 days. In view of the fact that cases of similar severity and local signs recover without operation, the advisability of operative interference on the third or fourth day should be most carefully considered. The cause of infection may be a sloughing appendix, a virulent fluid resulting from the localized peritonitis, and lastly the fluid in the peritoneal cavity. Infection may best be restrained by Harrington's method of packing gauze. Harrington makes his incision toward the median line, well inside the tumor, so that thorough inspection is permitted, in order to determine the exact condition of the general peritoneal cavity, as well as the situation and extent of the tumor. The infected area is then walled about with gauze and the appendix is removed. Upon the condition of the serous exudate, and its freedom from infection, will depend the outcome of the case. Some interesting observations were made concerning cases with localized abscesses, in all of which recovery ensued after simple drainage. Whether the abscess was one of long standing, with firm walls, or whether the patient's condition was such as to contraindicate prolonged search for the appendix, the immediate plan of treatment was the same—simple drainage. In acute cases, in which an extensive suppurative process has taken place, fecal fistulæ are unavoidable; they should be no cause for anxiety, however, as they always heal spontaneously. It has been observed that the nearer the perforation to the cecum the more likelihood is there of a fistula resulting. The explanation of the fulminating cases is given in detail: "The virulence of the infection depends upon the size of the hole, its seat with reference to the cecum, the size of the appendicular lumen, the potency of Gerlach's valve, and the liquidity of the fecal contents. These factors, even opposed by a most vigorous and absorptive peritoneum, will break down barriers that would successfully resist a less forcible attack. The very rapidity of attack, the great volume of fecal escape, tear aside the hasty barriers which the peritoneum tries to raise and invade the abdomen to its farthest recesses." In the treatment of acute cases, it is believed that the greater one's experience the greater will be the number that justify serious doubt as to the advisability of interfering, once the diagnosis is made. That immediate operation is demanded in every case, and that the operation shall in every case be the removal of the appendix seems a position rendered untenable by the facts as they are thus far known. Furthermore, interference is not approved of even in severer cases as soon as the diag-

nosis is made; as for example, a patient in whom a severe attack is rapidly subsiding should not be operated upon as long as improvement continues; if, after a temporary subsidence, the condition is aggravated, operation is indicated and will have greater chances of success at the end of a week than upon the third or fourth day. [These remarks, coming from a man of acknowledged skill and ability, with so large a personal experience, demand the most serious consideration of those interested in this all-absorbing topic. The conclusions as to the question of operative interference are based upon solid facts, close observation, and sound reasoning. These views conform to those adopted by a class of surgeons that is constantly increasing.]

**3.—All attempts to destroy the bacillus tuberculosis *in situ*** have thus far proved futile. The treatment, therefore, is aimed to develop and strengthen the resisting power of the tuberculous patient until his pulmonary tissue presents no longer a favorable soil for the invading germ. The best results from this hygienic-dietetic treatment are obtained in closed institutions and sanatoria, because the management of the patient's life can thus be more exactly and continuously effected. Furthermore, such institutions have the advantage of thorough equipment. The main elements of the treatment are (1) out-door life and pure air free from dust and smoke; (2) abundant alimentation, consisting of properly selected and prepared food rich in fats and carbohydrates; (3) rest or exercise, or both, according to the individual condition; (4) hydrotherapy. Supplementary to these are (a) such general medication as from time to time seems to be useful in cooperating with the measures named, and (b) symptomatic medication to relieve any symptoms that interfere with the general plan and that cannot otherwise be removed. The necessity is emphasized of rest for all cases and of absolute rest for the febrile cases. Afebrile cases may bear a moderate amount of exercise, depending largely upon the condition of the heart. Walking, either on a level or up gentle ascents, is the simplest and most free from injurious effects and can be easily regulated. Deep breathing, or lung-expanding movements should be a part of the exercises. The breathing-tube is serviceable for this purpose. Chest-expansion may also be assisted by arm-movements in either the erect or the recumbent position. As to the character of climate, medium or high altitudes yield the best results. The food should be nutritious, easily assimilable, containing a due proportion of proteids and carbohydrates, and it should be rich in fats. It should be carefully prepared, the patient's tastes catered to, and his appetite tempted. Small quantities should be administered frequently. At 7 o'clock a glass of warm milk may be taken, either in bed or while dressing, with a spoonful or two of brandy or lime-water, if indicated. At 7.30 or 8 o'clock is breakfast, consisting of tea, coffee, or cocoa, bread and butter, bacon, fish, poultry or meat. At 10 or 11, a glass of milk or a cup of broth or beef-tea, or a sandwich and a glass of wine may be given. At 1 or 1.30 dinner is taken, consisting of soup, meat or poultry, or fish or game, with fresh vegetables and light pudding or fruit. Alcohol in some form may be allowed at this meal. At 4 o'clock a glass of milk is given, or a cup of tea or coffee with much milk or bread and butter or rolls. At 7 o'clock comes supper, with one or two courses and vegetables, similar to the meal in the middle of the day. A 9 or 10, on going to bed, a glass of milk is allowed, or bread and milk or milk with some farinaceous food like oatmeal porridge. If milk alone is given 2 or 3 teaspoonfuls of brandy are added. If fever is present the food must be less solid and be given more often. Milk is better when given as an adjunct to the regular diet than as an exclusive diet. Alcohol is especially valuable in febrile cases. The form in which it is given makes little difference. Codliver-oil is a most useful fat-producing food and should be used pure, in small doses, in the beginning and in the quiescent stage. As to the clothing, the under-garments should be loose enough to allow a layer of air beneath them, and the innermost garment should be of wool, of a weight adapted to the season, of light open texture and loosely fitting. (The article is to be continued.)

**5.—The oldest child immunized was 5 years, the youngest 1 day.** The largest immunizing dose was 5 cu. cm. and was given to the child of 5 years; the smallest  $\frac{1}{2}$  cu. cm. to the baby of one day. The older children were not affected by the injections. The infants were restless and cried for some



time. In 3 infants the temperature reached 101°, 5 hours after the injection, but it was practically normal in all the next morning. On the morning after the injections the younger children all had slight coughs, which passed away in 2 or 3 days. Urticaria occurred as a late manifestation in 14 cases. There was punctate erythema of brief duration in 2 cases. In 1 case there were soreness and pain in the right knee. From February 15th to March 22d eighteen cases of diphtheria had occurred in the asylum. From March 22d, when the injections were begun, for a period of nearly 3 weeks, no cases occurred. At the end of this time children coming to the hospital were not immunized. Cases of diphtheria began immediately to occur until all the children in the house were immunized again.

Annals of Surgery.

June, 1898. [Vol. xxvii, No. 6.]

- 1. Remarks on Surgery of the Bile-Ducts. CHRISTIAN FENGER.
- 2. Operative Wounds of the Thoracic Duct. Report of a Case with Suture of the Duct. HARVEY W. CUSHING.
- 3. Successful Resection of the Ileo-Cecal Coil for Carcinoma. JOHN CHAPMAN DIBBEL.
- 4. The Importance of Chronic Irritability of the Colon with Mucous Stools as a Symptom of Appendicitis. GEORGE KELLY SHOEMAKER.
- 5. Total Excision of the Fibula for Sarcoma. SAMUEL LLOYD.
- 6. A Case of Hara-Kiri which Terminated in Recovery. RICHARD H. HARTE.
- 7. Report of Six Cases of Hip-Joint Amputation. WILLIAM H. NOBLE.
- 8. A Surgical Washstand. FRANK FARROW SIMPSON.

1.—As it is impossible, clinically, in all cases, to separate the common duct from the rest of the bile-ducts, Fenger's remarks refer chiefly to the **surgery of the common duct**. The causation of pain or biliary colic is due to one of three factors; incarceration, with contraction of the wall of the duct around the obstructing stone; inflammation of the wall of the duct; or retention of bile behind an obstruction. As a point of interest in the differential diagnosis, the question arises as to whether the shape of a given gallstone passed by the bowel gives any clue by which its former seat in the biliary tract may be located, and, if so, where might one expect to find more stones. It has been observed that stones with facets, pyramidal stones, come originally from the gall-bladder. Stones with two parallel facets and barrel-shaped stones are commonly from the ducts, where they lie in a single row; while spherically shaped stones with no facets, only single, and either large or small, may occur anywhere; though, when multiple, they often come from a dilatation of the common duct. Exceptions, however, have been observed, as in the case herein reported, in which all the biliary passages were filled with pyramidal stones. It is impossible, clinically, to differentiate diseases of the gall-tracts caused by stones from those caused by bending or valve-formation of the ducts. Fenger is not in accord with those who advise abandoning the operation of cholecystostomy in two stages; the advantages of this method of procedure are, (1) that it is a surer preventive of infection of the peritoneum, especially when the operation is for a suppurating gall-bladder, and (2) that simple drainage of the gall-bladder not only allays the symptoms, but brings about a change in the pericystitis, whereby the hard and infiltrated adhesions become softer and more pliable, so that, at a later operation, the isolation of the bile-ducts, without rupture of the gall-bladder and intestines, is rendered possible. Two cases have been observed in which there was displacement of the gall-bladder and of the entire liver, due to firm adhesions to the parietal wall. Lateral displacement will necessitate prolongation of the longitudinal incision, while upward displacement might require resection of the costal cartilages. As in operations executed in the early stages few complications are liable to be encountered, it is advisable, in all cases, to urge early operative interference. In cases with remittent attacks, the operation should be performed in the interval of rest, at which time the adhesions are less rigid and edematous and the microbes less active. As an aid in detecting stone after the common duct has been

opened, Fenger recommends the flexible metal probe, made of spiral wire. With this instrument, not only is the click felt when the probe strikes a calculus, but, what is of greater importance, should a part of the probe glance by a calculus, a grating sensation is felt, from the contact of the stone with the uneven surface of the probe. The prognosis of choledochotomy, as of all operations of the ducts in general, is improving, the mortality varying from 18 to 6.6%.

2.—Wounds of the thoracic duct have in the past been regarded as hopeless and beyond surgical treatment. Cushing reports a case that demonstrates that an operative wound of the duct can be successfully sutured. The extensive dissection of the supraclavicular region that is more common nowadays, especially in amputation of the breast for malignant disease, exposes this structure to injury more frequently.

3.—Oliver resected the ileocecal coil for carcinoma in a patient 56 years of age, anastomosis being effected with the Murphy button. The case was an exceptionally suitable one for surgical interference, as the absence of adhesions allowed the intestine to be delivered through the abdominal wound; and making the operation practically an extraperitoneal one. There was little subsequent constitutional trouble and the patient made a rapid convalescence.

4.—Shoemaker draws attention to the prevalence of attacks of catarrhal enteritis with copious discharge of mucus in the previous history of individuals subsequently victims of appendicitis. The relation of **appendicitis** to these **mucous discharges and irritation of the colon**, may be considered a point in the differential diagnosis of appendicitis from obscure or complicated acute cases of localized pelvic inflammation, and also with reference to the probable role of the appendix in chronic catarrhal intestinal conditions. It is not unlikely that the discharge, from the appendix into the colon, of a fluid containing colon-bacilli or normal bacteria of the intestine, which have been modified by the pathologic condition existing in the walls of the appendix, may have important bearing in the etiology of chronic colitis, or enterocolitis.

5.—Lloyd reports a case of **total excision of the fibula for sarcoma**, the first operation of this nature that has been performed for malignant disease. In the performance of the operation it is advised that every precaution be taken to avoid injuring the musculo-cutaneous nerve, the anterior tibial and posterior tibial vessels and nerves; and, if the ankle-joint is involved, care must be taken in the after-dressing to keep the foot at such an angle that, should ankylosis follow, it will still be in a useful position. The patient was a woman, 23 years of age, who had sustained an injury to her ankle some 8 years ago. After she had recovered from the effects of the operation, the toxins of erysipelas and prodigious were administered as a prophylactic against recurrence. It is interesting to note that, though 3 years have elapsed since the operation, there has been no recurrence.

6.—That recovery should have followed this case of **hara-kiri**, the act of self-destruction practised by Japanese gentlemen of the military class, is nothing short of miraculous. The patient, while in a depressed state of mind, owing to the loss of his eyesight, inflicted this injury upon himself by thrusting a butcher's knife into his abdomen on the left side and drawing it across to the corresponding point on the opposite side, separating all the parietal integument, and allowing a large mass of the viscera to escape. Only a brief time elapsed before the man was in the hands of the attending surgeon, who discovered that there was a large transverse wound, from 8 to 9 inches in length in the abdominal wall and on a line just above the umbilicus, while protruding from the wound were the transverse colon, the omentum, and a large mass of small intestines, a portion of which, about 18 inches in length, had been severed from its mesenteric attachment and stripped of its peritoneal covering. In addition to thorough cleansing of the intestinal mass with hot distilled water, the operation consisted in a resection of about 18 inches of the injured bowel, which had been severed from its mesenteric attachment. With the exception of the development of an abscess in the abdominal wall, the patient made an uninterrupted recovery. Harte calls attention to several factors, which he believes greatly aided its favorable termination, namely, the short time elapsing between the injury and surgical assistance; the temperature



of the day, which was high, preventing chilling of the exposed viscera, and thereby diminishing the tendency to shock; and the thorough douching with hot sterile water during the operation, and the hourly flushing of the abdominal cavity for 2 days afterward.

7.—This series of **6 hip-joint amputations**, with 1 death, includes 1 amputation for a crush to the thigh, 2 for diseased femoral and acetabular disease, and 3 for osteosarcoma of the tibia. As to the technic, 2 were done by transfixion, hemostasis being effected by digital compression (exerted by means of the assistant's hands passed in through the incision and grasping the flap), and 3 were done by the use of Wyeth's pins. As there are the same objections to Wyeth's method as to elastic pressure elsewhere, Noble prefers to amputate by transfixion, the hemorrhage being controlled by an assistant, in the manner described.

#### American Journal of Obstetrics.

June, 1898. [Vol. xxxvii, No. 246.]

1. The Cesarean versus Fetal Mortality. EDWARD REYNOLDS.
2. Vaginal Ablation in Pus-Cases. W. R. PRYOR. (*With ten Illustrations.*)
3. A Case of Extrauterine Gestation, with a Study of the Origin of the Syncytium. H. L. WILLIAMS and L. T. SALMON. (*With six Illustrations.*)
4. A Clinical Contribution to Tubal Pregnancy. H. J. BOLDT.
5. Cystic Degeneration of the Chorion Villi with Coincident Cystic Tumor of Both Ovaries. HENRY KREUTZMANN.
6. Irrigation with Salt-Solution and other Fluids in Surgical Practice. HUNTER ROBE.
7. Tetany in Infants. SAMUEL S. ADAMS. (*With three Charts.*)
8. Membranous Dysmenorrhea. GEORGE WYTHE COOK.

2. Pryor states that there is practically no mortality from **vaginal hysterectomy in pus-cases**. The operation is so rapid, the narcosis so limited, that fatal complications are not encountered, as pneumonia and nephritis. The technic adopted is as follows: The uterus is cureted and swabbed out. The incision posteriorly is made at the cervico-vaginal junction so that the cul-de-sac is easily entered. Anteriorly it is made, not near the external os, but it enters the loose pericervical tissue between the bladder and the cervix. Upon each side  $\frac{1}{2}$  inch of vaginal mucosa separates the sides of the incision. This is left (a) to preserve intact the base of the broad ligament containing the uterine artery, and (b) to hold the last pair of forceps. The intrauterine traction-forceps is next introduced to secure control over the uterus. The tissues are cut with scissors and are rubbed off the cervix by the fingers. When the anterior peritoneum is severed by the fingers the lateral attachments of the bladder to the uterus are carefully broken by the fingers. Up to this point no attempt has been made to separate adherent adnexa. This completes the first stage. The uterus is next split exactly in the middle line as high up the anterior surface as the operator can see. The uterus is then drawn down and further splitting accomplished until the cornua appear. The perineum is then retracted and the uterus is split in two halves by a special bistoury. One half (the right) is then shoved up into the pelvis, and the other (the left) is drawn down and rotated outward, thus facilitating enucleation of the tube and ovary. When this is accomplished the left half of the uterus is pushed up into the pelvis and the right half is brought down and its appendage freed. The right ovarian artery is then clamped with the first pair of forceps applied, which is put in from above down. The next pair is applied upon the uterine artery and should include all the tissues to the vagina. The uterus is cut away and the two forceps are allowed to hang loosely. The left half of the uterus is similarly treated. A piece of gauze is then placed between each set of forceps and the vaginal wall and pieces between the sets of forceps so as to completely fill the vagina.

3.—Williams and Salmon incline to the opinion that all varieties of **extrauterine gestation**, without exception, undergo their primary development within the oviduct. No evidence exists to show that the normal impregnation does not take place in the tube, whereas there is no rational ground for assuming that man differs in this respect from other placental mammalia. From a careful study of the

villi of a case reported, it is concluded: 1. That in the present case the changes in the tubal mucosa were secondary to, and the result of, the detention of the impregnated ovum within the tube. 2. That no tubal decidua vera was formed. 3. That the syncytial layer is not derived from the superficial cells of the endometrium or tubal mucosa. 4. That the syncytial cells are not derived from the endothelial lining of the maternal capillaries. 5. That since the syncytial cells are not of maternal origin, they must be derived from the fetus, and probably directly from the fetal ectoderm.

4.—Boldt records a case of **tubal pregnancy** of the right side in which rupture occurred at an early stage of gestation (between the third and fourth week). He denies that there are invariably present periodic attacks of characteristic pains in patients who have a tubal gestation. He has personally seen 3 cases without characteristic pain or any other pain until a moment or two prior to the rupture. The characteristic, intermittent, cramp-like pains are present in all cases that have a partial rupture and in cases of tubal abortion, but it is doubtful if they occur in all instances in which extensive rupture takes place at a very early stage of gestation. As regards treatment, the vaginal route is permissible only when the tube has not ruptured, or if the patient has had one tube removed at some previous operation. If rupture has taken place, preference should be given the abdominal route.

5.—Kreutzmann records a case of **cystic degeneration of the chorionic villi** in a woman, 28 years of age, who had already given birth to 2 children at term. The patient made a good recovery.

6.—Robb states that the materials used for the purpose of **abdominal irrigation** are plain hot water, sterile salt-solution, and a variety of antiseptic fluids. Solutions containing germicidal drugs are open to the objection that they can never be of sufficient strength to destroy the septic material without producing local lesions or even general toxic effects from the absorption into the system of the chemic irritants that they contain. Even plain hot water is said, with reason, to have a definite deleterious effect upon the tissues. Through its action the red and white blood-corpuscles are injured or completely broken down. Abdominal irrigation is practised not only for cleansing purposes, but also to produce such a stimulus that the effects of shock may as far as possible be minimized. Normal salt-solution is an agent that offers these advantages and which thus far has never been shown to have any deleterious influence upon the tissues.

7.—Adams reports two cases of **tetany** in infants, and claims to have collated all of the published cases in infants 2 years of age and under that have been reported in North America. Tetany is a condition characterized by intermittent or continuous tonic contraction of muscles, usually affecting those of the extremities, but occasionally involving those of the face, neck, and trunk. Laryngismus stridulus is usually associated with tetany of infants, but is seldom observed in older children. Tetany may occur at any age, but it is more frequent in infancy and early childhood. It is more common in boys than in girls.

8.—Cook states that the exfoliation of the entire mucous membrane of the uterus, including the utricular glands, so as to show a cast of the uterine cavity as a whole or in segments, is rather a rare occurrence, yet it is sufficiently common, and is accompanied by so much pain, as to constitute a distinct form of **dysmenorrhea**. It is impossible to say why the mucous membrane under these conditions does not undergo the ordinary degenerative changes incident to menstruation. It would seem to be a perversion of nutrition and function rather than an organic disease. The treatment recommended has consisted in local application of iodine, carbolic acid, and the like, curettage and electricity, and the use of such constitutional remedies as arsenic, the iodids, and mercury.

#### American Gynecological and Obstetrical Journal.

June, 1898. [Vol. xii, No. 6.]

1. Ureteral Anastomosis. HOWARD A. KELLY. (*Illustrated.*)
2. Sterility. W. GILL WYLIE.
3. Four Cases of Abscess of the Uterus Treated by Incision,



Curetment, Sterilization with Carbolic Acid, and Drainage. GEORGE H. NOBLE.

4. Uterine Drainage; Drainage-tube versus Gauze. W. LILLYN PHELPS. (Continued.)
5. The Abortive Treatment of Puerperal Affections. WALLACE A. BRIGGS.
6. The Limitation of Hysterectomy for Carcinoma of the Uterus. JOHN H. RISHMILLER.
7. Birth of the Secundines. ERVIN A. TUCKER. (Concluded.)

1.—Kelly states that he has ligated a ureter twice in the enucleation of fibroid uteri, and once in removing a carcinomatous uterus through the abdomen. In another case of hysteromyomectomy he divided the ureter and anastomosed it at once into itself, and in one other case the ureter, bared in making an extensive abdomino-enucleation for a carcinomatous uterus, sloughed and left a uretero-vaginal fistula. Winckel estimates the proportion of ureteral fistulae to the number of total extirpations of the uterus as 17 in 774, or 2.2%. Ureteral injuries occur during operations, through the ligation of one or both ureters, by clamping them, by puncture of a ureter with a needle carrying a ligature under a bleeding area, by cutting a displaced ureter with a knife, by creating a slough in the wall of the ureter with a cautery-knife or loop, by tearing off a ureter adhering closely to a cyst or a malignant tumor, or by baring the ureter and injuring its external vascular sheath, resulting in the formation of a slough with a fistula. When a ureter is injured the best plan of procedure is to anastomose it at some point (ureterostomy). Such an anastomosis may be made in one of the following ways: Into the abdominal wall—simple ureterostomy; by joining the divided ends—uretero-ureterostomy; by switching the cut ureter into its fellow of the opposite side—crossed ureterostomy; by switching the upper end directly into the bladder—ureterocystostomy; by turning it into the rectum—ureteroproctostomy, or into the colon—ureterocolostomy, or into the vagina—ureterocolpostomy. Simple ureterostomy, ureteroureterostomy and ureterocystostomy are the anastomotic procedures employed when a ureter is injured during an operation. Ureteroproctostomy and crossed ureteroureterostomy are deliberate procedures to be undertaken at a later date, and ureterocolpostomy has hitherto been rather the result of the accidental formation of a fistula than a method of deliberate choice.

2.—Wylie says that for practical purposes the causes of sterility may be considered as those due to disease of the adnexa and those due to disease of the endometrium. Any disease that affects the endometrium or that changes the character of its secretion is liable to produce sterility. The trouble is not so much due to flexion as to the chronic endometritis that always exists in these cases. The proper treatment of this condition is the judicious use of the curet.

3.—Noble reports 4 cases of **uterine abscess** successfully treated by incision, curetment, sterilization with carbolic acid, and drainage. He recommends this process especially in puerperal cases.

4.—Porter divides the cases demanding **uterine drainage** into 3 distinct classes, according to the form of drainage to be employed. (1) Those requiring the uterine drainage-tube; (2) gauze-packing and the cervical drainage-tube; (3) cervical drainage, with or without gauze-drainage. The first class includes 3, the second 3, and the third 2 varieties of cases, as follows: 1. (a) The undeveloped uterus, usually ante-flexed, with endometritis of the atrophic type; (b) the small multiparous uterus, with simple non-septic endometritis; (c) the small nulliparous or multiparous uterus, with septic or gonorrheal endometritis; 2. (a) The subinvolved uterus, with metritis and hypertrophic endometritis; (b) the large, non-septic, puerperal uterus; (c) after operations for removal of submucous fibromyomata and polypoid growths; 3. (a) The septic puerperal uterus; (b) the septic or non-septic uterus after incomplete abortion. Given a small ante-flexed uterus, with a history of dysmenorrhea and sterility, the best results are to be obtained by the use of the intra-uterine drainage-tube. With a large, flabby, subinvolved uterus, gauze-packing is of advantage in promoting uterine contractions, favoring depletion, and checking hemorrhage when present. It should be used in conjunction with the cervical drainage-tube, for the small amount of gauze commonly left in the cervical canal does not maintain the patency of the os

and afford satisfactory drainage. When gauze-packing or tamponade is employed, the gauze should be gradually withdrawn, to allow of the escape of retained debris, and should be entirely removed in from 36 to 48 hours. Gauze, when compressed and coated with blood and mucus, serves to obstruct rather than favor drainage. When capillary drainage is desired, gauze should be loosely inserted and used with the tube to secure free drainage through the cervical canal. In puerperal sepsis, a large cervical drainage-tube should be used, preferably without gauze, and frequent irrigation with a catheter introduced well beyond any point of flexure should be practised.

5.—Briggs suggests the following **abortive treatment of puerperal sepsis**: 1. Prepare the patient and her surroundings very carefully as for a major operation through the vagina. 2. If the perineum be torn and seem infected, remove the stitches at once. 3. Place the patient in an exaggerated Sims' position, with the right knee well drawn up, so that the fundus will be the lowest part of the uterus. 4. Remove from the introitus a small quantity of lochia for culture and microscopic examination. 5. Cleanse the vagina thoroughly with a copious mild antiseptic douche—formalin 1:500. 6. Examine the vagina and cervix carefully in a good light for lacerations. 7. Remove the lochia from the cervix for culture and microscopic examination. 8. If the uterus does not seem infected, cleanse the lacerations of the cervix, vagina, and perineum, and pack them with gauze saturated with antiseptic glycerin. 9. If the uterus seems to be infected, thorough disinfection by approved methods is indicated.

6.—Rishmiller says that total **extirpation of the uterus** is justifiable when there exists a strong clinical suspicion corroborated by microscopic evidence of **malignant disease**. Hysterectomy is indicated in all cases in which a positive diagnosis of carcinoma of any part of the uterus is made. Contraindications for uterine extirpation are all those conditions in which the uterus is fixed and immovable in the pelvis, through extensive carcinomatous infiltration into the broad ligaments. An operation for extensive rectal implication may seemingly appear feasible, but the infected, although not suspected, lymphatic perirectal glands can rarely ever be removed and will soon kindle an inevitable recurrence. A radical operation is of no avail whenever the bladder or ureters are involved.

7.—Tucker points out that the frequency of the birth of the fetal surface of the placenta out is, as observed clinically, more than twice that of the maternal surface out. Most profuse hemorrhages occur when the placenta is born with the maternal surface first and out, and the smallest when it is born edge first. When the placenta is born spontaneously within from 15 to 20 minutes after the child's birth, hemorrhage is more frequent than when the placenta is expressed by the Credé method.

## Archiv für Verdauungskrankheiten.

April 1, 1898. [Bd. 4, Heft 1.]

1. The Diagnostic Value of the Blood-count in Latent Gastric Carcinoma. FREDERICK P. HENRY.
2. Alimentary Glycosuria in Liver-affections. J. C. J. BIEREUS DE HAAN.
3. The Histology of the Gastric Glands in Hyperacidity. JOHN C. HEMMETER.
4. The Digestion of Albumin Under the Influence of Solutions of the Halogen-salts. B. PELTYN.
5. Hypertrophic Stenosis of the Pylorus and its Treatment. J. BOAS.
6. A Case of Adhesion Between the Liver and the Colon. H. WESTPHALEN.

1.—Henry considers the estimation of the **red blood-cells** a highly important means of **diagnosis** between **carcinoma of the stomach** and **pernicious anemia**. He states that he has never seen a case of carcinoma of the stomach in which the number of red cells was below 1,500,000, and on the contrary he has never seen a case of fatal pernicious anemia in which the number of the red corpuscles was not below 1,000,000; in other words the decrease in the number of corpuscles in carcinoma does not keep pace with the cachexia, while it exceeds this in pernicious anemia.



2.—De Haan has made tests in 20 cases of various **diseases of the liver**, administering in each 150 grams of grape-sugar. He found **alimentary glycosuria** in 18 cases, while in 11 cases it was not present. It was present in 2 cases of Lannec's cirrhosis, absent in 1; present in 7 cases of Hanot's cirrhosis, absent in 3; present in 3 cases of hypertrophic cirrhosis with icterus and ascites, absent in 1 case; absent in 2 cases of atrophic cirrhosis with icterus, and in 1 case of hypertrophic cirrhosis with ascites without icterus; and present in 2 cases of carcinoma, and 2 of 3 of catarrhal icterus. These results are opposed to those of Hanot, and other Frenchmen, who have found alimentary glycosuria absent in cases of Hanot's cirrhosis. The glycosuria was found most frequently in those cases in which there was severe constitutional depression. De Haan states that it is necessary to examine the urine in portions passed at different hours of the day, as sugar may be found at certain times of the day and not at others.

3.—From examination of fragments of the gastric mucosa Hemmeter divides the changes found into those with an increase of the interstitial tissue; those with an increase of the glands, affecting the chief glandular cells alone, or a special increase of the parietal cells while the chief glandular cells remain normal; and another type in which there is increase in the number of the glandular canals in parts, while in other parts the parietal cells are chiefly increased. Other conditions found are beginning atrophy or advanced atrophy, and vacuolization; in the latter a portion or the whole of a part that was previously occupied by a gland being replaced by spaces. Of 10 healthy persons, 8 were found in this way to have a normal mucosa. Of 20 cases of **hyperacidity** the glands were normal in 4; in 2 there was atrophy, with interstitial increase, but with an increase in the number of parietal cells; in 6 cases there was an increase of the glands, with seemingly normal parietal cells; while in 8 cases there was an increase of the parietal cells, without marked changes in the glandular canals. Of 12 cases of **anacidity** there were 2 presenting normal conditions. In the remainder, excepting one, there was some stage of atrophy. In the exceptional case there was hyperplasia of the glands, with marked round-cell infiltration. There was thus an increase of the glandular elements in from  $\frac{1}{2}$  to  $\frac{2}{3}$  of the cases of hyperacidity, and a decrease in the same percentage of cases of anacidity. It is highly probable, therefore, that there are 2 forms of hyperchylia, one of nervous origin and one due to changes in the mucosa. Although it is commonly taught that proteid diet is best for hyperacidity, Hemmeter finds that a large increase in the proteids is always followed by an increase in intestinal putrefaction, as indicated by the amount of indican and of ethereal sulphates in the urine, while the addition of carbohydrates to the diet is attended with a decrease in the amount of these substances. He also finds that the use of a proteid diet increases the amount of hydrochloric acid in the gastric contents, and he has found also that of two dogs from the same litter, one fed upon carbohydrates for a year, the other chiefly upon proteids, the first displayed a much lower percentage of hydrochloric acid than did the other. He believes, therefore, that a diet rich in starches may often be useful, and he has found it well borne in many of these cases, though he believes that the patients should have a rest from heavier diet once every week or two, and be put upon fluids for a few days.

4.—Peltyn has investigated the **proteolytic action** of several **halogen-salts**, beginning with sodium chlorid in various concentrations, from .05% to 30% solutions, and excluding the action of microorganisms. When fibrin was acted upon by these solutions, it was found first by making cultures that the growth of the microorganisms had been excluded. There had been distinct digestive action by the concentrated solutions, that of 15% strength seeming to have the most marked action, while of the weak solutions, that of .5% strength was most active. The digestive action began after  $\frac{1}{2}$  hour with the 15% solution, and within 2 hours 3 grams of fibrin had been entirely digested by 30 cu. cm. of the salt-solution. It was found by chemic examination that the results of this disintegration were fibroglobulin, protoalbumoses, deutero-albumoses, and peptones. Comparison of sodium-chlorid digestion with pepsin-digestion showed that the former was less effective than the latter. All albumins were not so readily digested by sodium chlorid as was fibrin, only the so-called genuine albumins, as egg-

albumin and gluten, being much acted upon. Boiled fibrin, coagulated egg-albumin, casein and vegetable albumin were not changed. Of other halogen-salts, fibrin was found to be digested by potassium chlorid, ammonium chlorid, and bromid and some of the iodids and fluorids. These experiments showed that microorganisms are not necessary to the process of proteolysis, and make it probable that fibrinolysis in the blood is due to the digestive action of the salts in the blood-serum, as it has been shown that the blood is free from such proteolytic ferments as pepsin and trypsin.

5.—Boas reports three interesting cases, and from them concludes that **stenosing gastritis** occurs chiefly in the earlier half of life; as a chronic disorder with symptoms that persist for a number of years before they become severe. The earliest symptoms are only those of dyspepsia, vomiting coming on only in the second stage of the trouble, that of disturbed compensation. A marked feature in the cases was that the appetite was well preserved in distinct contrast to ordinary gastric affections, though this may occur in other conditions. In no case was there any history of bleeding from the stomach or of blood in the stools. The stomach was not much enlarged in any case, though in one there was moderate dilatation. In another there was marked peristaltic unrest, and in one there was a hard tumor to be felt at the pylorus which made the diagnosis difficult. In other cases no tumor could be felt. After the use of ordinary food remnants were usually found in the stomach. On absolute milk-diet no remnants were found in two cases, though the stomach never emptied itself in the third case. Free hydrochloric acid was always absent, and the ferments were largely decreased. Lactic acid was always present, sarcinae never, though long bacilli were found in greater or lesser number. The diagnosis depends upon the recognition of stagnation in connection with, possibly, visible peristalsis, these pointing to stenosis; while the absence of hydrochloric acid and of ferments is indicative of a profound change in the gastric mucosa. The prolonged course of the disease and the exacerbations and improvements bespeak a benign process. From stenosis due to cicatricial contraction, hypertrophic stenosis of the pylorus is distinguished by the absence of a previous history of hemorrhage, and hydrochloric acid. From primary atonic ectasia it is distinguished at once if visible peristalsis is present, and Boas has never seen such marked symptoms of gastritis attend atonic gastrectasia. The differentiation from carcinoma may be difficult. If the disease has lasted for years this fact would exclude carcinoma. If the case is seen for the first time the diagnosis might be impossible, but the earlier age of occurrence of hypertrophic stenosis and the history, showing the variations in severity at various periods, would be of importance; as well as the facts that the gastric motility progressively decreases in carcinoma and that coffee-ground vomiting is common. The presence of a tumor at the pylorus is not distinctive of ulcer, as shown by the third case. The prognosis of hypertrophic stenosis is unfavorable, practically all cases resulting fatally unless operated upon. The degree of stenosis and of preservation of gastric motility are the signs upon which the prognosis should be based. As a rule, unless the condition is very pronounced, the patients can take large quantities of fluid without much stagnation. If this cannot be done operation becomes necessary. When food can be taken the advisability of operation depends upon the judgment of the physician and the wishes of the patient. In the medical treatment of these cases careful diet, with the exclusion of all irritants, chief dependence being placed upon fluids as far as this may be possible, is the most important indication. Hydrochloric acid, pancreatin, and papain may do good. In all of Boas' cases gastroenterostomy was performed, in two with practically entire recovery, in the third with improvement.

6.—Westphalen records the case of a man, 57 years old, who had for a long time had digestive disturbance, the chief difficulty being pain in the neighborhood of the liver and umbilicus followed by vomiting. These attacks increased in frequency until they occurred every week or oftener. On one occasion coffee-ground material had been vomited. There was severe constipation, but no icterus. Several years before the man had suffered an injury in the region of the liver. This organ was of normal size. There was a tender point in the region of the pylorus, with no other definite symptoms. No gall-stones were found in the stools. There



was no stagnation in the stomach. The gastric contents were excessively acid. A diagnosis of ulcer was made and seemed to become probable through the repeated occurrence of hematemesis, but treatment for ulcer was attended with no improvement. As the attacks were undoubtedly connected with the act of defecation, were much improved by a warm bath, but did not seem of spastic nature as atropin brought no relief, and as the lower portion of the liver-dulness always gave place to an area of tympany during the attacks, the latter symptom pointing to an acute local meteorism, it was decided that intraabdominal adhesions must be present; and as there was a probable history of ulcer, the diagnosis of gastro-colic adhesion seemed established. Operation was undertaken, and while the pylorus was found firm and contracted, no adhesions of the stomach were present. Subsequently to the operation, there were severe hiccough and vomiting, which did not improve, so that a second operation was undertaken, with the thought that there was an adhesion of the intestines to the stomach causing obstruction and consequent upon the celiotomy. This adhesion was found, but the patient died. On examination after death a duodenal ulcer was found immediately next to and causing stenosis of the pylorus. There was also a broad fibrous adhesion between the transverse colon and the under surface of the liver. There were no gall-stones. Hence the original diagnosis had been nearly right, and in error only in that there was an adhesion of the colon to the liver instead of to the stomach. Westphalen speaks of the impossibility of finding any satisfactory description of such a condition in text-books or other writings.

#### Münchener medicinische Wochenschrift.

June 7, 1898. [45. Jahrg., No. 23.]

1. The Tonsils as a Site of Entrance for Severe General Infections. F. JESSEN.
2. Bacteriologic Investigations in Whooping-Cough. OTTO ZUSCH.
3. A Contribution to the Knowledge of Secondary Malignant Neuroma. HABERMANN.
4. The Employment of Sanatogen in States of Disease. H. SCHLESINGER.
5. Vasogen as a Vehicle in the Local Treatment of the Skin. KARL ULMANN.
6. Psychic Conditions of Imperative Impulse. L. LÖWENFELD.

1.—Jessen reports 4 cases in which the tonsils constituted the **portal of entry for infectious diseases**. In the first, a man of 30 was seized with severe pains in the limbs, stupor and sore throat, and a dirty-green membranous formation appeared on the tonsils. A papular eruption appeared after 3 days, and there were severe joint-pains. Bacteriologic examination showed staphylococci and streptococci in pure culture in the membrane, while examination of the blood yielded negative results. In the second case, a diagnosis of typhoid fever had been made, although the Widal reaction was negative. Nothing abnormal was seen in the throat. The spleen was enlarged. The urine contained albumin and casts. After death numerous pyemic abscesses were found that seemed undoubtedly to have arisen from inspissated abscesses that were present in the depths of the tonsils. In the third case there had been at first signs of tonsillitis, and streptococci were cultivated from the tonsils, then wandering pneumonia appeared, with pericarditis, pleuritis, signs of renal irritation, cutaneous eruptions, and hemorrhages. No pneumococci or influenza-bacilli were found in the sputum, but the same streptococci that were found on the tonsils. Recovery occurred. In the fourth case the patient was seized with tonsillitis, then with pericarditis, followed by pneumonia and general sepsis. After death the tonsils showed nothing externally, but when divided, pus issued from numerous small cavities. Pyemic abscesses were found in the spleen and lungs, and in the tonsils, the lungs, the spleen and the kidneys, staphylococci were found. Cases like the second and fourth teach that the origin of a general sepsis may be the interior of the tonsils when the external surface seems normal. Jessen believes that one may have an early suspicion as to whether there is danger in a given case of tonsillitis that general sepsis may occur. Such forms

as have an exudate on the tonsils that is not lacunar, but in strips of yellowish-white color like those seen in culture-tubes, and that tends to go deeply into the tonsils, must be considered dangerous in the beginning. Several cases are reported in which there were enlargement of the cervical glands and the general appearances of scrofula, together with adenoids, and in which the removal of the adenoids caused rapid disappearance of all the signs suggestive of tuberculosis. It is believed that tuberculosis frequently arises from adenoid growths.

2.—Zusch states that in 24 cases of **whooping-cough** he has got the same results as in cases that he has previously published, finding in the sputum, especially in the first 2 or 3 weeks of the disease, a bacillus much resembling in its morphology the influenza-bacillus, but somewhat larger. It is found readily by allowing the sputum to stand in water for about an hour, and then examining the peculiarly pale flecks of mucus. Zusch and Czapslewsky have concluded that their independent results are identical. Zusch gives a description of the methods employed and of peculiarities of culture. The bacillus is facultative anaerobic; it does not cause fermentation of sugar, and it does not coagulate milk. It is usually decolorized by Gram's method, and it stains well with carbol-fuchsin. Inoculation-experiments yielded negative results.

3.—Habermann makes a contribution to the literature of that condition known as **secondary malignant neuroma**, a condition associated with congenital neurofibromatosis or elephantiasis neuromatodes congenita, with congenital pigmentation and nevi of the skin. The originally benign neuroma may exist for a long time, entirely free from any subjective disturbances, until the sarcomatous degeneration begins, when motor and sensory phenomena appear. Garré has pointed out the distinction between secondary malignant neuroma and primary sarcoma of the nerve. The former presents the picture of multiple fibromatosis, with all its clinical manifestations, is usually of congenital origin or develops in childhood; this is not the case with primary sarcoma of the nerve. The local manifestations of the latter differ in no way from those of sarcoma of the soft tissues, while secondary malignant neuroma usually remains encapsulated, and does not involve the surrounding tissues; local recurrence is rare and metastasis to the internal organs, if it occurs at all, does so late in the course of the disease. It is evident that the condition is a rare one, as up to this time but 22 cases have been recorded. In the case here reported the patient was in her twenty-eighth year when the first observations were made. An examination at that time revealing diffuse pigmentation, and nevi and fibromata variously distributed over the cutaneous surface. The condition that first demanded attention was the development of a neuroma on the sciatic nerve, causing motor and sensory disturbances in the course of its distribution. Removal of the growth was followed by complete cessation of the subjective symptoms. Not long afterward neuromata appeared successively upon the ulnar and posterior occipital nerves, with the same train of symptoms, which, as in the first instance, vanished upon removal of the growths. There was in no instance any sign of local recurrence, but subsequently a number of other nerves became involved and in some instances the growths were removed. In each instance microscopic examination of the growths removed revealed beginning sarcomatous degeneration. An interesting feature was the supposed involvement of the splanchnics, as evidenced by excruciating pain in the hypogastric region and the diminished secretion of urine. After a period of time, during which the suffering was intense and only partially relieved by injections of morphin, the subjective symptoms vanished altogether—a phenomenon explained upon the assumption that the sensory fibers were destroyed by the sarcomatous degeneration.

4.—Schlesinger has used **sanatogen** in a number of cases of various kinds with seemingly good results.

5.—**Vasogen** has all the desirable characteristics of a vehicle in the treatment of skin-diseases. It is non-irritating, colorless, free from odor, penetrates without difficulty the skin-follicles, ensuring rapid absorption of the drug, and is easily removed. It is thoroughly miscible with the drugs that are commonly employed in the treatment of cutaneous affections.

6.—*Obsessional hallucinations*.—These occur in part in



connection with obsessional concepts (secondary obsessional hallucinations), in part independently (primary obsessional hallucinations). The secondary forms correspond in the main to the concepts on which they are based. One patient who was pursued by a suicidal concept saw a glittering dagger inviting her, as it were, to the deed. The primary hallucinations are partly called up by perceptions or recollections. One patient saw a board with nails before her whenever she read the word "When" (Wenn). A patient reported by Stephani, saw frequently painful scenes of her former life with intense vividness.

5.—*Obsessional impulses, instincts, acts, and inhibitions.*—

1. Not all imperative acts are consequent upon obsessional impulses or instincts, a large part having only an indirect connection with obsessional concepts, for the latter lead first to other concepts or motives, which in their turn provoke the action. Thus *Zweifelsucht* leads to endless repetition of an act because the doubt concerning the correctness of the work constantly reproduces the motive to execute the task properly. Mysophobia leads to imperative washing; the idea that one cannot know for what purpose this object may be utilizable to the collecting and accumulating of worthless trifles. 2. Other imperative acts result as a direct consequence of obsessional concepts with impulse. The impulse here antedates the action as a distinct mental phenomenon, but does not necessarily lead to the particular act, the consummation being prevented by the inhibitory action of the reason. To this class belong the inclination to repeat accidental acts, such as touching of objects, enunciating single syllables or words; to whistle or to hum; the impulse to smash everything to pieces, the impulse to arson (pyromania), to appropriate the things belonging to others (kleptomania), etc. 3. Certain imperative acts are excited by obsessional concepts with impulses that immediately and irresistibly are transformed into the corresponding deeds. Impulse and deed, in other words, coincide. To this group belong many coordinated movements, such as those observed in *maladie des tics*; the impulse to laugh or to weep during an indifferent or even contrary mood; coprolalia, echolalia, and echokinesis. These phenomena have been observed in the disease known as latah, myriachit, or the jumping disease, described by Beard.

6. Special attention must be given to the imperative concepts with suicidal or homicidal impulses, the latter being generally directed against the immediate family. Such concepts usually arise transiently as the result of external circumstances, as at the sight of a knife, of a bottle of poison, of an open window, or on walking along the bank of a stream. Usually the impulse connected with these obsessional concepts is not strongly marked, and if the patient becomes depressed it is because of the nature of the concept rather than from fear of actually committing the deed. Homicidal acts as a consequence of obsessional concepts within the limits of a neurosis are rare if at all known, but suicide has occurred. Not rarely obsessional concepts and impulses have their origin in dreams. Obsessional inhibition is rare as an independent phenomenon, but it proceeds usually from obsessional concepts, emotions, or acts. The compulsion to perform certain acts while at work may lead to a suspension of the work. The obsessional concept of inability, of being unable to do a certain thing, may lead to failure to do that thing. The nosologic position of obsessional states is not definitely settled. Löwenfeld seems to look upon them as chiefly symptoms that may occur in hysteria, hypochondria, melancholia, *maladie des tics*, migraine, epilepsy, etc. Regarding the prognosis he, as well as Koch and others, is of opinion that obsessional states are rather a protection against psychoses than predisposing to them. It is usually possible to ameliorate the conditions and even the most severe are amenable to cure. However, there is a tendency to recurrence.

**Wiener klinische Wochenschrift.**

June 2, 1898. [11. Jahrg., No. 22.]

1. The Epithelium and Glands of the Esophagus. JOSEF SCHAFER.
2. Concerning the Deposition of Arsenic in the Hair. E. SCHIFF.
3. The Movements of a Pyopneumothorax as observed upon the Röntgen Screen. ROBERT KAIENBÖCK.

1.—Schaffer draws attention to the manner in which the **histology of the esophagus** has been neglected. He, himself, describes two forms of glands in the esophagus; one found chiefly in the upper half of the esophagus, consisting of long twisted glands lying in the submucosa, the ducts emptying into an ampulla, from this passes a main duct that pierces muscularis mucosa obliquely. The secretory portions are lined with cuboidal epithelium, which in the ducts becomes high cylindrical. These glands secrete mucus. Another form of glands is found only in the mucosa and their character varies somewhat. The body of the gland is composed of a few long, twisted tubes emptying into an outlet that likewise is often ampulla-like. This duct, however, always passes through the summit of the papilla, while the duct of the first form of glands always passes between the papillae. The secretory epithelium of the latter form of glands reminds one strongly of that of the pylorus of the stomach. There were occasionally examples, however, of cells that resemble entirely in their size and form the parietal cells of the glands of the fundus of the stomach. These areas of typical gastric epithelium appear to the naked eye like erosions. They are found in the lateral pouches between the cricoid cartilage and the fifth tracheal ring, although they sometimes appear in the deeper parts of the esophagus. The explanation of their occurrence is found in the fact that the esophagus is, in the early development of the individual, covered with the same form of entodermal cylindrical epithelium as the remainder of the alimentary tract, becoming subsequently changed, and finally reaching the form of pavement epithelium. The successive varieties of cells can be traced in various animals. In man, one can find that the cardiac glands of the stomach are often carried into the esophagus in small patches. The existence of these cylindrical cells affords opportunity for the occurrence of cylindrical carcinoma. The fact that the duct of the first form mentioned passes obliquely to the surface renders easy the occurrence of obstruction and the formation of small cysts.

2.—In order to determine whether the influence of arsenic on skin diseases is local or general, Schiff made chemical analyses of the hair of animals fed upon this drug, producing chronic arsenical poisoning, and found that both under these conditions and in the case of animals acutely poisoned with arsenic the hair contains a small quantity of arsenic, from which he concludes that the effect of arsenic is probably chiefly local.

3.—Kaenböck reports the case of a man, 24 years old, with a left-sided closed pyopneumothorax that he studied with the fluoroscope. The most interesting observation made was that there was vertical respiratory movement of the surface of the fluid. This may be explained by the contraction during inspiration of the diaphragm, which under the circumstances is convex below. There was also pulsation of the surface of the fluid during the systole, i.e., a pulsating empyema, and Traube's explanation of the pulsation of empyema as due to direct conduction of the heart's impulse is supported by this observation, as the heart seemed to communicate its impulse directly to the fluid. Fereol's theory, that the heart communicates the pulsation to the air in the pneumothorax and so indirectly to the fluid is unsupported by Kaenböck's observations, as if the patient lay on his left side, thus leaving the heart surrounded by air, while the fluid sank to the side, no pulsation could be noticed.

**Berliner klinische Wochenschrift.**

May 30, 1898. [35. Jahrg., No. 22.]

1. The Innocuousness of Exudates Rich in Leukocytes. OSCAR BAIL.
2. The Biology of Tubercle-Bacilli. HANS ARNSON.
3. Prurigo. DOHL.
4. Dural Infusion. PAUL JACOB.
5. Diabetes and Mental Disease. RUDOLF LAUDENHEIMER.

1.—Bail has made some excellent investigations upon the **bactericidal action of fluids containing leukocytes**. Effusion was induced in rabbits by the intrapleural injection of aleuronat. Twenty-four hours later the animals were killed, the fluid removed, and then heated. It was found that the normal unheated exudate was entirely bactericidal, destroying all of the organisms employed in the course of 7 hours. The exudate heated to 55° C. was still moderately



bactericidal for staphylococci, but it had lost this power over streptococci; when heated to 60° for half an hour, it was still slightly bactericidal for staphylococci, the number of organisms not increasing; but it formed an excellent culture-medium for the typhoid bacillus. The bactericidal action was maintained by the fluid, even though the cells had been removed by centrifugation, but it seemed to lose this power more readily if heated than when cells were present. After the cells were removed from the liquid and suspended in physiologic salt-solution, their effects were equally as good as those of the normal exudate or better. In order to determine the nature of the bactericidal substance, the fluid from the exudate was precipitated by acetic acid, the precipitate collected, washed and dissolved in an alkaline normal salt-solution. It was found to possess slight inhibitory, but no marked bactericidal action. An attempt to extract from the leukocytes the substance that resisted a temperature of 55°, was partially unsuccessful. They were warmed in normal salt-solution for half an hour. If, however, some bouillon or serum were added, the microorganisms grew very well. Control-experiments with normal serum showed that it is not quite as active as the exudate.

2.—Aronson has studied the **chemic composition of tubercle-bacilli**, particularly with reference to the presence of fat. Large cultures were made, filtered and washed with distilled water; then dried at a temperature of about 80° C., the mass carefully ground in a mortar and treated with a mixture of 5 parts of absolute ether and 1 part of absolute alcohol. This solution was first used cold, then warm, and finally filtered. When the ether and alcohol were evaporated there remained a yellowish-brown, gelatinous mass, which weighed about one-fourth as much as the mass of dried bacilli. About 70 grams of this material were finally collected and analyzed, and it was found to contain 17% of free fatty acids, most of them soluble in alcohol; the remainder consisted of a wax, that is, a fatty acid mixed with some of the higher insoluble alcohols. Further experiments show that this wax is produced by the microorganisms, for it was even found, although in much diminished proportion, when they were grown upon inorganic media. It takes the basic aniline stains with great intensity, but is not wholly responsible for the peculiar color-reaction, because the bacilli can still be stained, although faintly, after it has been removed by ether; showing that they probably are enclosed in a capsule. If, however, the extraction is made with ether and alcohol to which hydrochloric acid has been added, the microorganisms lose wholly their staining reaction. The poison of the tubercle-bacilli is found in their bodies and is not destroyed by heat of 100° C., or above. Very small portions thus obtained in the autoclave produce death in guinea-pigs, with profound emaciation, but without characteristic lesion. Some animals, if given a sufficiently small initial dose, may become comparatively immune. An effort was made to immunize a horse, and as far as the animal was concerned, this was successful. The serum of the animal became distinctly toxic for guinea-pigs; its antitoxic qualities are not reported.

4.—Jacob continues his article upon **dural infusion**. After the cannula with 3 openings has been inserted, and the cerebrospinal fluid allowed to run out, the straight and lower openings are closed and a glass tube is attached to the upper one, in which the fluid to be injected is placed. This allows accurate measuring of the quantity injected and complete control of the pressure. All injections were naturally made with the strictest antiseptic precautions. The first experiments were made with a 0.1% solution of sodium chlorid, from 10 to 15 cu. cm. being injected. There was no local or general reaction. If the fluid was at once withdrawn the whole quantity could be obtained. If allowed to remain in the subarachnoid space for hours or days, the quantity obtained was greatly diminished. The second series of observations were made with the same solution, although from 50 to 70 cu. cm. were injected. Twenty-four hours later only a portion of this liquid could be obtained by puncture. In order to determine the diffusion of the liquid it was colored methylene-blue, which caused a slight greenish tinge in the subarachnoid fluid and to a certain extent must have been excreted through the kidneys, because the same coloration was observed in the urine. The third series of experiments were made with a physiologic solution of sodium chlorid (0.6%). The injection was followed immediately by violent twitching of the hind legs. The animals were restless and

exhibited symptoms indicative of intense pain. If methylene-blue were added to the solution, the color-changes were more pronounced and appeared earlier. The general symptoms usually lasted from a half-hour to 2 hours. The fluid seems to have disappeared almost completely in the course of 24 hours. Examination of these animals after death disclosed the presence of the stain in all parts of the subarachnoid space. The fact that a 0.1% solution may remain as long as 24 hours in the subarachnoid space proves that the cerebrospinal fluid may undergo great changes in volume. Unfortunately there were no cases in the clinic in which lumbar puncture appeared to be indicated as a therapeutic or diagnostic measure. Jacob was obliged to use for his observations some women suffering from general paralysis and hysteria. Injections of 0.1% solution of sodium chlorid produced no symptoms, even when as much as 150 cu. cm. were used. If methylene-blue were added to the solution the same changes were observed that occurred in dogs. When a physiologic solution was employed the patient complained of intense pain in the back, shooting into the legs, then severe headache, and a few hours later vomiting. There was usually a rise of temperature of about 4° C. All the symptoms disappeared in the course of 12 hours. Jacob concludes that considerable increase in the intracranial pressure, produced experimentally, has no influence upon the nervous system, unless the pressure be prolonged for some time. Experiments were also made to determine whether antiseptic or medicated solutions could be injected for the purpose of lavage of the subarachnoid space. This would probably be useless in cases of meningitis with much exudate, particularly if there was at the same time encephalitis or myelitis. The only antiseptic employed was carbolic acid 50 cu. cm., of from a  $\frac{1}{4}$  to a  $\frac{1}{2}$  solution being injected without producing any symptoms; a 0.4% solution of potassium iodid also was employed, as much as 25 cu. cm. being injected. The animals exhibited symptoms of intense pain, with paraplegia and sometimes paralysis of the forelegs. Later there was salivation, injection of the conjunctivæ, tachypnea, elevation of temperature, and other symptoms of intoxication, lasting usually from 12 to 24 hours. Iodin could first be recognized in the urine at the expiration of 6 hours, but the excretion lasted for 60 hours. It was always in the form of potassium iodid and was not in any organic combination. If a puncture was made 6 hours after the injection, the fluid contained a large proportion of potassium iodid, which was also found in the substance of the brain and cord for from  $\frac{1}{4}$  of an hour to 16 hours. This proved that the iodid was immediately taken up by the central nervous system after the injection, and remained in it for a considerable time. One-half per cent. solution of chloral hydrate induced no symptoms. The conclusion is reached that dural infusion may be of value as a therapeutic measure.

5.—Laudenheimer continues his article upon the **relation of diabetes to insanity**. He reports 3 cases of melancholia and paranoia in which glycosuria appeared simultaneously with the acme of the stage of depression and disappeared during recovery. Sometimes, indeed, it appeared 1 or 2 days before the psychical symptoms became pronounced. It is, however, impossible to include positively from these cases that the glycosuria had a causal or resultant relation to the mental symptoms, because its relation was not constant and it is difficult to conceive how such slight nutritive disturbances, which in normal patients pass unnoticed, could produce such severe changes in the mind. It is possible, however, that both are the result of some other cause. This relation may, however, be elucidated by study of the results of therapy.

**Suprapubic Cystotomy as an Aid to External Urethrotomy.**—Knott (*Western Med. Rev.*, June 15, 1898) states that when, in cases of impermeable stricture of the urethra, it is found impossible to pass even a filiform bougie, and when retention of urine makes immediate operation necessary, the performance of suprapubic cystotomy and the passage of a sound from the bladder to the point of urethral occlusion are distinctly advantageous. If skilfully performed, suprapubic cystotomy does not increase the danger of the classic operation, and it obviates the necessity of a tedious search for the proximal end of the urethra, while it is unattended with the risk of failure to incise the stricture.



## Original Articles.

## LECTURES ON ORTHOPEDIC SURGERY.

By JOHN RIDLON, A.M., M.D.,  
of Chicago;

AND

ROBERT JONES, F.R.C.S.,  
of Liverpool, England.

[Continued from Vol. I, p. 788.]

THE treatment of spondylitis, like the treatment of chronic disease of the arms and legs, is chiefly mechanical, but occasionally it is operative. The mechanical treatment may be divided into three stages: 1. Correction of the deformity; 2. Physiologic rest of the diseased area; 3. Restoration of function.

*Correction of the Deformity.*—From the earliest times efforts have been made to correct spinal deformities. Hippocrates (460–357 B. C.) treated spinal deformities occasionally by succussion, but he appears generally to have preferred treatment by forcible traction and countertraction, with direct pressure upon the gibbosity. Henry Heather Bigg,<sup>1</sup> quotes the following from Dr. Adams' translation of "The Genuine Works of Hippocrates":—

"Those cases in which the gibbosity is near the neck are less likely to be benefited by these succussions with the head downwards, for the weight of the head and tops of the shoulders when allowed to hang down is but small; and such

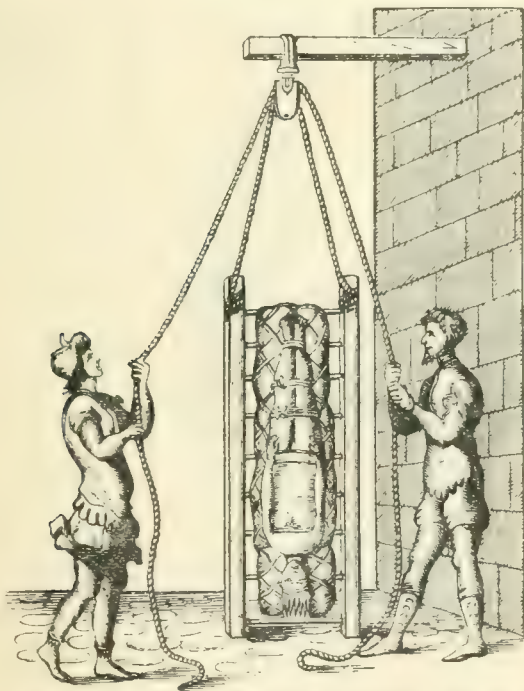


FIG. 1.—The treatment of spinal deformities by succussion. From the Venetian edition of Galen. Quoted in Bigg's "Orthopraxy."

cases are more likely to be made straight by succussion with the feet hanging down, since inclination downwards is greater in this way. When the hump is lower down it is more likely that succussion with the head down should do good. If one should think of trying succussion it may be applied in the

following manner: The ladder is padded with leather or linen cushions, laid across, and well secured to one another, to a somewhat greater extent, both in length and breadth, than the space which the man's body will occupy. He is then to be laid on the ladder upon his back, and the feet at the ankles are to be fastened, at no great distance from one another, to the ladder with some firm soft cord; and he is further to be secured in like manner both above and below the knee and also at the nates; and at the groins and chest loose shawls are put around in such fashion as not to interfere with the effects of succussion; and his arms are to be fastened along his sides to his body, and not to the ladder.

When you have arranged these matters thus you must hoist up the ladder, either to a high tower or to the gable end of a house; but the place where you make the succussion should be firm and those who perform the extension should be well instructed so that they may let go their hold equally to the same extent, and suddenly, and that the ladder may neither tumble to the ground on either side nor they themselves fall forward. But if the ladder be let go from a tower, or the mast of a ship fastened to the ground with its cordage, it will be still better, so that the ropes run upon a pulley or axle-tree."

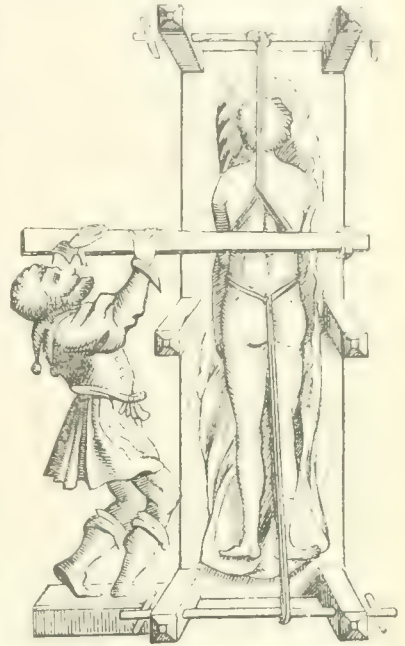


FIG. 2.—Forced correction of spinal curvature by traction and countertraction, and direct pressure by lever. From the Florentine edition of Galen. Quoted in Bigg's "Orthopraxy."

For the treatment of the gibbosities of spinal caries by extension Hippocrates recommended that

"something like an oaken bench of a quadrangular shape is to be laid along at a distance from the wall in which a groove has been previously scooped, which will admit of persons to pass around if necessary, and the bench is covered with robes, or any thing else which is soft, but does not yield much."

The patient after being stoved and bathed with hot water is to be stretched upon the board on his face, the arms being laid along and bound to his body. Next

"the middle of a thong which is soft, sufficiently broad, and long, and composed of two cross straps of leather, is to be twice carried along the middle of the patient's breast, as near the armpits as possible; then what is over of the thongs at the armpits is to be carried round the shoulders and afterwards the ends of the thong are to be fastened to a piece of wood, resembling a pestle; they are to be adapted to the length of the bench below the patient, and so that the pestle-like piece of wood resting against this bench may make extension. Another such band is applied above the knees and ankles, and the ends of the thongs fastened to a similar piece of wood; and another thong, broad, soft, and strong, in the form of a swathe, having breadth and length sufficient, is to be bound tightly around the loins as near the hips as possible; and what remains of the swathe-like thong with the ends of the thongs must be fastened to the piece of wood placed at the patient's feet, and extension in this fashion is to be made upwards and downwards, equally, and at the same time in a straight line."

<sup>1</sup> "Orthopraxy," J. & A. Churchill, London, 1877.

It is further recommended to press the palm of the hand upon the hump while extension is being made; or a person may sit upon the hump while extension is being made, rising from time to time and letting himself fall back upon it, or the foot may be placed upon the hump and the entire weight of the body brought gradually to bear upon it. Or better still, a lever may be used, one extremity of which is fixed in a hole in the wall, or in a piece of wood fastened to the ground. This lever is brought across the hump, a cushion being interposed and firmly pressed down while extension is made.

Galen (130-200 A. D.) appears to have followed very closely the methods of Hippocrates. His influence was paramount for more than 1300 years. In the Venetian edition of Galen's works will be found an illustration showing the method of performing succussion. In the Florentine edition is an illustration showing pressure upon the gibbosity by means of a lever during extension and counterextension by a windlass device.

Ambroise Paré (1517-1590) followed the teaching of Hippocrates in all essential particulars. He differs only in setting aside the pestle-like lever of Hippocrates and the windlass device of Galen for direct manual traction and countertraction, and in giving certain instructions for exerting pressure upon the projecting portion of the spine. He adds, moreover, directions for the application of splints to the back when the distortion has been reduced. The illustration that he gives shows the patient laid upon his face on a table, bound with towels under the armpits and about the hips, and by means of these extension is made, but not violently. During the extension pressure is made upon the projecting vertebrae by the hands; but if pressure exerted in this manner fails to restore the protruded parts, then it

will be convenient to wrap two pieces of wood four fingers long and one thick, more or less, in linen cloths, and so to apply one to each side of the dislocated vertebra, and so with your hands to press them against the bunching forth vertebrae until you force them back into their seats, just after the manner you see it before delineated." ("Orthopraxy." Henry Heather Bigg. 1877.)

These ancient methods were long since abandoned and have only been saved from total oblivion by occasional mention as examples of curious and barbarous

procedures. Reference is here made to these methods for comparison with the work recently done by Calot and others, to be described later on in these pages. In 1874 Sayre, of New York, began the treatment of spondylitis with the use of the plaster-of-Paris jacket, applied with the patient partially suspended, claiming by that means to correct the deformity in some considerable measure. Orthopedic surgeons in general, however, denied that the true curve or angle at the point of disease was in any way affected by this treatment, and that the only straightening of the spine effected by it occurred in the compensatory curves above and below the area of disease. The recent results from forcible straightening of spinal curvatures seem to demonstrate that Sayre's early claims were well founded.

Charles Fayette Taylor, of New York, followed with claims of gradual straightening by the antero-posterior leverage spinal brace; and his son, Henry Ling Taylor, has shown tracings of many cases treated with the Taylor brace and a more or less prolonged period of recumbency, in which some degree of straightening has taken place.

Following the treatment recommended by the late Dr. Buckminster Brown, of Boston, I believe one of us (J. R.) was the first to report a case of cervical spondylitis in which a well-marked angular deformity was completely corrected by horizontal traction, the patient being in bed.

The attempts at gradual straightening by the leverage-

brace, and by traction, with the patient recumbent, have been successful so many times and in the hands of so many different men that we may speak very confidently as to the results. They are briefly as follows: So long as the disease is active, deformity from disease in the cervical spine can be wholly effaced; deformity in the upper half of the



FIG. 1. Correction of spinal curvatures by traction and countertraction and manual pressure upon the kyphosis. From Ambroise Paré, in the sixteenth century. Quoted in Bigg's "Orthopraxy."

dorsal region can rarely be reduced; in the lower half of the dorsal region it can usually be somewhat reduced; in the lumbar region it can usually be greatly reduced and sometimes entirely effaced.

Recently, efforts have been made, and successfully, to straighten these spinal deformities by the exercise of considerable force, the patient being completely anes-



thetized. For many years, since the introduction of ether and chloroform, surgeons have been accustomed to straighten deformities due to disease at the joints of the legs and arms by the use of considerable force, but to Dr. Calot, of Berck-sur-Mer, is due the credit of suggesting and employing the same procedure in deformities due to disease in the spinal bones. Calot says that he was not satisfied with the results of the usual methods of treating Pott's disease; that he found the deformities under the usual methods of treatment growing progressively worse. This same experience has been the common lot of all surgeons who depend upon a surgical instrument-maker to measure for and apply spinal braces, and it has too often been the experience of those depending upon the plaster-jacket as a support in ambulatory cases.

Calot has been followed, with certain modifications, by very many of the Continental surgeons. It is not necessary here to specify them or their modifications. Briefly they are as follows: In recent cases the straightening is effected by longitudinal traction by the hands of assistants or by mechanical devices, while the operator makes downward pressure upon the kyphosis, the patient lying prone. In older cases operative measures are added. The soft parts are cut through and the bones divided by a chisel in one or more places; carious foci, if within reach, are scraped out; then the spine is straightened, and the spinous processes are wired to each other to maintain the correct position. This idea of immobilization by wiring the spinous processes appears to have originated with Dr. B. Hadra, of Galveston, Texas, who, in 1890, wired the spinous processes in a case of fracture of the spine. The immediate result was so good that Hadra recommended it in the treatment of Pott's disease in a paper read before the American Orthopedic Association in 1891. Hadra's wiring for fracture ultimately proved a failure, and, so far as we know, it has not been attempted for Pott's disease in this country. European surgeons appear to be becoming more conservative in their work in forcibly straightening these spines, since deaths have occurred from tuberculous meningitis and general tuberculosis arising apparently from dissemination of the disease through tearing through the walls of the tuberculous focus, as has occurred after forcible straightening at the hip and knee.

At the present time the deformity, if it be at all considerable, is straightened at several operations instead of at one, and cutting operations are avoided. Plaster-of-Paris is generally used as the means of retention. It may be put on while the patient rests upon two blocks, one under the hips and the other under the upper part of the chest, traction and countertraction being maintained; or the patient may be suspended by the feet during the application of the jacket. Foot-suspension requires fewer assistants and is safer when chloroform is used as the anesthetic; the objection to it is that the

abdominal contents are displaced upward to an unnatural and uncomfortable degree. The horizontal position is objectionable chiefly because it favors an uncomfortable degree of lordosis when the disease is dorsal, and because it is a difficult position when the head needs to be embraced by the plaster-dressing. Unless the head be included in the dressing, recurrence of the deformity may be expected in all cases in which the disease is at or above the ninth dorsal vertebra. After forcible correction of the deformity the patient must be kept in bed for many months, as no mechanical device can be relied upon to retain the spine in the corrected position if patients are allowed to walk around.

We have performed this operation of forcible straightening a sufficient number of times to warrant us in speaking from personal experience. The patient is fully anesthetized, preferably by chloroform. The patient is then turned prone upon the table. One assistant, in the case of a child, makes traction upon the legs; another makes traction upon the arms, and the anesthetizer makes gentle traction upon the head. The operator, with his hands upon the kyphosis, directs the gradual increase of the traction as the deformity yields, usually with considerable tearing and crackling, which can be distinctly felt and sometimes be heard. In recent cases little or no pressure need be made by the operator to effect the straightening of the spine; in cases of longer duration the surgeon may find it necessary to exert very considerable pressure. Each operator must judge of the amount of force that can be safely employed in each case. When the deformity is in the dorsal region and associated with a protruding sternum it will be convenient to place a block under the hips and another under the sterno-clavicular articulation. When the straightening has been effected the patient is clothed in a closely fitting stockinet shirt; quarter-inch felt pads must be placed over the iliac crests, and from half-inch to inch pads of felt must be placed upon the transverse processes on each side of the kyphosis, as close as possible to the spinous processes, to guard against pressure-sores, and then the plaster-jacket is made. Such a jacket must be made longer than the ordinary plaster-jacket used in ambulatory cases. In cases of lumbar disease it must extend downward on the thighs below the greater trochanters so far that the patient cannot sit upright, and in the presence of disease at or above the ninth dorsal vertebra it must extend up to and include the head. It has been claimed that the jacket thus applied maintains the longitudinal extension, but this is doubtful; it does, however, almost wholly prevent antero-posterior bending, and thereby acting as a lever, it prevents any considerable return of the deformity. The application of a plaster-jacket, including the head, while the patient is profoundly anesthetized and horizontal traction and countertraction are maintained, requires many assistants and is rather difficult; if sufficient assistants are not available it will be best

to suspend the patient by the feet, or by the knees, and apply the jacket with the head pendant. When patients are to be suspended by the feet or the knees plaster-casts must be put on the feet, or the knees, the day before the operation, so that the supporting straps or bandages may not constrict the limbs. When the head is to be included the hair is to be cut short, or the head shaved, and then wrapped thickly in bandages of cotton-wadding or wrapped in oakum held by an ordinary roller-bandage. Pressure-sores readily form on all parts of the head and they may form over the prominent sternum, or indeed over any bony point.

After observing the recent work of Goldthwait, of Boston (May, 1898), who utilizes the weight of the patient above the diseased area to partially correct the deformity, without anesthesia, and his stretcher-frame for holding the patient during the application of the plaster jacket, one of us (J. R.) has made use of the following procedure: After the spine has been straightened forcibly, as already described, and the patient is clothed in the stockinet shirt, he is laid supine upon two light steel bars supported by two sheet-steel rests that stand upon a table. The steel bars are bent to fit the straightened spine from the apex of the kyphosis downward, and they are separated

just far enough to make pressure upon the transverse processes. The sheet-steel stands that carry the parallel bars are narrowed at the top to  $\frac{1}{8}$  inch on each side of the bars. Laid supine upon these bars, with the part of the body above the kyphosis extend-

ing beyond their ends, the weight of the upper part of the body will straighten the deformity more than it can be straightened in any other way during the application of the jacket. A half-inch pad of felt is placed between the bars and the kyphosis, and quarter-inch pads over the iliac crests and over the upper part of the sternum. The plaster-jacket is then made, including the parallel bars. When it has hardened the patient is turned over prone, and the parallel bars are pulled out. This leaves a weak place at the back just above the angle of the deformity; and this can be strengthened by a few half turns of a plaster-bandage. In cases in which the disease is in the dorsal region above the ninth vertebra, the jacket can be built up in front under the chin of the extended head and the whole head need not be included in the plaster-dressing. This bridge-device

for supporting the patient, which only weighs 2 or 3 pounds, can be used in place of Goldthwait's stretcher-frame in applying plaster-jackets when the patient has not been anesthetized, and in all cases it is far more convenient for the surgeon and more comfortable for the patient than any form of suspension.

The second stage of treatment may be summed up in the term physiologic rest. This means the nearest possible approach to immobilization of the diseased area, its protection from jars and concussion, and its relief from weight-bearing until consolidation has become well established. Immobilization is sought for, and more or less perfectly attained by rest in bed, with or without traction, and by the application of a brace or corset; some of these devices by their leverage-action protect the diseased area from a certain degree of weight-bearing and jar during locomotion. Whether the patient should be treated with brace or jacket, or in bed with or without traction, will depend not only

upon the individual case and its personal peculiarities, but also upon the family and the general surroundings, and the skill of the surgeon himself in the use of this or that special appliance. One surgeon may be able to fit a brace well and manage it skillfully, but be un-

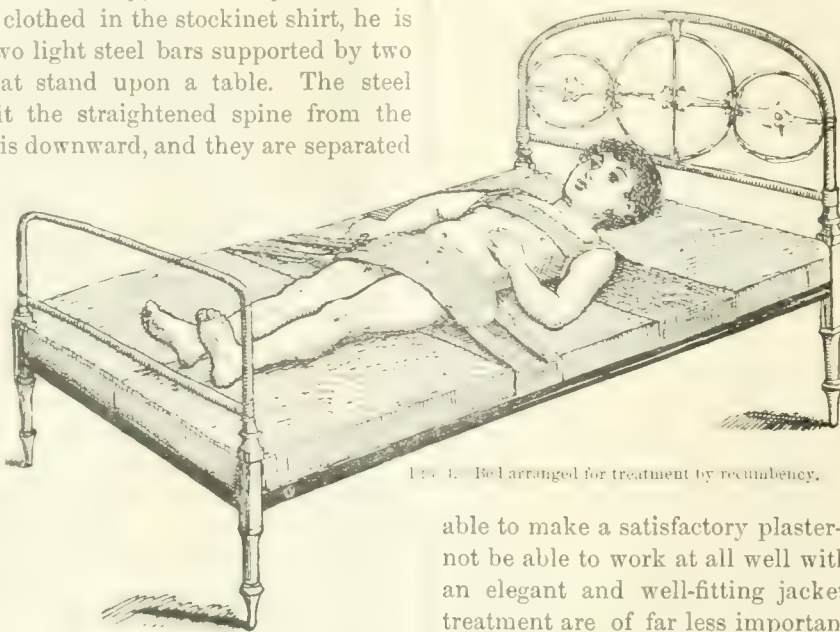


FIG. 1. Bed arranged for treatment by recumbency.

able to make a satisfactory plaster-jacket; another may not be able to work at all well with tools and yet make an elegant and well-fitting jacket. The methods of treatment are of far less importance than a correct appreciation of the principles involved, and the patience requisite to carry them out to the very end. In the hands of one of us the best results have been obtained by the antero-posterior leverage-brace; in the hands of the other a cuirass has been most serviceable. The latest form of the Taylor brace is perhaps the most correct theoretically, but in our hands it is not readily obtained and fitted. Most surgeons probably now use some form of jacket of plastic material, of which the Sayre pattern is the example best known and most readily made. Each of these will be hereafter described.

Treatment should be commenced at the earliest possible moment, and must be persisted in until cure is effected. A case is cured only when the spine will bear the superincumbent weight without pain or evident weakness in any posture, and continue so without any increase in the deformity.



*Treatment by Recumbency.*—This mode of treatment, by recumbency, in its effective application, is so exacting to the patient as to be well-nigh impossible. It calls for the most careful nursing and hence is wholly unsuited for the poorer population. It requires that the bed should be flat, smooth, firm, and without a pillow, and the patient so secured by straps that he cannot sit up, twist or turn. Thus, a strap of webbing or strong bandage is passed across the bed beneath the patient's shoulders, and fastened to the bed-frame on either side; upon this strap are strung two loops through which the patient's arms pass, and these are connected the one with the other by a strap across the chest. The pelvis is secured by a broad belt around it, from the sides of which straps pass to the sides of the bed-frame and are there fastened. The patient must not be allowed to sit up for food, for the use of the bed-

pan, or for any other purpose; nor must he be taken from bed for bathing, for changing of sheets or clothing, or for the turning of the mattress, if the best effects of recumbency are to be secured. To fail in strictly following these directions will cause the breaking up of the new bone-formation about the carious vertebrae, a return or an increase of the deformity, or it may prolong

the paraplegia, if present, and perhaps render it incurable. It will be readily seen that although the surgeon is saved labor, it is very difficult to carry out this treatment for any considerable time; in fact, practically impossible to carry it to a successful result in any but exceptional cases. So-called "treatment by recumbency" often means that the patient lies in bed when he chooses, sits up when he pleases, or gets up and walks when he can. Under such conditions it is not surprising that the deformity increases, that abscesses are frequent, and the duration of the disease is prolonged.

To increase the efficacy of recumbency various other means have been employed. Traction is used, both for its effect in reducing the deformity and preventing the patient from sitting up in bed. A sling is attached to

the patient's head and from it a cord is carried over a pulley at the head of the bed to a small weight of from  $\frac{1}{2}$  to 1 or 2 pounds. Slings may be made of leather or of cloth, and are constructed upon one or two general plans; either that which is used in the ordinary suspension-apparatus, or one made by buckling a band across the forehead and below the occiput and attach-

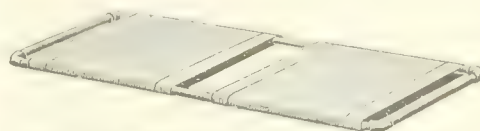


FIG. 6.—Bradford's frame for treatment by recumbency.

ing another above each ear to pass over the head, to which is attached the pulley-cord. This leaves the chin free, prolonged use not causing recession of the chin, and in exquisitely sensitive cases of cervical spondylitis the patient can eat with less motion and less pain.

Traction can be used with advantage only in cases confined to bed, being especially advantageous in the presence of cervical spondylitis, less so in lumbar and dorsal disease. It is of value when inflammation is progressive and when paraplegia complicates. It is an efficient aid in reducing to a minimum the pain and increase of deformity from muscular spasm during the formation of an abscess. Traction does not appear to separate healthy articular surfaces or diseased ones after the reparative process has commenced. It does, however, at times reduce the deformity, apparently by separating the contiguous carious surfaces, and this without pain or any ascertainable untoward results.

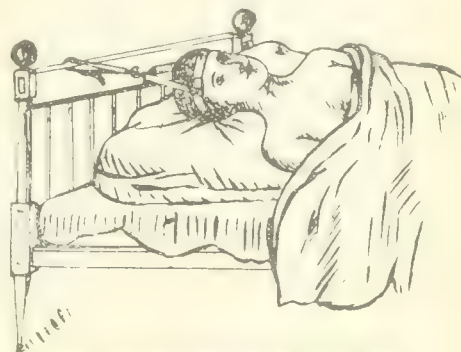


FIG. 7.—Elastic head-traction to bed-frame.

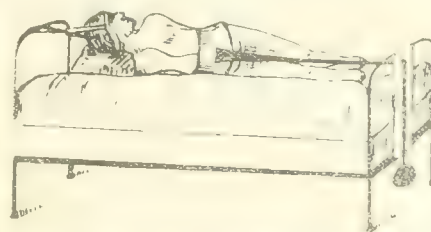


FIG. 8.—Fixed traction from head to bed frame with weight and pulley traction from pelvic girdle.

In cases successfully treated by Mr. Jones the little patients are strapped on canvas stretched on a frame that rests on the bed on four short legs. Straps are placed that fix the shoulders and thighs to the canvas, and holes opposite the anus and perineum assure easy egress to excretions. By this device the patients can be moved about without interfering in any way with the

diseased vertebræ. Sayre uses the wire cuirass with head-sling and traction from the feet; this apparatus cannot be readily obtained and is expensive. Steele, of St. Louis, attains the same end by a portable stretcher-bed, consisting of a forged, oblong frame of flat bar-iron, made somewhat longer and slightly wider than the patient, over which are snugly stretched two pieces of strong canvas, one reaching from the buttocks to the top of the frame and the other from just below the buttocks to the bottom of the frame, the space between the

two being left for the use of the bedpan. Upon this stretcher the patient is placed, strapped down at the shoulders and hips, and traction is made from the head-sling upward, to a flange at the top of the frame, by means of an elastic or inelastic strap, and downward by elastic or inelastic straps attached to strips of adhesive plaster applied to the patient's legs, to two flanges at the bottom of the frame. The patient thus lying on the frame can rest upon the bed or be carried about without discomfort of motion to the spine. The iron-work of the frame can readily be

done by any blacksmith, and the covering by the family of the patient; all should cost but very little.

The surgeons of the Children's Hospital in Boston reduce the expense still further by making the frame of iron gas-piping, and obtain traction from head and legs by the ordinary weight and pulley to the head and foot of the bed. A gas-pipe frame can be made to take the place of Steele's frame by having pieces of smaller pipe set upright in the middle of the bar at the head and like pieces at each of the corners at the foot. An excellent device is to slightly modify a Thomas double hip-splint by putting the parallel bars a little closer to each other and

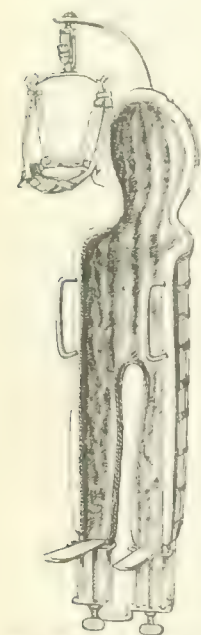


FIG. 10.—SAYRE'S CUIRASS.

extra side wings so as to restrain all lateral motion at the hips. A piece of strong leather can be stretched from one main stem to the other to form a sling for the spine and make it possible to lift and move the patient as one piece. Without some such plan, to turn

a patient over for cleaning or other purposes, means damage, slight or severe, to the carious column. Thomas' modification of the Bauer support offers admirable assistance to bed-treatment if two bars be

added which extend to the knees and thus fix the thighs. This appliance is easily borne and its application offers no difficulty. The irregularities of the bed are thus obviated, and the greatest leverage can be employed

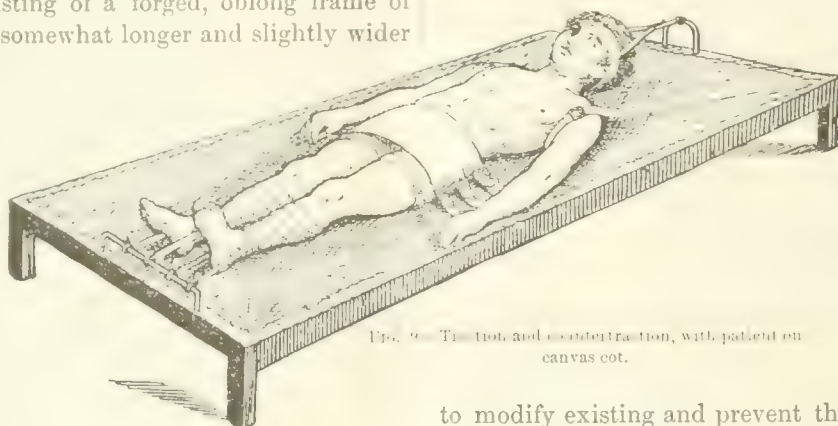


FIG. 9.—Traction and countertraction, with patient on canvas cot.

to modify existing and prevent threatening deformity. Another device of simple construction is the Phelps plaster-bed. It is constructed in the following manner: A  $\frac{3}{4}$ -inch board is cut roughly to the form of the patient, with the legs somewhat separated; foot-pieces are put on at the bottom and an iron flange is set in at the top to carry the head-sling; the upper surface of the board is upholstered and the patient is laid thereon; then he is wrapped from the shoulders downward, together with the board, in plaster-bandages; before the plaster fully hardens the front is cut out, leaving a plaster-trough, the cut edges of which are bound, and in which the patient can comfortably lie.



FIG. 11.—Phelps' plaster-bed.

*Treatment with the Plaster-of-Paris Jacket.*—This aims at immobilization after the patient has gained a position of greatest comfort by partial suspension. The opponents of the plaster-jacket treatment have asserted on the one hand that, by suspension, the carious surfaces are separated and the patient's life thereby endangered; and, on the other hand, that suspension is of no use inasmuch as it does not straighten the spine at the area of disease, but only apparently elongates it by straightening the normal curves. It appears to us that neither of these objections has any foundation in fact. There appears to be no evidence that separation of the carious surfaces by partial suspension has ever been of the slightest harm to the patient; and it has not been claimed by the advocates of suspension that it would straighten the curve of disease after reparative consolidation had at all advanced. Portions of curvatures and whole curvatures due to involuntary muscular spasm, and angles due to loss of bony tissue in the



vertebral bodies can, before any considerable reparative action has taken place, be in a measure sometimes totally rectified by well-judged and carefully executed partial suspension.<sup>2</sup>

The plaster-jacket can, of course, be applied without suspension of the patient, but unless the spine be put in a position of greatest comfort to the patient the object for which the plaster-jacket was designed is not attained, and failure to gain good results should not be accredited to the jacket-treatment. Surgeons are much too prone to modify methods and mechanical appliances without duly appreciating the principles of the apparatus that they ingeniously "improve" and label with their names. It is safe to say that of the thousands who have used the plaster-jacket in the treatment of spondylitis very few have ever given due thought to the teaching of Dr. Sayre to "suspend the patient until the point of entire freedom from pain is reached, stop there, and at once apply the jacket." In this connection, however, it must be remembered that many patients do not

sion, and in their case it seems wise to forego its use until a certain degree of confidence has been established. In a few cases it is not well borne, the patient showing such a tendency to syncope that one does not like to repeat the experience. In such cases, prior to fixing with plaster, the hammock of Davy may be employed, or the patient may be placed in the hand-knee posture and the spine guided into the best possible position by gentle manipulation. If the hammock of Davy be used it must be drawn tight; otherwise the sagging as the patient lies with the face downward will give an uncomfortable position when the jacket has set and the patient stands.

The appliances requisite for suspension are as follows: A strong hook set into a beam, and a tripod or crane. To the hook are attached a block and tackle, which support an iron cross-bar from 12 to 18 inches long, grooved transversely for adjusting the leather head-sling, or collar, and arm-slings that hang from it. The collar and arm-slings are so adjusted upon the patient that, when he stands directly under the cross-bar and traction is made upon the pulleys, the force is expended equally upon the head and arms.

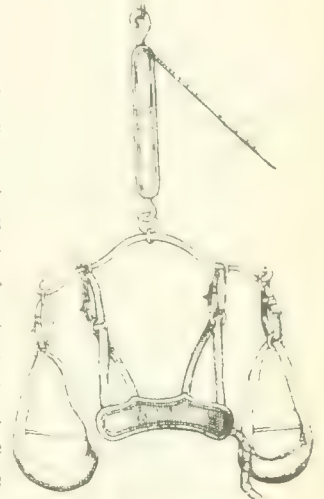


FIG. 14.—Suspension apparatus.

For the jacket the plaster-bandages should be made by the surgeon or under his immediate supervision, for we know of no place where even fairly good ones can be purchased. Dr. Sayre has them made from cross-barred crinoline, in lengths of from 3 to 5 yards, torn into strips 2, 4, or 6 inches wide, according to the size of the patient, care being taken to tear off the selvage from the fabric.<sup>3</sup>

To make plaster-bandages the strips of crinoline are spread upon the flat surface of a table or shallow tray and the best quality of dental plaster-of-Paris is thoroughly rubbed in, removing the excess, and rolling the bandage rather loosely as the plaster is rubbed in. A bandage rolled tightly requires too long a time to become thoroughly wetted, while the center of one rolled loosely and with too much plaster between the rolls easily slips when wetted and becomes twisted and tangled. Too much plaster between the rolls of the



FIG. 12.—The hand-knee posture for applying a plaster-jacket.

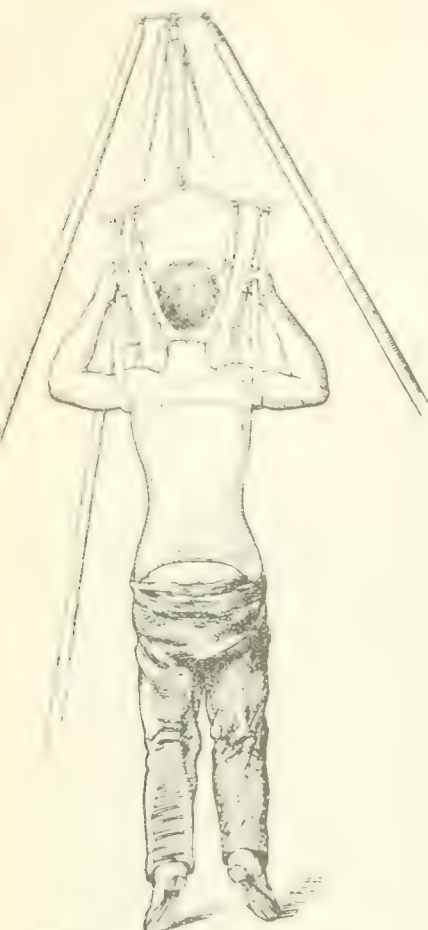
complain of pain, even during the period when the angle is on the increase.

Some very young children are frightened by suspen-

<sup>2</sup> When the manuscript of the part of this chapter relating to the plaster-jacket was submitted to Dr. Sayre for suggestions and corrections he told Dr. Ridlon that a patient had been killed in Berlin by the breaking internally of an abscess-wall during complete suspension with weights attached to the feet and during chloroform-narcosis. Mr. Jones adds to this his experience in two cases, neither of which was published at the time. He was called to see a patient who had returned home from one of the hospitals after having been suspended during the application of a jacket for upper dorsal curvature. The patient, who had been perfectly well up to the period of suspension, died 2 hours after leaving the hospital, after complaining of pain in the limbs and suffering great respiratory difficulty. In the other case paraplegia resulted suddenly, being almost complete in 24 hours. In both cases suspension had been too complete, although in each case a surgeon of repute superintended the application. Dr. Sayre expresses a doubt as to the possibility of fully correcting any true angle by the suspension-treatment.

<sup>3</sup> The starch used in stiffening the crinoline in no way interferes with the setting of the plaster, but all specimens of cross-barred crinoline that we have found for many years past have been stiffened with some glutinous substance that delays the setting of the plaster. Such stiffening must be washed out and the goods ironed before being used. For some time past we have used a crinoline, not cross-barred, made especially for use in plaster-bandages by The H. B. Claflin Co., of New York, and known as "H. B. crinoline." It comes in pieces of 27 inches wide and 12 yards long, and costs 45 cents per piece. A piece is sufficient for 13 bandages, 3 inches wide and 10 yards long.

bandage is a very common fault, and needs to be guarded against. It is our experience that bandages made in any other way and from any other material, however satisfactory for ordinary plaster-splints, will be found of little use for making really durable plaster-jackets. From 7 to 15 bandages will be required to



make a jacket; if the jacket is to be cut down it should not be made too thin. For soaking the bandages a pail is used with sufficient tepid water to cover, by 2 or 3 inches, the widest bandage when standing on its end. It will not be necessary to add salt or alum to the water to hasten the setting; nor should the water be too hot. The plaster-sediment left in the bottom of the pail in which the bandages have been soaked, should not be used to rub into the jacket, as it will greatly delay the setting of the plaster and even soften that which is already set. A competent assistant is of the

greatest importance, and he should rapidly and carefully smooth out every wrinkle and rub well in every layer as it is laid on.

The patient should be clothed in a seamless, skin-fitting knitted vest, made long enough to reach below the middle of the thighs, and well pulled down; it should fit without a wrinkle or a loose place. The surgical-instrument shops usually carry wool shirts of this order, but recently we have generally used tubular stockinet of cotton of gray color. This stockinet can be obtained of the knitting-factories in pieces of any number of yards, and can be cut in any required length. It is much less expensive than the wool vests. All other clothing should be removed down to the level of the greater trochanters.

If the patient be a woman or an adolescent girl, breast-shields, or in lieu of these pads of cotton-wadding of proper size, should be placed between the breasts and the shirt; and if the jacket is to be made removable a

strip of zinc or block-tin 2 inches wide and long enough to reach from the neck to the pubes should be placed under the shirt for protection to the patient when rapidly cutting off the jacket. On the outer side of the shirt pads of felt should be placed over the iliac crests and long, narrow strips along each side of the spinous processes included in the kyphosis. The floor should be covered with a sheet; and two chairs placed for the surgeon and his assistant.

Now, all being ready, the patient should stand beneath the suspension-apparatus while the surgeon adjusts the collar and arm-slings, and suspends him to the point of comfort, and no further. The assistant sits in front and grasps with his knees the thighs of the patient and steadies him. The surgeon sits behind, places a bandage on end in the pail of water and waits until the air-bubbles cease to rise; he then puts in a second bandage, squeezes out the superfluous water from the first, and rapidly and smoothly winds it around the patient's waist, and from there works downward over the iliac crests to a level with the greater trochanters; then he works upward again, each turn of bandage overlapping the former by two-thirds of its width, until a point is reached at the back and front well above the level of the axillæ. The assistant must smooth out all folds and rub each layer well into the preceding one. In this way the bandages are laid on until a sufficient thickness has been attained. Then with a well-sharpened knife the jacket is trimmed out under the arms and at the flexures of the thighs, so that the patient may afterwards sit with comfort.

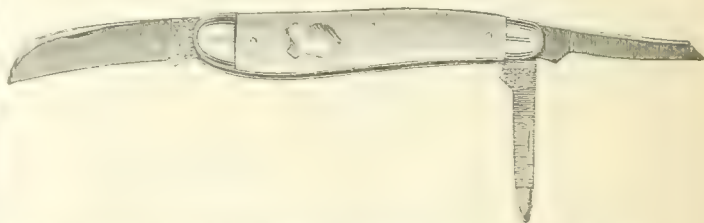


FIG. 15.—Roth's plaster knife, made by W. Stead, 100, Sheffield, Eng., and imported by J. C. & A. B. Co., Warren St., New York City. This knife is specially shaped and specially hardened for plaster-work.

By this time the jacket will usually have become sufficiently hard to permit of a discontinuance of the suspension. The patient should then sit quietly until the setting of the plaster is quite complete. If the plaster sets slowly, or if for any reason the time of suspension has to be shortened, the surgeon, placing his hands under the patient's arms, lifts him while the assistant, after removing the collar and arm-slings, supports the patient by the thighs; thus he is placed prone upon a couch to await the completion of the work. But if the jacket is to be made removable it is cut down from neck to pubes, while the patient is still suspended, carefully sprung off the patient, its cut edges brought accurately together and held by an ordinary gauze or muslin roller-bandage. The jacket is then set aside to



dry—it will usually take 2 or 3 days—or it may be rapidly dried in an oven or over a range, in which case it must be carefully watched lest it become brittle. When dry it is tried on the patient during partial suspension, and trimmed wherever it may be necessary to render the patient quite comfortable; the outer and inner layers of the shirt are stitched together over the cut edges in front on either side, and here on each side on the outer surface of the jacket are sewed two strips of strong leather, previously provided with lacing-hooks set at intervals of about an inch. The patient is then clothed in a well-fitting undervest—those made to measure and of Angora wool, and skin-fitting are the best—suspended as before, and the jacket applied and laced. The jacket must not be removed at night, or at any time except during partial suspension and in the presence of the surgeon.

For disease above the eighth dorsal vertebra, the jacket alone does not give sufficient support to prevent the steady progress of the deformity. When the disease exists between the first and eighth dorsal vertebra a jury-mast should be used to support the weight of the head, and more especially to prevent it from drooping forward.

The jury-mast consists of strips of tin, perforated in opposite directions, and joined to 2 steel uprights, at the back, bent to fit the outline of the patient. The tin strips, 2 on either side for a child and 3 for an adult, extend laterally from the posterior steel uprights nearly to the median line in front, but not across the spine at the back, and with the posterior steel bars are worked in between the layers of the jacket during the process

of construction. The posterior bars are curved at the top, approach each other and are joined into one by being welded to form the upright bar that passes upward over the top of the head. This bar is bent to approximately follow the contour of the neck and head, and may be lapped and fastened with screws at the back of the neck so as to be elongated at will. It ends directly over the top of the head, and to its upper surface is riveted a cross-bar, turned up at the ends, from which depend the head-slings. The



FIG. 16.—The jury-mast.

The cross-bar being riveted by a single rivet, loosely set, the patient is able to turn his head from side to side at will.

For disease in the cervical vertebrae it is customary to make use of the same appliance, but we have not found it to immobilize effectively.

After the application of a permanent plaster-jacket no patient should ever pass from the surgeon's immediate control before 24 hours have passed in perfect comfort; any complaint of it hurting at any point,

then or later, should be considered as a positive indication for the removal of the jacket.

The objections that may be urged against the plaster-jacket are chiefly its cost and the delusion that most surgeons labor under that it is a simple thing to properly apply it. It will be evident from the foregoing that it is not the ideal treatment for dispensary-work if little time can be devoted to each patient and if every detail of cost is counted. A really good jacket will last from 2 to 3 months if a laced one, or somewhat longer if permanent, but a growing child will require from 4 to 6 jackets each year and the disease will require treatment from 2 to 6 years. When to the cost of materials is added the value of the surgeon's time it will be found to be an expensive method of treatment.

Grave objections, however, may be urged against plaster-jackets improperly applied, as it seems to us they usually are, from observations based upon patients wearing jackets applied at hospitals and dispensaries and by the family-doctor. With few exceptions they have been permanent jackets, seldom padded, and never with felt, over the bony prominences, rarely carried high enough or sufficiently low, generally so loose that the hand can be readily passed under them, so lacking in power to immobilize that the patients give a history of steady and progressive growth of the deformity, and when used among those of our fellow-citizens who have with reason been called the "great unwashed" have formed the pleasantest of homes for vermin of various sorts.

One does not of course have the opportunity to remove jackets applied by others from those patients who have done well and are satisfied with the treatment; but from the other patients, those that have not done well and are not satisfied, jackets are rarely removed without pressure-sores being exposed.

(To be continued)

## THE CONSERVATIVE TREATMENT OF PELVIC SUPPURATION OF PUERPERAL ORIGIN.

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PELVIC inflammation and suppuration of puerperal origin have certain marked peculiarities which distinguish them from inflammation in the non-puerperal state. Bernutz, by post-mortem examinations, and later Tait and his disciples, by abdominal section, clearly showed that pelvic inflammation in non-puerperal patients originates from an infection of the vagina or endometrium and that the inflammation spreads thence to the Fallopian tubes, and to the peritoneum. In such cases pelvic suppuration consists of pyosalpinx, abscess of the ovary, intraperitoneal collections of pus, and, in rare instances, secondary abscesses in the cellular tissue. In puerperal cases the course of the inflammation in

many cases is the same; in many others, however, the infection spreads from the endometrium, or from infected wounds of the vagina or cervix, along the lymphatics to the connective tissue of the broad ligaments, and gives rise to an acute cellulitis or lymphangitis. In certain cases the inflammation spreads along both routes of invasion. In still other cases infection spreads along the venous channels, giving rise to local phlebitis or to general septic infection. These elementary pathologic facts are now generally recognized, although some years ago they were sharply controverted, more especially by the disciples of Tait. My own attention was drawn to this subject very early in my professional work by seeing two cases of puerperal abscess in which abdominal section demonstrated that the Fallopian tubes were healthy, but that abscesses were present in the pelvic cellular tissue, which were evacuated in each case by a second extraperitoneal incision. This experience led me to a very careful study of all cases of puerperal pelvic inflammation which came under my care, and from time to time I have reported cases of true pelvic abscess to the Philadelphia Obstetrical Society, in a large percentage of which the diagnosis was established by abdominal section as a preliminary to the evacuation of the pus. When these reports were made, their correctness was disputed by many gynecologists who are now in full accord with this view of pelvic inflammation in puerperal patients.<sup>1</sup> In the last communication which I made on this subject,<sup>2</sup> I reported 21 cases of puerperal pelvic cellulitis and true pelvic abscess, in which the diagnosis was confirmed by celiotomy; 6 of these cases were seen by myself, and 15 of them were communicated by well-known abdominal surgeons throughout the country.

The primary purpose of the communications to which reference has been made was to establish the fact that in puerperal cases acute cellulitis and true pelvic abscess are met with. The object of the present communication is to consider the conservative treatment of these conditions. The diagnosis of the exact site of pelvic inflammation and suppuration is difficult, and this fact led to the performance of celiotomy unnecessarily in a number of the early cases which will be reported. These exploratory celiotomies served to establish the existence of cellulitis or abscess; but at the same time they showed that abdominal section is unnecessary for the cure of such cases. Celiotomy was employed to settle the diagnosis definitely, probably under the influence of the current belief that pus in the pelvis is almost invariably in the appendages or is intraperitoneal.

The differential diagnosis between pelvic cellulitis, and pus-tubes or intraperitoneal abscess is difficult, but there are certain diagnostic marks which will either establish the diagnosis or at least prevent the practitioner from going astray in his treatment. The general course of a cellulitis is milder than a peritonitis. There is less tympanites and bowel-disturbance. In other words, the inflammatory process is more distinctly localized. On examination the inflammatory mass is distinctly contiguous to the vaginal wall, and if large and unilateral it displaces the uterus to the opposite side. As a rule it is evident that the inflammatory mass is more distinctly in relation with the bony wall of the pelvis than is the case with diseased appendages. These leading characteristics serve to establish a diagnosis of cellulitis or true pelvic abscess, or to make it highly probable. In certain cases the diagnosis will be uncertain, for the excellent reason that the case is complicated by the existence of salpingitis and peritonitis.

In each of the cases embodied in this report satisfactory recovery followed the practice of incision and drainage. Incision from the most accessible point, preferably through the vagina, is the only rational treatment for cases of extraperitoneal pelvic abscess. To open the general peritoneal cavity in order to evacuate the abscess is not only irrational, but very greatly increases the risk of the operation. The inflammatory process in all these cases is recent, and there is every reason to believe that the invading germs still maintain their virulence, although exact bacteriologic researches upon this point are not available. The risks of septic peritonitis from such a method of treatment are apparent, and in addition to this is the disadvantage that the employment of drainage, especially of the large gauze drain through the abdominal incision, in a large percentage of cases leads to the subsequent development of ventral hernia.

The following cases are reported to illustrate various forms of puerperal inflammation and the results of treatment by operation:

CASE I.—Mrs. F. was operated upon by Dr. Daniel Longaker, assisted by Dr. Parish and myself, May 9, 1888. She was delivered after a normal labor of her third child seven weeks previously, under the care of Dr. Peltz. On the fifth day septic symptoms appeared, which persisted until the date of operation. She presented the typical evidences of long-continued septic absorption. A large mass could be made out in the left broad ligament, extending over to the right in front of the cervix, and also distinctly palpable from above in the left groin, extending as high as the crest of the ilium. At my suggestion a median abdominal section was made; some recent peritoneal adhesions were found; but the ovaries and tubes were palpated and found to be in good condition. The mass was distinctly extraperitoneal. A second incision was made above Poupart's ligament, and about 8 oz. of pus evacuated. The abscess was located in the left broad ligament, and extended between the uterus and bladder into the right broad ligament. Mrs. F. made a tedious but good recovery, and five years later was in good health. She had no more children, but her sterility was designed.

CASE II.—This patient was operated upon by the late Dr. Charles Meigs Wilson, assisted by myself, in the fall of 1888. Labor was followed by septic inflammation, which resulted in the formation of a phlegmon easily palpable from both the

<sup>1</sup> "Cases of True Pelvic Abscess," *Medical News*, Aug. 12, 1894. "Case of True Pelvic Abscess," *The American Practitioner*, January, 1895. "Cases of Puerperal Cellulitis," *Gaillard's Medical Journal*, April, 1894. "Puerperal Pelvic Cellulitis and Puerperal Peritonitis," *The American Practitioner*, January, 1896.

<sup>2</sup> "Puerperal Pelvic Cellulitis and Puerperal Peritonitis," *The American Practitioner*, January, 1896.



abdomen and the vagina, and tending to point in the right groin. Abdominal section was done to settle the diagnosis, which demonstrated that the abscess was extraperitoneal, and that the Fallopian tubes were not involved. The pus was evacuated by an incision in the groin. The patient made a good recovery from the operation, but her subsequent history is unknown.

CASE III.—Mrs. M. was seen in consultation with Dr. Himmelwright, March 2, 1890. She had a miscarriage Jan. 3d, at the second month of pregnancy. One week later pelvic inflammation appeared, and a diagnosis of peritonitis was made. The patient improved, and was out of bed Feb. 1. A week later relapse occurred, with marked pain in the right inguinal region, which increased in intensity and extended to the lumbar region. On Feb. 27, a swelling was noticed in the right lumbar region. On March 3, the mass filled the right half of the abdomen from the pelvis to the ribs, and distinctly pointed to the lumbar region. A lumbar incision was made, and at least a quart of pus was evacuated. Exploration with the finger showed that the abscess was extraperitoneal. The patient made a prompt recovery from the operation, and subsequent examination showed that the pelvic organs were in good condition. Dr. Himmelwright writes me under date of Feb. 14, 1898, that Mrs. M. continues in good health, is a hearty, robust woman, doing her full share of housework and riding the bicycle for exercise. She has had one child, now four years of age, and a number of miscarriages, since the operation.

CASE IV.—Mrs. T., aged 16, was seen in consultation with Dr. Langrehr on March 15, 1891, five weeks after her first labor. Septic pelvic inflammation followed labor. The patient was very sick for three weeks, her temperature ranging between 100° and 103° F. During the fourth week the symptoms abated, but recurred at the beginning of the fifth week. When I saw her she was very feeble, and presented the typical evidences of long-continued septic absorption. On examination a mass was found in the left broad ligament extending between the uterus and the bladder, and distinctly palpable above the pubes. A diagnosis of true pelvic abscess was made. Abdominal section was done the following day by Dr. Langrehr, who found that the uterine appendages were not involved. The omentum was adherent to the broad ligament. About six ounces of pus were evacuated by an incision in the left inguinal region. The patient made a good recovery. Under date of Feb. 10, 1898, Dr. Langrehr writes me that Mrs. T. has continued well since the operation, and has since given birth to "healthy children."<sup>3</sup>

CASE V.—Mrs. H., aged 28, a secundipara, was delivered of her second child in March, 1891, the labor being conducted by a midwife. She was infected, and subsequently was extremely ill. I saw her with Dr. Leopold five weeks after labor. At that time she was greatly prostrated, and presented the classical symptoms of septic intoxication. On examination the right broad ligament was found indurated, and a mass of exudate extended on the right side of the abdomen almost as high as the umbilicus. From the extent of the mass it was supposed that a right pyosalpinx with an intraperitoneal abscess existed. A median abdominal incision was made April 16th, and the abdominal viscera and the lower right quarter of the abdomen were found fused by adhesions. She took ether so badly that it was necessary to abandon the operation to avoid a fatal result from the anesthesia. Some days later operation was attempted with chloroform as the anesthetic. Anesthesia was abandoned, as the chloroform produced as marked cyanosis as the ether had done in the previous operation. Without anesthesia an incision was made directly over the broad ligament. The uterus was located, and the index-finger was forced into the broad ligament, evacuating several ounces of pus. The patient made a good recovery. On Oct. 27, 1892, Mrs. H. was operated upon for the cure of a ventral hernia, which had formed at the site of the drainage-incision. On opening the abdomen it was interesting to observe that the adhesions throughout the right side of the abdomen, which had been universal 18 months previously, had entirely disappeared, except for a point of adhesion between the omentum and the hernial sac, and another between the omentum and the broad ligament. Both appendages were perfectly healthy. This fact demonstrated what was inferred when the pus was evacuated, namely, that

the case was one of true pelvic abscess, and not a pyosalpinx. The disappearance of the very extensive adhesions is worthy of record as showing that peritoneal adhesions are not necessarily permanent. This case was reported in full to the Philadelphia Obstetrical Society, Dec. 3, 1892. Mrs. H. made a good recovery, and subsequently was delivered of a living child a year and a half after operation. Dr. Leopold writes me that when last heard from, in 1897, she continued well.

CASE VI.—This patient was seen in consultation with Dr. Dunn, of West Chester, May 1, 1894. Her last child was born March 27th, and in the meantime she had suffered from a mild but persistent septic infection, which had resulted in the formation of a large pelvic abscess. The pus had burrowed along the inguinal canal and was pointing in the groin. The patient was extremely feeble from long-continued sepsis. Owing to my previous experience with this class of cases, the treatment consisted in a direct incision into the groin with evacuation of the pus. A thoroughly satisfactory but tedious convalescence resulted. Dr. Dunn writes me, Feb. 10, 1898, that this patient has continued well since the operation, and two years after the operation she gave birth to twins. She has no symptoms dependent upon the former pelvic trouble.

CASE VII.—Mrs. B., a secundipara, was delivered Oct. 24, 1895, after a tedious and instrumental labor. About 36 hours after labor the patient became septic, and for the following 18 days the temperature fluctuated between 99° and 100° F. in the morning, and 103° and 104° F. in the evening. I saw her on the 18th day in consultation with Dr. Cross, of Jenkintown. At that time a well-marked mass could be made out high up in the false pelvis and in the region of the cecum. The diagnosis lay between appendicitis with an abscess, and an abscess of puerperal origin. The absence of any history of foul-smelling discharge from the uterus, and the fact that the uterus and broad ligaments were not found abnormal, and especially that no exudate could be felt high up in the pelvis, inclined me to accept the diagnosis of appendicitis, which had been arrived at by Dr. Cross. Operation was advised, and on the following day a direct incision was made into the mass, evacuating a large amount of pus. Unfortunately the ileum was adherent under the point of incision, and was opened for a distance of  $\frac{1}{2}$  in., requiring suture. The patient promptly recovered from the operation but the sinus did not close. On March 2, 1896, abdominal section was performed, and the cause of the persistence of the sinus was found to be a small right pyosalpinx. Mrs. B. made a good recovery, subsequently became pregnant, and miscarried June 5, 1897. This was a case of puerperal pyosalpinx with intraperitoneal abscess, and not a case of puerperal phlegmon. It is included here because incision and drainage rescued her from a very critical condition, in which a radical abdominal operation with removal of the affected tube would almost surely have resulted fatally.

CASE VIII.—Mrs. L., aged 28, a secundipara, was prematurely delivered, Nov. 20, 1895, by a midwife. On Nov. 28th she had a chill, and subsequently developed an inflammation in the right inguinal region. She was seen Dec. 7th by Dr. Stoner, who found her much prostrated, complaining of general abdominal pain, most marked in the right iliac region. A small mass was detected upon pressure in the appendix region. Her temperature was 100° F., and her pulse 112. Under treatment the general condition improved, but the mass in the iliac region increased in size. Dec. 11th I saw her with Dr. Stoner, and a very large mass in the appendix region was palpable. On this day the symptoms had become aggravated. An immediate operation was urged; consent was refused, but on the following day she was taken to the Kensington Hospital for Women. In the meantime her condition had become worse, her pulse was above 130, and the temperature 103° F. The peritonitis was evidently extending, and she had become decidedly septic. She was operated upon in the night. A direct incision was made over the mass, but adhesions had not formed between it and the abdominal wall. The general peritoneal cavity was packed off with gauze, the abscess was opened and the pus evacuated. The abscess extended well up toward the ribs. This patient recovered in spite of edema of the lungs and acute nephritis. Her condition was such that had more been attempted than a drainage-operation she would certainly have died. March 1, 1897, Mrs. L. was operated on a second time because of the development of a hernia and the presence of a small tumor. A small right ovarian cystoma,

<sup>3</sup> The first four cases were reported in the *Medical News*, Aug. 29, 1891.

made, and the mass of exudate was penetrated with the fingers almost to the bifurcation of the iliac artery, but no pus was found. The operation had a distinctly beneficial effect upon the exudate, as the fever promptly subsided, and the exudate was rapidly absorbed. The patient made a good recovery, and has since remained well. Dr. Kerr writes me, February 18, 1898, that Mrs. A. is quite well. She has had no children since the operation, and says "she does not expect to."

**CASE IX.**—Mrs. R., aged 40, has had 8 children and two miscarriages, the last one Jan. 4, 1896, at the sixth week of pregnancy. The ovum was discharged after one day. She apparently had very little trouble, and was out of bed on the tenth day. About two weeks later she was seen by Dr. Walker. She had severe pain in the hypogastrium, and later in the left groin. At no time had she fever, but she had a persistently rapid pulse. I saw her with Dr. Walker on Feb. 23d. Her pulse was 120, her temperature 101° F. A large mass was outlined between the uterus and the bladder, extending into the left broad ligament, and in addition there was evidence of pus-formation under the skin in the left groin, the exudate extending well up the flank towards the ribs. The following day an incision was made in front of the cervix, the bladder was pushed off from the uterus, and the finger introduced into the abscess-cavity, which extended from slightly to the right of the cervix well over into the left broad ligament. About four ounces of pus were discharged. A second incision was made in the groin, and a large abscess evacuated. The pus in this location had evidently burrowed along the round ligament, and was external to the abdominal muscles. She made a very satisfactory recovery, and has since remained well.

**CASE X.**—Mrs. B., aged 28 years, was delivered Dec. 18, 1895, at full term of her first child. Marked hydramnion existed, and about two gallons of liquor amnii were discharged. The patient was delivered instrumentally by Dr. Robinson, under full antiseptic precautions. A poorly developed child was delivered alive, but it died of convulsions after two days; 45 minutes after delivery Mrs. B. had an attack of convulsions, which were very severe, and persisted in spite of active treatment, especially with veratrum viride. The patient improved so far as the convulsions were concerned, but was much dazed mentally, and soon developed decided mania. On the fifth day there was a slight chill, and a decided one on the twelfth day. The lochia was normal throughout, the patient continued to be very ill physically, and did not improve mentally. The temperature in the afternoon ranged from 101° to 104° F. For a long time there was no tenderness or other indication of inflammatory processes about the pelvis, but after the 16th day the abdomen became tympanitic. On the 63d day a mass was recognized behind, above, and to the left of the uterus, but there was no complaint of tenderness. I saw Mrs. B., with Dr. Robinson, on Feb. 21st, and advised operation, and on the 26th was able to reach the pus-sac by vaginal incision, introducing the fingers well up behind the uterus, and puncturing the sac with scissors. A large amount of very offensive pus was discharged. The sac and pelvis were irrigated, and a large gauze-drain was introduced into the pelvis. Improvement was manifested at once. Within a week the mental condition was greatly improved, the insanity disappeared within two weeks, the temperature became normal after five days and remained so. The patient has since continued well, and is at the present time well advanced in pregnancy. The nature of the pus-sac was not discovered.

**CASE XI.**—Mrs. A., aged 28, was delivered of her third child after a normal labor, the child being born before the arrival of the attending physician, Dr. Kerr, of Downingtown. She did well, with the exception of contracting a tonsillitis on the fifth day. On the tenth day her throat was well, and she left her bed. Dr. Kerr saw her again on the 19th day, when she had a chill, with a temperature of 104° F., with pain in the right side of the abdomen. Prior to this time she had been at work, but for two days had complained that her foot and leg felt heavy. Two days later a swelling appeared in the right groin, and she continued to have an irregular temperature until the 31st day, when I saw her in consultation. A large exudate was present in the right half of the pelvis, and there was some phlebitis in the right leg. I considered the mass clearly a cellulitis and phlebitis, as distinguished from an intraperitoneal exudate. The persistence of the fever, and the extent and density of the exudate made a diagnosis of abscess extremely probable. Operation was advised, and three days later, at the Chester County Hospital, a vaginal incision was

made, and the mass of exudate was penetrated with the fingers almost to the bifurcation of the iliac artery, but no pus was found. The operation had a distinctly beneficial effect upon the exudate, as the fever promptly subsided, and the exudate was rapidly absorbed. The patient made a good recovery, and has since remained well. Dr. Kerr writes me, February 18, 1898, that Mrs. A. is quite well. She has had no children since the operation, and says "she does not expect to."

**CASE XII.**—Mrs. R. was seen, with Dr. Riesman, some weeks after labor. She had had a mild septic fever, which had persisted in spite of the usual methods of treatment. When I saw her there was a distinct exudate in the left broad ligament, and also an adherent ovary and tube upon that side. The mass of exudate appeared to be due to a cellulitis, but it was not possible to exclude a complicating salpingitis. As the fever persisted, and the exudate increased rather than diminished, an incision was made from the vagina, and the mass of exudate freely opened up with the fingers without reaching any pus. In this case, also, the effect of the operation was distinctly beneficial, as the fever soon disappeared and the exudate was gradually absorbed. When I last heard from the patient, some months after her discharge, she was enjoying good health.

**CASE XIII.**—Mrs. B., aged 22, has had 2 children and 1 miscarriage. The last labor was Jan. 3, 1897, when she was delivered of a dead baby. She did not have a good "getting up," but gave no history of an acute septic infection. She complained of pain in the pelvis and some bleeding, until April 20th, when she presented herself at the dispensary of the Kensington Hospital for Women. She was admitted to the hospital on May 4th, at which time she had a temperature of 101° F., and, on examination, a mass was found to the left of the uterus, which I believed to be an extra-peritoneal abscess. A vaginal incision was made, the abscess opened, drained, and packed with gauze. Recovery promptly ensued, and the patient returned home. She was instructed to report to the dispensary for tampon treatment, and received this regularly until her readmission to the hospital, Nov. 19th. During this time her general health improved very much, and, excepting when she exerted herself, she felt comfortable. If she was obliged to do hard work, however, she suffered from pelvic pain. On her readmission to the hospital it was evident that there were some adhesions holding the uterus in retroversion. The uterus was curetted, a laceration of the cervix sewed up, and then the abdomen was opened. The interesting point, of course, is as to the condition of the uterine appendages in the case. It will be recalled that the abscess was to the left of the uterus. Both appendages were found slightly adherent, but the Fallopian tubes were patulous, and, aside from the adhesions, in normal condition. The left tube was more nearly normal than the right. This fact indicates the correctness of the original diagnosis, that the pus was extra-tubal. The steps of the abdominal operation consisted in freeing the adhesions, and in shortening the round ligaments according to the technic of Mann. The patient made a good recovery. The case is an admirable illustration of the value of drainage for puerperal abscess.

Two other cases will be referred to, not because they were treated by incision, but because this method of treatment would have been better than that employed.

**CASE XIV.**—Mrs. F., aged 18, was delivered of her first child May 8, 1893. She had a mild puerperal sepsis, and was in bed for two weeks. The following month she was constantly sick, being in and out of bed with mild septic symptoms. She came under my care six weeks after labor. Examination showed a large inflammatory mass in the pelvis absolutely anchored to the left pelvic wall. The temperature fluctuated between 99° and 102° F., with the general evidences of mild septic absorption. An abdominal section was made June 26, 1893. The following conditions were found: The uterus was fairly well involuted, and was displaced upward and backward by a mass in the left broad ligament. The right broad ligament and the right Fallopian tube and ovary were entirely normal, as was demonstrated not only by touch but by delivering the ovary and tube



through the abdominal incision. The omentum was adherent to the anterior and upper border of the left broad ligament in front of the Fallopian tube. The left ovary and tube were found to be entirely normal, the meso-salpinx being normal, soft and movable. This was demonstrated by touch and by vision, the woman being in the Trendelenburg position. The left broad ligament was much infiltrated and firmly anchored to the anterior and left bony wall of the pelvis. Fluctuation was not apparent. It was decided to close the abdomen, and, if septic symptoms persisted, to open the broad ligament from the vagina. The patient's convalescence was uninterrupted; within four weeks the pelvic mass had almost entirely disappeared. On Jan. 9, 1894, she consulted me, and upon examination I found her to be between three and four months pregnant. A careful examination failed to show any evidences of the former pelvic cellulitis. This patient would probably have recovered had no operation been done. Her recovery would undoubtedly have been hastened had the left broad ligament been incised early in course of the inflammation.

CASE XV.—The second case was that of Mrs. C., aged 23, who was infected in her third labor, and was very ill from puerperal septicemia. I saw her in consultation with Dr. Bochrach, and found an extensive inflammatory mass in the right half of the pelvis. She was operated upon April 5, 1894. An abscess of the right broad ligament was found; to this the omentum was adherent, and a mass of fresh inflammatory exudate involved the middle portion of the Fallopian tube. The fimbriated extremity was not involved, and there was every reason to believe that the route of invasion was along the lymphatics to the broad ligament, the peritonitis being secondary to the cellulitis and broad-ligament abscess. The operation consisted in the removal of the infiltrated portion of the omentum and of the right uterine appendage. The ligatures were passed through the suppurating broad ligament. A large gauze drain and a glass tube were used. Mrs. C. made a tedious recovery, which was complicated by a sinus, which did not close until the pedicle-ligatures were discharged. She eventually became well, and when last seen by me was seven months pregnant. In this case it would have been better had the broad ligament been incised from the vagina and the abscess drained. In this way the operation would have been rendered simple and safe, instead of most difficult and serious.

The experience gained in the management of the preceding cases has thoroughly convinced me of the efficacy of incision and drainage in the treatment of puerperal pelvic cellulitis and abscess. If the inflammatory trouble is limited to the broad ligament, a prompt cure results; if complicating peritonitis exists, the patient is put in a position to recover from the immediate attack, and should complications due to the peritonitis ensue, they can be dealt with later when the patient has recovered from her septic state and the conditions to be dealt with are relatively simple. The cases of large intraperitoneal abscess reported in this paper, together with many others, have convinced me of the wisdom of limiting surgical treatment in such cases to simple incision and drainage. Frequently, perfect recovery results, and, if not, a subsequent operation is much simpler and safer than a primary operation done under such unfavorable conditions. It is a great gain to eliminate such factors as a large pus-accumulation, prostration of the patient from septic absorption, the necessity for the use of drainage or gauze-packing, the immediate risks of septic peritonitis and the remote risks of ventral hernia, and to reduce the case to one of operation for pus-tubes or adherent appendages.

It is interesting to note that we have definite knowl-

edge that the 15 women have given birth to 8 children, and that in addition several miscarriages and one pregnancy not yet terminated are known to have occurred. As several of the women have been lost sight of, and others have not been heard from for some time, it is probable that this does not represent the full number of pregnancies. One miscarriage and one pregnancy have followed operation in the 5 cases of puerperal pyosalpinx and intraperitoneal abscess; 8 children and several miscarriages have followed in the 10 cases of pelvic cellulitis or true pelvic abscess. This is an interesting commentary on the view which was generally held some years ago, that pelvic suppuration was almost invariably the cause of permanent sterility. If other evidence was not available, the histories of these cases would be ample to show that pelvic suppuration is by no means a certain cause of sterility.

I wish to add to the legitimate conclusions of the paper a few remarks upon the best method of treatment of recent suppurative salpingitis of puerperal origin. It has been my practice in the past to operate by abdominal section and removal of the organs involved; but it is my intention in the future, whenever such tubes or pus-collections are situated low down in the pelvis, to employ vaginal incision and drainage. In the light of the relatively favorable results which have been secured by this method of treatment in the more chronic pus-collections, puerperal and non-puerperal, there is every reason to expect the most favorable results from early drainage, and that many women will not only be cured of the pelvic suppuration, but will be restored to health with intact pelvic organs. The basis for this belief is the well-known activity of the reparative processes of nature when pus is evacuated in recent inflammatory cases. I feel satisfied that a very large percentage of such patients will enjoy subsequent good health without the loss of their sexual organs, and that in a certain percentage of them the tubes will be restored to their integrity, and that even in this class of cases sterility will not be absolute.

### INFANT-MORTALITY.

By FRANKLIN C. GRAM, M. D.,  
of Buffalo, N. Y.

Registrar of the Department of Health.

INFANT-MORTALITY is a subject that has given sanitarians an unlimited amount of care and concern; and the best method of controlling or reducing it is worthy of the most attentive study. That it is possible to do this has been sufficiently demonstrated. Summing it all up, it becomes a question of maternal education. But how educate the mother? The physician is called after the mischief has been done, and his office becomes that of a reconstructor, only too often to find reconstruction impossible. If he had the opportunity he may have given prophylactic advice to the mother, most of

which was quickly forgotten or could not be recalled when needed. In large cities there are thousands of cases in which physicians are never called until it becomes evident that the question of life or death has already asserted itself. A simple diarrhea in summer is looked upon as a natural sequence of warm weather, and it is either allowed to run its course or the advice of every old woman is followed. Some of this advice may be exceedingly valuable, but inefficient so long as the source of the evil is unabated.

One of the best methods, perhaps the best now in use, for educating mothers, has been adopted by the Buffalo, N. Y., Health-Department. It also shows what may be accomplished by persistent efforts in the right direction. When, in a constantly growing city, the infant-mortality has been steadily decreasing, both in percentage and in actual numbers, we are forced to believe that the result is due to some important factor.

When the present Health-Commissioner of Buffalo assumed office about 6 years ago he found, in studying the various details of his charge, that the infant-mortality was out of all proportion to that of the mortality of adults. While it was evident that a Buffalonian who had passed the age of childhood had a splendid chance for longevity, yet there seemed to be no reasonable excuse for parting with so great a portion of the infant-population. Accordingly the commissioner drew up a few simple rules and added some information on the care of infants during the hot season. These were printed in English, German, Polish and Italian and a copy was mailed to each mother from whom a birth-certificate had been received during the preceding year. To ensure efficiency the mailing was done at the beginning of the hot season.

Following is a copy of this circular :

#### DEPARTMENT OF HEALTH, BUFFALO, N. Y.

##### GENERAL RULES FOR THE MANAGEMENT OF INFANTS DURING THE HOT SEASON.

Most of the diarrheal diseases of children, and especially those occurring during the summer months, are primarily due to improper feeding and lack of general sanitation. With the object in view of lessening the prevalence of these maladies, the Department of Health recommends the following rules for the general management of infants, especially during the hot season:

**RULE 1.**—Bathe the child once a day in lukewarm water, as the health of the child depends much upon its cleanliness. If the child be feeble, sponge it once or twice a day with lukewarm water, to which a very little alcohol or vinegar has been added.

**RULE 2.**—Avoid tight bandaging. Have the inner garment of light flannel and the remainder of the clothing light and cool, all being sufficiently loose to allow free play of the body and limbs. Always undress the child at night and put on a cool, light garment, never using the same garments at night that are used during the daytime, and vice versa. On removing the garments, hang those that are not to be used near an open window that they may be thoroughly aired before being used again. Use clean diapers, and change them frequently, never using one that has been "dried" before it has been thoroughly washed in boiling-water.

**RULE 3.**—The child should sleep by itself in a cot or cradle. It should be put to bed at a regular and early hour, and it is well to teach children, when very young, to go to

sleep without being rocked or nursed in the arms. Without the advice of a physician, never give sleeping-drops, cordials, soothing-syrups, etc., as yearly many children die from the poisonous effects of these drugs. Whenever a child frets and does not sleep, if it is not ill, it is usually hungry, or perhaps thirsty. A small amount of boiled water, cooled, will often satisfy a child, and it is a good practice to give it a small amount at frequent intervals during the day. Never quiet a child by candy, or by cake, as they are the common causes of diarrhea and other complaints.

**RULE 4.**—A child needs plenty of fresh air. In the cool of the morning and early evening have it out of doors. Whenever it seems to suffer from the heat, let it drink freely of water which has been previously boiled and cooled. Never allow a child to remain in a room in which washing or cooking is going on. The influence of excessive heat reduces the vitality of young infants.

**RULE 5.**—Keep your house sweet and clean, cool and well aired. In very hot weather keep the windows open day and night, and never allow the room to smell "close." Do not allow slops, soiled diapers, etc., to remain in the room, as such poison the air and are not conducive to health. If foul odors are noticed arising from the sink or closets, place in them a small amount of the chlorid of lime, such as may be procured at any drug-store. If this does not do away with the nuisance, report the same to the Department of Health, and such will be investigated.

**RULE 6.**—The best food for young infants is the mother's milk. Never attempt to wean a child just before or during the summer months, unless advised to do so by a physician. When there are existing circumstances, which absolutely require weaning, consult a physician, so that the proper precautions may be taken to prevent the child becoming ill. When the mother has not enough nurse, it is not advisable to entirely wean the infant during the summer months, but give, besides the breast, good goat's or cow's milk. Do not nurse the child oftener than every 2 or 3 hours during the day, and as seldom as possible during the night, avoiding, as much as possible, nursing when the mother is overheated or greatly fatigued.

**RULE 7.**—If the child has been brought up "on the bottle" the best diet for it is milk, either from the goat or cow. Goat's milk is nearest to that of the mother, and cow's milk is next. It is necessary to be certain that the milk used is not skimmed and is pure. As soon as the milk is received from the dealer, it should be placed in clean, closed cans or vessels in a cool, well-ventilated place. In hot weather it is advisable to sterilize all milk (described in Rule 10) as soon as received, as this insures it remaining sweet a greater length of time. If a child thrives on a milk-diet, *no other food whatsoever should be given while the hot weather lasts.* Articles of diet, such as sago, arrow-root, potatoes, corn-flour, bread, crackers, and certain patent foods, which contain starch, must not be depended on as food for young infants, and this especially applies to those infants who have not cut their front teeth.

**RULE 8.**—Evidences of health in babies: No vomiting. Regular increase in weight. One to three stools a day. Child quiet. No diarrhea during teething.

One of the most common causes of vomiting is *overfeeding.* In hot weather, if a child becomes feverish, restless, vomits frequently and has numerous loose stools, consult a physician, and, in the meantime, abstain from feeding for a few hours, give cool water to drink and sponge the body with cool water.

**RULE 9.**—All bottles and nipples should be thoroughly cleansed before being used a second time. This can be accomplished by washing the bottles in boiling-water and soaking the nipples, for a short length of time, in water to which a little soda has been added, great care being taken to thoroughly remove all traces of the soda, by rinsing them inside and out in plain water. The only desirable nursing outfit is a plain bottle with an ordinary rubber nipple, *without a tube.* It is a good plan to have two or more such outfits that they may be used alternately.

**RULE 10.**—Method for the sterilization of milk. The utensils necessary are:

(1) A sterilizer. Such can easily be made from an ordinary tin pail or pot, about 10 inches deep by 9 inches in diameter, having a tightly fitting tin cover. Perforate the cover with 8 holes, each an inch in diameter. The holes should be



arranged in a circle, midway between the border of the cover and its center. The center should also be perforated with an opening of the same size.

(2) A wire basket of sufficient size to hold several nursing-bottles. (Such baskets are sold in the shops for this purpose.)

(3) Rubber corks for the bottles.

(4) A bristle brush for cleaning bottles.

**DIRECTIONS (Koplik).—**Place the milk, pure or diluted (as the doctor may direct), in the nursing bottles, and place the latter in the wire basket. Put only sufficient milk for one nursing in each bottle. Do not cork the bottles at first.

Having previously poured about 2 inches of water in the tin pail or pot, and brought it to the boiling-point, lower the basket of nursing bottles slowly into the pot. Do not allow the bottles to touch the water, or they will burst. Put on the perforated cover, and let the steaming continue for 10 minutes; then remove the cover and firmly cork each bottle. After replacing the cover, allow the steaming to continue 15 minutes longer in the winter, and 20 minutes longer in the summer. The steam must be allowed to escape freely, or the temperature will rise too high.

The process of sterilization is now completed. Place the basket of bottles in a cool, dark place or in an ice-chest. The bottles must not be opened until just before the milk is to be used, and then it may be warmed by plunging the bottle in warm water. If properly prepared, the milk will taste but little like boiled milk. There will not be a thick ring around the inside of the bottle, and no butter will be seen floating on the surface.

The temperature obtained under the conditions stated above will not exceed in extreme cases 188° F.

Milk should be sterilized when it is as fresh as possible, and only sufficient milk for 24 hours should be sterilized at one time. If, after nursing, the infant leaves some milk in the bottle, this should be thrown away.

When ice cannot be procured, milk in bottles may be kept cool by wrapping them in a cloth saturated with water, evaporation keeping them cool.

ERNEST WENDE, M.D.,  
Health-Commissioner.

Now as to the results. These can best be measured by a study of figures. The subjoined table gives the deaths from cholera infantum in Buffalo, from 1890, when the city's population was 255,664, to 1897, when the population had increased to 360,000.

DEATHS FROM CHOLERA INFANTUM IN BUFFALO.

YEAR.	UNDER 1 YEAR OF AGE.	1 TO 2 YEARS.	2 TO 3 YEARS.	3 TO 4 YEARS.	4 TO 5 YEARS.	TOTAL UNDER 5 YEARS.
1890	281	64	3	.....	.....	348
1891	307	66	6	1	1	381
1892	301	67	6	2	.....	376
1893	420	132	14	.....	1	567
1894	313	96	5	3	.....	417
1895	304	54	8	2	1	369
1896	239	71	10	1	.....	321
1897	226	40	10	.....	.....	276

The circular mentioned has been distributed for the fourth season. In 1894 the city's water-supply was accidentally polluted and for a month caused an epidemic of enteric fever.

Not only has the entire population increased annually, but likewise that of infants as shown by the birth-returns, which are as follows:

	Total Births.
1890.....	7,368
1891.....	8,309
1892.....	8,233
1893.....	8,861

1894.....	8,516
1895.....	8,081
1896.....	8,414
1897.....	9,146

Considerable alterations will be made in the next circular, about to be issued by the Buffalo Health Department, on the same subject. These are in the line of improvements resulting from experience and study since the first circular was issued.

## SIMULTANEOUS BLOOD-WASHING AND BLOOD-LETTING.

By A. B. KNOWLTON, M.D.,  
of Columbia, S. C.

DURING the past year much has been written about the various uses of normal salt-solution as a restorative agent. It is now injected into the rectum, the vagina, the cellular tissues, and directly into the circulation, through all of which avenues it affords marked and positive results in cases of rapid exhaustion from any cause. It is the *simultaneous* practice of blood-washing and blood-letting to which I wish especially to allude, and it is this *combined* procedure to which I have seen practically no reference whatever. The only treatment reported along this line that has come under my observation was a case of puerperal eclampsia reported in the *Therapeutic Gazette* for February, 1898, and in which case the saline solution was administered hypodermically, while the post-partum hemorrhage that occurred was permitted to have its way until the patient was sufficiently bled. The idea was to relieve the patient of some of the poisonous blood by depletion and to dilute the remaining blood and reestablish the vasomotor tension by the injection of normal salt-solution. I adopted practically this same treatment in the following two cases, one of which antedates the one just quoted, the difference in my treatment being that I injected the normal salt-solution into the *vein directly* and *at the same time* that I bled the patient from another vein on the opposite side of the body. My object was the same, however, *i.e.*, to relieve the blood of its toxic element—whatever that is—and to counteract shock, and dilute the remaining blood.

**CASE I.**—On November 16, 1897, I was called to Mrs. P., who had passed through a normal labor the day before, having given birth to a healthy, full-term child, and who had been in convulsions for two hours. In addition to the usual treatment, normal salt-solution (3 pints) was injected into the right median basilic vein, and at the same time about 22 ounces of blood were drawn from the left temporal. The patient rallied somewhat, but did not regain consciousness, dying in three hours after my arrival.

This is the earliest reported treatment of puerperal eclampsia with *simultaneous* blood-washing and blood-letting that I know of.

**CASE II.**—On April 15, 1898, I was called to see a colored girl, Maggie P., who was in the eighth month of pregnancy, and had had four convulsions of increasing intensity during the two preceding hours. There were no signs or symptoms

of labor and although the patient was in convulsions, I did not make the usual test of this fluid and accordingly did not dilute the contents of the uterus. I injected 3 pints of normal salt-solution into the right arm (median basilic vein), and simultaneously bled about 20 ounces from the left. This was the only treatment. In half an hour after the injection and the bleeding, the patient had one convulsion, which was said by the mother present to be much lighter than any of the others. In six hours more she had another convulsion, which was even still lighter and amounted only to a faint tremor. In the meantime the patient became conscious and called for nourishment. In 8 hours more (14 hours since the injection and the bleeding), I dilated the cervix under chloroform, and delivered the child. The woman had no more convulsions, and made a good recovery.

In view of the increasing intensity of the convulsions before the treatment, and their lessening intensity and subsidence before I emptied the uterus, I am persuaded that the patient's life was saved by the treatment; and while I was hardly justified in assuming the great risk incurred by so tardily emptying the uterus, I am much gratified at the result obtained. I believe that the day is not far distant when this means of depletion and dilution of the blood will be considered the most rational treatment in all forms of grave toxemia, such as uremic coma, puerperal eclampsia, malarial toxemia (except when there exists too great a dyscrasia) and in any condition in which the blood is surcharged with poison.

Now a few words relative to intravenous saline injections when there exists a condition of shock or rapid exhaustion, and when, of course, we would not bleed. As a means of dispersing shock or of resanguinating the victim of profound hemorrhage I know of no treatment that will compare with the injection. I have had considerable experience with it as a restorative and I have always found it prompt, safe, and most effective. There are a variety of instruments for, and many methods of giving the solution thus, and as I have seen a number of men, who were otherwise good surgeons, fail in the attempt to do this simple operation, I beg leave to submit the method that has often served me well and than which I believe there is none better. The instruments needed are a scalpel, a piece of bandage, and a fountain-syringe armed with an ordinary No. 3 aspirating needle. The normal salt-solution having been prepared and put into the syringe, an incision an inch long is made diagonally across any vein of the arm (usually the median, basilic or cephalic) and fearless dissection is continued until a portion of the vein is thoroughly exposed. Now (and not before) the piece of bandage is applied tightly above the wound by a bow-knot, so that it may be readily and easily released—it is important not to apply the bandage till the vein is thoroughly exposed or the vein becomes distended and is easily wounded. The solution is permitted to flow from the syringe for a moment, till the cooler portion is lost, and, while the solution continues to flow, the point of the needle is inserted obliquely into the vein. The bandage is now released and the syringe is suspended as high as possible. If no lump or node occurs near the point of insertion it may be concluded that

the solution is passing into the vein, but if one *does* occur it is positive evidence that the solution is passing into the cellular tissue around the vein. In cases of hemorrhage the amount of fluid injected should bear some proportion to the amount of blood lost. I have injected as much as 5 pints, with only favorable results. Should too much fluid be injected, it is rapidly dealt with by a beautiful and wonderful compensatory vasomotor system, and by diuresis and diaphoresis. I would impress upon those who are "far from the madding crowd," but who none the less have to do with the thready pulse, the pinched countenance, and the flagging heart, that in intravenous saline injection we have a most simple, safe, and effective means whereby to turn the ebb-tide of many a life we would save.

## A CONTRIBUTION TO THE SURGICAL DIAGNOSIS OF RETENTION OF URINE.

By ALFRED GORDON, M.D.,

of Philadelphia

Physician to the Philadelphia Dispensary.

Most practitioners believe that the diagnosis of complete retention of urine in the bladder is unattended with difficulty and that confusion is impossible. The number of errors, however, is quite large, and the cause lies in the idea that the main symptom to be considered constant is sometimes lacking, and that the diagnosis is extremely simple. To take an example, the following statement expresses the idea of the majority of authors: "In all cases of retention of urine the most superficial examination shows that the bladder is over-filled, for the latter can be limited by palpation and percussion in every patient."<sup>1</sup>

The majority of special treatises do not mention the fact that in some cases neither palpation nor percussion will give exact information as to the state of the bladder. Cases are comparatively rare in which such conditions are present, but they nevertheless occur, as I have had the opportunity of observing two within a week.

This observation is not a new one, Mercier<sup>2</sup>, in 1872, stating that in certain cases of profound alteration in the contracting capacity of the bladder, the latter over-stretched by retained urine, is soft, flat and confounded with the mass of intestines. Mercier adds: "Only percussion is able to trace the limits of the bladder." The absence of hypogastric dulness in some cases of retention of urine reported by Reliquet<sup>3</sup> is in accordance with Mercier's opinion. From the experience of these two surgeons it follows that the results obtained by percussion and palpation might be deceiving, if the classic idea mentioned is taken for granted.

The few instances that have come under my care in

<sup>1</sup> *De la rétention aiguë de l'urine des urinaires modernes*. Article Voies Urinaires, 1886.

<sup>2</sup> A. Mercier. *Leçons de physiologie de l'urine*, Paris, 1872, page 17.

<sup>3</sup> E. Reliquet. *Œuvres complètes*, tome iii, page 225.



my dispensary practice have given me the opportunity of drawing the conclusion that the absence of hypogastric dulness in cases of retention of urine is not so rare as it is generally believed to be. In two aged men with senile hypertrophy of the prostate and the usual accidents of retention of urine, the abdomen was entirely free from any dulness down to the pubis. Percussion of the abdomen in all directions failed to disclose any modification of the normal sound, which was everywhere uniform. Palpation in both patients also did not give any indication as to the size of the bladder. On introducing my index-finger into the rectum and pressing with the other hand upon the suprapubic region, the patients expressed an intense desire to urinate. In one patient, who was greatly emaciated, the bladder appeared contracted and elevated in the abdomen, and its shape was almost visible at a distance. Percussion practised at that time revealed the expected dulness. In the other patient the abdominal wall became so contracted that I was unable to make the same statement. The bladder contained about 1,200 gm. of urine, while in the first it contained 1,500 gm.

It is likely that the quantity of urine retained was not sufficient to induce the ordinary symptoms. Nevertheless it was absolutely necessary to determine exactly the limits of the bladder, especially in the emaciated patient who exhibited already symptoms of infection and was depressed. Under analogous circumstances the idea of anuria has been considered, although the bladder contained more than 2 liters of urine.

From the history of my two cases it seems fair to conclude that there exists or might exist a certain relation between the absence of the hypogastric dulness and the impossibility of tracing the limits of the bladder by palpation. In fact, what conditions are necessary for the enlarged bladder to escape recognition? That it be soft, flat and flaccid, as Mercier has stated, in a word, that it shall have lost its contractility. It may appear needless to state, that a flaccid bladder, although distended by urine, may escape detection by palpation and percussion in all cases; but it is to be borne in mind that in some cases it does not. The diagnosis of retention may be extremely difficult when the bladder is in a relaxed condition.

The cases to which I have reference occurred in prostatic patients suffering from retention for a long time and which gradually became complete. The bladder being distended progressively, had for this reason lost partially its normal sensibility, a circumstance that may in some instances become aggravated because of co-existing nervous disease, traumatism and advanced general depression.

Finally, the patients were always examined in the dorsal decubitus, and the results of the examination might have been modified by a change in position. In conclusion, I would state that these considerations are intended to call the attention of physicians to the erro-

neous belief that the diagnosis of retention of urine is simple in every case. It is not advisable to attribute an absolute value to the presence or absence of certain physical symptoms. Perhaps it is a good idea to make a clear distinction, as ancient authors did, between typical retention of urine in the presence of stricture of the urethra and retention in prostatic patients. Just as the first group of cases are clear and evident, the second require sometimes particular attention and are difficult of interpretation.

## RECOVERY FROM A LARGE DOSE OF STRYCHNIN TAKEN WITH SUICIDAL INTENT.

By H. S. LEFFINGWELL, A.M., M.D.,

of Milwaukee, Wis.

On June 6, 1898, I was hurriedly called to treat a young man, 26 years of age, who had taken poison. Before it could be learned what he had taken I gave the whites of 8 eggs and, immediately after, a heaping teaspoonful of mustard in a tumblerful of warm water, continuing the warm water until emesis was established. I then gave the whites of 6 more eggs and followed this with warm water until vomiting had emptied the stomach of what the man had last eaten.

During this time three clonic spasms occurred, affecting the lower jaw, the upper extremities and anterior muscles of the trunk of the body, the lower extremities being wide apart and motionless. Sudden noises or voices, and only slight contact with anyone around the patient, without his permission, would excite another attack; and the number of these during the 11 hours he was under treatment was about 40, lasting from 30 to 10 seconds each.

I ascertained by this time that the man had taken 10 grains of strychnin, which he purchased by stating that he intended killing his dog. R. J. Dunglison says "an eighth of a grain is sufficient to kill a large dog."

I began to administer ether to control the convulsions and ice-water to satisfy the thirst, and this I continued the whole time when not giving the following three remedies.

I gave potassium bromid to control the convulsions until 140 grains had been taken, relying principally upon this remedy. The doses were 20 grains every half-hour, until I had given 60 grains; and then every two hours with chloral hydrate 5 grains until I had given 80 grains more.

I also gave  $\frac{1}{2}$  gr. doses of morphin sulphate, hypodermically, every two hours, in alternation with the bromid and chloral combined, until I had given five doses, to control the intense pain in the lower extremities, to prevent exhaustion, and to prevent *asphyxia* from spasms of the muscles of the chest.

I was not entirely confident of saving the man's life until midnight, when the attacks recurred at longer intervals and were of shorter duration.

At about 3 A.M. he was able to draw up his lower extremities, and the pains were much lessened.

How long a time it was before my visit that he had taken the poison could not be ascertained, the first alarm being the man's call for water. He had fallen out of bed upon his back during an attack, and the door of his room was broken open to learn what was the matter.

I wish to add a few words concerning cases like that reported. The ether, bromid, chloral, morphin and hypodermic syringe, I had with me.

I would suggest that for *arsenical poisoning* it is far better for the patient, and the reputation of the physician, to carry soluble ferri oxidum saccharatum. Time is too valuable to wait for the hydrated iron oxid to be prepared by the druggist, when the patient has taken either Paris-green or Rough on Rats.



## Selection.

**Our Hospital-Service.**—In commenting upon the action of Mr. H. M. Flagler in presenting the Red Cross Society with a suitable plot of ground and \$5,000 for the erection of a hospital, the Jacksonville correspondent of the *N. Y. Evening Post* states that actions like this leave an impression that the government is remiss, that its work in the hospital-department of the service is incomplete, and that the officials are incompetent. Directly or indirectly, such things reflect on the government and its representatives in the department.

The government has called out thousands of men from their homes and occupations. It is sending them into places where life and health are in jeopardy. It is no more than a fair proposition that the government should provide the fullest and best care for those who are injured, or who are taken sick while in the service. The most skilful of physicians and the most competent of nurses should be in attendance upon the sick and wounded. The men in the hospitals should be supplied with every possible comfort. If this is not done, or in just so far as the government fails to do it, or to make due provision for its being done, the government is to be censured. Further, our pension-roll is now an affair of enormous proportions. Some increase in the roll is an inevitable result of the present conflict. An inefficient hospital-service would open at once a wide gateway to a wholly needless and undue extension of the pension-list.

Out of this there naturally arises the question of the efficiency of the medical department of the United States army, and its need of assistance, in its special branch, from any relief organizations. While there might be some slight differences in details among the different army-corps, a good idea of the present system is to be obtained from the following general order issued from the headquarters of the Seventh. It is based upon the division-hospital system, which supersedes the former plan of the regimental hospital. The regimental hospital is continued as a subordinate institution, an auxiliary, in which minor cases of injury or illness are treated without cumbering the larger establishment:—

Upon the recommendation of the Chief Surgeon, the following assignment of medical officers and members of the hospital-corps will be made to the various hospitals, litter-bearer, and ambulance-companies, regiments of infantry, cavalry, and battalions of artillery:

To each corps hospital:—3 medical officers, 6 hospital-stewards, 3 acting hospital-stewards, 125 privates.

To each division hospital:—6 medical officers, 6 hospital-stewards, 3 acting hospital-stewards, 125 privates.

To each litter-bearer and ambulance-company:—3 medical officers, 7 hospital-stewards, 3 acting hospital-stewards, 104 privates.

To each regiment of cavalry:—2 medical officers, 1 hospital-steward, 2 privates.

To each battalion of artillery:—1 medical officer, 3 acting hospital-stewards, 1 private.

To each regiment of infantry:—2 medical officers, 2 hospital-stewards, 2 privates.

The litter-bearer and ambulance-companies for the Seventh Corps will, as far as possible, be enlisted from the regiment and battalions serving in it.

The surgeon of each regiment will, with the approval of the regimental commander, designate three hospital-stewards, one acting steward, and twenty-six privates for this purpose. All hospital-tents, litters, bunks, and other medical and hospital-property belonging to the United States in the possession of the different regiments will be turned into the division-hospital. Regimental hospitals will be abolished for the present, and all cases requiring medical or surgical treatment sent to the division-hospital, except those that can be properly treated in quarters.

An ambulance will report daily after surgeon's call at each regiment to remove to the division-hospital all cases designated by the regimental surgeon for hospital-treatment. Men who become injured or are taken in after surgeon's call, and requiring hospital-treatment, will be reported to the surgeon in charge of the division-hospital, who will have them removed as soon as possible. Medical officers assigned to duty with each regiment will attend surgeon's call, and those men undergoing treatment in quarters, render emergency-aid when needed, prescribe for those not on sick-report requiring medicine for slight ailments, and look after the sanitary condition of the regiment.

Medical officers serving with regiments will be furnished pocket-cases, first-aid packages, bandages, tourniquets, and all medical supplies needed for the thorough performance of their duties. Also one orderly and one hospital-corps pouch. All assignments of medical officers, hospital-stewards, acting hospital-stewards and privates detailed for duty with the corps and division-hospitals, litter-bearer, and ambulance-companies and regiments will be made by the Chief Surgeon of the corps. Departures from the assignments of medical officers and members of the hospital-corps as set forth above will be temporarily made by the Chief Surgeon from time to time to meet the exigencies of the camp or battle-field.

This represents the system as applied to camp and field-hospital work. It will be seen that, attached to the corps, which numbers, broadly, 30,000 men, there is a detail numbering some 1,200 men, or one hospital-man to every 25 in the command. As 10% of the force engaged constitutes a high percentage of casualties, we thus have a ratio of 2 members of the hospital-service to every 5 soldiers injured, assuming that the proportion of casualties runs beyond the general average. In some instances the percentage has been much higher, even as high as 25 and 30%.

Each corps has 75 ambulances and 65 escort-wagons, each with a driver, who is really to be added to the foregoing list as a member of the corps who can be called upon for service. Thus it would appear that so far as the numerical strength of the hospital-department is concerned, the provision is ample. As for equipment with instruments, bandages, appliances, and medicines, an inspection of the field-cases provided for each command cannot fail to leave an impression of thoroughness and entire fitness. Gen. Sternberg, the chief surgeon of the army, assisted by an able staff of consulting and working surgeons and physicians, has certainly made a most exhaustive study of the subject of complete and compact appliances for use in camp or in field.

Behind all this, there are the post and army-hospitals to which the sick and injured are sent for recovery. Of the efficiency of the camp and field-service there can be no question. Wherein, then, does there lie any opportunity for any clash between the government department and any auxiliary societies? With no purpose of criticising those who are engaged in noble work for the relief of the sick and the suffering, it seems that these societies have sought to assume a too independent position. Their enthusiasm for their work has led to a zeal that has somewhat lost sight of the fact that their work is auxiliary and not principal. Their attitude has reflected to some extent upon the efficiency of the medical department. Their calls upon the public imply that the department is in some way remiss in the preparation for and the performance of its work. Very naturally, this is resented by the officials upon whom the responsibility really falls.

The most minute system is an absolute necessity for the welfare of the injured themselves, and as well for the protection of the government in its future financial interests. The Red Cross and other relief institutions are independent organizations supported by the liberality of individuals. But in their general operations in hospital-service their work properly is subordinate to, and comes under the supervision of, the Medical Department of the government. There are certain matters which are not, though they well might be, included among the functions of that department. The supply of pajamas, of ice, fans, literature, and delicacies for the sick, is almost as essential as the supply of bandages and iodoform. The furnishing of such as these would seem to be the proper sphere of these auxiliary societies, just as it comes within their field to feed the hungry and clothe the naked. It is of doubtful wisdom for them to essay the work which the government ought to do, and which there is every reason to believe it is doing.

The government should build and control its own hospitals; should have as many of them as may be necessary; should locate them at points best adapted for them, and should provide a proper medical and surgical corps for each. If any individual sees fit to purchase a building and to present it to the government for hospital-purposes, and the government sees fit to accept it, and to put it under the charge of a government official surgeon, it then becomes a government institution. If Red Cross or other nurses tender their services, and the government accepts them, no criticism can be made.

Any complication of our hospital-service is unwise and unfortunate. The government is responsible for the comfort and well-being of those who are in its service. It should be held responsible, and it should be the directing head of all relief work in camp or field. It is to the great honor of our country that we have so many citizens who are willing and ready to give of their means for the relief of the suffering, but it certainly seems best to give the government the option of accepting or declining auxiliary aid, and to bring that auxiliary aid wholly within the control and regulation of our department service, so far as relates to strictly military or naval work.



# The Philadelphia Medical Journal

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**The New Vaccination-Bill in England** has now advanced another stage toward becoming law by passing the grand or legal committee of the House of Commons. Its present shape may, therefore, be taken, in all probability, to be its final shape. In this event it is but a poor outcome of the seven years' labors of Lord Herschell's Royal Commission, on the voluminous reports and interim reports of which it is supposed to be founded. A certain amount of compulsion is retained in the bill, but only enough to irritate the antivaccinationists, whilst all sanitarians and statisticians in England are deploring the omission of any provisions with regard to revaccination.

**The Place of Women in the Community.**—We beg to call attention to the summary of the work of the General Federation of Women's Clubs, from a medical and sanitary point of view, given on another page of the JOURNAL by an intelligent observer, competent critic and active participant, and ask that this be contrasted with the report in last week's JOURNAL of the Deutscher Aerztetag. Sentiment aside, it is certain that woman is bound to play an important part in the community, in public as well as in private affairs, and the degree of activity of women in communal matters may be taken as an index of the culture, of the advancement, of the morality of a community and of the civilization of a country.

**The Children's Seashore House** at Atlantic City is so well known and its humane work so commendable that it should be only necessary to state that it is in need of funds in order to fill its treasury. Though poor in material wealth the corporation is rich in good deeds. It maintains at the seashore an institution in which poor sick children, without regard to race, color or religion, may receive careful treatment, trained nursing and good food during the summer months—a period that in our large cities is exceedingly destructive, especially among the young; and to send these unfortunates away when necessary is to save lives that must otherwise be lost or maimed. The best time to contribute to this laudable enterprise is now. The president is Mr. K. M. Blakiston, 1012 Walnut Street; the treasurer, Mr. E. A. Sibley, 136 N. Fourth Street; the secretary, Mr. F. K. Hipple, all of Philadelphia; and the physician in charge, Dr. Wm. H. Bennett, at the Ocean end

of Ohio Avenue, Atlantic City, N. J. The Home is supported entirely by voluntary contributions. During the season of 1897 it was open for 95 days and received 1,087 children and 218 mothers, who remained for an aggregate of 13,931 days. The outlay for milk alone was \$1,326.

**Hypnotism, Medicine, and Law in England.**—A singular case is now being heard in the English law-courts in which the issue will turn upon what the position of hypnotism in medicine may be. A Dr. Kingsbury, who has written on hypnotism as a remedial agent, is the residuary legatee under the will of an aged lady, recently deceased, whereby he receives, if the will is found good, the sum of £30,000. The son of the lady disputes the will, alleging that Dr. Kingsbury had used hypnotic suggestion to influence the testator, and his counsel has been able to quote from Dr. Kingsbury's own written work sentences that seem to show that in the doctor's opinion such influence might be thus employed. Dr. Kingsbury asserts that he made no hypnotic suggestions whatever to his patient that could lead her to make him a legatee, and evidence has been called to show that whatever Dr. Kingsbury may have written (or even may have tried to do), hypnotic suggestions could not have been carried to such a pitch. The verdict is awaited with curiosity by the medical profession in England, who, as a body, have been unable hitherto to make up their minds whether or not hypnotism is of any practical value in medicine. If a law-court finds on good medical evidence that hypnotic suggestions can be made irresistibly—of course to suitable subjects—on such important matters as their testamentary intentions, a great impetus will be given to the employment of such influence therapeutically.

**The Red Cross Society** has, we notice, been refused permission to participate in the Nile expedition, and the experience of the U. S. medical authorities with the organization during the present war should serve to bring about some more definite arrangements between governments and military authorities, and the society. We cannot believe that the Red Cross is managed with quite the proper amount of intellectual guidance. Sentiment, good as it is, appears to be all too dominant in the councils and work of the society. The noblest motives do not alone suffice. We think it high time that

those who contribute to its funds should demand obedience to a few simple commercial rules and safeguards. They should demand a systematic auditing and public accounting of the vast amounts of money poured into the treasury of the society. We neither make charges, nor suggest suspicions of wrong-doing, or of misapplication of money and power. But it is not according to the known laws of human nature that the disposal of vast sums, and the direction and control of thousands of agents should not result in waste or dishonesty when those who use and direct have no public accountability to any one. The fundamental criticism seems to be that the organization is in danger of exaggerating its own importance, and that the medical departments of armies should be competent, should be permitted, and should be compelled, to manage all medical matters pertaining to war. For what other purpose are these medical departments, pray?

**The Multiplication of Professors** has at last reached an extreme that is arousing protest. The real professors are alarmed at the encroachments of the pseudos. The title will soon be as meaningless and distinctionless as Mr., or Col., or Gen. The public is beginning to think it flattery to address letters with a Prof. instead of with the Dr.-handle to names. Dr. Dwight, of Harvard, decidedly objects to the democratization of the title, contending that the assistants who are taking the titles of Associate, Clinical, Adjunct, or Assistant Professors, do so at the expense and to the belittlement of the chiefs and original holders of the position, and that the practice leads to anarchy, dishonoring of the true dignity of the office, and endless trouble generally. With the insight and wisdom usually characteristic of our much respected contemporary, the *Boston Medical and Surgical Journal* says there is no danger if the chief is not only nominally but in reality head of his department, with the ability to lead and direct and incite. We feel like adding that the controversy, protest, and counter-protest, are useless and will prove ineffective. No people are more hungry for aristocratic-looking titles than the democratic American people, and the process of securing them will go on even if each city has to manufacture a dozen medical colleges. Moreover, the custom is relatively harmless. Neither the professors, the beprofessed, nor the public take the matter very seriously—except in the college-catalog. The professors of Whitewashing and of Eyesight-tested-free have discounted the dignity and delivered us from the duty of hero-worship. One hardly understands why a man should prefer to be called Professor rather than Teacher or Instructor, but, alas, it is a fact.

**Funerals and Infectious Disease.**—In Prof. Koch's address on the spread of the plague, as reported by our Berlin correspondent, is tersely told the story of the manner of the invasion of German East Africa. A

native trader travels into the plague-infected country, returns, becomes ill and dies. His friends attend the funeral, and all are stricken with the disease. Others who came in contact with these are in turn infected; the disease spreads and has now persisted for 8 years. The story is that of an uncivilized, nay, barbarous, Central African tribe, but it will have a suspiciously familiar ring to the inhabitants of many civilized countries.

Despite the known dangers of infection it is difficult, even in many parts of civilized countries, to keep the funerals of individuals dead of contagious diseases private. An exaggerated reverence for the dead, sometimes thought to partake of a religious feeling, but really a superstitious sentiment still makes itself sensible. While the proper treatment of what *was* mortal of friends will ever remain a tribute of the living to the dead, it is a serious matter that exaggeration in this matter under the counterfeit presentment of reverence should continue to expose communities to the dangers attendant upon the spread of infectious disease. There remains an educational advance to be effected in this connection that medical men are best fitted and most suitably situated to lead. The development of correct views in this matter will in time be followed by the disappearance of other abuses in connection with funerals, such as the large expenditure often made by those who can ill afford it, the silly display and customs that fashion dictates, the exposure to inclement weather often on the part of those already run down by long nursing, watching and anxiety—in a word the attendant evils that make civilized funerals as irrational as the funeral-rites of the poor benighted Central African.

**Again the Philadelphia Water-supply.**—The only thing as disgusting as the description of the filth that pollutes unchecked the Schuylkill is the contemplation of the state of mind in which those Councilmen have put themselves who have voted that the poisoning shall continue unhindered for the present. The obvious intent is to prevent the present city administration receiving the credit and its friends the possible profit of performing the work required to establish filtration. This higgling kind of way of treating large questions of life and death deserves a reprobation more severe than the long-suffering and slow-moving public is likely to bestow upon it. So forgetful, fortunately for the pot-house politician, is this same public that it seems scarcely even to have noticed that the Schuylkill Valley Water Company has raised its head again from the mire to which it had temporarily retired.

For ourselves, we can only repeat what we have already said so often—*we want and need filtration now*. Every man who makes excuses to postpone it is a public enemy, nay, makes himself responsible for loss of life. If these seem hard words their justification may



be found in the steady rate-incidence of typhoid fever, which has only begun to abate in the past fortnight, and in the report of Dr. Benjamin Lee to the State Board of Health (see p. 152). The appalling list of dead animals (a horse's carcass remained undisturbed for many days at Flat Rock Dam), refuse-heaps, garbage, privies designed to cast their contents into the river, household-drainage (at "Pottstown a large population of Hungarians . . . make use of the stream as a receptacle for garbage and refuse"), mill-sewage - furnish an endless list of vileness.

There is nothing new in all this. Every one who cared to know it has known it for years—but those whose interest was not to disturb existing arrangements have all the while continued to prophesy smooth things. Not even the epidemic of last winter and some hundreds of needless deaths have sufficed to disturb their self-complacency. *The only remedy and the only penance is filtration.*

**Mr. Poultney Bigelow's Strange Course.**—We cannot but deplore the fact that our compatriot, Mr. Poultney Bigelow, seems to have suffered some diminution in his heretofore unqualified loyalty to a certain imperial friend of his in Europe. In a recent paper in the *Century*, Mr. Bigelow has pursued a course that will certainly puzzle, and perhaps even pain, his American friends. He has probably been reading Nordau on "Degeneration," or Ireland's "Blot Upon the Brain;" but this surely is no excuse for the cruel and wicked skill with which he dissects his fidus Achates, and holds up the brilliant egotism of the latter to the irreverent gaze of our American democracy. Mr. Bigelow is evidently a past master in that reprehensible style of literary composition that seems to laud its victim, while in reality it isolates and displays his foibles to the world. Few of us, even in private life, could endure such a revelation of our seamy side; but the man who sits in the "fierce light that beats upon a throne" is peculiarly defenceless against such covert attacks upon the eccentricities of his imperial genius.

We doubt not that Mr. Bigelow's unfortunate paper will have a directly opposite effect in this country from what he intended. The American public is quick to detect an unfair advantage taken of a defenceless foe, and will doubtless sympathize with the prince whose exuberance of divine right is thus mercilessly posted in the gaze of all. Something will be allowed for the natural megalencephaly that comes to Mr. Bigelow's friend by both heredity and environment; something will be condoned in one whose exalted nature evidently does not permit him to think, to speak, and to act like ordinary men. We earnestly trust that the medical public in particular will not hastily conclude from Mr. Bigelow's treatment of his subject that a dangerous paranoiac force is exerting itself in the momentous affairs of the world. The medico-psychological aspect of

the case will alone appeal to our readers, who know how difficult it is in such cases to arrive at a correct diagnosis. We trust, in conclusion, that Mr. Bigelow has not exposed himself to any risk of *l'ise majesté*.

**The Conflict of Medical Science and Piety** has never been brought to such a sharp and momentous issue as is to-day illustrated by the struggle of the English in India with the subject races in regard to the prevention of the plague. The medical profession is convinced beyond all doubt that the sole means of stamping out and avoiding a frightful recrudescence of the terrible disease is by measures (the chief of which is segregation of the smitten), that are so repugnant to the social and religious prejudices of the people that they prefer to die by the million rather than submit. If the Government persists in carrying out the sanitary measures demanded by science and by common sense it is certain that some fifty millions will be in open revolt against English rule. The differences and difficulties heretofore arising between medicine and morals have been insignificant in comparison with this tremendous revolt, and it is a proof of the growing power of our science and of the problems yet to arise in eradicating infectious diseases from the globe. For us, who are fast developing imperial tastes and assuming imperial powers, the fact is of peculiar suggestiveness. What unforeseen problems we soon may be confronted with! The English Government is entirely loyal to its physician-advisers in this matter, and these are unanimous in their scientific opinion and advice. An absolute impasse seems to have been reached, reminding one of the old problem concerning the impact of an infinite force with an immovable body. As usual, however, either the supposed force is not quite infinite or the body may be moved by another with a sufficiently high momentum. Science and government have about concluded they must bow to the at present irresistible force of public prejudice, and that disease must be allowed its way. The regulations as to segregation, etc., will be withdrawn and perhaps millions will pay with death the penalty of their piety. The fact would be far more tragic were it not that the grinning Malthusian is a spectator of the conflict from the standpoint also of an infallibly logical science. Under English rule the number of natives in India has risen so that the increase of population, not checked as formerly by war, is reducing life to a pitiable worthlessness. The average annual income of the Indian native is stated to be about five or six dollars, and under such circumstances life cannot and is not regarded, even by the living, as of much value. The dangerous indulgence of old habits and prejudices is preferable to a more certain and longer life if coupled with violent change in these customs. If the deaths of the obstinate were the sole consequence! But perhaps only by such facts can science teach the lesson, old to her, but

never learned by the ignorant, that disease in one part of the world means at least the possibility of disease anywhere and everywhere.

**Common-Sense Views in One Lay Journal as to Vivisection.**—We have a strange mixture of feelings in chronicling the fact that the *Evening Journal* of New York has published an editorial article marked by downright good sense in reference to Antivivisection and Vivisection. The *Evening Journal's* course in regard to political and other journalistic matters has been so outrageous that we could not have expected the good news of finding its judgment so perfect on a subject so thorny as that of "Cutting up Live Animals." But honor to whom it is due! The subject is treated in a popular and newspaperly way, of course, but as to essentials in a way that we could wish every newspaper in the land would imitate. The anti-vivisectionist's crusade would soon end if it were found that popular prejudice could not be aroused, and if the newspapers would hold their heads as well as the *Evening Journal* has done in this matter. Here are some extracts from the large column on the subject in its issue of July 11th:—

"The anti-vivisectionist absolutely declares that it is always wrong and brutal, is, of course, a kind-hearted individual. 'Say to such a man,' 'Your little boy must die. He will perhaps be saved if I might try an experiment on him as a test, but that would hurt the cat, perhaps, and he.' The anti-vivisectionist would wring his hands and say, 'That is on ten cats four thousand cats—all the cats on earth, but save my child.' To permit vivisection by any save scientific men, for scientific purposes, is, of course, indescribably brutal. To vivisection frogs or other small animals in the presence of children is degrading, and it should be illegal. To permit the cutting up of live creatures in schools for young women is horrible and revolting. The girl taught to regard with indifference the sufferings of animals is unfitted for motherhood—as well as for ice-cream and hammock parties. The young woman who experiments with animals should be sent to bed on bread and water for a week. The young man, medical student or other, who tortures animals experimentally should be locked up and made to feel sympathy at least for himself.

But no interference should be permitted with the operations of legitimate science. A man, who, like Brown, Squard, could calmly break his own finger in a vise in the presence of his pupils at the Académie de Médecine, and then lecture on the knitting processes of the bone, may be excused for having around his house small guinea-pigs with their spinal cords severed.

Nature, ruthlessly experimenting and striving for development and ultimate perfection, tortures beyond conception not scores, or thousands, but hundreds of millions of animals every year. And remorseless nature goes further and experiments on human beings, teaching by brutal punishment the penalty of wrong and wiping out the unfit.

Thousands of children suffer through infancy and die in agony because their parents sinned. Millions suffer death by hunger, endure agonies worse than any in the dissecting room, that men may be compelled to think and fight and vote for themselves. This material universe is a great and wisely managed system of punishment, suffering and slaughter. A few more deaths, a few drops added to the vast ocean of suffering need not be counted if in consequence suffering and death are to be diminished for centuries to come. Suppose ten thousand cats suffer now, and as a result five hundred thousand children are saved in the next ten centuries. Is not that all right, even though some of the cats may have endured useless experiments?

The trouble with all rampageous philanthropists, as with those who oppose vivisection, is this: They mistake selfishness for benevolence. They hate vivisection because it forces upon them facts which are painful. The anti-vivisectionist, if sincere, ought to be a permanent bankrupt. One walk through the slums would impoverish him if he felt suffering as keenly as he thinks he does. The knowledge of the constant suffering and torture that surrounds him in the animal world would kill him if he were really as sensitive as he imagines himself.

Fight unrestricted and unscientific vivisection as savagely as you can, dear anti-vivisectionists, and secure laws, if possible, preventing the degradation of children and of young women by the cutting up of live animals in schools. But do not interfere with the needs of science.

**The Yellow-Fever Situation.**—The question doubtless presents itself to many minds: Are we facing an emergency? Are those ugly companions, war and pestilence, both confronting us? As the question is one of supreme importance, we have taken pains to obtain official information for the benefit of our readers. The newspaper-reports are often unreliable, and the criticisms contained in them of high officials, who have to meet grave responsibilities, are often hasty and unjust. Yellow fever cannot be controlled in some situations without presenting problems of great difficulty and perplexity; and these problems have to be met in the camp and hospital—not at the editorial desk.

In the first place, as far as home-territory is concerned, Dr. Walter Wyman, Supervising Surgeon-General of the Marine-Hospital Service, has assured us, under date of the 25th inst., that there was not, so far as he knew, a case of yellow-fever in the United States on that day. A mild epidemic of the disease, in which no deaths had occurred, had just been successfully stamped out in Mississippi. According to the health-reports, published by Dr. Wyman's department, the quarantine-camp, controlling this epidemic, was ordered closed on the 12th inst. As Dr. Wyman's information about the possible existence of yellow fever in the United States should be more exact than that of the newspapers, we may accept it as both conclusive and encouraging. We do not know, of course, that cases may not exist in such a large territory outside of official knowledge, but the opinion of the Supervising Surgeon-General of the Marine-Hospital Service should certainly be accepted as of first importance. It is not probable that any cases, especially an epidemic, could long exist and not be detected.

As for the alleged importation of a few cases within the last few weeks, we have no positive information. It was said that the steamship *Seneca*, direct from the seat of war, was in a very bad condition when she reached port and had some mild cases of yellow fever on board. We have, however, no authentic information on this subject. The Spanish prisoners in Portsmouth harbor have evidently suffered much from disease and exhaustion, but it is to be presumed that yellow fever is not in that camp. Other fevers, such as



malaria, typhoid and sunstroke, have prevailed among the troops in various quarters, but these are easily recognized and should furnish no ground for doubtful diagnosis.

As for the future, the problems presented are undoubtedly grave and pressing. In and around Santiago yellow fever is prevailing, and has attacked the American troops. On the 27th inst. Gen. Shafter reported the total number of sick in his army on the 26th as 3,770, of which 2,924 were fever cases, but these figures evidently include fevers of all kinds. As the commanding general unfortunately did not give details it is impossible to say how many of these were cases of yellow fever. Such cases of the latter disease as exist are said to be of a mild type. The deaths numbered 10, of which 5 were from yellow fever and 3 from typhoid.

The difficulty which the government will have to combat from this time forward will be to prevent the importation of the disease from this center of infection. The government has a double duty: first, to the soldiers in the field; second, to the country at large. Channels of communication between the seat of war and the home-government must, of course, be kept open. The proper disposal of the infected troops is doubtless a grave question for the authorities. The invalid-soldiers should be given every advantage of a better climate and better sanitary surroundings that can be given them without needless risk to the home-population. This may be as grave a sanitary and moral question as has ever been presented to our government. At present writing we do not feel called upon to express an opinion, because we are ignorant of what plans the government may have under consideration. The authorities may be facing the disagreeable alternative of having to import cases of yellow fever or of ignoring the just claims of our heroic men who have faced battle, hardships and disease in the cause of their country. Surely we can rest content in the belief that the government will meet this dilemma with both patriotism and prudence, and that its plans will meet with the approbation of the country.

**Lobar Pneumonia with Prolonged Pyrexia.**—J. Stewart and D. C. McCallum (*Montreal Med. Jour.*, May, 1898) report a case of lobar pneumonia of the left lower lobe occurring in a child 3 years old. On the sixth day the temperature dropped to normal, where it remained for 3 days. In the course of a few days signs of consolidation disappeared, but the temperature began to present features suggestive of a marked and characteristic septicemic process, and for 6 weeks it varied from subnormal to 103° F. Tappings for pneumococcus pleurisy, cultures of the blood and the Widal test yielded negative results. There was no evidence of unusually delayed resolution or of any pleural, pericardial, peritoneal or meningeal complication. The child took nourishment and stimulants freely, was bright and cheerful and did not appear to suffer particularly throughout its prolonged illness.

## War Correspondence.

Transporting the Sick and Wounded on Board the "Relief."—Inadequacy of the Arrangements of the Quartermaster's and Commissary Departments.—Injuries Inflicted by the Mauser Bullet.—Yellow Fever.—A Fatal Case of Benzine-Naphtha Poisoning.

SICOY, CUBA, July 11, 1898.

WE arrived here on Thursday morning last, and after some delay, caused by rough water and insufficient anchorage, work was begun transporting the sick and wounded from the shore-hospitals to this ship, until at this writing there are about 200, chiefly wounded, on board. There are surprisingly few sick in the hospitals, and though some fever-patients were taken on board at first, Dr. Torney, from fear of yellow fever, has decided to receive from this time only the wounded.

This place consists of perhaps 100 wretched shanties, and is being used as a base both for landing troops and as a hospital-center. They are brought in from the front line now encircling Santiago, where they are occupying the trenches, from which the Spanish were driven. There has been an armistice since Saturday a week ago, the original time having been extended from day to day to enable the enemy to get an answer from Madrid to our demand for unconditional surrender. It has been a merciful respite for the army, for, at the end of the 2 days' fight, after forced marches and terrible privations, they found themselves utterly exhausted and with nothing to eat. This was due partly to the fact that in the various engagements many of the men had temporarily cast aside pretty much everything they carried, and their packs were rifled by our Cuban allies, and partly because they had been rushed pell-mell ahead and no thought was given nor arrangements made to get supplies to them.

In Friday's and Saturday's fight there were 1,585 killed, wounded and missing. The large proportion, of course, were wounded, and an inadequate surgical corps found themselves overwhelmed with work, and it is no wonder that practically all the wounds are infected. The wounded were forwarded as rapidly as possible to the shore-hospitals here. I say as rapidly as possible, which was in fact painfully slow, for there are but five ambulances for this large army. This, of course, is scandalous, but it is only one of the many means adopted—I was going to say to add to the frightful suffering our brave men have undergone since they left Tampa. Many, of course, did come down in the ambulances, but, as a matter of fact, a large number came on foot, some carried on the backs of stronger men, and others on horseback with a companion leading the animal.

I have never seen a more distressing sight than these poor fellows presented. As for the condition of the shore-hospitals here, I scarcely dare allow myself to speak. That the medical corps and the chief surgeon are not to blame I am glad to be confidently able to assert. The appointments made in Washington to positions of trust and importance in the quartermaster's and commissary departments of the army of anyone and everyone who had a father or a political pull, sufficiently explain the disgraceful condition of things here.

However, matters greatly improved after the arrival of the *Relief*, and the poor fellows are now being tenderly and efficiently cared for. We have been surprised to find that the wound made by the Mauser bullet is by no means so

extensive as we had expected. Speaking generally, it is safe to say that this bullet does not mutilate. We had read of the mutilations made by it on the cadaver at various ranges, but, as a matter of fact, the point of exit is surprisingly small, in some cases amounting to nothing more than a scratch. Nor are the bones splintered to the extent that the text-books state. The bullets seem to be surprisingly easily deflected. I could give many instances of this. In one case the bullet entered the right leg in the upper third of the thigh, passed upward through the abdomen in front of the bladder, and finally came out of the left leg externally at a point exactly corresponding to that of its entrance, leaving only a very small mark. On the other hand, the Lee-Metford bullet used by the marines makes a frightful wound at the point of exit, and when it strikes a bone it literally drives it before it, at the same time splintering it to bits. These are, of course, only preliminary observations, as I have not as yet had an opportunity to see a large number of cases, but I am giving expression to the opinion of a number of surgeons to whom I have talked.

Yellow fever has broken out here, though in a very mild form. There are in all 30 cases in this filthy village. The abominable nest should have been burned before allowing a man to enter it, but no one had common sense enough to do so practical an act of incendiarism. The average Cuban is dirty enough to give an army of clean men disease and vermin. Some of the officers have actually taken up their abode in the houses of Cubans here, and as result, in one instance, six of nine are down with fever. For obvious reasons I do not mention names, but three have yellow jack.

A curious case of poisoning occurred on one of the ships here. Two sailors who had charge of a naphtha-launch, getting thirsty, tapped the only visible supply of liquor the boat possessed and drank a mixture of benzine, naphtha and water. One died in dreadful agony in two hours; the other suffered frightfully and came out of the fight totally blind.

FRANK DONALDSON, M.D.

## COLD TEA AS A SOLDIER'S BEVERAGE.

To the Editor of the Philadelphia Medical Journal.—

The note in your edition of July 16th, p. 94, entitled "Cold Tea as a Soldier's Beverage," is a most appropriate suggestion to the men in the field. During the (Kaffir) Zulu war of 1879, and the subsequent Boer war in 1881 and 1882, I had personally discovered the very satisfactory beverage cold tea proved itself to be—not only for those on active duty, but also for the sick and wounded. During forced marches with the mounted troops, when we were for hours broiled in an unmitigated sun-bath, it was interesting to note the contrasted endurance of the "cold-tea men" and the spirit-drinkers (creek-water). The decision was always in favor of the former.

The tea used should be what is known in the trade as a "clean" tea, i.e. a mild-flavored, uncolored green or black tea, not an astringent, coarse variety, and it should not be a stronger infusion than two heaping teaspoonfuls of dried tea to a pint of re-boiled water. It should be allowed to cool in the open before being transferred to the canteen, and no sugar must be used. The addition of lime-juice is useful, but not essential. A further suggestion gained by experience is that during long marches in hot countries, whatever beverage is used should be "sucked," not drunk in the usual manner. By this method the thirst is much more readily

assuaged and much less fluid is required. All that is necessary to render this possible is to screw a small metallic or hard-rubber spigot into the canteen.

Attention to these apparent trifles is one of the factors that make one feel "fit" at the end of a long march or several hours' bush-fighting—a sensation most fully appreciated by those who have experienced it.

Respectfully,

FREDERICK W. D'EVELYN,  
(Edinburgh University),

Late with Natal Field Force and Pretoria Siege Garrison.  
*San Francisco, Cal., July 2, 1898.*

## Correspondence.

### LETTER FROM BERLIN.

(SPECIAL CORRESPONDENCE OF THE PHILADELPHIA MEDICAL JOURNAL.)

#### The Spread of the Bubonic Plague.

At a special meeting of the German Society for Public Health, held in the White Hall of the Berlin Zoological Garden, on July 7, 1898, and presided over by Geheimrath Prof. Spinola, the Director of the Charité Hospital, Prof. Robert Koch presented a communication **on the spread of the bubonic plague**. During his recent visit to German East Africa, Koch had the opportunity of investigating a series of suspicious cases that had been reported from the neighborhood of Lake Victoria Nyanza and of deciding that there exists here in Uganda, on the northern shores of the lake, a literal plague-spot, a region in which true bubonic plague is endemic, and where it has existed as far back as tradition goes.

Ten years ago it seemed as though the dread plague, which had so often scourged Europe, and still oftener Asia, had lost its power of extension and destruction. Only slight epidemics and almost isolated cases were reported. But there came the rude awakening from this dream of fancied security, when some four years ago the plague was reported to be raging violently in Northern India. Then came the news that Persia had been invaded, and in 1894 came the news that the disease began its ravages around Hong Kong and in the city itself. Two years ago it gained a foothold in Bombay, and the latest reports show that all of the measures thus far taken for its eradication have been unavailing.

The discovery in London of two cases of the disease that had been imported from India, and the presence at Suez of a ship infected with the disease, aroused Europe to the realization that the dread scourge of the past was at her doors and that prompt measures must be taken for her protection. Most of the European governments at once sent medical commissions to investigate the disease, while effective measures were taken for its exclusion.

Investigation showed that undoubtedly this was an epidemic of the old plague so fearfully known in history. It had the bubonic characters, the high mortality, and the same virulence for rats that tradition had attributed to the old plague. In fact it was more of a rat-disease than a human disease, attacking these ordinarily resistant animals on the slightest exposure. Meantime Kitasato and Yersin had discovered the bacillary cause of the disease, and then proper sanitary precautions that could be depended on to assuredly protect civilization became possible, for the abso-



lutely certain recognition of the disease at an early stage was made easy.

Interest now centers in the origin of the disease, for modern bacteriology points inevitably to the conclusion that epidemics of disease do not result from a regeneration of the contagium, but that favorable circumstances combine to make epidemic an affection that has been previously endemic. The important question in the prophylaxis then is where is the primary focus or where the primary foci; for there would seem to be more than one region in which the disease is endemic. One such focus certainly exists in the northeastern part of India and western China near the Himalayan mountains, in Thibet; and it is from this center that the Indian epidemics have arisen. A second focus is in Mesopotamia in the country between the Euphrates and the Tigris, whence certain great historic epidemics took their origin. A third focus lies south of Mecca, in Arabia, and Mohammedan pilgrims undoubtedly carry the disease with them on the way home from their pilgrimages. A fourth focus is the one that Koch has just found in South Africa; whence the disease, by being carried down the Nile, which flows through Lake Victoria Nyanza, has led to certain European epidemics, especially on the Mediterranean coast. The epidemic of plague at Tripoli, for instance, in the seventies, whose origin was such a profound mystery, might easily have been derived from this last focus, being carried by caravans with slaves or ivory.

Some suspicion of the existence of a focus of plague in South Africa has been entertained for some time. Emin Pasha, in his travels on the upper Nile, had seen some cases that he suspected of being plague. The reports of other travelers and missionaries seemed also to hint at it. On Koch's arrival in German East Africa he found the reports of a plague-like disease in the province of Kisiba so widespread and seemingly so authentic that he resolved, if possible, to investigate it. It was too far to travel three months from the coast; but a German military medical man gave up his vacation, which he was spending on the coast, to return to the region, investigate the disease and send Koch specimens from the fatal cases. He found typical cases of the plague in its fulminant form with the characteristic glandular swellings, a mortality of 90%, and bacilli like those described by Kitasato and Yersin.

Koch found an almost pure culture of the plague bacillus in the specimens sent him, and that reached him in excellent condition, and the characteristic changes in the glands. He did not make cultures of the bacilli; but in answer to any objection that might be raised on the score of the diagnosis being merely a microscopic one, he said, after the lecture, in the discussion, that the plague-bacillus in the tissues is so nearly a pure culture that the objection could not hold; and, besides, inoculations of animals, especially of rats, had given the desired confirmation. These latter animals, usually so resistant to all infection, showed themselves characteristically susceptible, while other animals had to be inoculated subcutaneously. One need but feed a small quantity of infected material to rats, to see the disease develop and find the bacillus in pure culture in their tissues.

Koch has not the slightest doubt that the disease is true bubonic plague. It had existed in Kisiba (German East Africa) on the southern shores of Victoria Nyanza for 8 years and the story of its introduction was known. It had come from Budu, in Uganda, on the northwestern shores of the lake. A trader had gone into this region from Kisiba on a 3-days' journey and had had dealings with a man who

was seized with the disease as he was himself after his return. The attack proved fatal, and all who came to the funeral were likewise seized.

The country is of such a character as to be considered eminently a plague-spot. The inhabitants live almost entirely on bananas (and Koch remarked that the study of metabolism on an exclusively banana-diet would make an extremely interesting subject for a physiologic investigation). The banana-trees grow in thickets, through which light and air can scarcely penetrate, and in the midst of which the inhabitants live. The conditions for the development of special virulence in bacteria would thus seem to be all supplied. There can be no wonder, therefore, that plague, once introduced, has become endemic; and so it has been within the memory of man.

The new focus of plague thus exposed is of special interest because the English are engaged in building a railroad from the coast to Lake Victoria Nyanza, which will place this plague-spot in direct communication with commercial highways of the world. With our present knowledge of the disease and the modern advances in sanitary science, however, there need be no cause for alarm. The plague has been restricted to a few foci, and it can be kept there. To this end accurate knowledge is necessary of the spots from which danger is imminent. The timely discovery of this new possible focus of infection will serve to prevent unexpected dissemination from a quarter from which no danger has been apprehended, as the plague was thought to be an Asiatic disease; and knowledge here means power to restrain.

## LETTER FROM DENVER.

### The Biennial Meeting of the General Federation of Women's Clubs.

*Specially Prepared for THE PHILADELPHIA MEDICAL JOURNAL.*

In the month of June of this year there were held two notable gatherings in the city of Denver. Hardly had the doctors of the American Medical Association departed before the club women of the United States appeared. The second convention was, in some ways, the more remarkable of the two. It was, perhaps, the greatest affair ever conducted by women alone. The Women's Clubs have not been federated long, and this was only their fourth biennial; yet there were present in far-away Denver nearly 1,000 delegates, and they came from 31 States of the Union. The first thought of an observer was "What a fine-looking body of women," and the second was "How tremendously in earnest they are." The doctors were here three days and had no evening meetings. The clubwomen were in session nearly a week and had meetings every night and Sunday, too.

The work of the General Federation of Women's Clubs is divided into departments. It pays much attention to education, literature, music and art, but several of the departments are interesting from a medical standpoint. One session was devoted to household-economics, another to a discussion on industrial conditions for women and children, and a third to civic clubs and city-improvement societies. Hygiene and sanitation are subjects of vital interest to clubwomen. At their last meeting they passed a resolution asking Congress to provide a National Board of Health. The work of sanitation has been carried on by women throughout the whole United States. One report says: "We have neglected nothing in our association which tends towards

protection of public health." Women are natural sanitary officers. They have always been the unconscious but determined foe of bacteria. Baking and boiling, cleaning, dusting, and sunning—what are they but good methods of sterilization? The homemakers who keep their houses clean and healthful show an active interest in city-house-keeping. Delicate and refined women do not shrink from struggling with such problems as the disposal of garbage, expectoration in public places, baths for the poor, sanitation of schools, stores and bakeries, management of slaughter-houses, etc. Miss Jane Addams had herself appointed garbage-inspector for her district in Chicago, and saw to it that the streets were kept clean. Even in such remote States as New Mexico, Idaho, and Utah, the clubwomen take a surprising interest in sanitary matters. In Salt Lake City they have an anti-spitting ordinance that is really enforced. The women of Santa Fé, New Mexico, spent \$2,000 in beautifying the plaza of their town. I asked Dr. Munn, the Health-Commissioner of Denver, if the clubwomen had ever been of any practical help to him? and he replied that they had offered many valuable suggestions, and had been a help in enforcing existing ordinances. Putting metal cans on the sidewalks to receive refuse was their idea, and they furnished the money for seats at the street-car intersections. They persuaded the street-car companies to put up notices forbidding expectoration, and they assisted in the endeavor to make vacant lots more sightly; but Dr. Munn says the moral support of the clubwomen is even more valuable than their practical help. The Health-Board of Denver feel so sure of the intelligent cooperation of the best women, that they dare undertake work that is in advance of public sentiment generally.

The Federation of Women's Clubs has a department devoted to the study of household-economics. The chairman is an educated woman-physician, and the work is carried on in a scientific manner. They wish to interest women in health, so that each may become a sanitarian in her own home. They study how to prepare food for health and economy, and they give especial attention to the intelligent and scientific care of children, so that infant-mortality may be decreased. They are trying to improve average home conditions, and to solve the domestic problem. The chairman, in her report, says: "The art of furnishing a home in a sanitary and economical manner is more valuable than Byzantine, or Phœnician art, and the chemistry of cooking is more fascinating, and more necessary than Browning."

Schools of domestic science have been established in various parts of the country. A competent instructor is provided, who gives a preliminary talk on food-values and the best method of securing digestible food. Then the class of young girls immediately put into practice what they have been taught. The clubwomen believe that cooking is a science, and they think a housekeeper should depend upon a knowledge of physical and chemical facts instead of upon guesswork. The chief aim of these cooking schools is to teach the poor how to live more comfortably, but many of the girls who are taught become servants before they have homes of their own, and incidentally the mistresses who employ them are helped.

All over the United States women are bravely struggling with the difficult problems that everywhere perplex the homemaker. If the domestic problem is ever to be solved it must come through the efforts of organized women.

A recent writer says: "Until women have shown more

sagacity in the management of servants, it is not unjust to deny them a share in managing the government." She goes on to state that no condition of municipal mismanagement is more notorious, or more desperate, than the mismanagement of our kitchens.

Defeat by the difficulties of the servant girl question does not prove lack of brains. The president of a large University once said that a man who could manage hundreds of students, certainly could manage his own household. During the absence of his wife, he undertook to demonstrate the truth of this assertion by taking the reins into his own hands. Within half a day the three servants had left the house, bag and baggage, and the gentleman found himself with a large dinner-party on hand, no hostess, and only one inexperienced servant to manage everything. The host decided that brains enough to run a university might not suffice to manage a kitchen. The fact that homes exist at all proves that women have the power of working effectively under adverse and trying circumstances.

One interesting report read at the Biennial in Denver says that there is no limit but that of human endurance to the good that women may do in the way of sanitation. The question arises, Are not many clubwomen sacrificing their own health in trying to carry on all the lines of work that they attempt? Some of them belong to a dozen clubs or more. They attend endless meetings and listen to much fruitless discussion. They devote their days to doing committee-work and spend the hours of the night worrying. One is tempted to believe that women's clubs are popular, because they are the fashion, and shortly the craze will die out and this fad will disappear, as many others have done. Yet these clubs show no sign of disintegration and there must be some meaning in a movement so vast that it is altering the state of society throughout the whole country. I believe that clubs will be permanent, because women have active brains, and mental food is just as necessary for the thinking brain, as daily bread is for the hungry stomach. Excessive and too frequent eating does not prove that food in itself is a bad thing. That women have rushed into club-life with such eagerness proves simply that they have found how natural, normal and delightful it is to think. No doubt many women undertake too much and injure themselves by the mental strain to which they subject themselves, but, on the other hand, many more have been rescued from invalidism by becoming interested in club-work. To think and talk forever about diseases, dress, and domestics, is enough, in itself, to give one nervous prostration. A busy clubwoman, on being asked about her health, answered in surprise: "I do not know how I am. I have had no time to think about myself." Clubwork is more effective than Christian science in reducing the number of nervous invalids. The delegates in Denver were a strong, robust-looking body of women, and their appearance seems to prove that using one's brain is both a pleasant and a healthful occupation.

When men join a club, it is because they wish to find a place of recreation that is free from worry and care, but women make their clubs a place for endless work. Perhaps women are too serious and take life too hard, but it is certainly true that they find intense enjoyment in mental stimulation, in meeting congenial minds, and in working for and with each other. A busy life need not be fatiguing. Clubwork is often inspiring, exhilarating, recreating.

It is a frequent occurrence in club-life to see an officer elected who seems incompetent and unsatisfactory at first, but she is so developed by responsibility, and her mental



power so increases by use, that when she is ready to resign, nobody can be found to fill her place.

It is a keen delight for a woman to feel her mental horizon broadening, her vision growing clearer and her intellect daily being strengthened. If it should be admitted that club-life is beneficial to the mother, it may be urged that her absence from home interferes with the health and comfort of her family. It has been my experience that frivolous women are most likely to neglect their families, and the serious ones, who do active club-work, are generally devoted to their children. It was a fact clearly established by the biennial meeting in Denver that the average clubwoman is middle-aged. With her the dramatic incidents that attend the bearing and rearing of children are ended. The mother feels, to her sorrow, that she is no longer indispensable, and is ready to fill the vacancy in her life with work outside her home. Childbearing brings into action all the powers of one's being, and when this work is finished, a woman craves some other absorbing occupation. The one who has loved her home the most devotedly feels most need of something else to fill her life. The General Federation is composed of women who have homes and love them, and let us hope that women working in organized bodies may be able to do what they strive for, "to improve the average conditions of home-life, and from better homes to build better municipalities, better States and better nations."

KATE REYNOLDS LOEBINGER (M.D.)

## American News and Notes.

**Typhoid fever** is reported on the increase at Camp Alger.

**The Various Yellow-fever-immune Regiments** are to garrison Santiago.

**Dr. Leonard Wood**, now a Brigadier-General of the United States army, and formerly commander of the Rough Riders, has been commissioned Military Governor of Santiago de Cuba.

**A Hospital at Bridgeton, N. J.**, is about to be inaugurated. It is proposed to purchase the Markley mansion, which is offered for \$6,000, and to endow the hospital with a fund of \$50,000.

**Medical Inspector Remus C. Persons** is the officer assigned by Surgeon-General Van Reypen to the care of the wounded Spanish prisoners at Seany Island—not Surgeon Pursens, as the printers would have it.

**The James Stevenson Fund** of the Harvard Medical School has been created by a bequest of the late James Stevenson, of Brookline, Mass., who devised the sum of \$10,000 for the establishment of two free scholarships.

**Poisoned by Eating Hash.**—More than half the members of Company E, Twenty-second Kansas regiment, at Camp Alger, were recently made ill with ptomain-poisoning, the result of eating infected hash. Fortunately all soon recovered.

**Investigation of the "Seneca."**—Surgeon-General Sternberg has ordered an investigation as to the truth of the allegation of gross mismanagement of the transport-ship *Seneca*, used to carry sick and wounded sailors and soldiers from Santiago.

**The International Association of Railway Surgeons.**—At the annual meeting recently held at Toronto, Canada, Dr. Bruce L. Riordan, of Toronto, was elected president, and Dr. Louis J. Mitchell, of Chicago, Ill., secretary, for the ensuing year.

**The Associated Health Authorities of New Jersey**, at their annual meeting held at Woodbury on July 24th, elected the following officers: President, Dr. L. M. Halsey, of Williamstown; vice-president, Dr. James Hunter, Jr., of Westville; secretary and treasurer, Dr. Thomas E. Parker, of Woodbury.

**Smallpox in Jackson County, Ky.**—As a consequence of the prevalence of smallpox, the Kentucky State Board of Health has issued a proclamation placing the whole of Jackson County and each of its inhabitants under rigid quarantine. The Board found that there have been more than 100 cases of smallpox in the county.

**The Mississippi Valley Medical Association** will hold its twenty-fourth annual meeting at Nashville, Tenn., from October 11th to 14th, under the presidency of Dr. John Young Brown, of St. Louis, Mo. The address in medicine will be delivered by Dr. James T. Whittaker, of Cincinnati; the address in surgery by Dr. George Ben Johnson, of Richmond, Va.

**University of Denver, Medical Department.**—The following additions have recently been made to the Faculty: Dr. Carroll E. Edson, Professor of Therapeutics; Dr. Hobart E. Warren, Associate Professor of Anatomy in charge of the Department; Dr. T. J. Gallaher, Professor of Laryngology and Rhinology; and Dr. I. B. Perkins, Clinical Professor of Gynecology.

**The Association of Life-Insurance Medical Directors**, at its ninth annual meeting, held in Montreal, Canada, July 6th and 7th, elected the following officers for the ensuing year: Dr. H. Cabell Tabb, president; Dr. Geo. R. Shepherd, vice-president; Dr. J. H. Webb, second vice-president; Dr. O. H. Rogers, secretary; Dr. J. W. Brannan, treasurer, and Drs. Edward Curtis, A. Wood, A. Huntington and G. M. White, members of the executive committee. The next meeting will probably be held in New York.

**Complete Removal of the Stomach.**—Another, and the fourth successful, case of esophagoduodenostomy is reported from San Francisco. The *Pacific Record of Medicine and Surgery* states that Dr. George Childs-MacDonald operated, on June 15th, for carcinoma of the stomach, removed the entire organ, and united the esophagus with the duodenum by means of a Murphy button. On June 26th the abdominal wound was dressed for the first time, and the stitches were removed. The temperature of the patient was normal.

**The Pacific Coast Association of Insurance-Examiners**, at its fifth annual meeting held at Portland, Oregon, June 3d, elected the following officers for the ensuing year: Dr. W. C. Cox, of Everett, Wash., president; Dr. Henry Waldo Coe, of Portland, secretary; Dr. Bell, of Kelso, vice-president for Washington; Dr. Robertson, of Salem, vice-president for Oregon; Dr. Robertson, of Moscow, vice-president for Idaho; Dr. Swan, of San Francisco, vice-president for California; Dr. McClanahan, of Red Lodge, vice-president for Montana; Dr. Baldwin, of Salt Lake, vice-president for Utah; Dr. McGuigan, of Westminster, vice-president for British Columbia.

**Obituary.**—DR. EDWARD HAMILTON KIDDER, Fall River, Mass., July 16th, aged 33 years.—DR. FREDERICK WILLIAM VOGEL, Roxbury, Mass., July 16th, aged 52 years.—DR. R. O. MOFFAT, Toronto, Can., July 18th.—DR. GEORGE B. HARRISON (of Washington, D.C.), at Cape May, N. J., July 20th, aged 62 years.—DR. CADMUS DASHIELL, Princess Anne, Somerset County, Md., July 17th, aged 85 years.—DR. CHARLES K. ANDERSON, Nelson County, Va., July 15th, aged 69 years.—DR. S. M. SWAN, Johnstown, Pa., July 23d, aged 68 years.—DR. EDWARD C. CLINE, Jersey Shore, N. J., July 24th, aged 47 years.—DR. WARREN PIERCE, Plymouth, Mass., July 10th, aged 50 years.—DR. JOHN BOARDMAN, Buffalo, N. Y., July 9th, aged 70 years.—DR. GEORGE W. BURTON, Mitchell, Ind., July 13th.—DR. DAVID S. HAYES, Hollidaysburg, Pa., July 10th, aged 60 years.—DR. E. A. PARKINSON, Hart, Mich., July 12th.

**Analyses of Samples of Ground Coffee.**—Secretary Edge, of the Department of Agriculture, has recently received from Professor Cochran a report of his analyses of a large number of samples of "ground coffee" and "ground-coffee compounds," selected in Eastern Pennsylvania. The report, in part, is as follows:—

"Composed of bran, cracked wheat, and a little caramel; chiefly wheat-bran sweetened and roasted."

"Sample bears about the same relation to coffee as wheat screenings do to wheat."

"Roasted sweetened wheat, 75%; coffee, 25%."

"Composed of the roasted and rather finely broken grains of wheat and barley."

"Sample is composed chiefly of wheat bran."

"Composed of roasted cereals and husks of cocoa-beans."

"Coffee, about 64%; pea-hulls, 13%; and chicory, 23%."

"Sample is roasted rye."

"Sample is roasted barley."

"Sample is composed of wheat, chicory, coffee and peas, coarsely ground."

"Composed of peas, about 69%; grains, 29%; and chicory, about 2%."

"Sample is composed of bran, cracked wheat, chaff and caramel."

"Sample is composed of wheat, chicory, coffee and peas, all coarsely ground."

Of all the samples examined, but 4 were found to be composed of pure coffee, and of these, 3 were pronounced to be of "very inferior quality."

**San Francisco County Medical Society.**—At the regular monthly meeting, held June 12th, DR. CHARLES LEVISON read a paper on **Some Additions to the Surgery of the Kidney, with a New Point in Diagnosis of Malignant Disease of the Kidney.** He reported several cases of nephrectomy and nephrotomy, among them being a case of angioma of the left kidney, the tumor being a rather large one, located in the lower portion, contrary to the general rule governing angiomata of this organ. The patient was a young man, with no history that would in any way lead to a diagnosis. The only symptom was occasional hemorrhage into the bladder, in conjunction with which the urine contained clots; no casts or kidney-cells were at any time present, and when the urine was free from blood there was no albumin. There was no pain or tenderness on pressure, and, in fact, no symptom other than the occasional hemorrhage. This had been noticed for about a year, and occurred more often than had previously been the case. Repeated trials were made to differentiate the healthy kidney, but at the times of the hemorrhagic condition, the bladder was so filled with blood that it was quite impossible to see anything at all with the cystoscope; the blood and clots could not be removed fast enough to give a clear field of vision. While palpating the

abdomen one day, the thought suggested itself that if a little more pressure were made in the region of one kidney, it might be followed by a flow of blood, thus showing which kidney was the source of the persistent hemorrhage. The trial was made on the left side first. The pressure was stated to be not excessive, but merely a trifle greater than would ordinarily be made in palpating the abdomen. After making this pressure on the left side, the patient was allowed to get up from the table and walk about for a bit. In 15 minutes he indicated a desire to urinate, and passed a considerable amount of blood. The diagnosis was thus conclusively shown to be a morbid process in the left kidney. The patient was immediately operated upon and a large angioma discovered; this was removed and the patient made an uninterrupted recovery. There was no metastasis and no recurrence. Dr. Levison stated that he could find but 28 successful cases of this kind on record. Another point of interest was a new method of retaining the catheter after suprapubic cystotomy. The objection to the operation was thought to be the difficulty of retaining the catheter after the operation, the patient making such violent efforts at its removal. No method with which Dr. Levison is conversant is free from objections, and he has devised one that he had found to be both satisfactory and reliable. This consists in applying strips of adhesive plaster to the penis, both equatorially and longitudinally, the latter strip being slit for the passage of the catheter into the urethra; a safety-pin is adjusted under the longitudinal strip, and passed through the structure of the catheter—not through the catheter itself, but merely through its coats. One arm of the pin being beneath the strip of plaster, and at the same time passing through the plaster, the catheter could neither be removed by the patient voluntarily, nor squeezed out by the violent contractions of the bladder. The plaster may be changed and the catheter removed and sterilized as often as may be required.

DR. THORNE reported a case of removal of the stomach—**gastrectomy**—which he said was the fifth reported up to date. The patient was an elderly German woman, and the disease had existed for some years. The operation was uncomplicated, but at no time was the condition of the patient very good. She did not rally well from the operation, and, in spite of all stimulants, died 40 hours after leaving the table.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

A board of medical officers to consist of Colonel DALLAS BACHE, A. S. G., Lieutenant Colonel CHARLES SMARK, D. S. G., and Major WILLIAM REED, Surgeon, is appointed to meet in this city for the purpose of considering the question as to whether or not the Government should issue the so-called "cholera-bands" for the use of the U. S. troops in the field.

Major LAWRENCE C. CARR, brigade-surgeon, will proceed to this city and report to the Surgeon-General U. S. Army.

Major OGDEN RAFFERTY, brigade-surgeon, will proceed from Tampa, Fla., to this city and report to the Surgeon-General of the U. S. Army for orders.

Captain ALEXANDER N. STARK, A. S., is detailed as a member of the examining board appointed to meet in this city by S. O. 163, July 13th, this office, vice Major GEORGE W. ADAIR, surgeon, relieved.

Captain GEORGE M. WELLS, A. S., is relieved from duty at Fort Ringgold and will proceed to Chickamauga, Ga., and report to Major EDWARD C. CARTER, brigade-surgeon, in charge of Leiter U. S. General Hospital, for duty.

Acting Asst. Surgeon ARISTIDES AGRAMONEL will proceed to New York City and there take passage on the U. S. steamer "Resolute" for Santiago de Cuba, and, upon arrival at that place, will report to Major-General William R. Shafter for duty in the yellow-fever hospital.

Acting Asst. Surgeon IRVIN E. BENNETT is relieved from duty at Fort Delaware and will proceed to Tampa for duty.

Acting Asst. Surgeon SAMUEL P. COTTRELL will proceed to Fort



Monroe and report to Major CALVIN DE WITT, surgeon, in charge of U. S. General Hospital at that post, for duty.

Acting Asst. Surgeon R. FLEMING JONES will proceed from Tampa to Santiago de Cuba on the first transport leaving for that point.

Par. 11, S. O. 162, July 12th, this office, is so amended as to direct Acting Asst. Surgeon CHARLES T. NEWKIRK to proceed to New York and report to Major WILLIAM H. ARTHUR, chief surgeon, to await transportation to Santiago de Cuba, and, upon arrival there, to report to Major General William R. Shafter, for duty.

Acting Asst. Surgeon H. J. THOMAS will proceed from Winston, N. C., to Tampa, to await transportation to Santiago de Cuba, for duty.

Major EDWARD MARTIN, brigade-surgeon, is relieved from duty with the Second Army Corps and will proceed to Tampa for assignment to duty.

Acting Asst. Surgeon EDWARD J. MEYER will proceed from Charleston, S. C., to Washington, D. C., and upon his arrival report to the Acting Surgeon-General of the Army for duty.

Leave for one month is granted Major CHARLES B. NANCREDE, chief surgeon.

Acting Asst. Surgeon EDWARD J. MEYER, having reported to the Surgeon-General of the Army, as heretofore ordered, will proceed to Fort Monroe and report to Major CALVIN DE WITT, surgeon, in charge of U. S. General Hospital at that place, for duty.

Acting Asst. Surgeon J. F. ARCHER will proceed from Shelby, Miss., to Washington, D. C., and report to the Surgeon-General of the Army for instructions, and, upon completion of the duty assigned him, will proceed to New York City, and report to Major WILLIAM H. ARTHUR, chief surgeon, to await transportation by U. S. steamer "Resolute" to Santiago de Cuba, and, upon arrival there, will report for duty.

The following-named acting assistant surgeons will proceed from New Orleans, La., to Washington, D. C., and report to the Surgeon-General of the Army for instructions, and, upon completion of the duty assigned them, will proceed to New York City and report to Major WILLIAM H. ARTHUR, chief surgeon, to await transportation on the U. S. steamer "Resolute" to Santiago de Cuba, and, upon arrival there, will report for duty: PAUL MAZZURI, MEYER HERMAN.

Private George S. Richards, Jr., Hospital-Corps, now at Second Division Hospital, Second Army Corps, Camp Alger, Va., will be sent to Albany, N. Y., to report to the Governor of the State to accept a commission.

Major WILLIAM C. GORGAS, brigade-surgeon, is relieved from duty on the U. S. hospital-ship "Relief" and will report to Major-General William R. Shafter, Santiago de Cuba, for assignment to duty.

The following-named brigade-surgeons will report to Major-General William M. Graham, commanding Second Army Corps, Falls Church, Va., for assignment to duty: Majors Jabez N. JACKSON, WILLIAM F. DE NIEDMAN.

Leave for 14 days is granted First Lieutenant LOUIS P. SMITH, A. S.

Acting Asst. Surgeon ROBERT W. ANDREWS will proceed from Poughkeepsie, N. Y., to Chickamauga Park and report to Major-General James F. Wade, commanding Third Army Corps, for duty.

Acting Asst. Surgeon PATRICK H. McANDREWS will proceed to Tampa, Fla., for duty.

Major GEORGE R. FOWLER, division-surgeon, having reported to the Surgeon-General of the Army, will return to his proper station and duty with the Seventh Army Corps, Jacksonville, Fla.

Major ROYCE D. FRY, brigade-surgeon, will proceed to Fort McPherson for duty in the U. S. General Hospital at that post.

Captain FRANCIS A. WINTER, A. S., will report to Major CALVIN DE WITT, surgeon, for duty in the U. S. General Hospital at that post.

First Lieutenant DEANE C. HOWARD, A. S., is relieved from temporary duty in the field and from duty in connection with the steamer "Olivette," and will proceed to Fort Columbus for temporary duty.

Acting Asst. Surgeon PAUL C. HUTTON will proceed to Tampa, Fla., for assignment to duty.

Acting Asst. Surgeon DOMINGO LAGOMASINO will proceed to New York, and report to Major WILLIAM H. ARTHUR, chief surgeon, to await transportation by the U. S. steamer "Olivette" to Santiago de Cuba, for assignment to duty.

Acting Asst. Surgeon E. A. ROMIG will proceed from Big Rapids, Mich., to Tampa, Fla., for assignment to duty.

Acting Asst. Surgeon G. MORENO DE LA TORRE, having arrived at New York on the U. S. steamer "Olivette," will proceed from that city to Tampa, Fla., for assignment to duty.

Major WILLIAM H. ARTHUR, chief surgeon, will proceed from New York City to Philadelphia, Pa., on business pertaining to the Medical Department of the Army.

Major GUY L. EDIE, brigade-surgeon, will proceed from San Francisco, Cal., to Chickamauga Park, for assignment to duty.

The following-named officers, now at the posts opposite their names will report to Major-General John J. Coppinger, commanding Fourth Army Corps, Tampa, Fla., for assignment to duty: Captain EDWARD L. MONSON, A. S., Fort Monroe; Captain ALLEN M. SMITH, A. S., Fort Hamilton.

Acting Asst. Surgeon IRA C. BROWN will proceed to Tampa, Fla., for assignment to duty.

Acting Asst. Surgeon T. S. DABNEY will proceed from Jackson Barracks, La., to Washington, D. C., and report to the Surgeon-General of the Army for instructions.

Acting Asst. Surgeon JOHN A. METZGAR will proceed to Chickamauga, Ga., and report to Major EDWARD C. CARTER, brigade-surgeon, in charge of the Leiter U. S. General Hospital at that place, for duty.

Captain CHAMPE C. McCULLOCH, A. S., is relieved from duty at Fort Barrancas and from additional temporary duty at Fort Pickens, and will proceed to Fernandina, Fla., for assignment to duty.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon P. M. RIXEY, detached from the Naval Dispensary, Washington, D. C., July 18th, and ordered to the "Solace," July 19th.

Asst. Surgeon F. M. BOGAN, ordered to the Norfolk Navy Yard.

Asst. Surgeon J. SAILER, ordered to the "Arctic" immediately.

Asst. Surgeon A. G. GRUNWELL, ordered to the Washington Navy Yard.

Asst. Surgeon J. G. FIELD, retired, detached from the Naval Rendezvous, Savannah, Ga., and ordered to the Naval Hospital, Philadelphia, Pa., immediately.

Asst. Surgeon C. D. LANGHORNE, ordered to the Naval Hospital, Norfolk, Va.

## Foreign News and Notes.

**A new Hospital for Infectious Diseases** is to be erected in Melbourne, Australia.

**A School for Tropical Diseases** is to be established in connection with the Seamen's Hospital, London.

**An Association of Medical Practitioners** has recently been formed in Portugal. It has a membership of more than 200.

**The Metropolitan Hospital Sunday-Fund** has collected a little short of its usual £40,000 this year, but subscriptions have not quite ceased.

**The State Examinations in Medicine in Germany.**—Last year, of 1,295 students admitted to the examinations 1,079 passed satisfactorily. Of these 23 were foreigners, among them being two Americans and one Englishman.

**Obituary.**—PROF. GEORGE BAUR, professor of osteology and paleontology in the Chicago University, at his home near Munich, Bavaria, June 25th.—DR. HIRSCH, a prominent sanitarian, Charlottenburg, near Berlin, July 3d, aged 76 years.—DR. HUGO GEROLD, formerly professor in the medical faculty of the University of Halle.

**Monument to Grisolle.**—The Municipal Council of Fréjus, France, has voted a subscription of 1,000 francs towards the erection, in his native city, of a monument to the memory of the late Professor Grisolle, formerly professor of clinical medicine in the Faculty of Medicine of Paris, and president of the French Academy of Medicine.

**The Ninth Congress of French Alienists and Neurologists** will be held at Angers from August 1 to 6, 1898. The subjects for discussion are as follows: Post-operative Psychic Disturbances; The Part played by Arteritis in the Pathology of the Nervous System; and Transitory Delirium from a Medico-legal Point of View.

**Habitual Inebriates in Great Britain.**—A bill for dealing with habitual inebriates somewhat on the lines on which criminal lunatics are treated is now before the House of Commons. The scope of the bill has been extended to Ireland, it having originally only been intended to legislate for England and Scotland. Properly administered, the bill will be of service to the community, but there may be some little trouble in its working at first.

**An International Archives of Leprosy** will be published shortly under the editorial direction of E. Besnier (France), K. Dehio (Russia), Armauer Hansen (Norway), Jonathan Hutchinson (Great Britain), and Albert Neisser (Germany). It will consider not only scientific work upon leprosy, but also administrative and legislative proceedings.

**Memorial Bust of Dr. de Pietra Santa.**—At a recent meeting of the Société Française d'Hygiène it was determined to invite subscriptions for the erection of a memorial bust of the late Dr. Prosper de Pietra Santa, who was the founder and permanent secretary of the Société Française d'Hygiène, and founder and editor-in-chief of the *Journal de Hygiène*.

**The Medical Faculties of Switzerland.**—The total number of students in the medical faculties of the Swiss universities during the current summer semester is 1,085, of whom 294 are women. The students are distributed among the several universities as follows: Basle, 141, of whom 4 are women; Berne, 189, of whom 41 are women; Geneva, 271, of whom 86 are women; Lausanne, 144, of whom 39 are women; Zurich, 340, of whom 124 are women.—[*British Medical Journal*].

**An Ernest Hart Scholarship.**—The Council of the British Medical Association resolved, at its last meeting, to found, as a memorial of the late Mr. Ernest Hart, a scholarship, to be called "The Ernest Hart Memorial Scholarship for Preventive Medicine." It was felt that no more fitting means could be found to commemorate at once Mr. Hart's great services to the British Medical Association and to the advancement of the study of preventive medicine. The scholarship, which will be of the annual value of £200, will be tenable for two years.—[*British Medical Journal*].

**The Medical Club of Berlin and Visiting Medical Men.**—Physicians visiting Berlin may, on introduction by a member of the recently organized medical club, enjoy for 2 weeks all the privileges. Those who stay for a longer time may, upon payment of a fee of about \$1 a month, use its reading, playing, dining-rooms and parlors, in a word enjoy most of the privileges of membership. The enthusiasm with which the foundation of the club was received seems to continue, and promises to make of it a useful and extremely influential factor in the medical life of Berlin.

**Scientific Prizes.**—The *British Medical Journal* states that the Instituto Veneto di Lettere, Scienze ed Arti has awarded the three Balbi-Valier prizes, which are of the value of £120 each, respectively to Senator Durante, Professor of Surgery in the University of Rome, for his treatise on General Special Surgical Pathology and Treatment; to Professor Boschetti for his work on "Tremulotherapy"; and Professor Emilio Cavazzani, Lecturer on Physiology and Pharmacology in the University of Ferrara, for his researches on the Thermogenesis, Glycogenesis, and Circulation of the Fetus.

**The Royal College of Surgeons of England.**—At a quarterly meeting of the Council of the College held on July 14th, the president, Sir William MacCormac, was reelected, and thus enters on his third year of office. Sir William is a popular man and a dignified and firm president, so that no opposition to his reelection was looked for, although several of his predecessors have not been chosen for three years in succession. Mr. T. Pickering Pick, the senior surgeon to St. George's Hospital, and editor of *Gray's Anatomy*, and Mr. Howard Marsh, surgeon to St. Bartholomew's Hospital, were at the same time elected vice-presidents.

**Professor Virchow in London.**—Professor Virchow is announced to deliver the introductory lecture to students at the opening of the Autumn Medical Session at the Charing Cross Hospital. The great pathologist has chosen for his subject the simple but comprehensive one of "Recent Advances in Science and their Bearing on Medicine and Surgery," and he will speak in English. He has doubtless been attracted to London by the title of the lecture that he has been asked to deliver, for the introductory lecture at Charing Cross Hospital is called the Huxley Lecture, in honor of the hospital's greatest student, and modern England's greatest scientist, the late Professor Thomas Huxley.

**The Treatment of Lead-colic by Injections of Artificial Serum.**—At a recent meeting of the Société de Biologie de Paris, Delearde narrated an account of his treatment of nine patients suffering with lead-poisoning. The treatment consisted in the injection of large doses of artificial serum (Hayem's formula) beneath the skin of the abdomen. A single dose of 500 cu. cm. was sufficient to entirely relieve all the patients except one, who was given two injections of 500 cu. cm. each, at an interval of one day. While the serum exerted no action upon the paralyzes, it completely relieved the muscular pains, the constipation, the headache, and the vomiting, and relief was obtained in much shorter time than with other methods of treatment.

**The Vital Statistics of London** for the month of June, which have just been published, show a slight improvement in the public health of the city upon the figures of the preceding month, but the prevalence of diphtheria and enteric fever has become more marked as a setoff against the decline that has been registered in scarlet fever. Measles being a disease that is not notifiable under the Infectious Diseases Notification Act, no trustworthy statistics are forthcoming concerning it, but it is the general opinion of the medical profession that cases during the month of June were much fewer in number than they had been during the spring and early summer, and this opinion is supported by the fact that the number of deaths certified during the month from measles is 282, while the corrected average number for the corresponding periods of the ten preceding years is 338.

**Antirabic Inoculations at Oporto.**—Dr. J. Arantes Pereira, Director of the Pasteur Institute of Oporto, details in a recent number of the *Archivos de Medicina*, an account of the work of the institute since its establishment. Without official assistance, he opened the institute on November 15, 1896, for the purpose of supplying the needs of the northern portions of Portugal, where rabies is more common than in other parts of the country. From the date of the opening until December 31, 1897, 80 of the many persons who applied were treated, it being deemed unnecessary to treat the others. Of those treated, 48 were male and 32 female and they varied in age between 5 and 79 years. In 40 cases the animals that inflicted the bite were proved experimentally to be rabid; in 39 cases they were under suspicion. The patients were inoculated after the manner of the Institut Pasteur of Paris. None of the patients succumbed.

**Cortical Cell-Layers and Physiologic Functions.**—At a recent meeting of the Berlin Physiological Society, Dr. Schlepp, of New York, demonstrated a series of sections of the entire brain from man and various animals stained by Nissl's method. This represents the continuation of some work done in Professor Jolly's laboratory, and the preliminary report of which, "the cellular arrangement of the cerebral cortex of the ape *Macacus Oryzomolgus*," was published



in the *Archiv für Psychiatrie*. The demonstration was followed with great interest, as seeming to give a definite anatomic basis for tracing the limits of certain parts of the cortex that it has not been possible thus far to differentiate only by their physiologic functions. For instance, the exact limits of the optic region of the cortex can be traced by the character of its cells and the arrangement of the cell-layers. It has been denied until now that an abrupt transition from a brain-cortex of a certain number of layers to one of a smaller or larger number of layers could be found, but this can be easily seen in the Nissl preparations. The same thing holds good for the auditory and olfactory regions, the last being especially demonstrable in animals.

**Two Rare Diseases of the Skin.**—At a recent meeting of the Berlin Dermatological Society Dr. Joseph presented two extremely rare cases of diseases of the skin and its appendages. One was an example of **leukonychia**, that peculiar universal whitish discoloration of the nails, due to the presence of air beneath them and in their substance, and of which there are but 4 or 5 other cases recorded in the literature. The other case was an interesting specimen of what Unna has called **acanthosis nigricans** and Kaposi **keratosis nigricans**. The lesions appear as dark-colored warty growths, from grayish-brown to brownish-black, occurring especially on the back of the neck and in the axillary and pectoral folds. This patient was much younger than the victims of the disease usually are, being only 20 years old, and the lesions were distributed on the back of the neck and along the margin of the hairy scalp. The man was perfectly well otherwise, though the disease had begun a couple of years ago. The case is to be watched with special interest, as practically all of the patients in whom the disease has thus far been observed have died, within a comparatively brief period after its development, of carcinoma of some of the abdominal viscera, especially of the stomach.

**Creosote in the Treatment of Pulmonary Tuberculosis.**—At a recent meeting of the Académie de Médecine de Paris, Savine reported upon the use of creosote in the treatment of pulmonary tuberculosis. The drug was administered (a) by hypodermic injections of a 15% solution in olive-oil, with sometimes the addition of a little myrtol or eucalyptol in a dose of from 10 to 40 cu.cm.; (b) by continuous inhalations of from 5 to 10 gm. of an alcoholic solution containing 33% of creosote; and (c) by the mouth, either in oil, milk, or as an emulsion, beginning with a dose of 40 drops and gradually increasing to 300 drops in the 24 hours. The administration of the drug in capsules, pills, or cachets was objected to, as these modes of administration were held responsible for the various gastric disturbances that often attend its use. It should always be given in a considerable quantity of fluid, and preferably at meal time. The favorable action of creosote was considered to be due (1) to its bactericidal action on the microbes that accompany the bacillus of Koch, such as streptococci, pneumobacilli, and the like; (2) to its stimulating action on nutrition, so that the phagocytes that prey upon the bacillus of Koch are increased in number; and (3) to its chemic action upon the toxins secreted by the tubercle-bacillus.

**The Prince of Wales' Hospital-Fund.**—The Council of this Fund has started on the delicate task of distribution. Last year it made its award to the different London hospitals under the ægis of the Metropolitan Hospital Sunday-Fund, which has the experience of many years from which to give advice, but this year it has adopted a method

of its own, and it is a highly practical one. Greater London has been divided, for the purposes of the Fund, into four districts: North, South, East and West (by designation, if not exactly by the points of the compass), and a sub-committee consisting of two medical men and three laymen has been told off to make itself responsible for finding out all about the hospitals contained in each area. A personal visitation is to be made by two members of each sub-committee, one medical man and one layman, to all the hospitals, and upon their report the sub-committees will recommend awards. The Council of the Prince of Wales' Hospital-Fund has evidently realized that the people of London (or perhaps we should say of England, for the Fund is national rather than metropolitan) intend to have order in the distribution of their charities, and desire to benefit only such institutions as have been truly managed for the good of the sick poor and to leave severely alone places that are run in the interests of advertising medical men or fraudulent paupers.

**The Bordeaux Bureaux de Bienfaisance.**—In connection with the solution of the questions relative to hospital and dispensary abuse in this country, the following, from the *British Medical Journal*, is of interest: The Bordeaux Bureaux de Bienfaisance provide gratuitous medical assistance for the sick poor according to a system peculiar to that city. The total population is 296,986; the indigent section of it amounts to 19,864. The law of July 15, 1893, which is not compulsory, has not been adopted by the Bordeaux Bureaux. There are 12 auxiliary bureaux established in houses where the poor can obtain relief. Ten of these are in different parts of Bordeaux for the relief of Catholics; there is one for Protestants, the twelfth being for Jews. The last two distribute help and provide gratuitous medical advice for all the inhabitants of Bordeaux belonging to these two forms of faith respectively. There are 16 medical men termed "médecins des sections," and 24 specialists, of whom 6 are oculists. There are, in addition, 18 supplementary and 26 honorary medical men. Five dispensing chemists are in the pharmaceutical department. The auxiliary bureaux are entirely under the control of the administration; in addition to these, and in connection with them, there are charitable institutions which are supported by private philanthropy. During these latter years the outlay has been greater than the revenue. The indigent poor increase, and the yearly receipts decrease. It is intended to exercise greater strictness in future in respect of the admission of foreign poor. In order to relieve the acting medical officers whose duties have become more and more arduous, while their salaries have remained stationary, the supplementary doctors were asked to undertake part of the duties without remuneration, but only two came forward. The obstetric service is in the hands of 32 midwives and 39 probationers. In 1896, 582 women were delivered at a fee of 10 francs each; £221, 12s. were distributed among them besides medicine. There are 15,227 Bureaux de Bienfaisance in France. It is proposed to collect statistics; these, supplemented by a description of the working of these bureaux, will form a useful work of reference on the subject, which, it is hoped, will be ready for the Exhibition of 1900.

**Esophagotomy.**—S. E. Djémil pacha (*Gaz. Méd. d'Orient*, April 15, 1898) reports the removal of a coin from the esophagus of a child 2 years old. The coin had been previously located by the X-rays and was found below the level of the suprasternal notch. The esophagus and all but a small part of the external wound were sutured and healing was complete at the end of 20 days.

## Philadelphia News and Notes.

**Dr. Aloysius O. J. Kelly** has been elected clinical professor of pathology in the Woman's Medical College of Pennsylvania.

**Red Cross Ambulance.**—The Patriotic Aid Society of the North Broad Street Presbyterian Church has presented the Red Cross Society with a completely equipped ambulance.

**Ptomain-Poisoning.**—Eight cases of ptomain-poisoning following the ingestion of ham are reported from Roxborough. The patients were very ill for a time, but ultimately recovered.

**Dr. Hiram Austin** has been appointed surgeon-in-charge of the United States Marine-Hospital Service at this port in place of Dr. Fairfax Irwin, who has been detailed for duty in the West.

**The Medico-Legal Society.**—At a regular meeting held July 26th, a committee was appointed to cooperate with similar committees from other medical societies to influence legislators against appropriations for hospitals that give indiscriminate charity.

**Beriberi at the German Hospital.**—Seven sailors ill with beriberi have been under treatment at the German Hospital. They came to port, July 16th, on the German bark *Steinbeck*, Captain Theisen, from Froblingo and other Southern ports, by way of Bermuda. All of the patients are progressing favorably.

**The Board of Health of Philadelphia** has undertaken a house-to-house inspection of all buildings along the Delaware river front. Evidently such inspection was sadly needed, as the first day's work revealed over 100 nuisances, the majority of these consisting of filthy cellars, rooms, and yards, and full and overflowing wells.

**Corresponding Members of the Pathological Society of Philadelphia.**—Professor Rudolph Virchow, of Berlin, Professor M. V. Cornil, of the Faculté de Médecine de Paris, and Professor William H. Welch, of Johns Hopkins University, Baltimore, were recently elected corresponding members of the Pathological Society of Philadelphia.

**Infectious Diseases in Philadelphia** for the week ending July 23

Disease	Cases	Deaths
Diphtheria .....	46	16
Scarlet fever.....	25	1
Typhoid fever .....	70	6
Pulmonary tuberculosis...		45
Total mortality.....		523

**A Legacy to the University of Pennsylvania.**—Under the terms of the last will and testament of Edwin P. Kelly, who died July 23d at Merchantville, N. J., Dr. Thomas H. Andrews, Chief Surgeon of the Philadelphia Police Department, becomes heir to the corpse of the testator, who, in proper legal form, bequeaths his remains for the purpose of having the body mummified and presented to the University of Pennsylvania as a donation to science. Mr. Kelly was formerly a fashionable tailor of Philadelphia. Having made a fortune, he retired from business, and devoted his time to the study of proper methods of living. He claimed to have discovered the way of living to at least the age of 100 years; having done which, he died at the age of 74.

**The Philadelphia Public Bath-House.**—The fact that this bath-house meets the crying need for bathing facilities, and that it is appreciated by the public, is attested by the number of persons who frequent it. According to the *Philadelphia Polyclinic*, since the opening (April 21st) until the present time there has been a steady gain in patronage. In April there were 452 bathers, an average of  $45\frac{1}{2}$  per day; in May, 2,086, an average of  $67\frac{2}{3}$  per day; in June, 4,378, an average of  $145\frac{2}{3}$  per day; in July—until the 7th, 1,218, an average of 174 per day.

**Star Kitchen and Coffee-house.**—In the midst of the slum-district of Philadelphia is a modest and unpretentious institution capable and actually fruitful of a vast amount of good. This is the Star kitchen and coffee-house, which provides at nominal cost good, nutritious food, as well as pasteurized milk, beef-juice and barley-water. It embraces a coffee-house, a bakery, a coal-club, a shoe-club and a flour-club, and one of its specialties is a penny lunch. During the year 1896, 21,332 such lunches were served, and for the current year the average sale per month is 5,296. Each lunch contains a quarter-day's ration. It is hoped to make the enterprise self-supporting, but at present funds are needed to establish it on such a basis. The kitchen is situated at 700 Lombard Street. Miss S. P. Wharton is chairman and treasurer, and Mrs. S. G. M. Maule secretary.

**Practical Hints About the Administration of Drugs.**—H. C. Wood (*American Medico-Surgical Bulletin*, July 10, 1898) says that the capsule is much superior to the pill as a means of administering powders or dry drugs, but if liquids are given in this way the soft capsule, which can be hermetically sealed and be easily swallowed, should always be used. As a vehicle for nauseous drugs the aromatic elixir of the U. S. Pharmacopeia is superior to the sirups of tolu, wild-cherry bark, etc., which are loaded with sugar and disorder the digestion, whilst they often fail to cover the disagreeable taste; it should be remembered, however, that it contains about 92% of alcohol. The salicylates should always be administered in milk. In giving Monsell's salt in cases of intestinal hemorrhage, the drug should be placed in a small, heavy capsule and this be enclosed in a second and again in a third capsule, so that a mass is obtained whose core has a good chance of escaping through the stomach into the intestine and acting locally.

**On the Appearance of a Substance in the Blood, Under the Influence of Chemic Products, that is Capable of Agglutinating the Tubercle-Bacillus.**—Having previously shown that the blood-serum of an immunized horse is capable of agglutinating the bacillus of Koch, S. Arloing (*Semaine Médicale*, June 8, 1898) now states that the repeated injection of eucalyptol, guaiacol, creosote, or Mialhe's solution (corrosive sublimate) will produce the same result. In equal volume, the serum from a horse that has been subjected to these injections will act a little more quickly than the serum from animals that have been tuberculinized or tuberculinized. Serum modified by Mialhe's solution will always act a little more strongly. If the phenomena of agglutination are studied from the point of view of rapidity and perfection there will be found to be a difference in the behavior of the different substances. Thus, the modified sera will agglutinate more rapidly in the following order: Mialhe's solution, eucalyptol, guaiacol, creosote. In regard to perfection of agglutination the modified sera will be found to act in the following order: Mialhe's solution, guaiacol, eucalyptol, creosote. The specimens show the best agglutinating action in a  $\frac{1}{10}$  dilution. It may be noticed that creosote forms agglutinating substances less readily than do eucalyptol and guaiacol. These substances produce the agglutin by a reaction of the living organism, because, if to an emulsion of tubercle-bacilli is added  $\frac{1}{10}$  or  $\frac{1}{2}$  of its bulk of a saturated solution of any one of these four substances no agglutination takes place.



## Society Proceedings.

### AMERICAN OPHTHALMOLOGICAL SOCIETY.

Thirty-fourth Annual Meeting, held at New London, Conn.,  
July 20 and 21, 1898.

FIRST DAY—JULY 20TH.

The meeting was presided over by DR. GEO. C. HARLAN, of Philadelphia.

The following were elected to membership: Drs. J. W. Ingalls, of Brooklyn; Anton Coe, of Washington; F. N. Lewis, of New York; J. T. Carpenter, Jr., of Philadelphia; James Thorington, of Philadelphia; W. C. Posey, of Philadelphia; C. A. Veasey, of Philadelphia; W. L. Wood, of Portland, Ore.; A. G. Thomson, of Philadelphia; J. H. Claiborne, of New York; and T. B. Schneideman, of Philadelphia.

**Why the Proportion of Blind in the Country is Greater than in Large Cities.**—DR. LUCIEN HOWE, of Buffalo, said in the twenty-five largest cities of the United States the proportion of blind is, with two exceptions, smaller than in the States in which these cities are situated; or, taking all the cities of over 50,000 inhabitants together, there are in them about 33% less blind than the average for the entire country. In examining the different factors in the production of blindness, whether congenital or acquired, or, if of the latter class, whether due to traumatism, general disease, or to local diseases, these factors are all practically the same, or are made equal, in city and country, with one exception, namely, ophthalmia of infancy. Extended inquiry concerning the habitual practice of physicians in country almshouses, in hospitals and elsewhere in the State of New York, indicates that more attention is given to guarding against ophthalmia of infancy in the cities than in the country. This tendency to the habitual neglect, or habitual disuse, of such prophylaxis tends to make a radical difference in the distribution of the blind, estimated at possibly 14 to 1. It is at least the most apparent cause of this difference and probably accounts for the greater part of it. It follows from this apparently warrantable conclusion that if as great care were taken in general throughout the country as is given on the average in the cities to such prophylaxis the number of blind in the United States would be decreased in a single generation by some few thousands. While it is neither advisable nor possible to force by legislation any one method of preventive treatment upon physicians in private practice, it is the right and duty of the State to provide for children born in almshouses the best treatment thus far known, and to require for them the use of solutions of silver nitrate or of some other prophylaxis that may in the future prove to be equally efficacious.

**Report of the Committee on Resolutions Relating to Purulent Ophthalmia of Infancy.**—After a full consideration of all the information at hand, including a detailed study of statistics, etc., the committee reported in favor of adopting the following resolution and this was done:

*Resolved*, that we approve of legislation that would result in the invariable use of this method in almshouses, or of any other equally safe and efficient method, whereby the loss of vision from this disease would be lessened.

**Some Unusual Tumors of the Eye and Orbit.**—DR. C. S. BULL, of New York, reported a case of sarcoma that was supposed to be due to an injury of the eye received at some previous time, and a second case in which microscopic examination showed the appearance of tubercles, but in which the clinical history of tuberculosis was negative. DR. H. KNAPP stated that cases like this are rare, although he had seen two cases in which the origin of sarcoma from trauma was not problematic, but followed the injury at once. DR. POOLEY reported a case in which a supposed sarcoma of the orbit had been removed and later examination showed it to be a tuberculous tumor of the lacrimal gland. The patient was a strong, healthy individual, without any history of tuberculosis.

**Osteoma of the Orbit with Enophthalmos.**—DR. E. FRIDENBERG, of New York, related a case in which the two features of interest were (1) the position of the tumor, which was located much more toward the temporal aspect of the

orbit than usual, the mass of the osteoma being about at the center of the upper orbital margin; and (2) the position of the eye, which was crowded backward into the orbit and slightly downward; in other words, there was enophthalmos instead of the customary exophthalmos. The tumor, with the anterior wall of the sinus, was chiseled away, and the patient made a good recovery, though the eye remains still slightly lower than its fellow. Vision of  $\frac{1}{200}$  was improved to  $\frac{2}{30}$  by the use of glasses; the Javal ophthalmometer showing the presence of 8 D. astigmatism, which was corrected by +4 D. c. ax. 90° C — 4 D. c. ax. 180°.

**Abscess Involving the Frontal Sinus, with Destruction of the Vault of the Orbit and Depression of the Eyeball.**—DR. C. F. CLARK, of Columbus, reported a case in which an abscess involving the frontal sinus seemed to occur as the result of traumatism, the patient having received a blow in the face about a year previously and having suffered more or less continuously with headaches and other symptoms that might be attributed to abscess in the sinus. The bone had been eroded to such an extent that the brain-cavity was invaded, and the depression of the eye was sufficient to produce a hyperphoria of the opposite side equal to 5½°. The patient did well after the operation, but the wound has not thoroughly healed, probably because of the presence of some sequestra. During the year before she came for treatment she would occasionally have attacks of pain, followed by discharge of mucus and pus from the nose and mouth, and she noticed that at such times the size of the orbital swelling diminished. Pressure over the swelling yielded such firm resistance that it was at first suspected that the condition was produced by an osteosarcoma.

**A Large Tumor of the Orbit (Fibrosarcoma) of Twenty-three Years' Standing; Removal.**—DR. F. M. WILSON, of Bridgeport, Conn., exhibited a pathologic specimen which was of immense size for an orbital tumor. The patient had had the power of opening the lids, but could not close them over the tumor except by taking hold of the free border of the upper lid and pulling it out. The tumor had existed for a remarkably long time, and there were conflicting opinions as to the advisability of an operation, which, however, seems so far to have been a success. Although the eye was so displaced that the cornea was 1½ in. in front of the orbit, motility of the iris and some vision had been retained.

**A Case of Lipoma of the Orbit.**—DR. EMIL GRUENING, of New York, referred to the great rarity of lipomas of the orbit, and then reported his case, which occurred in a young man, who presented a lobulated tumor about the size of a lima-bean, which on microscopic examination showed nothing but fat-cells. Most of the tumors of this class that had been heretofore reported were subconjunctival tumors. DR. HOLDEN stated that the more tumors of the orbit are examined, the greater is the surprise at the great variety that occur in this situation. He referred to one 1½ in. in length by ¾ in. in width, two-thirds of which were purely lipoma, a small portion angioma, and one end of it distinctly fibromatous, and he said that the association of these three varieties is not uncommon. DR. H. KNAPP reported a case analogous to Dr. Gruening's, in which the tumor was partially encapsulated, and was so large as to necessitate its removal in three sections at three different operations.

**The Treatment of Entropion of the Lower Lid with Caustic Potash.**—DR. SAMUEL THEOBALD, of Baltimore, said that in applying this method, the aim should be to produce an eschar 3 or 4 mm. wide, parallel with the lid-margin and extending the whole length of the tarsus. The action of the caustic should not be allowed to approach nearer the edge of the lid than 1½ or 2 mm. When the requisite effect has been produced the caustic action is checked by the application of vinegar diluted with an equal quantity of water, or a solution of acetic acid of about the same strength. The eschar soon begins to contract, and the lid, which up to this time has been held in an everted position, no longer shows an inclination to turn in. It is seldom necessary to repeat the operation, but it can be done if necessary. DR. Theobald thought the treatment especially applicable to senile entropion, but useful also in other varieties. Better results, it was thought, could be obtained by the use of the caustic than with the knife, and no other anesthesia is necessary than the local application, on cotton, of cocaine. DR. KNAPP said that in the treatment of senile entropion, he



has employed a number of operations, but without equal or satisfactory success. The method proposed is more thorough and better adapted to the purpose than the actual cautery. DR. ABBOTT asked why soaking the lids with cocain was considered preferable to its hypodermic use. DR. THEOBALD replied that he did not specially prefer this, but he had not found the hypodermic necessary. He referred to some cases in which other operations had been performed without success, and in which the caustic potash accomplished the desired result. DR. GRUENING stated that he had found an operation similar to Hotz's method entirely satisfactory. DR. NOYES stated that he used a similar operation, but removed a narrow strip of skin and inserted deep sutures into the orbital tissue.

**Lymphoma of the Lids.**—DR. MYLES STANDISH, of Boston, reported a lymphomatous growth in the lower lid close to, but not involving, the lacrimal sac, cured by the administration of arsenic. DR. DE SCHWEINITZ referred to a number of lymphomas and sarcomas that had been favorably treated with preparations of arsenic and stated that while entire dependence must not be placed upon the administration of arsenic for the removal of morbid growths a sufficient number of cases have been improved by its use to show that care must be taken in operating simply upon the clinical diagnosis of these tumors.

**A Case of Spindle-cell Sarcoma Involving the Conjunctiva and Cornea; Removal of the Growth without Impairment of Sight.**—DR. S. B. ST. JOHN, of Hartford, reported the case of a man, 72 years old, who had lost the right eye twelve years previously as the result of traumatism. The growth appeared upon the left eye and grew in 2½ months from the size of a pin's head to that of a large pea. It sprang from the conjunctiva, was movable with that tissue, and overlapped the cornea. It was removed much after the fashion of a pterygium-operation.

**Conjunctival Melanosarcoma Involving the Cornea.**—DRS. JOHN GREEN and A. E. EWING, of St. Louis, reported a case in which a true melanosarcoma involving the conjunctiva and cornea to such an extent and of such a size that it became necessary to enucleate the eye.

**Hypopion-Keratitis; Break in Descemet's Membrane; Preceding Perforation Fluorescein Passed Through the Ulcer into the Anterior Chamber.**—DR. JOHN GREEN and DR. A. E. EWING, of St. Louis, reported a case of traumatic ulcer of the cornea in which an hypopion of 5 mm. in height occurred. The treatment, which was followed with good result, consisted in the free use of hydrogen-dioxid solution of normal strength, applied on a little mop, to the surface of the ulcer, held there, the application being renewed half a dozen times, until cessation of the ebullition that took place. On using this application bubbles of gas would appear in the anterior chamber, but this was rapidly absorbed and in a few hours nothing remained of it. Fluorescein produced its characteristic reaction. The hydrogen dioxid seemed to have the effect of breaking up the hypopion-mass and producing the good results that occurred. The conclusion was reached that one source of hypopion-keratitis is a direct break in Descemet's membrane, or exudation from the iris, or thirdly, possibly from the epithelium of Descemet's membrane. DR. HOLDEN opposed the idea that the hypopion could come from the cornea, and cited recent experiments to prove that just the reverse happened, and that the pus-cells found in the cornea had gotten there secondarily. He believes that the break in Descemet's membrane always begins with changes on its posterior surface.

**A Case of Interstitial Keratitis Congenital in Origin.**—DR. H. F. HANSELL, of Philadelphia, reported the case of a child, only 36 hours old when first seen, and presenting a thin, watery discharge from the eyes, the lids being slightly swollen and bluish-red in color, the conjunctiva smooth, but the ocular portion distended from the fornix to the limbus of the cornea by an almost transparent effusion. The corner showed, on inspection, a gray infiltration of the deep layers, consisting of fine points that tended to become confluent, most dense over the pupil, without vascularity or loss of epithelium. The child was poorly nourished, probably because of the fact that the mother, though ordinarily a healthy woman, had been in bad health throughout the pregnancy. There was no history of specific disease. The child was given tonic treatment, and at the end of six weeks there

remained only a slight opacity of the right eye. The local treatment consisted in the application of mydriatics. A similar case was referred to in which the cornea became entirely clear.

**New Treatment of Ulcers and Other Infectious Diseases of the Eye by Cassareep.**—DR. S. D. RISLEY, of Philadelphia, said that this preparation is made from the juice of the black cassava, and is used in a 10% ointment. It is applied freely between the lids, and the eye is subjected to massage to distribute it, and in the corneal cases a protecting bandage is applied. It causes no irritation and rapidly brings about improvement. DR. JOHN GREEN stated that he had seen the natives making cassava-bread, and that among them the juice has the reputation of being preservative of flesh. DR. MYLES STANDISH said that he has been using the preparation since Dr. Chandler originally introduced it, and he thought that, in the case of corneal ulcers, if the ointment be used for some time after healing has occurred, the scar is less dense than if treated by other means. DR. JACK has used the preparation, but said that in some cases it has been rather irritating. DR. RISLEY added that he has not noticed any difference in the degree of opacity, as compared with the results of other methods of treatment, but he believed that that would depend rather upon the amount of tissue destroyed.

**Spontaneous Expulsion of a Foreign Body From the Anterior Chamber.**—DR. J. P. WORRELL, of Terre Haute, reported the case of a boy who had received an injury of the right eye while exploding a gun-cap by striking it with a hammer. After the inflammation had cleared up, a small piece of bright metal could be seen on the inner surface of the cornea. The patient declined operation for its removal and some days later appeared with the statement that feeling something scratching the eye he rubbed it with a bit of cotton and removed, with some secretion, a small piece of bright copper. No inflammatory trouble followed. DR. HANSELL reported a case in which a piece of steel had been in the anterior chamber, according to the patient's story, 15 years, and was spontaneously extruded.

**Some of the Earlier Symptoms of Senile Cataract.**—DR. W. F. MITTENDORF, of New York, has carefully observed the last 508 cases of incipient senile cataract that have appeared in his practice in order to determine the exact location of the first changes in the transparency of the lens. Among these, 106 were central, and 402 peripheral, and of the latter the starting point of the striæ was found in the upper periphery in 13 cases only, in the outer periphery in 47, in the general periphery in 48, and in the greatest number, 286 cases, in the lower and inner quadrant. Admitting that cataractous changes do not depend upon senility alone, but more particularly upon the nutrition of the lens, Dr. Mittendorf suggests as a possible reason for the great prevalence of opacities in the lower inner quadrant the theory that there is a constant accommodation for small objects, especially in reading by artificial light, requiring a more or less forced convergence and a downward look, during which the pressure upon the surrounding tissues is an impediment to the nutrition of this particular portion of the lens. DR. RISLEY thought that opacities in the lower and inner periphery of the lens are often associated with choroidal disturbances in that section. He has noticed them particularly among iron-workers, with whom it seems to be due to the heat to which they are subjected, this being the least protected portion of the eye.

**The Operations for Secondary Cataract.**—DR. H. KNAPP, of New York, reported an interesting case of secondary cataract-operation. The primary operation for removal of the cataract was without special interest. The capsule becoming cloudy, and a secondary operation being required, it was needled in the ordinary way. The immediate result was good, but two days later reaction occurred and a severe, acute glaucoma set in. Iridectomy was at once attempted, but it was found impossible to catch hold of the iris, so that the operation was abandoned. The patient was relieved, however, of all pain and discomfort as a result of the paracentesis and remained so for four days, when trouble again set in. A second attempt at iridectomy was made and this time successfully. The relief was permanent. Dr. Knapp then gave a tabulated report of 70 cases of secondary cataract operated upon since October, 1897. Sight was improved in 63, remained the same in 6, and was almost lost in 1. Two



cases besides the one reported were complicated by glaucoma, one of them being relieved by myotics and the other by iridectomy. Considering the advisability of operating in cases that have vision not below  $\frac{2}{3}$ , Dr. Knapp contended that it must depend upon the case, but that ordinarily he believes an attempt should be made to give the patient the best sight his eye is capable of, especially as the secondary operation is, rare accidents excepted, safe. He considers discission the proper operation and lays down as a rule of paramount importance "cut, don't tear." As the region of the wound made in the primary extraction is the weak point in these eyes he considers it advisable to avoid that region as much as possible in the secondary operation, and a T-shaped incision in the capsule is thought to be best, the horizontal arm of the T being situated below the linear scar that Dr. Knapp makes in the capsule when extracting. Dr. ROOSA advocated the plan of removing the capsule in the secondary operation instead of doing a discission. Dr. NOYES prefers the discission and stated that he had occasionally introduced a long needle through the sclera because it gave better leverage when cutting the capsule. Occasionally he has used a second needle passed through the cornea at the same time. Dr. C. J. KIPP referred to the difficulties encountered in attempting to remove the capsule. Dr. CALLAN stated that he found himself more and more inclined to the use of the de Wecker scissors. Dr. POOLEY thought that all the operations, other than discission, with a sharp needle-knife, were open to serious objections. Dr. KNAPP thought that discission is by far the safest operation and is indicated in at least 95% of cases.

**Delayed Union after Cataract-Extraction.**—DR. GEO. C. HARLAN, of Philadelphia, reported two cases of delayed union after cataract-operations, in one of which union took place somewhere between the 10th and 17th days and in the other at the end of 20 days. In a review of the literature he found 26 similar cases in which the delay had lasted from 5 to 20 days. In 20 of these cases no cause could be given for the wounds having remained open. He stated that such cases seem to require no special treatment other than atropin and a slight pressure-bandage, together with treatment of any complications that may arise. Dr. NOYES has had a similar case in a man over 70, in which the wound failed to unite for over a fortnight, the edges of the wound being actually inclined to eversion. The wound finally healed and the man enjoyed good vision for ten years. Dr. GRUENING believed that one cause of the delay might be that the operation had been done within the clear cornea, and he thought that he gets most rapid healing when he makes the conjunctival flap.

SECOND DAY—JULY 21ST.

**Protargol in the Antiseptic Preparation of the Conjunctiva Prior to Cutting-Operations on the Eyeball.**—DR. B. E. FRYER, of Kansas City, uses a 2% solution of protargol as an antiseptic, and finds it preferable to solutions of mercuric chlorid, etc. It is destructive of all organisms and is not irritating.

**Buphthalmia; an Interesting Series of Cases Occurring in the same Family.**—DR. WALTER B. JOHNSON, of Paterson, N. J., reported 3 children in one family that were found buphthalmic within the first few years of life. Ophthalmic examinations were not satisfactory. Two of the children were operated upon in Naples, and the third here by Dr. Johnson. In each case the progress of the disease was arrested. The mother's eyes were normal, but the father thought he had never seen out of one eye, in which a disintegrated calcareous lens prevented examination of the fundus. Dr. HARLAN recalled the statement of Mauthner, made some years ago, that buphthalmia is simply congenital glaucoma.

**A Contribution to the Pathology of the Eye and its Appendages.**—DR. G. E. DE SCHWEINITZ, of Philadelphia, reported these cases:

**CASE I.**—*Primary carcinoma of the caruncle.* This was a small growth entirely replacing the right caruncle, about the size of an ordinary pea, which had existed for a number of years. Microscopic examination proved it to be carcinomatous. So far as known there has been no recurrence.

**CASE II.**—*Prelacrimal growth with the histologic characters of tubercle.* A small tumor anterior to the lacrimal sac was discovered while probing the tear duct. It was easily re-

moved, and on examination presented the appearances of tubercle, although no tubercle-bacilli could be found.

**CASE III.**—*Avascularity of the lacrimal gland, extending to the apex of the orbit; removal with preservation of the globe; functions of the eyeball and of the external ocular muscles, with the exception of the levator, which was involved in the growth.* This tumor, which is exceedingly rare, consisted of an angiomatous growth involving the lacrimal gland, and extended deeply into the orbit. It was probably congenital. In front of the ear, on the same side, there was a small cavernous angioma, about  $1\frac{1}{2}$  in. in length and 1 in. in width, but not communicating with the growth of the lid.

DR. FRYER asked if, in the examination of the carcinoma, coccidia had been found. DR. DE SCHWEINITZ said that he believed that there was considerable mythology connected with the pathology of coccidia. DR. BULL reported a similar case of prelacrimal growth which had been removed on the supposition that it was a cyst.

**Remarks on Cases of High Myopia; Treatment of One Case by Removal of the Crystalline Lens.**—DR. H. D. NOYES, of New York, said that the interesting features of this case are the early occurrence of converging squint; the rapid development of myopia between six and eight years of age; that the removal of the lens produced a change of 16 D., and with it an improvement in vision to double the previous condition; that binocular vision was not secured by the refractive changes, and that diplopia was never observed.

**A Contribution to the Operative Treatment of High Myopia, with Report of an Additional Case.**

—DR. W. H. WILMER, of Washington, reported a case in which the operation decreased the myopia by 22.5 D., and the vision was double what it had been before operating. In regard to the mode of operation Dr. Wilmer preferred a slight discission, making a very small opening in the anterior capsule, followed by extraction within six days. As to the amount of myopia that offers the best operative result he considers the ideal case to be the one in which 3 or 4 D. of myopia would remain after the operation. According to his experience, this would mean a myopia of 25 D. Dr. NOYES believed that if the operation were limited to cases of this degree, the amount of choroidal trouble would be so great as to incur great risk in the operation. He considered it justifiable to operate on young subjects with 13 D. or more of myopia, if the fundus is in good condition.

**The Pathology of Experimental Quinin-Amblyopia.**—DR. WARD A. HOLDEN, of New York, related experiments made with the aid of the newer stains for nerve-tissues and he exhibited drawings showing the changes that exist at various stages of the quinin-poisoning. The first changes were shown in the breaking down of the ganglionic cell-bodies and a deposition of myelin-like substance in the nerve-fibers. This appeared within three days after the administration of toxic doses. From that time until the 17th day more ganglion-cells were destroyed and at that time changes in the optic nerve consisting of a breaking down of the medullary sheaths of the fibers was noticed. By the 42d day the ganglion-cells and the nerve-fiber layer had almost entirely disappeared and the degeneration could be traced up to the external geniculate body and the pulvinar. No signs of degeneration could be found elsewhere in the brain or cord.

**Two Cases of Premature Delivery to Preserve Sight.**—DR. A. E. ADAMS, of Newburg, reported two cases of albuminuric neuroretinitis occurring in pregnant women, with vision reduced to a very low point. Shortly after premature delivery the vision showed marked improvement and Dr. Adams concludes that if abortion is ever justifiable it is in these cases, especially as the uremic condition is dangerous to the life of the fetus, as well as a menace to the mother.

**Implantation of Sponge in the Orbit after Enucleation.**—DR. S. D. RISLEY, of Philadelphia, said that a fragment of surgeon's sponge, carefully sterilized, was pared down to a size just sufficient to fill loosely the cavity left by the removal of the ball and to permit the suturing of the conjunctiva and the subconjunctival tissue over it without undue tension. The design was to furnish a framework for the deposition of connective tissue in the orbit and thus avoid the concave socket that ordinarily follows enucleation, and always permits the accumulation of tears and mucus behind the artificial eye. After the operation the appearance was much the same as that presented after the insertion of a



glass globe, as in the Mule's operation. Two or three months are required for the completion of the process of absorption of the sponge and the deposition of new tissue.

**Exhibition of Chalazion-Forceps.**—DR. C. J. KIPP, of Newark, demonstrated a pair of forceps consisting of a simple forceps, one blade of which was solid, and the other contained a slit, so that when this blade is placed over the conjunctival surface of the chalazion the latter may be incised through the slit and its contents squeezed out by pressure.

## AMERICAN OTOLOGICAL SOCIETY.

Thirty-first Annual Meeting, held at New London, Conn., July 19, 1898.

The meeting was called to order by DR. ARTHUR MATHEWSON, President.

**Report of a Case of Double Mastoid Disease Presenting Symptoms of an Intracranial Complication; Operation; Recovery.**—DR. GORHAM BACON, of New York, reported a case of double mastoiditis following a severe cold in the head, and presenting symptoms that led to the expectation of finding sinus-thrombosis. An operation was performed on each side, and the mastoid processes were cleansed of granulation-material, etc. Neither sinus was opened, as, notwithstanding the anterior walls of both were affected, it could not be demonstrated that there was a thrombus. Examination of the pus showed the presence of the pneumococcus and the staphylococcus. The patient made a good recovery. Dr. Bacon opposes puncture of the sinus, because he does not believe it is capable of determining the presence or absence of a thrombus, while it does increase the danger of introducing infection into a healthy sinus. DR. SPRAGUE reported a similar case in which double mastoid operations had been performed, and the aspirating needle had been used without locating any pus. Twenty-four hours later, however, on changing the dressings, it was discovered that the wound was discharging a large amount of pus, and the patient went on to rapid recovery. DR. KNAPP spoke of this condition occurring occasionally, and thought that the most likely location for the pus in such cases is the bulb of the jugular vein. DR. BLAKE reported a case in which the pus was followed up to its source and located in just this position.

**Three Cases of Suppuration of the Labyrinth, Two of them Producing Abscesses of the Cerebellum.**—DR. J. ORNE GREEN, of Boston, exhibited the temporal bones of which the labyrinthine structures had been more or less destroyed.

**Blood-clot in Mastoid Operations.**—DR. C. J. BLAKE, of Boston, suggested that, in cases of acute suppurative disease of the mastoid, after thorough evacuation of the mastoid contents, the cavity should be allowed to fill with fresh blood and the wound in the skin be apposed without sutures, but with a fair prospect of healing by first intention. This was done in a number of cases and the shortest period between operation and complete healing was only four days, while the average period in the successful cases was ten days. The same method was applied to a number of chronic suppurative cases with very good results. The method has the advantage that even if not successful and the part becomes infected the wound can be opened at the first dressing and can then be packed as usual without any damage having been done. DR. SPRAGUE reported some cases treated in the same way, and with about the same results. DR. BACON stated that he had tried the method in acute cases and that he had seen Dr. Blake's satisfactory results in the chronic cases. DR. CROCKETT reported that he had been using the method and that it was his custom never to dress a wound until the fourth or fifth day after operation unless special indications for so doing arose.

**Control of Hemorrhage from the Sinus and Meningeal Vessels During Mastoid Operations by Means of Intracranial Pressure.**—DR. C. J. BLAKE, of Boston, described the method that he had adopted some time ago for the control of hemorrhage from the lateral sinus. When by accident or design he opens the sinus and hemorrhage occurs, he does not pack the wound, but by the use of the spoon-curet he proceeds rapidly to increase the

size of the bony opening by cutting away its edges, so that the pressure from within the cranium brings the brain-substance into the opening and forces the inner wall of the vessel to plug its own lumen. This possesses advantages over packing in that it is easily and quickly done, promptly arrests bleeding and causes no delay in finishing the operation on the mastoid.

**The Functional Examination of the Ear, with Demonstration of Bezold's Continuous Tone-Series.**—DR. HERMAN KNAPP, of New York, exhibited Bezold's continuous tone-series, ranging from a low fork of 16 vibrations a second to the higher note of the whistle, about 40 vibrations. He also reviewed the methods of functional examination of hearing and laid stress upon its importance, especially with reference to deaf-mutes. In reference to the latter he cited Bezold's work to show that much can be gained in the education of these individuals by definitely measuring their hearing-rests and shaping the plan of education in accordance with the results. Bezold has proved that the aptitude of deaf-mutes to learn depends upon the tone-rests preserved in their organs of hearing.

**Trephining of the Stapedial Foot-plate for Otitis Media Sclerosa.**—DR. H. A. ALDERTON, of Brooklyn, reported an interesting case in which, after all other treatment had been tried and the crura of the stapes had been broken off in an effort to remove this bone, he trephined the foot-plate. From his experience he concludes that nothing permanent is gained by the operation, and that while nothing disastrous is to be looked for as the result of the operation, he would counsel against it. DR. KNAPP asked if anyone had had any results from the operation of removing the stapes. DR. JACK thought there was no doubt about securing permanent improvement in the hearing if the sound-receiving apparatus was in a healthy condition. He reported some cases in which good effects had been obtained. DR. BLAKE reported some cases in which improvement had not been noticed immediately, but had been noted later and was especially marked for the high notes. DR. CROCKETT reported a favorable case, but also remarked that he did not consider the operation entirely without danger, as he had known of an instance in which total deafness followed.

**Report of Cases of Otomycosis Treated by Insufflation of Boric Acid and Zinc Oxid.**—DR. SAMUEL THEOBALD, of Baltimore, stated that seventeen years ago he first called attention to this method, which he has since used with uniformly good results. He thinks that treatment of such cases with alcohol should be abandoned, as this is not a suitable agent to pour into an inflamed and painful ear, and requires to be used for a long period of time, whereas in the method suggested but two or three applications are necessary.

**The Sequelæ of Middle-ear Suppuration, with a Report of Cases.**—DR. E. B. DENCH, of New York, urged the necessity of removing all the diseased bone in every case of suppurative otitis media in order to protect the patient from infection. He showed that in some cases, in which the drainage is free, the danger of infection of the brain-substance, or of meningitis, is less than when the escape of pus from the external auditory canal is not free; still so long as the middle ear is the seat of inflammatory trouble extension to the cranial cavity through the bony walls is always a possibility.

**Do Tympanotomy and Removal of the Incus Arrest Progressive Hardness of Hearing?**—DR. C. H. BURNETT, of Philadelphia, answered this question in the affirmative, and he reported 61 cases in which the operation has been performed. Most of these patients heard very little at the time they were operated upon. Little or no improvement in hearing took place, but none have been made worse, and this latter fact is the most important one established regarding the hearing in most cases. In fact, the operations have been performed chiefly with the expectation of relieving tinnitus and ear-vertigo rather than the deafness, so advanced has the latter been. Tinnitus and vertigo have been relieved or banished in all cases. The hearing has remained unaltered or slightly improved in all cases. It would seem, therefore, to at least check the progress of the deafness. Dr. Burnett thinks the time has come not only to employ the operation in those cases in which deafness is advanced to a great degree, but to treat the patients while the disease is in its earlier stages and thus avoid greater deafness.



## BRITISH MEDICAL ASSOCIATION.

Sixty-sixth Annual Meeting, held at Edinburgh, July 26, 27, 28, 29, 1898.

[Through the courtesy of the Editor of the *British Medical Journal* we are able to present simultaneously with our great English contemporaries a number of the addresses delivered before the British Medical Association at its meeting at Edinburgh during the past week.]

**President's Address.**—After extending a welcome and expressing thanks for his selection as president, Sir T. GRAINGER STEWART adverted to the loss by death of many distinguished members, and especially of Mr. Ernest Hart, who during many years edited the *British Medical Journal*, and took a leading part in the conduct of the Association. His services have been and will be suitably acknowledged, and he must always be remembered with grateful appreciation.

It will not be easy for us in Edinburgh to equal the interest and the charm of last year's gathering in Montreal. If there lurked in some minds a doubt whether it might prove possible to make a meeting so far from home a success, such doubts were soon dispelled. Those whose good fortune enabled them to cross the ocean found in Montreal a cordiality of welcome, a skill of arrangement, and a wealth of instruction which led them to form a very high estimate of the qualities of the President, Professor Roddick, of the profession in Canada, and of its medical institutions.

Our science and our art recognize no national limitation. The members of our profession are our brethren to whatever people or race they may belong, but there is a just and patriotic pride in the greatness of our empire, and in the vigor of the schools and universities which have sprung up in so many distant parts of the Queen's dominions. The young country, with its freshness, its vast extent, its illimitable resources, showed us an inspiring example last year, and we must do our best to make it clear that the centuries have not diminished the vigor of this ancient home of medicine.

You have been drawn to Edinburgh on this occasion by a great variety of considerations; no doubt the chief of these is the desire for the increase of knowledge and improvement of practical skill, the hope of meeting old friends, and becoming personally acquainted with those whose work has made their names familiar. We hope that in none of these respects will you be disappointed.

But while these are doubtless the main attractions of our gathering, there must be many minor considerations which have helped to bring you here. Many have come to revisit the home of their student-days, and the haunts of happy youth. The old city is to them redolent of pleasant associations. I can fancy groups of fellow-students or brother-residents gathering to explore the wards or the class-rooms with which they were familiar, seeking out the site of the old infirmary, or the halls in which they had listened to a Good-sir, a Bennett, or a Syme. There are some, I can imagine, who shall wish to see the house in which chloroform was first administered, or the wards in which the principles of anti-septic surgery were developed. But many come also attracted by the picturesque and the historical. They wish to see the beautiful scenes that surround us; to explore the Castle; to trace the remaining fragments of the old city-wall which was built as a defence against our ancient enemies of England; to visit Holyrood; or to make out the site of the Heart of Midlothian, the home of Jeannie Deans, or of her faithful admirer, the Laird of Dumbiedykes.

No subject could in my judgment more worthily form the topic of an address on an occasion like this than a consideration of the reciprocal duties of our profession to the community and of the community to our profession. It is true that the time at our disposal can at the best permit of a very inadequate discussion of so wide a subject; still it may be possible to indicate in bold outline the general line of the questions involved, and to illustrate one or two of their more important aspects.

The respective duties may be described in a single sentence. That of our profession is to do its best to prevent disease, to cure disease, and to alleviate suffering in individual patients; to protect the community against preventable maladies; to advance our knowledge; to train our successors, and to guard the portals of admission to our

ranks. The duty of the community is to afford us every facility for so doing.

I purpose to speak briefly of each of these, and then refer to the various organizations instituted by the profession and the community with a view to the fulfilment of their respective duties.

It is, to begin with, most desirable that a common understanding should exist as to the present position of the science and art of medicine. The days are passed in which medical men were accustomed to make great claims as to their powers, arrogantly pretending to control processes of nature that we are really unable materially to influence. Our profession recognizes its limitations; none know so well as we how imperfect our art still is, and how little it can achieve compared with what we would desire. Still we know that medicine has advanced amazingly during the present century, and is advancing every day in all directions at an accelerated and ever accelerating speed.

Goethe puts into the mouth of a well-known personage a humorous description of the powers of our art—a description that has met with wide acceptance.

The spirit of Medicine is easy to be grasped.  
One studies through the great and little world  
To let things go in the end as pieces of food.

Wear Goethe living now, he would be the first to recognize that our studying through the great and little world is proving by no means fruitless. The annual death-rate in England and Scotland has, since 1855, fallen by more than one-fifth. The proportion of deaths from zymotic diseases, as compared with other causes, has diminished by more than one-third; the labors of members of our profession have mainly brought about these results. In the treatment of the maladies of every important organ—the heart, the stomach, the kidney, the liver, the brain—we can accomplish far more by our modern methods than was possible a few years ago. Even the great scourge of humanity, tuberculous disease, has been robbed of some of its terrors. The mortality due to it has fallen by one-third during the past thirty years. The experience of Glasgow has afforded a striking example of more recent improvement, for comparing the past 7 years with the 7 immediately preceding, the deaths from pulmonary tuberculosis have diminished nearly one-fifth. And everywhere the life of those stricken by the malady has been remarkably prolonged as compared with former experience; the chances of recovery greatly increased. All this has been accomplished in regard to tuberculous diseases, while as yet but little has been done in the way of spread by infection. Our rapidly advancing knowledge is supplying us day by day with new precautionary measures that are certain further to diminish the frequency of the disease and its rate of mortality. The public takes cognizance of facts like these, and is therefore according year by year a higher measure of respect to our art, imperfect though we must acknowledge it still to be.

There is little need to enlarge upon the personal relationships of doctors and patients. The duties that the practitioner owes are universally recognized. He has to master the art of medicine to the best of his ability and then to apply his knowledge for the benefit of each individual who may come under his care. Four hundred years before the birth of Christ, we find in the oath of Hippocrates the great principles that guide us still. The young physician of that school vowed to do his best for every patient, and "I will follow that system of regimen which, according to my ability and judgment, seems best, and abstain from whatever is deleterious and mischievous." He vowed also that he would never use his art for evil purposes: "I will give no deadly medicine if asked, nor suggest any such counsel." He vowed moreover to lead a high and noble life. "With purity and holiness I will pass my life and practise my art." And he vowed most solemnly to observe the strictest secrecy with regard to all private matters of which his profession might make him cognizant: "Whatever I see and hear in the life of man which ought not to be spoken abroad, I will not divulge, as reckoning that all should be kept sacred." No nobler summary of professional morals could be found than this, and I venture to say that, in our time and in our nation, these duties are well observed.

If we can claim that our part of this duty is fairly performed in our country at the present day, it is equally true



that the public shows a generous appreciation of the services of their individual doctors. They fully recognize our honest good intent, and if they sometimes evince less gratitude than we know or think we deserve, on the other hand they often accord us more; and if we treat our patients, from the humblest to the highest, with care, courtesy, and discretion, it will be found that, generally speaking, we have not to complain of any want of appreciation and gratitude.

The prevention of disease is in its practical results perhaps the most important of all our duties. It is our chief glory that we have been able to accomplish so much. It is our highest hope that we shall accomplish more.

The great group of diseases that owe their origin to invasion by pathogenic microorganisms are in course of being rationally explained, and so it is becoming possible for us to take measures for their prevention. In some of them we can prevent the development of the organisms. In some we may hinder their multiplication and spread. In some we can block the channels by which they have been accustomed to find entrance into the body. In some we are able to modify the germ so that it produces when inoculated a milder disease, and yet a disease capable of conferring immunity against the malady in its ordinary form. In some we can interfere with the action of the germ, even after it has been introduced, or counteract the poisonous substances that the germs generate.

With regard to the important group of diseases due to faulty chemical processes we have learned much that is of service for prevention. We have traced the origin of some diseases to the subtle action of chemical substances introduced with the food, or in the exercise of various trades and crafts. We have learned not a little regarding toxic substances that are developed within the body from faulty chemical processes, or which accumulate as a result of deficient elimination. And, most recently of all, we have traced important diseases to deficient or excessive supply of what we have come to know as internal secretions. And each discovery that renders the causation of disease more clear contributes something toward its prevention.

Every member of the profession ought to be keeping his eyes open to the advances of science, for in that he may find explanations of morbid action, as Lord Lister did in regard to wounds, always seeking for an explanation of the occurrence of disease, and especially of epidemic outbreaks, for by watchfulness in such matters mighty results can be achieved, as the work of such men as Snow and Budd and Koch has shown. The public may in many ways benefit from such discoveries and the precautions they suggest. Individual health, family-health, social health, and national health, may all be improved if the individual, the head of the family, the employer of labor, and the legislator, duly study and act upon these lessons. It is their duty to do so. But an intelligent appreciation of these subjects is not easily attained. Perhaps we are ourselves in some measure to blame for this, because our professional customs do not readily lend themselves to the issuing of clear and popular statements by leaders of medical opinion in such form as would enable the public to share our knowledge. We ought to take more pains to instruct the public in such questions. Individual members of the community should seek to understand how their own personal health and that of their families may be protected when they act according to the light of modern science. Employers of labor should modify the conditions of their work, as, indeed, so many of them do, with the view of warding off the special dangers proper to each occupation. Teachers and governors of schools should study zealously all that we are learning with regard to the evils of deficient ventilation, of cramped attitudes, and of excessive or too prolonged mental effort.

In unnumbered ways may intelligent and well-instructed men ward off dangers by attending to the hygienic rules of modern science. But apart from all the private applications of hygienic laws rises the question of the duty which the Legislature owes to the facts of medicine.

The country has since the Queen's reign become awakened to the benefits that legislation in medical matters may afford, and history will recognize the fact as one of the chief glories of the Victorian age. But I wish that our progress were more satisfactory. Take, for example, the great subject of the prevention of smallpox. With scarcely a dissentient voice the medical profession recognizes the transcendent value of vac-

cination. A Commission labored for many years, and at last reported unequivocally in favor of that treatment. But with a determination that would be admirable if it were not so disastrous, a comparatively small group of men set themselves to opposing and maligning the process, belittling its advantages and magnifying and multiplying the slight risks that attend it, in the most exaggerated way; and so it comes about that the greatest discovery in practical medicine, although it had its native home in England, is less efficiently carried out here than it is in many parts of the Continent. In Germany smallpox has practically disappeared; there has been no death from it in the whole of the vast German army since revaccination was introduced. But what does our Legislature do? The Government has during this session brought in a Bill which, although it contains much that is good, is marked by astounding defects. It contains many excellent suggestions, and in particular avails itself of Dr. Copeman's discovery as to the value of glycerinated calf-lymph. It is good that they propose to continue compulsory vaccination of infants; it is good that they propose to extend the period for infant-vaccination; it is good that they are improving the conditions of its administration; it is good that they are to provide calf-lymph instead of human lymph when it is preferred; it is good that they are taking advantage of the admirable researches of Dr. Copeman, and arranging to supply calf-lymph in its safe glycerinated form; but it is disastrous that they have not ventured upon the enactment of revaccination when general experience is showing us every day the great increase of protection which revaccination affords; it is grievous to think that we lag behind, and are deprived of a benefit which could so easily be obtained. Were the opinion of such a body as the British Medical Association taken in the matter, I have no doubt that revaccination would be speedily enacted, and I venture to say that it would be demanded both at the time that children have entered on school-life and when they enter upon manhood.

I wish that the Legislature would boldly accept the principle that as it is mainly guided by the opinion of lawyers as to legal questions, by those of soldiers in matters military, by practical seamen and engineers in matters concerning their department, so in medical questions they would look for guidance to the medical profession, and give effect to its matured opinion. Then we should have less difficulty about the question of vaccination, or that of the treatment of inebriates, or the prevention of the risks attending certain callings, such as those that expose the workers to lead-poisoning or to poisoning by phosphorus; and we should soon find the Statute-book enriched by further beneficent enactments which would save multitudes of lives and immensely diminish sickness and suffering.

Another duty recognized from earliest days is that of extending, increasing, and deepening our knowledge. The *mens medica* is an inquiring mind, and the nature of our training and of the problems which daily confront us stimulate inquiry. Original observation and research is being carried out in unnumbered centers throughout the world. The mediæval methods of building systems or theories upon slight or fanciful foundations has been replaced by the Baconian methods. To these the world is indebted for boundless benefits. Every great hospital has been for long used as a field of accurate and painstaking clinical observation, and in many of them and in every university and school laboratories of research have been established, and original work has been incessant. Here in Edinburgh, in addition to the various laboratories in different departments of the University, the Royal College of Physicians established some years ago its Laboratory of Research, and thereby the profession organized more perfectly than ever before the means for advancing our knowledge. Similar laboratories have since been founded by the London colleges and by other bodies. We may, therefore, claim that the profession is fully alive to its duty in this respect, and is exerting itself to the utmost for its fulfillment. It is much to be desired that the community were more appreciative of the value and importance of such work, that there were less of ignorance regarding the results, and less prejudiced opposition to the methods employed; but in this respect also, as the fruits become apparent, the value of the work is being admitted, and confidence and respect are deepening. It is a good thing to observe how generously individual men of wealth and position are seeking to foster work of this kind. In this University a gener-



ous and liberal minded citizen has, within the past few weeks, provided the whole sum necessary for building and equipping the much-needed new Public-Health Laboratory, and one may venture to hope that the hour may not be far distant when the State will realize that the money of the nation can scarcely be better spent than in making ample provision for the endowment of research.

I cannot speak as fully as I should like upon our duty of training our successors. From the earliest days this has been recognized as one of our most important functions. At first it seems to have been accomplished by transmission from father to son or from master to disciple. Just as one sees in the present day among the Savoyards at Aix-les-Bains the fathers training their sons and the mothers training their daughters in their traditional methods of treatment, so the old-world physician handed on his knowledge. By degrees the training came to be entrusted to individuals specially set aside for the work, and teaching was gradually organized.

To-day the profession has organized throughout the country many great and famous medical schools, and all the universities devote themselves more or less to medical education. That work, of course, can never be successfully accomplished except where great hospitals exist. The fame of the school of Guy, of St. Bartholomew's, of St. Thomas, has sprung from the splendid hospitals in connection with which they were formed, and the greatness of the Edinburgh school could never have been but for the Royal Infirmary, which among all hospitals stands out so eminently as a training-ground of the profession.

There is no need for me to speak to this audience of what medical education has now become, but I wish that all teachers could manage to make their instruction rather a training of the powers and mastering of the methods, rather than a loading of the memory with unnecessary facts and transient theories. I wish, also, that it were possible for us, for the universities and schools, to make more complete and satisfactory arrangements for post-graduate instruction, so that old students might return to the *alma mater*, and pick up, in the course of a few weeks, instruction as to new methods and new facts whereby they might keep themselves more abreast of modern progress.

I must not attempt to speak of our duty in respect of guarding the portals so that unworthy practitioners may not be let loose upon the public. Only I would say that I desire to see our examinations always more thorough, practical, and proportionate, so as to be just to candidates and to the public alike.

I wish we had time to consider together the various organizations which have sprung up in the profession, and have been recognized by the State, or which the State has instituted for dealing with matters medical; time would fail me to speak of the origin and the services of the ancients' guilds of surgeons and the royal colleges, profoundly interesting as that subject would be; nor can I speak of the growth of the medical faculty, or the universities, or the medical schools which are now scattered so numerous throughout the kingdom, nor of the societies which do so much not only in the great centers of medical education, but in every considerable city, and in every district or country throughout the empire; but I must allow myself time to refer to that Association, in connection with which we are assembled here this evening. Little more than 50 years ago it took origin as the Provincial Medical Association, and only after a time did it spread to London, and it is 40 years this week since they first ventured to cross the border and hold a meeting in Scotland. It now consists of upwards of 17,000 members, all legally qualified practitioners, admitted after careful consideration, and resident in all parts of the empire. In every district the Association is represented by branches, each of which serves important local purposes, and takes its share in determining the policy of the whole Association. Through its representations to and representatives on the Council I think the Association will do well to foster the vigor of life in the branches. Its *Journal* has a circulation of more than 20,000 weekly, and is recognized as one of the leading medical periodicals of the world.

The objects of the Association are the promotion of medical and allied sciences, and the maintenance of the honor and the interests of the medical profession. These are to be effected by the holding of meetings, the publication of a journal and transactions, the granting of money for the pro-

motion of science, and for defence and promotion or maintenance of the honor or interests of the medical profession by such means and such manner as the Council may think fit, including, in particular, taking or defending legal proceedings and promoting or opposing bills in Parliament. These objects seem to me worthy of the high and noble traditions of our profession. It is for the discovery and dissemination of truth, and for the maintenance of the rights and influence of the profession as a whole that the Association exists.

It is our duty to inquire how far these purposes are being fulfilled. The mere numerical growth to which I have referred seems to be of itself a proof that a useful end is being served. The value of the *Journal* to the profession cannot be overstated, especially now that such excellent epitomes of recent observation are sent out with each number. I am sure that no member can attend an annual meeting without being enriched in knowledge and being inspired with new ideas. The mere contact with other minds is of inestimable value, and every man who is thinking of doing original work finds fresh light thrown upon his results by those accomplished by kindred intellects.

The Association has for many years devoted considerable sums of money to the endowment of research, and much has been accomplished by its research-scholars and others whom it has helped. It exerts a considerable influence in connection with public affairs connected with medicine; our Council laboriously considers all questions of medical interest that concern the profession.

As time goes on the Association may often be able to perform like services for the profession and for the country.

Among the institutions which, although suggested by medical men, were instituted by the Legislature, I should mention first the General Medical Council. We have now had forty years' experience of that body, and I for one think that it has done good service to the profession and the State. It has raised the standard of preliminary examinations; it has extended the period of medical studies; it has secured that every medical man shall be educated and qualified in all the branches of the profession, and it has led to the grouping together of colleges in the granting of licences in a way that has proved eminently beneficial. Its powers have been more limited than might have been desired, and perhaps they might be extended and increased with advantage.

This brings me to speak of the Public-Health Executive, the officials who are entrusted with carrying out the laws relating to disease and its prevention. The formation of the department was—like most British institutions—an evolution rather than a creation; for when the Government felt the need of establishing such a branch of the Executive, it did not construct a new Board or appoint new officers more than was absolutely necessary, but rather laid additional duties upon Boards and officials already existing.

On the other hand, the duties of the Local Government Board naturally included, considering its mode of construction, much that might well have been relegated to other departments, as, for example, many matters relating to Poor-law administration.

All this might surely be simplified with much advantage. The department has grown so great and so complicated, and the importance of the work of some of its parts has become so much more appreciated, that it demands reconstruction. I should like to see the Local Government Board entrusted with every question that bears upon public health. It should have two divisions, one dealing with the questions of local administration, and the other with the public health. These two subdivisions would cover the whole work at present undertaken and which properly belongs to this great department.

The President of the Board thus reconstructed should be recognized as an official of the higher rank, and should indeed be not only a Minister, but a Secretary of State for the department. It would be a great benefit that he should be an officer of such dignity and influence as that he would be able to secure in the Cabinet and in Parliament due attention to the subjects with which he has to deal. He might be a member of either House, but considering the frequency with which financial questions must emerge, it would probably be better that he should sit in the House of Commons. He would, of course, have a Parliamentary and a permanent Under-secretary, the former of whom should also, as at pres-



ent, be a member of the House, who should take his share in the administration of the department, and in the absence of his chief, answer questions and be available for reference and inquiry in the House on any subject connected with the department. The subdepartment should also be maintained, at which information, advice and direction upon all sanitary questions might be obtained, while at the same time it continued to organize and carry out scientific investigations somewhat on the lines that are at present followed. There should also be other subdepartments, dealing with various branches of the subject, as, for example, with the registration of births, deaths, and marriages; with the incidents of notifiable diseases, epizootics and diseases of plants (unless this is sufficiently provided for by the Board of Agriculture), and meteorological and other reports; with the working out of the various Public-Health Acts; with the Vaccination-Acts, the medical questions arising under the Factory-Acts; with the care of the insane; with all questions as to the disposal of the dead, and such like. There are already officials entrusted with nearly all these duties, and in many respects the department is admirably equipped. All that would be required in many instances would be the grouping of them afresh and the clearing up of the precise details as to their work.

Before I close this address, I should like to offer an illustration of what I conceive to be the ideal working out of the mutual duties of a medical officer and of the department to which he stands related.

My friend, Dr. Aitchison, had in the discharge of his duties observed that the inmates in St. Cuthbert's Poor-House were throwing out nitrogenous matter from the system in a proportion far beyond that which they were taking in by way of food. The nitrogenous waste was so great that the paupers might have been described as in a state of "physiological bankruptcy." In well-fed healthy individuals the store of glycogen within the organism is kept at a level which amply suffices to meet the requirements of the system, and even if on any occasion the daily supply falls short, there is the fat stored within the body, which can easily be drawn upon as occasion requires. But beyond these are the nitrogenous tissues, which are only brought into use when the other two sources of supply are exhausted, and are so used at great expense to the organism. Dr. Aitchison found that our paupers were not fed in such a way as to meet the daily expenditure; that whatever stores of fat they might at one time have had were completely exhausted before they had long been living upon the poor-house fare, and that consequently they were obliged to fall back upon their nitrogenous tissues to the great diminution of their energy and strength. Their output of nitrogen, instead of being a normal of, say 15 to 20 gm., was from 30 to 40 gm. *per diem*. He soon ascertained that this nitrogenous waste went on all the same, whether the food-supply of nitrogenous material was given in proper quantity or deficiently or in excess. And by degrees he satisfied himself that the fault lay in the deficient supply of the fatty materials. He therefore provided for certain paupers an additional allowance of fatty materials in the form of suet-pudding, and found the nitrogenous waste greatly diminished. He then was able to determine the amount of fat required, by noticing when in each case he got the nitrogen-equilibrium established.

These results were presented to the University in the form of a graduation-thesis for the doctor's degree, and Dr. Aitchison received the degree with the highest honors. He then placed the work in the hands of the Local Government Board. The Board, after consideration and conference, sent the diets which he suggested to every poor-house in Scotland. If the authority of the Board over the Parish-Councils be supreme, as it ought to be, this improved diet will be everywhere adopted, and this whole matter will illustrate in an admirable way the efficient discharge of duty on the part of the medical officer and of the authorities under whom he acts and at the same time the conferring of most important benefits upon the inmates of our poor-houses.

But I have reached the utmost limit of my time and must hasten to conclude. With regard to the whole question of the relationships of our profession and the community, I should sum up by saying that what we have to do in order to secure its perfect fulfilment is to discharge our part conscientiously and to the utmost of our ability. It is not by banding ourselves like a trades-union and crying aloud about

our wrongs, real or imaginary, but by the efficient discharge of our own duty that we shall in the end succeed. When each of us does his best for every patient and for the State, not with eye-service as men-pleasers, which we are so often tempted to be, but with a profound appreciation of our grave and sometimes awful responsibilities, we shall win the place in public esteem which will bring to our beloved science and art and to us the recognition to which they and we are entitled.

**Address in Medicine by DR. THOMAS RICHARD FRASER.**—When this Association last met in Edinburgh the Address in Medicine was delivered by the accomplished and universally beloved physician, Dr. Warburton Begbie, and the thesis that formed the subject of the address was expressed in the inquiry, Has the practice of medicine made a single step since the time of Hippocrates?

From his elaborate survey of the history of medicine, he concluded that no general doctrine—chemical, physical, humoral, or physiologic—had been propounded that satisfactorily explained the nature and production of disease; that therapeutic advancement had been obtained chiefly by the observation of patients, by adhesion to the classic method of rational empiricism; and that by this method such valuable accessions to the means of treating disease had been gained as the administration of turpentine in pulmonary gangrene, and bronchitic affections; of quinin in intermittent fever, of potassium iodid in syphilitic periostitis and thoracic aneurysm; of potassium bromid in epilepsy; and of cod-liver oil in pulmonary tubercle.

It may not be without interest to consider to-day how far, and in what directions, this great and wide subject of medicine has chiefly advanced since Dr. Begbie delivered his address scarcely a quarter of a century ago. It has, however, been signalized by a great increase of knowledge regarding the fundamental sciences of chemistry, physiology and morbid anatomy; by the creation of pharmacology as a science of the action of remedies, by steady advance in symptomatology and diagnosis, and above all by so remarkable a development in our conceptions of the nature and production of many diseases, that we appear almost to have attained a position, vainly sought for during centuries by our predecessors, of being able to formulate a doctrine of disease, founded upon the satisfactory basis of experimental demonstration, and sufficient to explain many of its forms, and to already provide us with assured means and principles for its prevention and treatment.

While fully acknowledging the merits of the workers in medical science and practice by whom this gratifying progress has been made, it cannot be forgotten that the necessary pioneer work was undertaken amid difficulties of exploration in dark and unknown regions; and that but for this pioneer work the present generation would not have been able to reap so prolific a harvest of medical discovery.

This indebtedness to our predecessors is nowhere more conspicuously shown than in the advancements that have been made in the diagnosis of disease. Observation, careful and intelligent, as practised by the fathers of medicine, had already constructed a nosology sufficient to distinguish the great majority of diseases, and so complete that it is doubtful if much advance could have been made if the methods in use at the commencement of this quarter of a century had alone been trusted to. The introduction, however, of physical aids to our senses, and of chemical applications and methods—each rendered possible by the growth of collateral science—has placed us in a position from which we have been able to advance in accuracy of diagnosis, and even in the discovery of new diseases.

By the apparatus now in use for blood-determinations the condition of this fluid in regard to many of its most important constituents can be exactly determined, and information can be obtained valuable for treatment, and previously unattainable by any perfection of intelligent observation by means of the unaided senses. The sphygmograph depicts, with precision of detail, changes in the pulse, which are difficult to apprehend by the unaided finger, even after a long apprenticeship, and above all increases the usefulness of the physician by indicating the characters which, without its use, he should be trained to detect. He is thus enabled to appreciate changes which are not only of the highest value in prognosis, but are also frequently sufficient either in themselves, or aided by the most superficial



of further observation, to justify without auscultation the diagnosis of the cardiac lesion which is present. The ophthalmoscope has increased the certainty of diagnosis of many nervous affections and toxic processes, and some of the difficulties of clinical observation have been overcome by the radiograph, whose capabilities, however, are as yet undeveloped.

By the introduction of chemical processes, applied especially to the examination of the stomach-contents, and of the urinary and other secretions, diagnosis has also been advanced, and previously unknown precision has been obtained. The agglutinating effects of the blood-serum in certain infected diseases, as typhoid, Malta, and relapsing fevers, and in cholera and anthrax, upon their respective pathogenic organisms; and the application of chemical pigments to reveal the existence of the microscopically minute organisms of such diseases as pulmonary tubercle, pneumonia, and diphtheria, have removed many of the perplexities of diagnosis and rendered identification almost a mechanical art.

While by this and other means the diagnosis of diseases—a fundamental work in the art of medicine—has conspicuously advanced during the last quarter of a century, this advancement, however great, does not, in itself, justify any claim to a nearer approach to the realization of the highest aims and objects of medicine. Diagnosis, for the most part, deals only with symptoms; it has no concern with the true nature or course of the disease, and until this has been determined, progress in treatment can only be tardy and unsatisfactory. The history of medicine has shown that the advance in these two departments has rarely, if ever, been parallel or equal. The one may reach a position of almost ideal perfection, while the other still remains in the initial stage of vague speculation. This is exemplified by the present state of knowledge of nervous diseases. Minute symptoms have been identified, and have been so arranged in groups as to constitute special disease, and thus numerous forms of disease, associated with morbid lesions of parts of the spinal cord or brain, have been created. The elaboration is a remarkable triumph of painstaking and skilful observation in symptomatology and in morbid anatomy. It presents a field for the training of the powers of observation and reason, probably unsurpassed by any other problems in practical medicine, and the solution of these problems is undoubtedly a cause of satisfaction to the physician, as it frequently also is to the patient.

To what extent, however, is the patient a gainer; to what extent is the object of diagnosis and of all medical knowledge fulfilled? It must be admitted that the gain in most cases is disappointing. The natural course of the disease is no doubt often beneficially modified, but usually to only a slight extent, unless surgical treatment is successfully applied. Whether the investigation of the condition of the patient leads to the diagnosis of acute ascending paralysis or anterior cornual degeneration, of spastic paraplegia or locomotor ataxia, of syringomyelia or bulbar paralysis, the methods of treatment are much the same; and while we may have some satisfaction in adopting measures to relieve symptoms, or to protect the patient against conditions favorable to the progress of disease, or to increase the general powers of resistance, we most frequently find ourselves in the mortifying position of being unable to cure the disease. In those cases, on the other hand, in which it is possible to advance from diagnosis to the determination of the actual cause of the disease when remedies are employed which have been proved to be curative as regards that cause, the disease, whatever be its position in the artificial nosology of nerve-affections, may in many instances be arrested in its progress, and may even be cured, provided the affected tissues have not already undergone incurable destruction.

At the present epoch in medicine it is especially interesting to recognize that the latter gratifying results are to be obtained when there is reason to believe that the disease has been caused by a toxic substance present in the body, and that according as this substance be the poison of syphilis, or of rheumatism, or of malaria, is the cure effected by remedies which have been proved capable of annulling the toxic effects of these poisons. It is thereby shown that the disease is not truly a product of the structural alterations which are present, but of a hurtful substance or poison capable, among other effects, of producing these structural alterations. Simi-

lar facts are observed with many other poisons and an association highly significant in regard to the production of disease is thus indicated. Many of the more common poisons produce changes in structure closely simulating the changes of disease, as the peripheral neuritis, anterior cornual degeneration, granulo-fatty degeneration, and arterial sclerosis of lead; the liver-steatosis and yellow atrophy of phosphorus, and the fatty degeneration and diffuse sclerotic hyperplasia of the liver, the peripheral neuritis and the atheromatous changes in bloodvessels produced by alcohol.

By such facts, acquisitions of modern pathology, it is strongly suggested that the structural changes found in many diseases may, after all, be mere manifestations, associated with other effects, of a cause which would thus assume the importance of being the essence, the *vera causa*, of the disease, and that this essence is a toxic substance. This idea is rapidly becoming the prominent doctrine of the present-day conception of disease, and as investigation proceeds it is almost daily receiving support from new facts. It has been demonstrated that the body is constantly subjected to the risks of poisons produced within itself, as well as of poisons introduced into it from without. Many of the poisons produced in the body, such as the ptomaines and leukomains, are of the chemical nature of the previously known alkaloids, and not a few of them rival the vegetable alkaloids in toxic power and reproduce their leading effects. Nervein, for instance, is lethal in minute doses, and acts in many respects like pilocarpin; while muscarin finds its analog in the active principle elaborated by poisonous fungi.

The organism, even in a state of health, is a veritable storehouse of these toxic substances. Many of its normal constituents, such as potash-salts and carbonic acid, are well-recognized poisons; many of the products of its glands, such as saliva and bile, contain toxic ingredients. Many of the substances formed in the processes of disassimilation, and which enter such secretions as the urine and the intestinal canal, are capable of disordering health, and even of endangering life; and in disorders of function, even if they amount to little more than mere disturbance of nutrition, poisons not found in the healthy body are generated, and produce the symptoms of disease. By such toxic influences the symptoms of cholemia, gout, rheumatism, uremia, diabetic coma, stercoremia, and probably also of chorea, sunstroke, neurasthenia, asthma, and the idiopathic anemias, receive a sufficient explanation, even although the toxic substance has not in all cases been identified.

The doctrine of the toxic origin of disease has also been applied to mental affections. Auto-intoxication from poisons produced in the intestinal canal is believed to be an important factor in the causation of insanity, and already neurologists, such as Nissl and Van Gieson, have expressed the opinion that the toxic theory is destined to clear away much of the present vagueness regarding the pathogenesis of mental disease. Further, it is not improbable that in carcinoma, auto-intoxication by a poison generated in the carcinoma-cells, equally with, and in some instances to a greater extent than, structural degenerations of invaded tissues, accounts for the symptoms and for the fatal termination—a probability that has been strengthened by the separation from carcinoma of a substance possessing a hyperthermic and powerfully lethal action.

The widely acting pathogenic influence of poisonous substances has, however, received its most definite and convincing support from the remarkable discoveries in bacteriology which have signalized this period. The gravity and wide prevalence of infective diseases had rendered them a subject of special study from the earliest period. Rhazes, in the seventeenth century, propounded the view that smallpox was essentially a fermentative disease, and thus originated the doctrine of the fermentative nature of all infectious disease. Previous to this time a theory of the parasitic origin of these diseases had been propounded, and its more enthusiastic supporters gave a reality to their views by such statements as that syphilis was caused by a minute worm, and measles, smallpox and plague by infusorial animals or invisibly minute insects. With the introduction of the compound microscope the parasitic theory disappeared in this gross form of it, and the fermentative theory was again adopted. It was not, however, until 1861, when Pasteur's great discovery of the nature of butyric fermentation was made public, that the sufficiency of this theory became



revealed. His demonstration of the essential part played by minute living structures in the transformations that constituted the process of fermentation at length removed the process from the mysteries which had previously surrounded it, and opened up applications to the pathogenesis of infective diseases which have revolutionized medicine. He pointed out that the organisms of fermentation are similar to those that had already been discovered by Rayer and Davaine in anthrax. He subsequently demonstrated the virulent nature of the microbes of pyemia and infected gangrene, and, following Koch's work on the cultivation outside of the body of the bacillus of anthrax, he proved also that this bacillus, as well as that of cholera de poules, is able, when grown in suitable media, to reproduce itself almost indefinitely, and to retain for many generations its power to reproduce the symptoms of the original disease when inoculated into animals.

The way was thus opened up for important additions to the knowledge of the etiology of infective diseases, and, in rapid succession, the pathogenic microorganisms of swine-fever, morve, tubercle, Asiatic cholera, septicemia, erysipelas, pneumonia, and numerous other infective diseases were discovered.

The pathogenic action of the microbes was at first attributed either to mechanical obstruction of the bloodvessels, caused by their accumulation in them, which resulted in asphyxia of organs essential to life; or to a biological action which enabled them to appropriate nutritive materials destined for the tissues of the body, and thus to deprive these tissues of life. While, in the case of a few of them, both of these actions may to a slight extent explain their effects, it was subsequently proved that their effects are mainly caused by the poisons which they produce. These poisons are of complex composition; some are alkaloids, and others modified proteids, and others, again, have altogether unknown chemical composition; and many of them are of extreme, and almost indefinitely great, activity. Like other poisons, they also are capable of producing structural changes, exemplified in the focal necrosis of peripheral nerves produced by the diphtheria-poison; the fatty changes and longitudinal fibrillation of the heart-muscle produced by this poison, and also by that of anthrax; the cerebrospinal meningitis produced by the poison of influenza; the anterior corneal and muscle-degenerations and the neuritis produced by the poisons of tetanus and diphtheria; and by the production of nodules in the lungs, reproducing the characteristics of pulmonary tuberculosis by dead tubercle-bacilli.

The demonstration of the toxic origin of infectious diseases has thus added greatly to the number of diseases which are caused by poisons, and has thereby been largely instrumental in establishing the doctrine of the toxic origin of disease. Unlike the older doctrine of the iatro-chemists, humorists, and physiologists, this doctrine is supported by an abundance of convincing facts; and it may confidently be anticipated that it will have an endurance which former systems of medicine have not possessed.

Large numbers of disease-producing poisons are thus ever present in the body, created by the normal processes of life, and abundantly produced by departures, even in themselves unimportant, from these processes. Many substances well known to have poisonous properties are intentionally introduced into the body, such as alcohol, tobacco, tea, and opium, while others, such as lead, accidentally find their way into it. The respiratory passages and intestinal canal are crowded with microorganisms; they teem in the soil, air, and articles of food; many of them are producers of virulent poisons, and when they effect a lodgment in the body and find conditions congenial to development, they proliferate with so great rapidity that a single bacterium may in twenty-four hours have multiplied itself into many millions of separate toxin-creating organisms.

In these circumstances it is of interest to inquire what defence man and other animals can oppose to the disease and death-producing poisons by which they are so constantly endangered? Instances have long been known of a possession of defensive powers against the ordinary poisons, organic and inorganic. Certain animals are by hereditary endowment able to receive with impunity large quantities of poisons, which in minute quantities are hurtful to other animals; and this is well exemplified in the enormous quantities

of belladonna and opium which may be administered without injury to herbivora.

It is also notorious that man and other animals may become so habituated to the action of several toxic substances that in the course of time doses greatly in excess of the minimum lethal are no longer able to cause death or even much inconvenience. Such acquired powers of defence are produced against arsenic, opium, alcohol, and tobacco, and they are also illustrated in the effects of nitrite ethers.

Explanations for these exceptional powers of defence have been found in the special activity of the processes of elimination, and particularly of elimination by the kidneys, whereby the quantity of poison requisite to cause injury is prevented from being present in the blood; in an unusual power of producing decomposition, probably dependent on special chemical conditions of the blood, by which, for example, herbivorous animals are enabled to convert very large quantities of atropin into relatively inert trophine substances; and on the property which certain organs, and especially the liver, possess of absorbing and retaining toxic substances and of thus preventing their access to the structures on which they act, in quantity sufficient to be hurtful. In the case, further, of many organic poisons, absorption and diffusion are impeded by the walls of cells, as in the instance of the slow absorption of strychnin through the stomach-walls, and of many albuminoid poisons through the intestinal epidermis.

These explanations, however, do not account for all the observed phenomena, and it must in the meantime be assumed that tissues may gradually become accustomed, possibly by exhaustion, to the perturbations produced by substances which modify this normal condition, so that by and by a tolerance is induced.

Anticipating some statements that will afterwards be made, a fundamental difference exists between both congenital and acquired defence against ordinary poisons and that resulting from the action of disease-toxins, venous and such-like poisons, in so far that in the former there is not produced in the blood any substance which plays the part of a counter-poison or antitoxin.

The subject has, however, gained a new importance from the remarkable facts discovered in connection with the poisons produced by pathogenic microorganisms, and in connection also with other poisons of very similar chemical composition, represented especially by the venom of serpents, and by the vegetable products abrin and ricin.

It had long been known that many infectious diseases conferred upon those who had suffered from them a power of resistance against subsequent attacks of the same disease. After the discovery had been made—and to this I have already alluded—of the microbial origin of infective diseases, it was experimentally shown that if the microbes constituting the cause of any infective disease were inoculated into animals, not only were symptoms of the disease produced, but also the animal, if it survived, reproduced still further the events of an infectious illness, by acquiring a power of successfully resisting the morbid influence of the same microbes subsequently inoculated. It has likewise been found that each of these events could be reproduced by the filtered, and therefore microbial-free, solution, in which the pathogenic microbes had been cultivated, and thus it was demonstrated that neither the original disease, nor the subsequently acquired production was actually due to the microbe, but to toxic substances produced by it.

From this position the further great advance was made that the blood-serum of protected animals, itself destitute of poisonous properties, when introduced into non-protected animals, conferred upon them a resisting power which might be so great that even large lethal doses of the virulent micro-organism and of its toxin no longer produced death, or even symptoms of poisoning.

These remarkable results of experiment deservedly claim much attention. They irrefutably demonstrate that infectious diseases are in their essence poisonings; they throw much light on the mystery, previously shrouded in metaphysical phrases, of the nature of the protection acquired by attacks of infectious disease or conferred by vaccination; and they have not only at once led to valuable therapeutic results, but they indicate further applications, in both the prevention and the treatment of disease, exceeding in their possibilities any expectations that had previously been origi-



nated by discovery in medical science. Inquiry into the nature and cause of this protection has thereby been removed from the position of speculation long occupied by it to one in which experimental methods could be pursued with some hope of solving the problems. Many of the results, however, are yet difficult to explain, and considering that new facts bearing upon them are almost daily being obtained, it is not to be expected that altogether satisfactory solutions had been found or unanimity of opinion obtained. More especially does this apply to the nature of the process whereby protection or immunization is obtained, to the origin of the protection-producing substances or antitoxins and to the manner in which they act as curative or therapeutic agents.

As in the case of some of the ordinary poisons, mineral and vegetable, it may be admitted that a portion of the acquired protection is due to the tolerance brought about by the accustoming of the structures of the body to the action of the poison, but this tolerance could not continue for the long periods during which acquired immunity sometimes persists after the infective disease has been recovered from. It may also be admitted that pathogenic microorganisms absorb and thus remove from the body certain constituents necessary for their growth and vitality, whose removal may, to some slight extent, render the body unsuited for the further growth of these organisms; but, apart from other objections that might be advanced, it is inconceivable that this cause could operate in the bodies of animals that so rapidly change the composition of all their constituent parts, and that therefore the substances which have been removed would not very soon be again restored to the body, and thus render it vulnerable to fresh infections. The doctrine of phagocytosis, enunciated and ably and strenuously supported by Metchnikoff, in which protection is attributed to the power possessed by leukocytes of absorbing and destroying microbes, may, to a limited extent, account for the destruction of living microbes, but it probably accounts to a greater extent for their disappearance after life is extinct; while it can have but little influence upon the soluble toxins which, since the introduction of the theory of phagocytosis, have been proved to be in most cases the true cause of the disease-symptoms.

The frequent persistence of immunity, not only exemplified in the after-history of patients who have recovered from certain of the infectious diseases, but also in vaccination against smallpox, while it alone serves to disprove each explanation as yet advanced of the essential nature of acquired protection, must be taken into account in formulating explanations. The microorganism of an infective disease introduced into the body produces the characteristic symptoms of the disease, and, if the animal recover, subsequent inoculations of this microorganism no longer produce any injury. The animal has become protected against the disease, and there is abundant clinical evidence to show that in the case of the majority of infectious diseases the immunity lasts for many years. The pathogenic organism of the same disease cultivated outside the body produces a toxin that when administered to an animal likewise reproduces the symptoms of the disease, and if the animal recover, and further quantities of the toxin are successively administered, an immunity may be acquired so great that the animal suffers but little inconvenience when 50 times the minimum lethal dose, or even a larger quantity of this toxin, is now administered to it. The immunity acquired in the latter case is, however, only of short duration. I do not know if the duration of it has been defined with any of the toxins of disease, but at least enough has been done to show that it is brief compared with the immunity produced by the microbe from which the toxin had originated.

In the case of the venoms of serpents—which in composition and in other important respects are analogous to the toxins of disease—the duration of immunity has, however, been defined; and experiments have shown that if an animal be protected so as to survive the minimum lethal dose of the cobra-venom, the protection produced against the same dose of venom does not last longer than a few hours; and even when the process of immunization has been carried so far that the animal can survive four times the minimum lethal dose, the protection against this dose of venom exists for only 30 days. The protecting substance, antitoxin or antivenene, which appears in the blood after inoculation with pathogenic microbes, or after the injection of toxins or ven-

oms, is chemically unstable, and is subject also to the general processes of elimination. Its presence in the body, even when the quantity of toxic substance to which it owes its origin is greatly above the quantity of toxin which has been elaborated in a case of infectious disease by the pathogenic organisms of that disease, is to be measured by days only; and nevertheless the protection produced in a patient by an infectious disease may apparently endure for a lifetime, and the immunity from smallpox gained by vaccination for at least seven years. It appears to be impossible to explain these contrasting facts on any other supposition than that in the instances of prolonged immunity, successive supplies of the antitoxin of the disease, or of smallpox, must be furnished to the body during the time that protection continues. It is not possible, however, that these supplies could emanate from the pathogenic organism itself, for the life of the host would not endure were they retained in the body in their condition of original virulence. Jenner himself believed that vaccinia is modified smallpox. The microbe of smallpox, like all other microbes, is greatly influenced by its surroundings when transferred from man to the calf. It is now known that it may gradually acquire the characteristics of vaccinia, and elaborate substances which reproduce in man the protective effects of inoculation with human vaccine. The microbe of smallpox, therefore, has obviously become so modified that, while it can no longer produce a virulent toxin, it still retains the power of elaborating a protective antitoxin, and also retains sufficient vitality to reproduce its like through many generations in the human body.

Evidence pointing in the same direction has been obtained with other pathogenic microbes. Pasteur found that the microbe of fowl-cholera, when treated in a certain manner, can have its virulence greatly lessened, and if it be then injected into the tissues of fowls, only slight poisoning is produced. From fowls thus treated, microbes are obtained also, capable of producing only slight poisoning, and inoculations can be carried through a successive series of fowls with a like result. Each of these fowls had, by this inoculation with a weakened or attenuated microbe, become protected against the original and virulent microbe.

In the case of the pathogenic microorganism of anthrax, this great pioneer in the field of the microbial etiology of disease discovered similar facts. If grown outside of the body at a temperature of 42.5° C. for eight days, this microbe could no longer produce the disease in susceptible animals, but notwithstanding, it endowed them with a certain degree of protection against the original virulent microbe. Similar results were obtained with the microbe of hog-fever, and it is important to note that a duration of immunity exceeding that known to be produced by any toxin was obtained, for the protection following inoculation of the attenuated microbe lasted for at least one year.

These instances are sufficient to show that immunity, equally with poisoning, is dependent upon a soluble substance produced by the microorganisms; that the duration of even a high degree of immunity resulting from the introduction into the body of the immunizing substance, as distinguished from the microbe, is only of brief duration; and accordingly, with the existing evidence, it is impossible to account for the prolonged immunity following upon the recovery from many infective diseases, or from inoculation with vaccine-lymph, otherwise than by assuming that so long as immunity continues the microbial sources of infective disease continue to exist in an attenuated form in the protected body.

Attenuation for the purposes of protection would therefore appear to be essentially a process in which the condition of life of the microbe is so modified that its capacity for manufacturing poisons is weakened or destroyed, while its disease-preventing properties are retained. Unless by education we can so tame and civilize a pathogenic microbe as to subdue its virulent and hostile disposition, while at the same time its beneficial and protective properties are left unimpaired, the hope of obtaining—as for plague, cholera, and tubercle—immunizing vaccines equal in efficiency to the lymph of vaccinia will probably never be realized.

The theory that I have suggested implies that long-enduring protection from infective disease cannot be obtained by the introduction into the body of either the poisonous or immunizing products of microbes—the toxins or antitoxins—but only by inoculation of such microbes as are capable in



the body of assuming a non-virulent form, or of the microbe already converted into this form.

I would here point out that, however highly we may value the objects and success in some important directions of the experiments of Dr. Monckton Copeman and others, on the effects of glycerin upon vaccine-lymph, it must not be overlooked that the powerful microbicidal action of glycerin upon the contaminating organisms of this lymph may in the course of time weaken or even destroy the activity of the specific organism by which the protection against smallpox is produced.

In the case of some diseases it is possible that the modification of the pathogenic power of the microorganism necessary to convert it from a poison-producing to an antidote-producing agent cannot be accomplished in the body. Thus may be explained the failure of certain diseases to protect the body from subsequent attacks of the same disease, well recognized in the instances of pneumonia, influenza, rheumatic fever, and tubercle. On the other hand, the microbes of other diseases may in small numbers, and attenuated both in virulence and in power of conferring protection, persist in the body after convalescence has been established, and actually render it not only more susceptible to fresh infection, but also to a recurrence of the disease by autoinfection. Results obtained by experiments with toxin and venom support the former possibility; for, owing to some as yet unexplained individual peculiarity, an animal which has received a number of successive doses of venom, each considerably below the minimum lethal, instead of having thereby acquired protection, may unexpectedly exhibit serious symptoms of poisoning, and may even die when it receives a dose considerably below that required to produce death in an animal which had not previously received any toxin or venom. The probability of the second event is supported by the well-known effects upon the life and pathogenic power of microbes of changes, even although slight, in the conditions to which they are subjected. A change in temperature, the addition to or removal from the fluid in which they are grown of a minute quantity of a chemical substance may convert a non-virulent form of a pathogenic organism into a virulent form. Similar causes may, outside the body, also render moderately or intensely virulent a previously non-virulent microbe, and thus may be explained variations in the severity of epidemics, as well as the occurrence of outbreaks of infectious disease not originated by infection from any previously existing case. The dependence of microbial existence upon the composition of nutrient media may also partly account for the age-liability which forms so conspicuous a feature in the history of such infectious diseases as scarlet fever, measles, and whooping cough.

Further, pathogenic microbes attenuated as to their virulence, but not as to their protective power, may enter the body, and render it immune by a process of accidental vaccination, and thus may be explained, without recourse to such unsatisfactory phrases as individual or racial peculiarities, well-authenticated examples known to all of us, of repeated exposure to infection without the production of disease, and of the immunity enjoyed by the inhabitants of towns and districts daily subjected to the virus of typhoid fever, malaria, or yellow fever.

These are not mere hypotheses unsupported by experimental data. Describing the results of his experiments on anthrax, Pasteur states that when fowls are inoculated with the virulent microbes of this disease, they remain well until they have been cooled down to a subnormal temperature, and in the earlier stages of the poisoning thus induced, if the temperature be again raised, the symptoms of anthrax disappear, and the fowls recover. Anthrax-microbes, as well as those of fowl-cholera, if cultivated at a temperature between 42° and 43° C., acquire varied degrees of lethality according to the age of the culture, and the microbes of each variety of lethality can be almost indefinitely reproduced by maintaining certain conditions of cultivation. If microbes so grown as to be no longer able to produce anthrax in rabbits are first inoculated in a successive series of experiments in young, and for that reason, extremely susceptible, rabbits, and if the microbes obtained from the last of the series are then inoculated into somewhat older, and finally into adult, rabbits, the original virulence of the microbe is found to have been regained. "The work in my laboratories," he states, "has established that pathogenic microbes are not

morbid entities. They can assume various forms of physiological activity, depending on the media in which they live and multiply. As a consequence, one can modify their virulence. It can be exalted or enfeebled, and each state can be fixed." Impressed by the far-reaching possibilities suggested by these and other fruits of his fertile imagination, it is not astonishing that the great enchanter whose divining rod of science had thrown a clear light on the mysteries of centuries, should exclaim, "The hour has now arrived when we may enter the enchanted grotto full of priceless treasures."

**Address in Surgery.**—MR. THOMAS ANNANDALE took as his subject **the Present Position of Surgery**, which he discussed in: I. Its Scientific Aspect. II. Its Practical Aspect. III. Its Moral Aspect.

#### I. THE SCIENTIFIC ASPECT.

It must at the outset be acknowledged—and acknowledged with gratitude—that the marvelous advances in connection with present surgical practice are largely indebted to those who have diligently, honestly, and successfully carried on experimental and other research in connection with the sciences of chemistry, physiology, bacteriology, anatomy and pathology. We, as surgeons, look forward hopefully to receive the continued aid of these gentlemen in still further promoting our art, and it should be our duty to encourage and assist in every possible way all such scientific work, work that in connection with surgery can only be considered to be in its early infancy, and will require much care, accuracy, and close industry to establish its steady and sure growth.

I would now refer to some of this scientific work that has so benefited surgical practice. To speak of the antiseptic system at the present time is to speak almost of ancient history, but two reasons prompt me to refer to it: First, because it was in the Edinburgh school that its distinguished author carried on those carefully conducted and original researches and experiments which led him to suggest this great principle. Secondly, because I have lived long enough to have had experience of three epochs in connection with surgical wounds. As a young apprentice more than 40 years ago I witnessed the dressing of wounds by the application of layers of ointment, the edges being brought together by sutures of thick silk and the arteries secured by ligatures of the same material, the ends of the ligatures being left hanging out of the wound and acting much like setons. As a dresser under the great Syme I learnt the simpler methods of water-dressings and of dry dressings, and lastly as a pupil and colleague of Lister I had the good fortune to follow the various stages of the development of the antiseptic treatment. In the first of these epochs I gained a large experience in connection with septic suppurations, hospital-gangrene, pyemia, and septicemia, all of which conditions were common and frequently led to fatal results. In the second epoch my experience of septic suppurations, pyemia, and septicemia was small in comparison, but still too common. In my third and present epoch such experience has been reduced to a minimum.

In the early stages of the antiseptic suggestions failures undoubtedly occurred, but such failures when honestly investigated were important as lessons, and the consideration of their causes did much to establish on a successful basis the great principle. There were some who, ignoring the principle of the antiseptic treatment and also ignoring the established principles of surgery, preached and practised that the mere application of carbolic acid or other antiseptic lotion was all that was required and when such treatment was unsuccessful condemned the whole system.

Let me quote a sentence from an address that I gave when appointed Professor of Clinical Surgery in this University, now 21 years ago: "It is not the mere application of carbolic acid in one form or another which constitutes the antiseptic treatment, but the true antiseptic surgery is that which is the result of many years' patient, thoughtful, and scientific research; of vast, laborious, and expensive experiments, and of much and valuable time spent in clinical observation on the part of Mr. Lister."

I confess that I was one of those who, while carefully watching the progress of Lister's work, and thoroughly believing and highly admiring his great scientific abilities, were at first cautious in accepting all the details of its practical



application, because I felt that these were somewhat complicated; and it was certainly a great relief to my mind and to the minds of many others I am sure, when it was found that in actual practice many of these details could with safety to the principle be much modified and simplified; and further, I had learnt from experience that even with the use of antiseptic treatment the ordinary principles of rest, avoiding causes of irritation, and attention to the general health must not be ignored. I know that no one rejoiced more than Lister himself when it was proved that his great system could be successfully simplified, and so used under circumstances which formerly made it difficult or impossible to carry out.

But while the external application of antiseptic means and precautions is now thoroughly established upon a simple, and at the same time efficient, basis, it must not be forgotten that injurious organisms enter the body and tissues by other channels than through external wounds or breaches of surface; and therefore it is that the science of bacteriology becomes so important a study in connection with disease, and with the results of injuries and surgical procedures. It is to a further study and knowledge of this science—which must be considered as still in its infancy—that surgery, as well as medicine, looks for more light in connection with the causation and treatment of diseased conditions.

Although experimental and pathological research and clinical observation have already done something to explain and determine the action of certain organisms, the particular manner in which these organisms cause in one case no result, and in others injurious results, cannot be considered as proved. We certainly have learned certain facts: first, that organisms of various kinds gain entrance into the tissues or organs of the body; secondly, that some special condition of these tissues and organs favors their development and multiplication. Such organisms vary much in form, source of origin, situation where chiefly met with, conditions under which they develop or are destroyed, and the special effects which they produce. In the majority of instances the bad effects are produced not so much by the multiplication of the organisms themselves as by poisons or toxins caused by their presence or behavior in connection with the tissues. Further, it would appear that the resulting toxin may not itself produce the poison, but give rise to chemical changes and products which are the real cause of the injurious results. It is also an interesting fact that the presence of more than one form of bacillus may either increase or destroy these injurious results.

The conditions of the tissues or soil in which the organisms settle has much to do with the results caused. Individualism, age, constitution, general condition of the patient, and any local condition, more particularly any condition which interferes with the vitality of the tissues, influence much the action of organisms. The resistance of the tissues to the injurious effects of organisms depends upon the condition of these tissues, upon the activity of the organisms, and upon the amount and virulence of the toxins developed. It appears that it is the spores of organisms that most resist destruction, and as these spores may germinate not only in the tissues, but outside the body, they act as a serious source of infection.

From the facts I have just stated it will be judged what difficulties arise in connection with the study of bacteriology, and consequently with the treatment of the injurious results produced by the numerous organisms which invade and affect the human body. Bacteriologic experiments upon the lower animals may in some instances aid us, but the conditions of the lower animals are not always the same as those of human beings, and therefore results obtained in the former are not always safe guides as regards results in the latter.

Continued careful study of anatomy and pathology and accurate clinical observation should do something to increase our knowledge, but I venture to think that much of our future trust for light must be in connection with physiologic chemistry, which we hope may be able to teach us more of the origin, causation, and behavior of the various toxins, and of the action of the tissues in connection with them, so that we may be able to counteract their injurious effects by appropriate treatment.

At the present time we endeavor to treat the general effect of these toxins either by the administration of remedies supposed to produce a general antiseptic effect—but it cannot be

said that such treatment has proved satisfactory except in a limited number of cases—or by the introduction into the tissues by subcutaneous injection of so-called antitoxins. This latter treatment has met with an encouraging amount of success, especially in certain directions; but its position is still uncertain, and much further experience is required to place it on a safe and reliable foundation. All who have employed the antitoxins in connection with surgical conditions must have encountered this uncertainty as to their action. My own experience is that, though some severe cases of septicemia have recovered after the injection of an antitoxin, other cases very similar have recovered without any antitoxin being used.

I would suggest that another important subject for further study is the physiologic action or connection between one tissue or one organ and another. May not further experience help us in carrying out treatment based upon this connection? Take, for instance, the suggestion of Beatson for removing the ovaries in carcinoma of the female breast, incurable by other means. Having thought it my duty to test this suggestion, I carried it out in 3 typical cases, and my experience and the experience of others who have tried this procedure has been that, though the disease was not cured, the removal of the ovaries had certainly some influence upon the diseased local condition.

I venture also to suggest that as a possible and further addition to treatment some more careful work should be devoted to the action of drugs upon the toxins, such drugs being introduced either by the mouth, by subcutaneous or intravenous injection or by inhalation. We know that large quantities of saline fluid may be injected into the veins with safety, and it is therefore not unreasonable to suppose that other solutions of a non-irritating and antiseptic nature may be similarly employed.

The remarkable results obtained with thyroid extract should be an encouragement to us in this respect, and it has already been proved that certain vegetable products act as powerful antitoxins. If it can be discovered that certain drugs can be safely and successfully used as antitoxins it will much simplify our treatment, for such remedies would be more easily and more certainly handled than the antitoxins now in use.

The treatment of sarcoma or other new-growths by means of toxins is another subject of great interest to the surgeon. The results obtained by Coley and others with the mixed toxins of streptococcus and prodigiosus do show some hopes, for under the use of these toxins growths have undoubtedly disappeared, but I think that all who practise surgery will agree with me when I say that sarcomas and other growths do occasionally undergo a check in their development, and even disappear without any apparent cause. In all probability these occasional occurrences are the result of some physiological or bacteriological action which is not perceptible.

Reference to the scientific aspect of surgery would not be complete without some notice of the "new photography." Ordinary photography has always been of great assistance to surgeons, and will continue to be so for the illustration, progress, and record of many of their cases, but its new and latest development has already proved to be of the greatest service in diagnosis, and consequently in connection with successful treatment, and an improved development of it will no doubt add still more to the success of surgical practice. The scope of this department of science is a very wide one, and by its means we may add much to our knowledge of osseous development and growth, of the relation and position of internal organs, and of the actual condition of diseased parts. In connection with many surgical conditions, and especially in connection with injuries of various kinds, this photography is invaluable.

In leaving this, the scientific portion of my address, I desire again to express the indebtedness of practical surgeons to those discoverers and workers in science who have by their honest and accurate observation obtained results which have done so much to improve our practice, and to render our treatment more successful.

## II. THE PRACTICAL ASPECT.

The advances in our scientific knowledge, combined with extended and more accurate clinical observation, have, as has already been stated, assisted much in the improvement of practical surgery, and the development of what I would



designate honest specialism must also be looked upon as adding to our practical resources and treatment.

If asked to define any special characteristic which will apply to the practice of surgery at the present day, I would be inclined to say simplicity—antisepticity, of course, being granted—a simplicity in which are included operative procedure, instrumental assistance, and after-treatment. It is true that from time to time new procedures and new instruments are suggested, but as a rule it will be found that if practical surgeons adopt and employ them they are in the direction of continued simplicity with some addition to their efficiency.

In a general address such as this a reference to all the improvements which have taken place, and are taking place, is quite unnecessary, as such improvements must be well known, or should be known, to all who desire to carry on with success the active practice of surgery.

For such knowledge we have not only our own experience to aid us, but we have to thank the medical press and the many distinguished authors who by their books and papers bring the results of their own experience and observations and researches under the notice of the profession.

Although so many and so great changes have taken place as a result of the advances in the departments of science already referred to, it would be very wrong to ignore the work of those surgeons who are no longer with us. Many of these surgeons showed a knowledge and wisdom and forethought of conditions and procedures which have stood the test of time, and still remain sound and correct as monuments of their genius. This knowledge was principally the result of shrewd and careful clinical observation and reasoning, for they had little or no scientific aids to help them, and their success under such circumstances should be an example to all of us to make every use of our clinical opportunities, and to observe closely, carefully, and honestly.

But the practice of surgery has not only reached a high standard of improvement; it has much widened its area both as regards the number of its procedures and the number of those who practise them. This is scarcely the time or place to discuss the exact relationship between surgery proper and what is called gynecology. Of late years these departments have been gradually merged into one another, so that the line of demarcation between them is scarcely apparent. Both are really surgical procedures, and both require for their proper and successful performance that training and those qualities which make the good surgeon. That physicians under the designation of gynecologists should now become operating surgeons is perhaps only a little return for the fact that surgeons have so extensively and successfully invaded the province of physicians, and as time goes on some balance may perhaps be arrived at which, while guarding the interests of the public, will satisfy the representatives of medicine and surgery.

In this greatly improved era of practical surgery it is well perhaps to suggest a caution, for there is undoubtedly a tendency—and more especially in the case of some of our younger colleagues—to be too ready to resort to surgical procedures. When greater risk was attached to operative procedures, surgeons young and old had, for the sake of their patients and their own reputations, to take into account these risks, even in comparatively slight operations; but now that so little risk attends operations, they may be undertaken without due consideration of all the circumstances or necessities of the case. I would, as a senior colleague, venture to remind my younger friends that nature, with perhaps some little non-operative treatment, will do much, and that no operative procedure should be suggested or practised until the case has been thoroughly studied and found to be unrelievable by other means.

As a practical surgeon in this, the Edinburgh School of Medicine, it may be expected that I should refer to my experience of anesthetics, and I accordingly express the opinion that chloroform holds the field as the best general anesthetic in connection with surgical procedures; and although I have met with a few fatal results from its administration, I have most thorough confidence in its safety if carefully used and its effects diligently watched. Perhaps the best test of my confidence is the fact that having a few years ago suffered from a poisoned finger, received when operating, I was required to take an anesthetic on several occasions, in order to have deep incisions made for the relief of extensive

suppuration. The anesthetic I took was chloroform, and it was administered according to the "open" method by one of my assistants and not by any special anesthetist.

It is my opinion that fatal results will occasionally take place in connection with all anesthetics, and that these fatal cases may be divided into (1) avoidable, (2) unavoidable. The avoidable ones are those which are due to careless administration, or to neglect of means to prevent blood or other matters entering the air-passages, and should not occur if proper care is exercised. To avoid these risks it is essential that one person should give sole attention to the anesthetic and watch both respiration and pulse, more especially the respiration and its nature, during the whole period of its administration. I need scarcely say that the preparation of the patient before the anesthetic is employed, is, when possible, important. I prefer to give a small basin of plain soup about two hours before the chloroform is administered, and if the patient is feeble, or the operation likely to be attended with much shock, a tablespoonful or more of brandy or whisky a quarter of an hour before the anesthetic. In cases in which there is a risk of matters, and especially of blood, passing into the air-passages, the dependent position of the patient's head, as advocated by me in 1879, will often prevent this accident, and, should it take place, immediate tracheotomy must be resorted to if the symptoms are serious.

The unavoidable cases are, in my opinion, the result of heart-failure from fatty or other conditions, and occasionally I believe they may be caused by cerebral conditions, as I have seen a fatal case in which the symptoms resembled most an epileptic seizure. Further, I believe that in the majority of these unavoidable cases it is impossible by any external examination prior to giving the anesthetic to discover the condition which has led to the fatal result. I am inclined to think that the avoidable accidents are more frequent than the unavoidable, and if so it teaches us how important it is to avoid, by careful preparation and administration, anything likely to bring about an unfavorable result.

I would like here to give a word of warning as to the use of cocain in local anesthesia, and more particularly when it is used by subcutaneous injection. My experience is that some individuals are especially susceptible to its action, and therefore, if too strong a solution or too large an amount of a weaker one is injected, the result may be faintness and serious interference with heart-action. It should therefore be used cautiously, and a stimulant be given, or be at hand in case of such symptoms occurring.

Not wishing to weary you, I close my remarks under this head by referring to the importance of taking carefully into consideration everything likely to influence the performance or result of any surgical procedure, and when possible to first remove by proper treatment conditions likely to interfere with or to retard the recovery of the patient. It is not age or apparent feebleness which is likely to cause anxiety, but it is the condition of the organs and the tissues which should guide the surgeon, for if these be in a weak or in a diseased state they are more likely to become the soil for injurious bacteriological development and action.

### III. THE MORAL ASPECT.

I make no apology for offering a few remarks under this head, with the explanation that I employ the term "moral" in its highest and widest sense, for I am decidedly of opinion that it becomes every member of our profession who has the true sense of relieving suffering humanity at heart, and who desires to maintain the honor and reputation of his profession, to speak out with no uncertain meaning in regard to every action which is dishonest or dishonorable or tends to beso. The actions and practices of so-called quacks or unqualified individuals are much to be deplored, and it is in every way desirable that legalized checks should be established so as to prevent or limit them, and more particularly in the case of the ignorant and uneducated public. If the educated public consult such practitioners—and it is not very uncommon for them to do so—they can only blame themselves should unfortunate results take place.

It is, however, of practices inside the profession of which I wish to speak. It is sincerely to be regretted that in some quarters the true, honest, and high feeling which should be the standard principles of the members of our profession is



in the present day partially or wholly ignored, and in consequence our profession is not always respected as it should be, and its members are looked upon by some as mere humbugs, in some cases not without reason, thinking more of fees and fee-accumulations than of their patients' cure or relief. Three causes seem to me to influence this much-to-be lamented evil which has insidiously invaded our profession—(1) active competition; (2) untrained specialism; (3) society-demands.

There can be no doubt that the number of medical practitioners has increased, but in connection with the increase of the population this increase in numbers is not so great as is generally supposed. A few years ago I collected statistics in connection with this question, and taking some of the largest provincial towns in England and Scotland, I found that the number of medical men, as compared with the population, was very little changed from what it had been twenty years before. The active competition, therefore, is in my opinion not so much due to the increase of medical men as to the fact that in many instances the most of the remunerative work is done by a few, which leaves much hard work and poor pay for the remainder of the profession. My suggestions for the cure of this are, that those who constitute the few should be especially careful to guard and encourage the interests of the many; should not seek to secure every remunerative appointment within their reach, but should at least leave some crumbs for their less fortunate brethren.

The second cause is untrained specialism. I have already stated that honest specialism has aided much the practice of surgery, and by honest I mean such practice as is founded upon a thorough knowledge of all the different departments of the profession, and upon an honest study of all the circumstances connected with the various conditions which affect the organ or organs which are specialized.

Specialism in the hands of qualified members of the profession, unless practised under these conditions, is simply quackery, and quackery of the worst kind, for it is carried on by those whom the public understand to be properly educated as regards their profession. There are few who endeavor to practise their profession with integrity who have not met with cases in which mere symptoms have been treated by operation or otherwise, the real source of the diseased condition having been entirely ignored, either through ignorance or for reasons which can only be classed as contemptible and degrading to the profession. The cure for such practices is not easy, and it can only be hoped that the honest members of the profession will note such practices, and endeavor to check them by exposing their real nature, and by endeavoring with tact to educate the public mind to avoid those who practise them as unsafe and possibly dangerous advisers.

The third cause is society-demands. A section of the public, or I should rather say a section of what is termed "society," has done much to interfere with the proper feeling that should exist in our profession.

Men, women, and even young people, read and discuss professional matters and diseases; books are published and advertised which are written more to catch the eye of the public than to advance the knowledge or reputation of the profession; a certain class of newspapers and periodicals devote one or more columns to professional subjects, and even give gratuitous advice in the form of Questions and Answers. The manners, qualifications, and doings of members of the profession are freely criticised at afternoon-teas and other entertainments. One man is condemned, and some supposed failures in treatment are magnified or invented, while another receives extravagant praise, and many of his wonderful surgical or other procedures are lauded, and not infrequently described with marvelous details added. One is glad to think that in the majority of instances the surgeon or specialist has no act or part in such proceedings; and having, with justice, confidence in his abilities and upright conduct, much regrets that they should exist, and does all he can to prevent their occurrence. But there are some, I fear, who take advantage of such extravagant popularity, and, having become the fashion, trade upon it in a manner which is not consistent with the high feelings which should influence all our professional relationships. It is fortunate that there still exists among the public in all classes of society many who are endowed with nature's nobility and good feelings and who are not influenced by the extravagant or false

opinions of fashion, but who have both respect and esteem for those members of the medical profession who conscientiously devote themselves to the relief of suffering.

We can all hope, but I fear hope in vain, that those members of society who lead a frivolous, useless, and sometimes unholy life may some day realize that they are not acting as true citizens of their country or taking any proper interest in the welfare of their countrymen and countrywomen.

If some of their energies, some of their time, some of their sympathy, and some of their money were employed to assist their fellow-creatures, they would themselves reap reward by feeling that their lives were not altogether a selfish existence.

If any member of our profession encourages or takes part in society's ignoble life or actions, he is not worthy to belong to the profession, and he certainly does not add to its reputation.

**Address in Psychology.**—SIR JOHN BARRY TURK delivered an address on **Modern Conceptions of the Etiology of the Insanities**. Twice during the current decade the British Medical Association has demanded an address in psychological medicine. For the first time in its history, in 1890, Sir James Crichton Browne was requested to perform this duty, and now, after a short lapse of years, a similar duty has devolved on me.

I believe the actual reason for the requests for these addresses to be that the profession at large is alive to the fact that so-called psychological medicine is becoming day by day more and more incorporated in general medicine and less less a peculiar and isolated department; that with the advance of knowledge of the nervous system the glamor which hung over the general conception of insanity is becoming dissipated and that the various phases of mental alienation are coming to be recognized as symptoms of numerous and very various morbid physical conditions. In point of fact we are drifting away from the psychological conception of insanity, from the contents of the term "mental disease," even as our ancestors drifted away from the idea of demoniacal possession. *Nulla mens insana sed in corpore lesa* expresses the principle which is, to say the least, beginning to regulate our conception and our practice in respect of all the conditions comprised under the generic term insanity. It may be freely admitted that the proposition was enunciated centuries ago, but the theories of the connection between diseases of the general system and mental symptoms was so loose as to exercise little or no influence on principles or practice.

It was inevitable that from the earliest down to quite recent times the study of the insanities should be carried out on psychological lines. The prominence of the mental symptoms asserted itself, and cases of insanity were classified under the terms mania, melancholia, and dementia. Notwithstanding that these so-called forms were based on mere external appearances, that their common characters were so loose, that to say a case belonged to any one of them gave no further indication than could be derived from superficial observation of the case itself, these terms assumed the proportion of diseases. The symptom was the essence of the case, and the underlying causative condition was ignored. Undoubtedly to the public and the lawyer, the mental symptoms must always be the essence of the case; but to the physician they are not. He has to go further back and seek for the *fons et origo mali*. To him the underlying morbid condition is the essence of the case.

This undivided adherence to the psychological principle of study led to "an undue love of minute detail," and consequently to undue extension. Instances in which intellectual deficiencies were not so apparent as changes in feeling and conduct were designated cases of "moral insanity," with such subclasses as pyromania, erotomania, kleptomania, homicidal and suicidal mania, and so on, irrespective of the clinical observation that no case of insanity exists without moral aberration, and that in those cases in which moral obliquity is most prominent the intellectual faculty is also weakened, inasmuch as the patient is not able to recognize the nature of his immoral acts, or weigh their consequences. Thus confusion became worse confounded, and fallacies arose within the psychological conception itself. It had, moreover, a further result in the production of a conflict between law and medicine, the consideration of which, interesting as it is, the limits of this address do not permit of. All that need now be said is that the assumption of a clinico-psychological



position on the part of the physician in medico-legal cases served to intensify in his mind the importance of the psychological nosology of insanity. Accordingly so-called psychiatric medicine held a peculiar and isolated position, and, as Griesinger said, "its study was supposed to be distinguished by some difficulty *sui generis*."

It is only during the last 35 years that the study of the insanities has ceased to be so distinguished, or at least that scientific data have been afforded that should prevent it being so distinguished, data which, although still far from perfect, have afforded starting-points to the psychiatric physician for the scientific study of his subject.

It is of interest and importance to contrast the state of knowledge of the anatomy and physiology of the cerebral hemispheres in 1864 with that of 1898. Up to the former year even the rough naked-eye anatomy of the convolutions was chaotic, only some two or three gyri being recognized as distinct anatomical landmarks, and it was only then that Gratiolet reduced them to a system, demonstrated their orderly arrangement, and propounded a nomenclature, which, with certain modifications, is in use to-day.

In the last edition of the *Textbook of Physiology*, by Michael Foster, the part written in conjunction with Sherrington sets before the student a wonderful panorama of brain-connections, paths of conduction between organs without and within the skull, between the various organs of the brain itself, and between various parts of the same encephalic organ. Although the authors never overstep the physiological limit, it is difficult for the reader to avoid, while studying the relations of the mechanism by which impulses are distributed, the construction of schemes which, for the moment, seem to make it remotely feasible to conceive how it might be possible to account for the transmutation of external impulses into states of consciousness. Need it be said that his dreams are short, and that he wakes to the fact that he is vainly seeking to think of the unthinkable, and that his sphere is limited to the study of structures, the destruction or implication of which renders mental activities impossible or imperfect. The very brilliance of the anatomical demonstrations and of the physiological deductions emphasizes the wide gaps in our knowledge. Large areas of the cortex exist to which no system of experimentation has been able to assign or even to suggest special functions. But Flechsig has of late asserted that certain of these unnamed regions in the brain-map may be filled in; for he has arrived at the conclusion, founded on a series of anatomical, physiological, pathological, and clinical observations, that certain of the cortical areas on the superior and frontal aspects constitute the material "antecedents" of mental activities, in that they are the areas in which the stimuli of the various sense-spheres are associated.

Great as has been the work of the anatomist, that of the physiological pathologist has been equally important. Hughlings Jackson's name must ever hold the foremost place in this department of science.

The physiologists of the psycho-physical school, which arose as a result of scientific developments, advanced the study of psychology so far as they ranged scientific data so as to add to the "provisional body of propositions" about states of mind necessary for their philosophy.

Whether our knowledge of states of mind has been materially increased by the lucubrations of this school is open to question, but there can be no doubt that the views not only of the physiologist, but of all thinking men, have been enlarged by the application of the philosophic mind to the scientific position. Were it only that the world has had placed before it the proposition that the essence of mental life and the essence of bodily life are the same—namely, the adjustment of inner to outer relations—great gain has accrued to science and philosophy. But I verily believe that the change of conception of the nature of the insanities is much more due to the establishment of scientific data bearing on the antecedents of mental action than to the generalizations of the philosopher as to mental activities. Remember we are dealing with the mental attitude of a profession which deals with material, and which, till lately, so far as the cerebral material is concerned, had slight scientific knowledge. Gradually—no, I should say rapidly—perhaps too rapidly for complete assimilation—there has been presented to the physician knowledge of a cerebral apparatus, on which he is warranted in basing working hypotheses and practice. Until that apparatus was demonstrated, he could not assert,

except as an assumption, the fundamental physiological principle that mental action is a function of connection, or, the pathological corollary, that interruption of connection is the cause of impaired mental action. Given those starting-points he can work in the same atmosphere as his brother-physician. That atmosphere may not be—nay, is not—so clear as that of his colleague; he may still see through a glass darkly; but what he does see is a revelation to him that could not have been afforded by the study of a philosophy which, except in certain of its provisional propositions, is not cognate to medicine.

Time to-day will only serve to allude to the observation around which all others center. That, to my mind, is the demonstration of the mechanism by which impulses are carried from the periphery to the cortex and from the cortex to the periphery. We know that series of fibers exist which, starting from the entire surface of the body, the muscles, and from the mucous membranes, are collected in the spinal cord, and pass upwards to the optic thalami, whence—as demonstrated by Flechsig, whose observations have been confirmed experimentally by Ferrier and Aldren Turner—they are distributed in three systems to the cortex.

We will deal with only one of these "sensory" systems—that which passes directly to the Rolandic cortex without forming connections in their upward course with any other system of fibers. In the external layers of the gray matter these fibers come into relation with the dendrites of the pyramidal cells; but there is no anatomical continuity between the sensory fibers and the dendrons; they transfer impulses by contact.

It is contended by certain observers that the liberation of energy takes place in the dendrons, which, by their gemmule, are in close contact with the dendrons of other cells, forming what Foster terms "synapses." Be this as it may, impulses descend to the cell-bodies, through which certain of the fibrils of the dendron pass to the descending axon—till lately spoken of as the axis-cylinder—the fibrils of which are distributed to the periphery, throwing off collaterals to remote areas of the cortex.

In order to obtain and maintain the conception of the mechanism of a circuit it might be well not to restrict the term "neuron" to the cell-body and its dendritic processes, but to include in the term the ascending conducting apparatus, the cell-body, and the spinal, cerebellar, and cerebral distributing arcs, and to regard the whole apparatus as a physiological if not an anatomical unit.

It is not necessary for our present purpose to consider where and how the transmutation of peripheral impulses takes place, but it is of importance to emphasize the statement that impulses are not generated in the cell body. As Gowers says, the old battery-idea must be thrown aside. It may be regarded as the "vital center" of the neuron, and, making allowances for the possible action of the dendrons, it may be held to be a receiver, conservator, and transmutator of energy, and a liberator and distributor of energy by means of its synapses with other pyramidal cells, and with what is of supreme importance, association-cells. But all impulses come from without, a fact which must have important bearings on the question of the adjustment of outer to inner relations.

Although the neuron has been spoken of as an organ, it may be as well to state, for the benefit of any layman who may be present, that the neurons can be counted by millions; but anyone can realize that an almost unappreciable number of organs must exist for the reception and distribution of the constant and continuous flood of impulses that streams from without inwards to the brain.

It is as difficult to estimate the influence of the development of knowledge of the nervous system on the individual general physician as it is to gauge the influence of bacteriology. Our acquaintance with both these subjects is a recent acquisition. The latter is a new science, and I believe I am right in saying that in the case of many of us only its outlines are present with us. But the principles pervade the method of thought of the whole profession. So with the study of the minute anatomy of the brain; none but experts can be expected to be acquainted with the full details of its anatomy, but the great leading facts as to structure, and the facts, theories, and warrantable assumptions as to its actions, have operated, and continue to operate, on the views of the specialty at large. Its members, knowing that they have a



mechanism to deal with, solution of the continuity of which in any part of its course may affect its function, have a scientific foundation for the study of the morbid influences productive of interruption of connection.

A strong indication of the awaking of the scientific spirit is afforded by the earnestness with which the study of the morbid anatomy of the brain is being prosecuted by the psychiatrist all the world over. Shortly after methods of cutting and staining microscopic sections of nervous structure were promulgated, the rough turning over of the soil was begun. Naturally, in dealing with what was then an occult subject, certain errors of observation and deduction were made; still, the fact was elucidated that marked departures from health were to be found by microscopic examination of the brains of persons dying insane. Since the publication of Bevan Lewis' book our knowledge of the minute anatomy of the brain has been considerably increased, and with it our knowledge of its lesions and our appreciation of their significance. Let me allude to two instances of this: First, the demonstration of the loss of gemmule of dendrites under the action of disease, the organs which we have a right to believe have important conducting function; and, secondly, to changes in the cell-bodies, the significance of which was misinterpreted so long as the cell was regarded as an originator of impulse. Now that we understand that one at least of its functions is control over the nourishment of the great neuron, the pathological value of its lesions assumes different, but still very important, proportions, inasmuch as the consequences of impaired trophesis, interruption of continuity, must be sought for in the synapses or in other parts of the paths of conduction.

The value of research into morbid cerebral anatomy made itself so strongly felt that laboratories were established in many asylums, and eventually the County Council of London were so deeply impressed by the importance of the subject that they instituted a thoroughly equipped laboratory for the systematic study of the pathology of insanity, placing it in charge of that able and experienced physiologist and pathologist Dr. Mott. The work he has already accomplished is of great interest and value, and we may confidently anticipate rapid progress in this department of science as the result of his labors. Scotland has followed suit. An association of asylums has been formed for the same purpose. Assisted by the Royal College of Physicians of Edinburgh, suitable premises have been provided, and systematic work is being prosecuted under Dr. Ford Robertson, one of whose most important duties is the instruction of assistant medical officers of asylums in methods of research. Similar institutions have been erected in the United States, and if I merely refer to the observations of Van Gieson of New York, of Berkeley of Johns Hopkins University, and of Hodge of the Clark University, evidence is afforded that important scientific results have been already obtained, bearing not only on morbid anatomy, but on physiology and normal anatomy. Contributions flow in from Germany, Italy, France, and Russia, and it may be truly said that the psychiatrist all the scientific world over is alive to the necessity of tracing the lesions productive of solutions of continuity as an essential part of the pathology of the insanities. In this connection I may allude to the importance attached to science by the Medico-Psychological Association of Great Britain and Ireland, which holds examinations for the certification of practitioners, already conversant with insanity. Whilst demanding evidence of knowledge of the normal and morbid anatomy of the nervous centers, it excludes psychology in any form as a subject of examination.

As a consequence of this system of study a vast change has come over the aspect of psychiatric literature. The journals of the day, instead of dealing largely with analyses of the mental condition of real or imaginary persons, with abstract considerations, and mere clinical details, are now mainly occupied by papers of a strictly scientific character bearing on the production of neuroses, and the reports of cases are rarely confined to a mere description of symptoms; and in one particular instance, the monumental work of Bevan Lewis, we have the study of the insanities preluded by a systematic account of the cerebral apparatus, instead of by an attempt to analyze mind, which was the time-honored introduction to works on mental aberration.

But the all-important question remains to be answered: What effect has the change in the principles of study had on

general pathology, practice, and treatment? As regards general pathology the evidence is manifold, but I must confine myself to two illustrations. In former times the theory of the effect of the mind on the body held a foremost place, and gave rise to many misconceptions. For instance, the general degradation of the system, the complications in the intestinal and reproductive systems, which are such marked and important symptoms in many of the insanities, were regarded either as the results of abnormal mental action or as its cause. Now that we recognize that the brain exercises trophic functions over all the organs of the body, we are alive to the fact that such degradations are referable to imperfect brain-action, that they are secondary on the reduction of its nourishing action, and are to be treated accordingly. Another evidence of change is afforded by the acceptance and extension by the psychiatrist of the principle that all mental symptoms are produced by the action of the same causes of disease which act in other systems than the nervous. In the absence, which I believe will be but temporary, of a nosology of the insanities founded on morbid anatomy, we find him tracing the history of each etiological class, studying each and all on the same lines as the hospital-physician follows in the case of ordinary disease. He is no longer content with the rudimentary classification of the insanities; he disregards the six "disorders of the intellect" set forth in the *Official Nomenclature of Diseases* published in 1871, and associates with and qualifies each symptom by an etiological term indicative of the morbid agency which has been potential in its production.

The psychiatrist has influenced public opinion in this respect very markedly. In most of the recently erected institutions for the insane, at home and abroad, we find separate hospitals provided for the treatment of recent and acute cases. This surely marks the reduction of theory to practice. Instead of the subject of a recent attack of insanity being mixed up with the residuum of chronic cases, he is placed in a separate institution, where he is submitted to systematic treatment on thoroughly hospital-principles. The extreme delicacy of the brain-structure demands early and assiduous medical treatment in order to prevent disintegration and destruction of tissue; and the psychiatrist has so forced this on the mind of lay asylum-authorities as to have induced them to place at his disposal hospitals suitable for this purpose.

But even with such appliances many of those working amongst the insane are heavily handicapped, as no provision is made by the public for the treatment of cases in the initial stages. Statistics show that the increase of chronic lunatics occurs amongst the poorer classes of society, and not amongst the rich. I believe this to be due to the latter being able to place members of their class showing indications of incipient insanity under systematic treatment at home during the prodromal stage; whilst the former are compelled to allow matters to drift till cases become more or less confirmed.

We know that if we exclude general paralysis and epileptic insanity from consideration, at least 80% of recent cases are amenable to treatment. But such treatment is necessarily costly, as it involves nursing, possible change of residence, and continuous medical attendance. This is out of the power of the poor to obtain. All general hospitals shut their doors against persons suspected of insanity, on the ground that the asylum is the proper place for their treatment. The asylums, however, cannot receive cases until the symptoms are so far advanced as to warrant certification; and, in England especially, the procedure for the transmission of insane persons to asylums is so absurdly cumbersome as to prevent many persons being placed under treatment until such time as the probabilities of recovery are seriously lessened or the case is hopeless. How this state of matters can be improved is one of the questions to be taken up by the commission I have suggested. Some relief may be obtained by the inclusion of the study of the insanities in the five years' curriculum of study demanded of the rising generations by the General Medical Council.

If teachers conduct their courses of instruction on the general principles that govern the teaching of medicine, the general practitioner will soon be found treating the insanities as he does everyday disease, and we may fairly anticipate a reduction of the number of cases relegated to asylums as a consequence of early and rational treatment.

To be continued.



## The Latest Literature.

### British Medical Journal.

July 3, 1898. [No. 1558.]

1. Remarks on Sanatoria for the Open-Air Treatment of Consumption. ARTHUR RANSOME.
2. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. SIDNEY MARTIN. (Lecture IV.)
3. The Treatment of Consumption and of Lupus by Tuberculin. G. A. HERON.
4. On the Treatment of Obesity and Myxedema by a New Preparation of Thyroid ("Thyroglandin.") WILLIAM MACLENNAN.
5. The Treatment of Lupus Vulgaris with "T. R." Tuberculin. G. G. STOPFORD TAYLOR.
6. A Case of Malignant Polypus of the Nose, with Remarks. G. HUNTER MACKENZIE. (Illustrated.)
7. A Case of Cephalic Tetanus Treated with Antitetanic Serum: Recovery. G. E. HALE. (With Chart.)
8. A Case of Traumatic Tetanus Treated with Antitoxin. G. BLACKER MORGAN, JR.
9. Hemorrhagic Infarction of the Small Intestine. JOHN A. LYCETT.
10. The Camphor-Habit and its Dangers. W. H. SPURGIN.
11. Chorea Complicating Pregnancy. J. HENRY ASHWORTH.
12. Perforating Gastric Ulcer: Operation: Death: Necropsy. E. W. ROUGHTON.

1.—The open-air treatment of pulmonary tuberculosis secures a quantity of air 100 times greater than the amount that can be afforded in ordinary ventilation, and its scavenging effect is correspondingly greater. It furthermore acts antiseptically, as the air that enters the lungs is purer, and the sunshine has a destructive effect upon the organisms in the atmosphere. The open air contains a quantity of ozone that is never found in dwelling-rooms, and the amount of active oxygen being greater, it is more destructive to the ordinary bacteria. The sunshine has an exceedingly rapid action in destroying the virulence of tuberculous sputum and of tuberculous dust. It further quickens all the vital processes, and thus increases the activity of phagocytic action. In the selection of a site for a sanatorium the best climate is that which restricts least the daily duration of the stay in the open air. It is indispensable that the air be pure, that the soil be sandy and without dampness, and affording the smallest probability of fog or mist after sunset. The building should not contain more than from 60 to 80 patients; it should be so located that an extensive view can be obtained, and it should be made easy of access. It should face the south when the prevailing winds permit. The architectural arrangements should be the most simple. In the rooms all corners should be rounded, the windows and doors should not project, and the floors and walls should be made of or covered with material that will admit of disinfectant treatment. Each sleeping-room should have a cubic content of about 600 feet. The doors should be opposite the windows in order to afford free ventilation. There should be no ornamentation. The rooms should be well sluiced with water once a month and cleansed each day with a woolen duster lightly dipped in an antiseptic solution. All surfaces should be brushed occasionally with a 1% solution of chlorinated lime. The veranda should be on the south side of the house and protected from the wind and an excessive amount of sunlight. Every chamber should have a small fireplace, and the rooms further should be heated by indirect radiation. A good medical directorate and an adequate number of nurses for day and night are essential. The patient should be carefully educated as to the character and quantity of food to be taken and as to how to take it, to be careful about his toilet, his ablutions, and his exercise. The physician should be ever watchful for the occurrence of complications, and all should be promptly treated. Every patient should be taught how to regulate his cough and how to prevent danger to others in the disposal of the sputa. The most marked objection to sanatoria is the depressing influence of the presence of many individuals. This is much less than is generally supposed, and in the majority of institutions there is a remarkable air of cheerfulness.

3.—Among 37 patients reported by Heron in April, 1891, treated with the old tuberculin there were 5 cases of lupus. Of these all had relapsed. Of the remaining cases of tuberculosis of the lungs 8 have died, 8 are fairly well, and all trace of the others was lost. Since March, 1897, Heron has been using tuberculin R. He has treated 10 cases, one of lupus, the others of tuberculosis of the lungs. None of the 9 cases of tuberculosis was within the limits suggested by Koch, namely, not having a temperature-range above  $99.4^{\circ}$ , and only having a small portion of one lung affected. In the case of lupus recovery took place. In 2 of the cases of far advanced tuberculosis death resulted. The other cases all did well, some of them apparently recovering entirely. The hypodermic injections were always given with antiseptic precautions. In 2,000 injections, usually made in the interscapular region, there was never any occurrence of abscess or septic infection in any form. The dose of the new tuberculin should be so limited that the reaction-rise of temperature will be confined within the limits of  $1^{\circ}$ , and little headache should follow. Before administration the temperature usual to the patient should be ascertained by the keeping of a careful record for a period of a week immediately preceding the beginning of the treatment. If the temperature rose more than  $0.5^{\circ}$  as a result of the administration of any dose of the remedy that same dose was repeated until practically no rise of temperature followed, and it was never repeated until the temperature had fallen either to normal or to the level usual to the patient before treatment. In the beginning the injections were not given oftener than once in two days. The rise of temperature of even  $0.5^{\circ}$  following upon a small dose of tuberculin is considered practically diagnostic of the presence of tuberculosis in the patient, and its use for this purpose is recommended. Heron begins with a dose of  $\frac{3}{16}$  mg., increases this by  $\frac{1}{16}$  mg. each dose until  $\frac{1}{8}$  mg. is being given. He then increases by  $\frac{1}{16}$  mg.; after reaching a dose of  $\frac{1}{4}$  mg. he increases by  $\frac{1}{8}$  mg. up to 1 mg.; from this point increasing up  $\frac{1}{2}$  mg. until a dose of 5 mg. is reached. Of this dose not more than two injections per week are given. The dose is increased gradually to 20 mg. The treatment is not carried beyond this, and this amount is given only once a month. All administrations are subject strictly to the law of temperature as defined. Heron has never seen the injections do any harm, but he has seen good results in cases of lupus and he thinks the agent an aid to recovery in cases of tuberculosis, provided the disease is treated at an early stage.

4.—MacLennan reports 3 cases of obesity in which he used a new preparation of thyroid gland known as **thyroglandin**. One grain was given 3 times daily for a few days. The dose was then rapidly increased until 9 grains were taken in the course of the day. The decrease in weight was rapid and persistent in all cases and was unaccompanied by the unpleasant symptoms so commonly experienced with other preparations used for this purpose. MacLennan reports also a case of **myxedema** in which the patient was first treated with thyroid gland, this treatment yielding good results. Owing to inability to secure the fresh glands, the patient was later placed on various extracts and other preparations for a period of two years or more, during which time there was little improvement. Thyroglandin was now given in 5-grain doses 3 times a day. The improvement was rapid and led to the conclusion that the therapeutic effect was equal to that of the raw gland and was unaccompanied by unpleasant symptoms. Thyroglandin is so prepared that thorough sterilization is secured and that it is freed from everything deleterious that might be derived from other animal substances of the gland, while it contains the iodo-globin thyriodin in the form and proportion in which they exist in the gland. It is easily preserved if kept dry, and can be administered in capsules or doses of from 3 to 5 grains.

5.—Taylor reports 4 cases of **lupus vulgaris** treated with tuberculin R. There was marked improvement in the earlier treatment. This was followed by a period of no advance and this again by a period of breaking down of the healed ulcerations and a recrudescence of the disease. The minimum dose given was  $\frac{3}{16}$  mg., and the maximum 10 mg. All the patients suffered from malaise, anorexia, pains in the back and weakness or trembling of the legs. The local reactions were milder and confined more strictly within the disease-limits than was the case with the old tuberculin. There were no abscess-formations.



6.—A woman, 60 years old, had, for 3 months only, symptoms pointing to **nasal polypi**, the initial symptom being profuse hemorrhage from the left nostril. On examination polypi were found in both nostrils, those in the right presenting the characteristics of simple growths, while those on the left were more numerous, of a dark-brown color, at places slaty gray, and bleeding freely when touched. The first and second microscopic examinations showed the polypi to be benign; the third, however, revealing the appearances of a round-cell sarcoma. The growths were removed, but recurrence in the left side was rapid and the patient succumbed on the course of a few months. The diagnosis of malignant polypi must be based upon hemorrhage and the situation of the growth. "It is safe to assume that, given an elderly individual with a nasal polypus or a sessile polypoid growth, which bleeds freely and profusely, the probability is that it is malignant, more especially if the growth be attached to the septum, for this is the malignant area of the nose." The prognosis depends upon the stage and the situation of the disease (the earlier the disease is detected and the growth removed the more favorable being the prognosis), and the degree of malignancy. The results of the microscopic examination in this case would indicate that the polypi on the left side were benign and that the sarcomatous degeneration was of comparatively recent occurrence.

7.—A man, aged 30 years, suffering from **cephalic tetanus** of a subacute type, recovered completely under treatment with antitetanic serum. The patient received also bromid and chloral, but in view of the rapid improvement following the second large injection on the fifth day of the disease the general beneficial effect that resulted is attributed to this. Ptosis, a rare symptom of cephalic tetanus, and the emotional disturbance accompanying the onset of the disease, were the unusual manifestations. All told, 210 cu. cm. of the serum were injected. The injections were made into the cellular tissue of the back, 20 cu. cm. being injected at each puncture; they caused but little pain and there was no subsequent inflammation.

8.—Symptoms of **traumatic tetanus** developed on the seventh day after a bite from a colt that was kept in a stall in which a horse had died from tetanus. The treatment included hypodermics of chloral and four injections of antitoxin; three injections of 8 cu. cm. each, given in the first 24 hours, were followed by temporary improvement, but through unavoidable delay the next injection of 16 cu. cm. was not administered till the lapse of 24 hours. The patient died on the eleventh day. [The value of the antitoxin-treatment of traumatic tetanus of the acute type, as based upon the reports of cases that appear from time to time in the literature, is not such as to encourage its continued use. The prognosis in acute cases seems to be as grave now as it was before the introduction of serum-therapy.]

9.—A male infant, breast-fed, aged one month, was in a state of collapse and moribund when first seen. The abdomen was distended and dull on percussion in the lower half. The infant had been perfectly well until 6 hours previously, when he became restless, drawing up his knees and straining. There was occasional vomiting, which eventually became fecal. The bowels had been twice moved and were not blood-stained. Death occurred 2 weeks later. Eight ounces of dark-colored fluid containing blood were found in the peritoneal cavity. Four inches of the small intestine were gangrenous, and a small portion opposite the mesenteric attachment had sloughed, the free margin being ragged and allowing fecal matter to pass into the abdominal cavity. There was no general peritonitis; and no cause for the gangrene was discovered.

10.—Spurgin reports 3 cases of **poisoning** from the use of **camphor**. Two of the patients were in the habit of using camphor and the third had taken it for no special reason. In one case it produced giddiness, noises in the head, and maniacal delirium. In the other two cases epileptiform convulsions occurred. The odor of camphor on the breath and excreta was absent in all the cases and the pulse was quick and weak. Potassium bromid was given subcutaneously, and all cases promptly responded to this treatment.

11.—Ashworth records a case of **chorea major complicating pregnancy** in a woman aged 27 and in the eighth month of gestation. There was no history of pre-

vious chorea, rheumatism, or scarlet fever. Arsenic, iron, chloral, and potassium bromid all failed, and owing to the intensity of the symptoms the induction of premature labor was resolved upon. This was accomplished under chloroform, followed by forceps-delivery. The patient, however, steadily progressed from bad to worse, and died 4½ hours later.

12.—Although the operation was performed within 13 hours of the onset of symptoms pointing to **perforating gastric ulcer** the patient died, as a result of ineffectual cleansing of the peritoneum and inefficient drainage, as indicated by the formation, in the hypochondriac region, of an abscess containing about half a pint of pus. The perforation was situated on the anterior surface, near the cardiac extremity of the stomach, which was adherent to the adjacent left lobe of the liver.

### Lancet.

July 9, 1898. [No. 3906.]

1. The Chemical Products of Pathogenic Bacteria Considered with Special Reference to Enteric Fever. SIDNEY MARTIN. Lecture IV.
2. Notes of a Series of Cases of Abdominal Surgery. E. T. DAVIES.
3. Hematuria as a Symptom: Methods Employed in Making a Differential Diagnosis; with 19 Cases, Illustrating Points of Interest in the Diagnosis of Renal Affections Characterized by the Presence of Blood in the Urine. DAVID NEWMAN. (Continued)
4. Two Cases of Obstruction by Band; the One Chronic, the Other Acute. HERBERT W. PAGE.
5. The Value of Antistreptococcic Serum in the Treatment of some Pathogenic Infections. NATHAN RAW.
6. A Note upon a Case of Abdominal Section, in which Sterile Broth was Injected into the Peritoneal Cavity Previously to Operation. J. W. WASHBOURN.
7. A Case of Puerperal Septicemia, with Subnormal Temperature Throughout. JAMES J. HARDING.
8. An Interesting Case of Aneurysm. J. H. MARTIN.
9. A Case of Wound of the Internal Pudic Artery; Operation; Recovery. (Under the care of C. H. GOLDING-BIRD and L. A. DUNN.)
10. A Case of Complete Rupture of the Aorta, Presenting some Extraordinary Features; Necropsy. (Under the care of R. PETCH.) (Illustrated.)

1.—Martin compares the action of certain other poisons with that of the poisons of the typhoid bacillus, Gärtner's bacillus, and the bacillus coli. The seeds of the castor-oil plant and those of the abrus precatorius contain poisons that have an action closely similar to that of the toxic products of the microorganisms named. The influence on the intestine exerted by all of these poisons is effective during the process of excretion by the mucous membrane, it matters not in what manner they may be introduced into the body. The diphtheria-bacillus sometimes causes diarrhea, and, like the three microorganisms named, in small doses, it reduces the body-temperature. The diphtheria-poison causes palsy dependent upon degeneration of the peripheral nerves, and the tetanus-poison induces convulsions, in marked contrast with the poisons of the other three bacilli, which cause no evidence of palsy or of convulsions. The poisons of anthrax, of ulcerative endocarditis, of diphtheria, and of the typhoid bacillus (the last to a less degree), induce well-marked fatty degeneration of the heart-muscle, probably as the result of a direct toxic effect. The chemic nature of the bacterial poisons is as yet not definitely determined. In the poisoning by abrus-seeds and in snake-poisoning, the toxic action is closely associated with the contained proteids. There is, probably, something in the constitution of the proteid molecule that possesses a poisonous property. Brieger and Cohn have obtained a toxic product from diphtheria that causes all the characteristic symptoms, but gives no proteid reaction. It may, therefore, be considered that the diphtheria-poison, the poison of tetanus, that formed by the typhoid bacillus, are of a ferment nature rather than of proteid origin. Experimentation has shown that they are not digestive ferments, in the ordinary sense of the word. They are substances having a peculiar affinity for certain tissues of the



body, on which they exert a special toxic effect. Thus, the diphtheria-poison selects the peripheral nerves, the tetanus-toxin the cells of the spinal cord, while abrus, ricin, and the poisons of the typhoid, colon and Gärtner's bacilli exert a pronounced effect on the bodily temperature, and have a marked action on the small intestine. The ferment in each case must be essentially different, while with abrus and ricin, although the action of the poisons is closely similar, one does not produce immunity to the other. The typhoid bacillus is constantly present in cases of typhoid fever in the intestinal lesions, in the spleen, the mesenteric glands, and sometimes in the blood. It is, in not a few cases, found in the urine, and occasionally in the feces. Its constant presence in the lesions of the disease is one of the arguments in favor of its being the cause of the condition. It may be obtained in pure culture from the spleen after death. The second argument in favor of its etiologic relation is the sedimenting and agglutinating reaction yielded by the blood-serum of typhoid patients. This reaction is specific. The bacillus coli does not exhibit it, but Durham has shown that the bacillus of Gärtner displays it to a slight extent. Typhoid serum never gives a reaction with the bacillus coli, nor the bacillus coli serum with the typhoid bacillus. It is a matter of great difficulty in animals to infect the intestinal tract with the typhoid bacillus. Remlinger, however, accomplished this by the administration of large doses of pure cultures. Characteristic lesions were induced and the serum of the animal gave an agglutinating and sedimenting reaction. The non-virulent forms of the typhoid bacillus are not toxic, but they may become toxic and may infect the body, when products of certain other microorganisms are injected at the same time. This is especially true of the bacillus coli. In some cases of enteric fever the typhoid infection is pure; in others mixed. The bacillus coli becomes more virulent in the presence of the typhoid bacillus, thus suggesting that these organisms react on each other. Martin inclines to the view that, from our present knowledge of this subject and of other intestinal infections, the opinion that the infection in enteric fever is primarily intestinal is the more logical one. Peyer's patches form the least protected part of the mucous membrane, and consist of a tissue of only slight metabolic activity.

2.—Davies reports a series of cases of **abdominal surgery**, including celiotomy for rupture of a ventral hernia, with protrusion of the greater portion of the small intestine; ovariectomy for a twisted pedicle, followed by rupture of a cyst and diffuse peritonitis; nephrectomy for a tuberculous kidney; and cholecystotomy for impacted gall-stones. By far the most interesting case of the series was the first mentioned. In this case a large portion of the small intestine had protruded through a ventral hernia, and remained outside the abdominal cavity for a period of 24 hours before medical assistance was obtained. The patient belonged to the pauper class, and, when found, was lying on the floor, in the corner of a common living-room, among a heap of straw and filthy rags. Under chloroform-anesthesia the protruded intestines were washed and cleansed as well as possible with plain water drawn from the tap near by in a not over-clean basin, and were returned to the abdominal cavity. The patient made a rapid and uninterrupted recovery.

3.—Continuing his remarks on **hematuria as a symptom**, and the methods employed in making a differential diagnosis, Newman, referring to the use of the cystoscope, says that this instrument will be more generally used for diagnostic purposes after surgeons become more expert in handling it. By estimating the quantity of hemoglobin, and comparing it with the amount of albumin in the urine, one is able to tell whether or not there is sufficient blood in the urine to account for the amount of albuminuria. If the ratio of albumin to hemoglobin be about 1 to 1.6, it may be concluded that the albumin is entirely due to the presence of blood. Any excess beyond that proportion is an indication, not only of an independent albuminuria, but also of a renal affection as the cause of the hematuria. The most common causes of hematuria are traumatism, renal calculus, neoplasms, and tuberculous disease. Hemorrhage due to renal calculus is usually small in amount and appears at more or less prolonged intervals; it is increased by movements of the body, and is appreciably diminished by rest in bed, the latter peculiarity being the most characteristic. Hemorrhage from a renal tumor is generally more profuse

and less transient than from a calculus, and in some cases it is so copious as to cause marked anemia. Unlike the hematuria of renal calculus, that following tumors is more likely to occur during the night while the patient is in the recumbent posture. The presence of a persistent swelling in the renal region, associated with considerable hematuria, is of significance, and may be held as clearly indicating the presence of a neoplasm in the kidney. Hematuria from tuberculous disease is frequently absent for long intervals, is seldom so severe as from stone, and is not increased by exercise. In addition to the presence of tubercle-bacilli, it has been noticed that the quantity of albumin is generally in excess of that accounted for by the blood, and in the later stage, when pus appears in considerable quantity, the pus and blood are not so rapidly or so completely precipitated in the urine as in the presence of calculous pyelitis. A series of cases is reported, illustrating the diagnostic points mentioned in the text.

5.—Raw reports 11 cases of severe, acute streptococcal infection, in which he used the antistreptococcal-serum treatment, with 6 recoveries and 5 deaths. If streptococci are clearly demonstrated in the blood or discharges from any case of acute infection under his care, examined bacteriologically, he at once injects the serum, but never uses it in any other cases. He has never seen any bad symptoms from the use of the serum, provided it is fresh and is injected with antiseptic precautions. The dose used was 20 cu. cm.

6.—As a preliminary treatment of the peritoneum in operations upon the abdomen when there is a risk of contamination, Durham recommends a preliminary injection of some substance that is capable of increasing the local and general resistance of the peritoneum, and he believes the most efficacious substance to be the serum of animals immunized to the microbe used for subsequent inoculation. Washbourn reports a case in which this suggestion was carried out, the patient being a child, 8 months old, with an intussusception. Twenty-four hours before celiotomy was performed, 5 cu. cm. of sterile broth were injected into the peritoneal cavity. The abdominal symptoms entirely subsided after the operation, and the patient for a time did well, but finally died of collapse. The post-mortem examination revealed no evidence of peritonitis.

7.—Harding records a fatal case of **puerperal septicemia**, in which, at no time from the beginning, did the temperature rise to the normal, being subnormal throughout, and ranging from 97° to 97.2°. Neither cureting nor the antistreptococcal serum was used.

8.—The interesting features of this case of **aneurysm of the left external carotid artery** were the ability of the patient to determine the exact moment at which the vessel ruptured, and the rapid enlargement of the aneurysmal sac, which, within 11 days, attained the size of a hen's egg. Ligation of the left common carotid was practised, and the patient recovered.

9.—**Wounds of the internal pudic artery** are rare accidents, in which attempts at hemostasis are attended with difficulty, owing to the depth at which the wounded vessel is situated. In the case here reported, the artery had been divided at the point where it crosses the spine of the ischium, the injury to the vessel having been inflicted by a sharp piece of glass.

10.—The remarkable feature of this case was the unusual prolongation of life after the occurrence of the accident, the patient living for more than 5 hours. The autopsy revealed a **complete rupture of the aorta** about  $\frac{1}{2}$  in. above the aortic valves. The ascending portion of the aorta was invaginated into the transverse portion as far as the commencement of the descending portion, while a second invagination was found, the ruptured end again turning in and passing through a second rent in the arterial walls into the lumen of the transverse aorta.

#### New York Medical Journal.

July 23, 1898. [Vol. lxviii, No. 4.]

1. Exercise and Diseases. E. PALIER.
2. Summer Diarrhea. WILLIAM L. STOWELL.
3. An Experimental Study of the Toxic Properties of Indol. C. A. HERTER. (Concluded.)



4. Continued Irrigations of the Uterus in Hysterectomy for Acute Puerperal Septic Metritis, with Report of Several Successful Cases. HORACE MANSEAU.
5. Diphtheria and Antitoxin. DOUGLAS C. MORIARTY.
6. Report of an Operation for the Removal of the Stomach for Carcinoma. WILLIAM H. NOBLE.
7. A New Form of Instantaneous Cut-off. HENRY W. WANDLESS.

1.—In considering the employment of **exercise** in the treatment of disease, Palier states that it should be restricted in rheumatism, as it is likely to make the symptoms worse. In many gastro-intestinal disorders it is highly valuable, while in tuberculosis it may do good or harm, depending upon whether the patient was previously much exhausted or not. The same is also true of hysteria and neurasthenia. If in these latter diseases, the patient is not exhausted, regular exercise should be instituted, as not all of these cases should be put at rest.

2.—In the treatment of the **summer-diarrhea of infants** Stowell first administers a purgative or practises enteroclysis, bismuth and salol being the medicaments chiefly preferred. At first food is entirely withheld, while afterward milk is given in smaller quantities and in quarter dilution.

3.—Herter details the results of the administration of **indol** to three men for experimental purposes, keeping their hygienic and other conditions as nearly alike as possible before and during the period of observation. The beginning dose was 0.1 gm. The first individual suffered from a dull feeling in his head, became somewhat giddy, and after a large dose of indol on the third day had severe colic and diarrhea. The knee-jerks seemed increased. The second individual suffered from intestinal flatulence, followed by headache, disturbed sleep, and finally insomnia. The indoxyl-reaction was much increased and the ratio of preformed sulphates and the combined sulphates was sometimes as low as 0.823. In the third case, the symptoms were much like those in the first, though somewhat more pronounced. With the discontinuance of the indol, the symptoms all disappeared. In considering the conclusions that may be drawn, Herter believes that headache may be produced through the agency of indol, though the symptom that seems most due to this cause is a sensation of discomfort and fulness in the head. There was pronounced fatigue in the cases, and it is probable that this was due to the indol, and that in dyspeptic cases, an absorption of indol causes this symptom, and it may finally lead to neurasthenia. The observations on the knee-jerks were not complete enough to be made the basis of a dictum. The effects varied in different individuals very distinctly, according to their susceptibility. While indol cannot be regarded as an indifferent substance for human beings, it cannot be considered to have highly toxic effects, even absorbed in large amounts.

4.—In the treatment of **septic puerperal complications** Manseau recommends as a most effectual measure continued irrigation of the uterus after using the dull curet, which will not reopen a partly obturated surface or produce laceration in the midst of sepsis, and he reports 4 illustrative cases. The irrigation is done with hot water and is continued for 12 hours at the rate of 7 or 8 gallons an hour. Under the influence of continuous irrigation the uterus contracts well and quickly, and fissures heal rapidly. The irrigation must be kept up until such time as it is certain that there is no more internal suppuration; otherwise the os, now firmly closed, will retain the discharge, and the temperature will rise again 1° or 2°.

5.—Moriarty discusses the results of the treatment of 207 cases of **diphtheria** in Saratoga: One hundred and eighty-eight received antitoxin, 19 did not. There were 16 deaths, 7 of which occurred in those that did not receive antitoxin. Of the other deaths, in those to whom antitoxin was administered, 7 occurred within 18 hours after its exhibition, and 1 from broncho-pneumonia 2 weeks after the diphtheria began. The dose of antitoxin ordinarily employed was 1,000 units; children from 2 to 5 years of age received up to 2,500 units; and those from 7 to 8 years from 2,500 to 3,500 units. The conclusion is expressed that antitoxin is practically a specific for diphtheria, that it is the rational treatment, and is harmless. It must be used early and must be obtained from reliable sources. In laryngeal cases intubation is a necessary adjunct. There are no cases so far advanced that antitoxin should not be used, but it should be administered

promptly when the clinical diagnosis is made, and must not be the last resort or used in too small doses.

6.—Noble undertook the **removal of the stomach for carcinoma** with some hesitancy, the piteous appeal of his patient overruling his better judgment. The technic followed in every respect that reported by Dr. C. R. Brigham, of San Francisco, with the exception that the esophageal end was severed before the stomach was entirely freed of both the greater and lesser omentum. When the operation was almost completed the patient collapsed, and every effort at resuscitation proved futile. The operation, however, was carried on to completion, the freed ends of the duodenum and esophagus being united without difficulty. Examination of the stomach showed that the growth involved about one-third of the greater curvature, and was more than half an inch thick. Furthermore, it was discovered that there were several nodules in the extreme left border of the lesser omentum, so that it is probable, had the patient survived the operation, any good accomplished would have been thus rendered nugatory. Noble's experience in this case, while convincing him of the feasibility and practicability of the operation, impressed upon him the fact that it is a procedure to be undertaken in conditions that rarely obtain in patients so afflicted. As a rule, when the patient comes under the observation of the surgeon, his general physical condition usually contraindicates so radical a procedure.

### Medical Record.

July 23, 1898. [Vol. liv, No. 4.]

1. Fractures of the Bones of the Face. C. C. WARDEN.
2. A Review of Some of the Cases in Which Insane Persons Have Been Released From Custody by the Courts Within the Past Six Years. CHARLES E. ATWOOD.
3. Cases of Chronic and Acute Intestinal Obstruction Subjected to Operation. RICHARD J. HALL.
4. The Cure of Writers' Cramp and Telegraphers' Paralysis. S. H. MONELL.
5. Functional Activity of the Mammary Glands in an Infant. J. B. GROVER.
6. A Case of Tubal Pregnancy. E. J. WHITEHEAD.
7. Obstruction of the Esophagus. J. D. LEWIS.
8. A Case of Delayed Change of Voice, Due to Unrecognized Power to Use the Adult Voice. H. SCHOONMAKER.
9. Excision of the Right Shoulder-Joint for Subcoracoid Dislocation of the Right Humerus, Complicated by an I-Fracture of the Surgical Head. CHARLES VOORHEES BUTLER.
10. Hematemesis as a Sequence of Chronic Ulcer. GEORGE FLANAGAN SHAW.

2.—Atwood gives the subsequent records of 5 cases, comprising all the male patients who have been discharged by the courts from the hospital with which he has been connected during 6 years (namely, Bloomingdale, White Plains, N. Y.). In the first case, the man was really improved, and he was only retained in the hospital because his family did not know the proper method of having him removed. The second patient failed rapidly after his release and died insane in the Middletown asylum. The third was still weak-minded, and was with difficulty induced to leave, having himself no desire so to do, though he had improved considerably. The fourth afterward married, had one child, and was subsequently readmitted seriously insane. He was, at the time of his release, not in proper condition for dismissal. In the fifth case, the effect of the trial and publicity was to produce profound depression, leading to an attempt at suicide. Such a case suggests that it would be better to have trials before a commission, composed of two or three medical men in association with a judge. At any rate, there should in all cases be testimony by medical men who have long had the patient under observation.

3.—Hall publishes a series of cases of **chronic and acute intestinal obstruction, subjected to operation**. The high mortality is attributed to the late date at which the patients were referred for operation. The series includes in one class operations performed for obstruction at or above the pylorus, and in another those of obstruction of



the small or large intestine. In the first class are included three cases of gastroenterostomy, in two for stricture, and in one for carcinoma of the pylorus; two of gastrostomy, in one for carcinoma of the esophagus, in the other for carcinoma of the pharynx, one being carried out by Witzel's, the other by Frank's method; and one case of pyloroplasty after the Heineke-Mikulicz method. Comparing the relative merits of Witzel's and of Frank's method, Hall is inclined to favor the former, basing his opinion upon the results obtained: with the former no leakage whatever occurring, even when the tube was removed, a result that could not be claimed for the Frank method. Among the operations for obstruction below the pylorus were two performed for acute intestinal obstruction, due in one to a band, in the other to a strangulated incomplete inguinal hernia; two for volvulus; and one for chronic intestinal obstruction following carcinoma of the rectum. The mortality in the latter series was exceedingly high. The symptoms that are of most value as guides in the diagnosis of intestinal obstruction, are vomiting, rapid pulse, and an expression of mental anxiety. The diagnosis may be based further upon pain, either general or fixed, obstinate constipation, and a subnormal temperature if gangrene, perforation, or septic peritonitis ensue. The use of morphin is protested against, as it completely masks some of these valuable diagnostic guides. The danger of delay after the symptoms fail to respond to medical treatment need be only alluded to, as the prognosis is fair or grave in accordance as the operation is performed immediately or after greater or less delay.

4.—Monell believes that **occupation-neuroses** are really not neuroses, but due to simple impairment of nutrition. Rest will, however, not entirely effect a cure, and it may make the condition worse. Monell's treatment consists in the application of electricity to quicken the circulation and to cause general nutritional muscular contractions; he makes, besides, a quiet, restful nutritional application, lasting about 10 minutes. With these methods, he has had entirely successful results.

5.—Grover reports the case of an otherwise healthy baby, 5 months old, whose mammae secrete milk abundantly, as much as 2 drams being removed by the breast-pump at a time.

6.—Whitehead records a case of **tubal pregnancy** in a primipara, 27 years old, married for 3 years, in which relief was afforded by abdominal section.

7.—Louis records the case of a woman, 36 years old, who had swallowed concentrated lye when a child, and had since lived upon liquids and semi-solids. When seen, she had sudden esophageal obstruction, due, she thought, to swallowing boiled potatoes. Administration of hydrogen dioxide caused effervescence, and then removed the obstruction.

8.—Schoonmaker records the case of a boy, with an unusually high-pitched voice, who was subject to attacks of hoarseness and huskiness. His voice did not change properly at puberty, but this was discovered to be due chiefly to the fact that he had not recognized the change, and did not attempt to use the deep voice. After being instructed in the matter for a few days, he himself recognized his power to use his deep voice, and he acquired a manly voice unless he spoke without conscious effort, when the voice would again become high-pitched.

9.—The patient had fallen from a doorstep without apparent serious injury to the shoulder. Five weeks later, a **subcoracoid dislocation** of the right humerus, complicated by a longitudinal fracture of the surgical head, was discovered. It was proposed to reduce the dislocation and wire the broken fragments by an open operation, but this being found impracticable, the head of the humerus was excised. At the operation the fragments were found to be separated to the extent of admitting the tip of the index-finger, and the long tendon of the biceps-muscle was caught between the fragments, and was with great difficulty separated. As to the ultimate functional use of the limb, the patient is now able to use her arm to wash and iron, and the arm can be passively moved to more than a right angle.

10.—Shaw reports the case of a typically chlorotic woman, who had symptoms of gastric ulcer when 17 years old, and again 2 years later; 2½ years after the second apparent recovery, she vomited large quantities of blood, and suffered severe pain. Until the time of the hemorrhage, the symptoms of gastric ulcer had not been sufficient to base an accurate diagnosis upon.

## Medical News.

July 23, 1898. [Vol. lxxiii, No. 4.]

1. The Diagnosis and Treatment of Early Tubal Pregnancy. JOSEPH BRETTAUER.
2. A Fatal Case of Afebrile Acute Endocarditis. CHARLES O'DONOVAN.
3. Winds and Weather in Manila. JOSEPH EARLE STEVENS.
4. Yellow Fever: Its Diagnosis and Treatment. J. EDWARD STUBBERT.
5. The Army-Hospital at Siboney. RAYMOND SPEAR.
6. Gunshot-wound of the Abdomen: Ten Intestinal Perforations and Twelve Perforations of the Mesentery; Operation; Recovery. GEORGE TULLY VAUGHAN.

1.—Brettauer reviews the subject of the early diagnosis of **ectopic pregnancy**, basing his conclusions upon an experience of 34 cases seen during the past six years. Of these only 4 were seen before alarming symptoms appeared. The typical characteristics of a gravid tube differ widely from those evoked by any other possible condition. Laterally or behind the enlarged, slightly softened uterus can be felt a mass, varying in size from a large walnut to an orange, somewhat tender to the touch, movable, distinctly pulsating, imparting to the fingers a pseudo-fluctuating, boggy impression, and sometimes contracting during palpation. These symptoms, together with the information gained from a minute history, are typical and decisive for an absolute diagnosis. The expulsion from the uterus of a decidua *in toto* or in shreds at this stage is not a constant occurrence, but is characteristic.

2.—A young man, 18 years old, complained of pains over the descending colon. Heart and lungs, as well as the temperature, were normal. There had been no history of rheumatism. Under treatment the patient's condition rapidly improved, but a week later he was again complaining of intense weakness, with a sense of constriction over the precordia. He was pale, his pulse 96 and jerky, and there was a regurgitant aortic murmur not very well defined. On the following day the murmur was more distinct and there was also a slight systolic murmur. The sense of constriction had disappeared. On the next day the systolic murmur had become loud and rough, while the heart's action was weaker. Two days later a pericardial friction-sound was audible near the apex, and it became more pronounced on the following day. After another day the aortic murmur seemed less loud and the systolic murmur more pronounced; the pericardial friction was diminished. Nine days later the aortic diastolic sound and the systolic murmur were found to persist, and there was besides a presystolic bruit. The sound of the mitral-valve closure was sharp and well defined. The pericardial friction had disappeared. At no time had the temperature risen above 99.4°, and this height had been attained but once. After six weeks, when the patient left his bed for the first time, examination of the chest showed the aortic and pulmonary valves both leaking. The other valves seemed to be normal. Nine days later the patient took a 30-mile railroad-journey, and on the following day returned to his duties as a school-teacher. He was not then seen for two months, when he was very weak, much emaciated and pale, the pulse 126 in the sitting posture, and more in the erect; the arterial tension was very low. He had some twinges of rheumatism in the right leg. On examination the heart was found "filled with a seething, churning fluid, in which the valve-sounds could not be made out." The patient now grew rapidly worse, and died at the end of a week.

6.—Vaughan reports the case of a man who was **shot with a pistol in the abdomen**, the ball, of 38-caliber, having entered the left side of the abdomen. Under chloroform the peritoneal cavity was opened and 10 intestinal perforations, 8 in the lower part of the jejunum, and 2 in the ileum, were found and closed with a mattress-suture of fine silk. In addition to these there were 12 perforations of the mesentery. Despite the number of intestinal wounds, the patient made an uneventful recovery.

## Boston Medical and Surgical Journal.

July 21, 1898. [Vol. cxxxix, No. 3.]

1. Appendicitis, Remarks based upon a Personal Experience of 750 Cases, including 150 Consecutive Cases Success-



fully Operated Upon "in the Interval." MAURICE H.

RICHARDSON and G. W. W. BREWSTER. (*Concluded*)

2. Some Modern Methods of the Treatment of Phthisis, and its Symptoms. EDWARD O. OTIS. (*Concluded*)

3. Some Practical Aspects of the "Summer Diarrheas." JOHN W. BARTOL.

4. Types of Habit Neuro-Psychoses. EDWARD W. TAYLOR.

1.—Continuing their remarks on **appendicitis**, Richardson and Brewster state that the diagnosis is easy in most cases, but at times a correct differentiation is impossible. Errors have been made in mistaking, for appendicitis, acute cholecystitis, an ileocecal tumor of tuberculosis or malignant disease, acute intestinal obstruction, Meckel's diverticulum, and salpingitis. It is of interest to know that malignant disease appeared in two cases after the removal of what seemed to be an ordinarily inflamed appendix. In many cases the severity of the attack has been out of all proportion to the seriousness of the pathologic lesion. Speaking of the operation in the interval between the attacks, Richardson and Brewster state that from a feeling of strong doubt as to the advisability of this procedure they have been led to one of confident enthusiasm; from one of extreme conservatism to one of marked radicalism. On the other hand, in the management of cases of acute appendicitis they incline more toward conservatism; not allowing the severe cases to run on in the hope of avoiding operation, but, on account of the safety of the interval-operation, bringing the patient through his acute attack without operation. As to the technic the McBurney incision is preferred; the appendix itself is removed by the actual cautery and the stump, which is burned close to the ligature, is depressed into the cecal wall and buried there beneath fine silk sutures. When there is the slightest suspicion of local infection drainage for 48 hours has invariably been the rule. Since August 1, 1894, 150 cases have been operated upon without a death.

2.—In the general medication of **pulmonary tuberculosis** Otis uses creosote, either as such or in the form of guaiacol or creosote carbonate, the alkaline hypophosphites (to promote nutrition), strychnin (as a tonic to the digestive system and for its general effect upon the heart and respiration), arsenic (as a nutritional tonic and stimulant to assimilation), and iodoform (as an aid to nutrition and for the alleviation of cough). He recommends tuberculin as a valuable test for diagnostic purposes, and thinks that when properly given it is without injury to the patient. The treatment of the fever should be directed to the general condition, and it should be hygienic rather than medicinal, including rest of mind and body in a pure, dust-free air, with the administration of good, easily digested nourishment, especially rich in fat and carbohydrates. The use of alcohol in the form of strong wine or brandy administered in milk is also advised. Sponging with cool water or water mixed with alcohol or vinegar night and morning, the application of cold-water compresses to the chest and the ice-bag to the cardiac region (if the heart is rapid) are of great service. Antipyretics should be given only as a last resort. *Night-sweats*, when dependent upon the fever, should be treated as the fever. In cases in which the fever is slight, dry or moist, rubbing with acidulated water at night, compresses to the chest and abundance of fresh air should be employed. Strychnin is valuable. Of the specific antihydrotics camphoric acid, picrotoxin, agaricin, and atropin are recommended in the order named. The patient should be well covered in bed and sleep with open windows. The patient should be urged to restrain the cough until expectoration of the secretion is easy. For the spasmodic cough counter irritation of the chest, warm milk with salt, Seltzer and Apollinaris water, pastils of Iceland moss or gelatin, etc., with wet compresses to the chest are valuable. The cough that immediately follows eating is often relieved by assuming the recumbent posture. The common morning-cough can often be checked by a glass of warm milk containing a little soda or salt. Of drugs, Otis uses only codein in 1% solution, and this he finds most valuable. For the treatment of *hemoptysis*, rest, the use of opium, the administration of cold nourishment, counter-irritation in the form of mild mustard-plasters to the back and sides of the chest, and dry cupping are recommended. The efficacy of the ice-bag to the chest is questioned. In cases of bronchial hemorrhage, atropin, ipecac, saline laxatives and salt are given, and constricting bandages are applied to the

extremities in order to lower pulmonic vascular tension. The use of astringents is of doubtful value. The best, if they are used, are turpentine, erigeron, and fluid extract of hydrastis. Chronic dyspepsia requires careful dietetic treatment and the administration of intestinal antiseptics if fermentation exists. Alkaline mineral waters in milk are good for constipation, and brandy for a tendency to diarrhea. Vomiting, if due to hyperesthesia of the pharynx, is relieved by a cocaine-spray. Food must be administered in small quantities frequently and gastric sedatives should be given.

3.—Bartol divides the *Summer diarrheas* into those of nervous origin, those caused by the purely mechanical irritation of undigested food, and, the much more important class, those described by the term acute intestinal catarrh, and under this last he includes the indigestions of duodenal type and those acute cases characterized by copious and frequent stools containing large amounts of undigested food without fermentative diarrhea. The chief characteristic of these from the pathologic standpoint is that they are not associated with bacteria other than those ordinarily found in the intestines. In the infective class of diarrheas the fermentative or putrefactive microorganisms occur, and with them lesions of the mucous membrane varying from the slightest involvement of the superficial epithelium to the ulcerative processes of the more serious inflammations. The infective class includes first, the ordinary fermentative diarrheas without serious lesions of the mucous membrane, and second, those attended by deeper inflammation and ulceration. It is not the number of dejections in these cases that serves as a basis for the prognosis, but rather the degree of the toxemia. The toxic elements are produced within the intestine by some of the ordinary forms of saprophytic bacteria which are taken in with the food. Active poisons may be elaborated in the food before it is administered. In these cases sterilization will not destroy the "ptomaine products" thus formed. This suggests the necessity of a thorough knowledge of the source from which the food is derived. The way in which to determine the seriousness of a case is by the study of the toxic symptoms that manifest themselves; first, by high temperature; second, by marked restlessness, incessant movements, sleeplessness or vigil; third, by notable prostration and the collapse of cardiac depression; and fourth, by reflex vomiting. Bartol then reports a series of cases illustrating these manifestations. In the matter of treatment he recommends, according to the indications in the individual case, first, a purge of calomel or castor-oil; second, abstinence from milk in any form for 24 or 36 hours; third, full stimulation; fourth, irrigation of the bowel thoroughly and persistently carried out with high injections of unirritating solutions; fifth, cold water in the form of baths or bags, best combined with mustard for stimulation of the circulation in pyrexia. Subcutaneous injections of saline solutions he thinks might be valuable in supplying the loss of body-fluid. Bismuth preparations with or without salol should also be given. Barley-water, rice-water, and wine-whey may be used as substitutes for milk. Persistent vomiting can be checked by washing out the stomach.

4.—Taylor divides the habit neuro-psychoses into three divisions: the first, that in which without apparent cause the morbid association is aroused and persists through repetition; second, that in which an association is formed as the result of the imperfect interpretation of physiologic processes; third, that in which an association persists after its exciting cause has been removed. Under the first are placed a large number of so-called neurasthenic conditions and the source of these is frequently difficult to determine. In these conditions a fixed habit of experiencing certain morbid sensations has grown up and eventually so bound the patient mentally and physically that he experiences pain and discomfort in positions in which the normal individual would find pleasure. While these cases are difficult to treat, the only hope of cure lies in the correction of the patient's point of view, by substituting helpful for harmful trains of association. The common source of the second class is the sexual sphere. This class is more important and more amenable to treatment. In the line of prophylactic medicine an intelligent forewarning of patients of the ills of certain habits into which they unwittingly fall would prove of incalculable value. Other examples of this class are found in the association of colds with damp feet and drafts, and of digestive disturbances following the eating



of ordinarily harmless articles of food. The traumatic neurones are included under the third class. As the mechanical effects of the injury pass off in this class the pain persists, notwithstanding the removal of the cause. This idea of pain is as real to the patient as the original pain. These patients form a definite habit which persists and tends to increase.

#### Journal of the American Medical Association.

July 23, 1898. [Vol. xxxi, No. 4.]

1. Surgery of the Lung. J. B. MURPHY.
2. Diabetes Mellitus at the Massachusetts General Hospital from 1824 to 1898. A Study of the Medical Records. REGINALD H. FITZ AND ELLIOTT P. JOSEPH.
3. The Use of Iron and Opium in Bright's Disease. JAMES TYSON.
4. The Course and Management of Complicating Myocarditis. LOUIS FARRERIS BISHOP.
5. The Causes of the Inconstancy of Mitral Regurgitant Murmurs. J. N. HALL.
6. Tuberculosis and its Treatment by the Later Methods. A. G. DEARDOFF.
7. Modern Methods in the Treatment of Tuberculosis. WILLIAM F. WAUGH.
8. The Psychology of Habitual Constipation. ALBERT H. BURN.
9. Report of a Case of Epidemic Cerebrospinal Meningitis, with Recovery Following Lumbar Puncture. PETER BASOE.

1. See this JOURNAL for June 11, p. 1094, and for June 18, p. 1130.

2. See p. 1088.

3. See p. 1089.

4. See p. 1088.

5.—Attention is called to the importance of a study of the signs of **disease of the myocardium** in all acute diseases. In milder cases irregularity in force and rhythm are signs suggestive of myocarditis. When these signs of relative feebleness, disturbances of rhythm and undue rapidity are associated with dyspnea and prostration the picture of complicating myocarditis is complete. In the treatment of these cases stimulants directed to the heart itself should be avoided. Patients should follow a long and strict regimen, avoiding indiscretions in diet, sudden exertions, and dissipations of all kinds. Light, slow and systematic exercise is undertaken to improve bodily nutrition, and that of the heart-muscle in particular. The food should be concentrated so that the nourishment is administered in small volume, leading to an easy performance of the functions of the stomach. A small quantity of alcohol with meals is not harmful, but excess is always followed by injury. Tea and coffee should also be controlled by the physician. Tobacco is best discontinued. The judicious use of baths and massage, with pleasant diversion, is also of benefit in improving the nervous tone.

6.—Dearhoff writes in commendation of Paquin's anti-tuberculous serum and antistreptococcus serum in the **treatment of pulmonary tuberculosis**. Detailed reports are given of the treatment of 12 cases with these remedies. Of 5 patients in the third stage of the disease 1 died, 1 was benefited, 1 was greatly benefited, 1 was well, and 1 was living 6 months after being given up to die. Of 3 patients in the second stage 1 was greatly improved, 1 was well for over a year, 1 was improving. Four patients in the first stage are all well. Codliver-oil, spraying of the throat with antiseptics and flushing the colon two or three times a week with sodium-chlorid solution were used in connection with the serum-treatment.

7. The climatic treatment of **pulmonary tuberculosis**, the various forms of serum-therapy and the use of antiseptics are briefly considered.

9.—A Russian laborer of 45, who had been ill for 5 days with severe headache, backache, and pain in the extremities, was sent to the hospital with a diagnosis of trichinosis. There was pain in the head and neck and great tenderness on pressure; the pupils were equal, contracted, and reacted normally; there was no paralysis. The pulse was full, soft, regular, and 48 beats to the minute; the respirations, 23; the

temperature, 98° F. The headache, tenderness, and rigidity persisted, the pulse increased in frequency, and the temperature rose, ranging between 100° and 102.5° F. The diagnosis of meningitis had been made, and on the ninth day after admission lumbar puncture was practised to determine the microorganism present. Nine blood-serum tubes were inoculated and in two of them pure cultures of Weichselbaum's diplococcus were found. The patient gradually improved and seems to have made a complete recovery at the time of report.

**Carcinoma of the Thoracic Duct.**—At a recent meeting of the Société Médicale des Hôpitaux, M. Troissier reported the further investigation of 3 cases of carcinoma of the thoracic duct that had been observed in patients suffering with abdominal carcinoma. Histologic study showed that the neoplastic tissue formed a vegetating mass that obstructed the lumen of the duct more or less completely. The carcinomatous plug was found to be composed of large epithelial cells, each of which had an unusually large nucleus adherent to its wall. On transverse section, the growth could be divided into (1) a peripheral or parietal zone, in which the cellular elements were very distinct; and (2) a central portion, which presented a caseous appearance, from the presence of amorphous, necrobiotic elements. The wall of the duct was altered in appearance; it presented either a simple connective-tissue thickening, or carcinomatous nodules that projected into the lumen of the duct. In all the lesions there was an associated inflammatory proliferation and carcinomatous vegetation. The lesions closely resembled those of carcinomatous lymphangitis. An important rôle is ascribed to the thoracic duct in the extension of abdominal carcinoma, and particularly in the production of subclavicular adenopathy. (*Semaine Médicale*, May 25, 1898.)

**Tearing Away of the Bladder from its Pelvic Connections.**—F. Bird (*Australasian Medical Gazette*, May 20, 1898) reports the case of a lad, thrown from his horse and suffering from concussion of the brain, in which the bladder was found distended, together with symptoms of retention of urine. Examination had shown no bruising of the perineum, no tenderness or fulness and no bleeding from the urethra. A catheter at once drew blood, but no attempt, even under chloroform, succeeded in withdrawing urine: a large quantity, however, was removed by aspiration. On operation it was found impossible to reach the bladder through the perineal incision. The triangular ligament was torn and a traumatic cavity was found behind the pubes. Suprapubic cystotomy was performed and through the abdominal incision it was found that practically all the structures that anchor the bladder to the pelvis had been torn away. Several fingers could be freely passed from above behind the pubes into the perineal wound. The pubo-prostatic ligaments had disappeared and 2 small, thin shells of bone were discovered pulled off the pubes. With the aid of the finger in the bladder the remains of the membranous urethra were found as a small tuft on the anterior portion of the prostate. The lumen of the tube was closed by spasm of the muscular fibers, producing complete retention. The parts were carefully cleansed, and a rubber catheter was passed through the abdominal wound, the bladder, the torn membranous urethra, and the perineal wound. The space back of the pubes produced by the injury was packed with gauze about a drainage-tube, which was removed after 3 days; although light packing was continued for a week. At the end of this time packing was discontinued and a catheter was passed through the penis into the bladder, the distance from the bulbous urethra being about 3 inches. There was considerable cystitis, but no cellulitis or abscess-formation. Several months after the injury, micturition was perfect and a No. 10 sound could be passed with ease.

**Gastric Ulcer, with Death from Pulmonary Embolism.**—Rosenthal (*Hospitalstidende*, June 22, 1898) reports a case of gastric ulcer with profuse hematemesis, in which the patient was being nourished with nutrient enemata and seemed to be doing well, when suddenly severe dyspnea with cyanosis supervened and the patient rapidly sank and died. At the necropsy the cause of death was determined to be pulmonary embolism. The ulceration of the stomach was extremely superficial and was found only after most careful examination of the mucous membrane with a hand-lens.



## Original Articles.

### ON HYPERNEPHROMAS OF THE KIDNEY.\*

Being a Critical Dissertation Concerning Various So-called Adenomas, Carcinomas, Sarcomas, Endotheliomas, and Peritheliomas of the Kidney, with Particular Reference to their Derivation from Aberrant Adrenal "Rests;" Reports of Eleven Cases Heretofore Unpublished, with Nine Original Illustrations.

[From the Proseutery of the Imperial-Royal Imperial Francis Joseph Hospital, Vienna.]

By ALOYSIUS O. J. KELLY, A.M., M.D.,

of Philadelphia

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WHEN Grawitz,<sup>1</sup> in 1883, first directed attention to the fact that certain tumors of the kidney, which prior to that time had been but imperfectly understood and variously interpreted, were derived from aberrant adrenal tissue in the kidney, to the points of view from which the study of renal neoplasms had heretofore been approached it became necessary to add another; and this latter is still highly important in the comprehension of the histology and histogenesis of new-growths of this organ. Respecting this, Grawitz wrote:

"The following treatise concerns itself with a group of small tumors that, under the name of lipoma of the kidney, have been mentioned here and there in the literature, but which during life so rarely produce perceptible manifestations of disease that clinically they are scarcely known, and pathologic-anatomically they are not especially discussed."

In this group of tumors he included the heteroplastic form of lipoma, or Virchow's "lipomatoid" new-growth<sup>2</sup>; certain microscopic preparations that were found in the collection of the Berlin Pathologic-Anatomic Institute, namely, various so-called lipomas of the kidney, angioma cavernosum renis, myxoma lipomatodes renis, myxolipoma telangiectodes in capsulatum renis utriusque, and myxoma renis; further, the lipoma intrapérinéphrétique partiel of Robin,<sup>3</sup> and finally many tumors described by Klebs<sup>4</sup> as renal adenoma or adenoma carcinomatodes renis, by Sturm<sup>5</sup> as adenoma or glandular carcinoma of the kidney, and by Sabourin<sup>6</sup> as renal adenoma. For these tumors Grawitz proposed the designation *strumæ lipomatodes aberratæ renis*, corresponding with the name *strumæ suprarenales*, which Virchow gave to similar tumors of the adrenal body. In a subsequent communication<sup>7</sup> he included also in this group of tumors the alveolar form of renal adenoma of Weichselbaum and Greenish,<sup>8</sup> whose work at the time of Grawitz's first communication had not yet appeared. He further noted that these usually

benign new-growths might, under certain circumstances, serve as foci of origin of some malignant tumors of the kidney.

The work of Grawitz was most fruitful, being productive of an animated interest in, and leading to a renewed and careful study of, tumors of the kidney in general. His new enunciations soon received abundant confirmation, in that not only the younger writers of a number of inaugural dissertations, such as Wiesel,<sup>9</sup> Hollen,<sup>10</sup> and Ambrosius,<sup>11</sup> but also other authors, such as Chiari,<sup>12</sup> Strübing,<sup>13</sup> Löwenhardt,<sup>14</sup> Beneke,<sup>15</sup> Horn,<sup>16</sup> and Marchand,<sup>17</sup> added the weight of their opinions in support of his views. There were not, however, wanting authors who expressed a contrary opinion. de Paoli<sup>18</sup> reported 3 cases of what he called angiosarcoma of the kidney, without even an allusion to the work of Grawitz. Later, Driessen<sup>19</sup> reported 2 instances of tumors belonging to the category under consideration, and held them to be endotheliomata, expressly rejecting the supposition of any relation to them of the adrenal body or portions of tissue thereof.

Despite these diversities of opinion, however, the views of Grawitz were accorded general, if not unanimous, acceptance, and it remained for Sudeck<sup>20</sup> to absolutely deny their tenability. He resurrected the old theories of Klebs, Sturm, Sabourin, Weichselbaum and Greenish, and wrote:

"As a result of the investigation of them [his cases] I have arrived at the conclusion that they all are to be looked upon as renal adenomas, and that, at least, the majority of Grawitz's strumas are also renal adenomas."

Sudeck's article was followed by the careful and detailed papers of Lubarsch<sup>21</sup> and Askanazy<sup>22</sup> who, critically discussing the views of Sudeck, confirmed those of Grawitz; Lubarsch, in addition, adducing various new characteristics as indicative of the suprarenal origin of these tumors. Then there arose a discussion between Sudeck<sup>23</sup> and Lubarsch.<sup>24</sup> More recently there have appeared papers by Ulrich,<sup>25</sup> McWeeney,<sup>26</sup> Jores,<sup>27</sup> Lubarsch,<sup>28</sup> Manasse,<sup>29</sup> Gatti,<sup>30</sup> and Ricker.<sup>31</sup> In these papers, although there naturally appear variations of individual opinion, and although all the authors do not view as equally characteristic certain distinguishing features of the tumors under consideration, they nevertheless range themselves with Grawitz.

As to the genesis of these tumors there exist, therefore, at present, diverse opinions. The majority of authorities assert that they are derived from suprarenal "rests," while others contend that they are not. The former are most prominently represented by Grawitz and Lubarsch. Of the latter we may distinguish two classes: (1) those who, as Sudeck, reject the suprarenal origin, maintain the epithelial nature of the new-growths, and assert that they arise from the epithelial lining of the uriniferous tubules; and (2) those who reject both of these views and maintain the endothelial nature of the tumors, holding that they are derived

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from a proliferation of the perithelium of the blood-vessels or the endothelium of the perivascular lymph-spaces. I have already mentioned Driessen as a champion of this latter view. More recently Hanse-mann<sup>32</sup> and especially Hildebrand<sup>33</sup> have likewise warmly supported this same standpoint. As regards the nomenclature, the majority of authorities agree with Grawitz and Lubarsch; while others speak of renal adenomas, and still others prefer the designation angiosarcoma or endothelioma. But the difficulty in the classification of these tumors was well recognized by Grawitz when he wrote:

As the point in question stood in dispute, that tumors with a structure that at times resembles that of a lipoma, at times that of a gland, or a sarcoma, or an adenoma, have developed from regular, defined tissue, one may not expect to be able to follow all of these transitional stages in one and the same mode, either because of the nature of the growth, the proof can be only indirect."

And this is the view adopted by the majority of authorities to-day.

The reasons advanced by Grawitz in support of his contention are as follows: 1. "The situation of the tumor directly beneath the capsule [of the kidney], where, as is well known, 'rests' of the suprarenal capsule are not so seldom met with." 2. "The character of the cells,"—so totally different in form from that of the epithelium of the uriniferous tubules. 3. "The cell-contents,"—fat, especially in large droplets, without destruction of the cells. 4. "The tumor-capsule," which is similar to the capsule possessed by suprarenal "rests" in the kidney that do not further develop. 5. "The relation of the cells to the interstitial tissue,"—preponderance of the cells in the part resembling a gland, analogous to the adrenal cortex, where the cells are rather arranged in regular rows; preponderance of fibrous tissue in the central part of the growth, analogous to the medullary substance of the suprarenal capsule, in which the cells, as in the tumor, are more irregularly arranged in small groups. 6. "The amyloid alteration of the vessels," which is deserving of notice, as tumors with amyloid degeneration are rather rare, but more especially because this change, in corresponding intensity, was present only in the adrenal body of the case, the renal arteries, on the other hand, being absolutely unaffected, and the glomeruli but slightly implicated. In conclusion, Grawitz remarks that the so-called lipoma or struma-nodule in the kidney-cortex presents, in its structure, a great resemblance to adrenal strumas. He reports, in addition, tumors of corresponding character and malignant, at least in part, which he refers to malignant transformation of aberrant adrenal tissue in the kidney.

Chiari, who reports a similar case, supports the view of Grawitz and bases his opinion upon the following characteristics of his tumor: 1. The situation of the tumor in a region where suprarenal "rests" occur. 2. The capsule of the tumor. 3. The fact that tumors of

the kidney may develop from aberrant adrenal tissue and that these may become exceedingly large and give rise to metastasis. 4. The histologic resemblance of the tumor to real tumors of the suprarenal capsule. 5. The cell-contents—pigment and fat.

As characteristic of the suprarenal origin of the tumors under discussion, Horn, a pupil of Grawitz, adduces the following criteria: 1. The presence of epithelium containing fat-droplets or—after hardening and staining the preparation—vacuoles, which are to be considered residua of fat-extraction. 2. The dissimilarity in form existing between the tumor-cells and the epithelium of the uriniferous tubules. 3. The characteristic arrangement of the epithelium in rows and double rows, whereby the tumor-tissue, even in places where it directly invades the kidney-parenchyma, is sharply outlined against the uriniferous tubules possessed of a lumen. 4. The fact that the tumors in question have characteristics in common with certain tumors of the suprarenal capsule.

Sudeck, who rejects as untenable the supposition of the suprarenal genesis of these tumors, and asserts that they owe their origin to the epithelium of the uriniferous tubules, bases his views upon the following suppositions: These new-growths are much more common than similar growths of the suprarenal capsule. At a certain period in the development of the tumor, a network of tumor-cells becomes surrounded by a network of capillaries, without being separated from the wall of the capillary by connective tissue. "The typical picture is produced later in that the cells arrange themselves into tubules." This is said to be rendered difficult "because the cells possess no stroma that might afford them a support;" and further,

"The bloodvessels consist entirely of capillaries,—the regular development of larger bloodvessels, especially of arteries, does not take place; it thus happens that in the larger tumors there regularly occur disturbances of circulation—passive congestion—that always means a slow, but continuously operative, disturbance of nutrition."

Thus are explained the frequent hemorrhages, the coagulation-necrosis, the hyaline and the fatty degeneration. According to Sudeck's view it is thus

"Readily explicable that so many tumors of this nature never approach that structure that pertains to well-developed tumors, but that they remain stationary at an earlier stage."

The so-called fatty infiltration is not a fatty infiltration, but a fatty degeneration, such as frequently occurs in the kidney. The cystic spaces present in the tumor indicate

"That the new-growth has arisen through the excessive development or cystic degeneration of a tumor originating as a tubular one; this, because it is impossible to suppose that cysts that are lined with an accurately arranged single layer of epithelium, should not have developed from pre-formed spaces. From this, one unhesitatingly draws the conclusion that the kidney is to be looked upon as the matrix of the tumor, the latter as an adenoma."

The so-called papillary adenomas are only cystic adenomas, whose obliquely cut and therefore clipped-



off septa simulate papillæ. The difference between the papillary and the alveolar adenoma is one of degree only. According to Sudeck's conception

"The cystic (papillary) form represents a further stage of development of the non-cystic alveolar form, whence it is deduced that the latter is likewise a tumor of tubular origin, or, in other words, that it has the same matrix as the cystic tumor, namely the kidney."

Thus, Sudeck would believe that he has entirely invalidated the assertions of Grawitz, who distinguishes between alveolar and papillary adenomas, holding the latter to be true kidney-tumors, and maintaining that the former arise from aberrant adrenal "rests." Sudeck says further:

"The tumor mass consists of a parenchyma network and a stroma network, the latter being composed entirely of a network of capillaries. These are made use of by the parenchyma-cells as a support; because we note, when the typical formation has been attained, that the parenchyma-cells have arranged themselves about the capillaries. One naturally concludes, therefore, that the capillary-network must have pervaded the young tumor mass—still without bloodvessels—at a time when it exhibited no typical arrangement."

And

"From this discussion the inference is, that the cell-contents, the polygonal cell-form, and the arrangement of the cells into double rows, are not to be looked upon as positive indications of the derivation of the tumor from adrenal tissue."

Transition-forms are also said to be seen, in that the epithelium of the uriniferous tubules changes into newly formed alveolar groups of tumor-cells; and in well-developed adenomas, there are said to be, in addition to the ordinary cylindric cells, others that are polygonal, as in the tumors under consideration.

Lubarsch, who, in his detailed and carefully prepared article, accepts as tenable the morphologic features of the tumors advanced by Grawitz, Horn, and their followers in support of their contentions, deals lightly with them and asserts—and in this I agree with him—that he "considers neither the purely histogenetic nor the purely morphologic basis of classification of tumors as comprehensive and correct." Both must be employed in conjunction with each other. Laying stress, therefore, upon both the situation and the appearance of the tumors, as also upon the frequent occurrence of fatty-tumor cells, he adduces, as supplemental to the reasons already advanced by Grawitz and Horn, the following characteristics as indicative of the suprarenal origin of these neoplasms: 1. "The staining property of the nucleoli"—the property of the nucleoli to stain differently from the nucleus when treated according to the Weigert-fibrin and the Russell-fuchsin methods, a property possessed by neither the renal epithelium nor true renal adenomata, but common, however, to the suprarenal capsule—especially the cortex, simple aberrant adrenal "rests" in the kidney, and, as is well known, very many malignant new-growths, particularly carcinomata; 2. "The structure of the cell-protoplasm, which is absolutely at variance with that of the kidney-cells, but which closely coincides

with that of the cells of the adrenal cortex;" whence the deduction "that tumors, whose cellular conformation is after the type of the adrenal cells and not after that of the kidney-epithelium, are derived from the suprarenal capsule and not from the kidney;" 3. "The similarity existing between destructive tumors of the adrenal and this variety of kidney-tumors," not only as regards the gross appearances, but also in "respect to the cell-form, cell-arrangement, and fat and glycogen of the cells;" 4. "The presence of giant-cells," as in simple hyperplastic formations of the suprarenal capsule; 5. "The marked tendency of these tumors to invade the venous system early," a tendency that, as Manasse<sup>34</sup> has demonstrated, is frequently exhibited also by simple hyperplastic growths of the adrenal; 6. "The relations of the tumor-capsule, which is similar in these tumors to those of aberrant suprarenal 'rests,' of which one may distinguish such as are situated in the kidney and surrounded on all sides by a capsule, and such as are simply covered on the surface with a capsule;" 7. The glycogen-formation. "Especially in those cases in which the derivation from adrenal tissue is not immediately patent, the discovery of glycogen—in addition to all the other fully discussed points—is of great diagnostic importance." Contesting Sudeck's assertions, Lubarsch says:—"Whether in a tumor that in general resembles a gland, papillary and cystic formations occur or not is immaterial as regards the determination of the genesis of the growth." The cystic formations are not true cysts. In the suprarenal capsule of man, there are found cylindric cells similar to those present in the tumors under discussion; but the occurrence of cylindric cells in a tumor is not of determining importance as regards its source of origin. Between the uriniferous tubules and the newly formed groups of tumor-cells, transition-forms do not occur. From Sudeck's description of his own tumors, Lubarsch concludes that Sudeck's view that they are "true renal adenomas has not been proved and is absolutely not justified," and in a subsequent discussion, he says that Sudeck "is incapable of distinguishing an adenoma from an endothelioma or a perivascular sarcoma,"† and that Sudeck's tumors belong to the so-called hypernephromas.

Driessen, the first to dispute Grawitz's contentions, feels unable to believe in the suprarenal genesis of these tumors, because of the similarity of his so-called renal endotheliomata with endotheliomata of bone, the possibility of the origin of which from adrenal "rests," one is hardly disposed to concede.

Hildebrand, the most recent and ardent advocate of the endothelial character of these tumors, writes:

† Relative renal origin of tumors.—The deduction that the tumor is of renal origin is based upon the fact that the tumor is composed of cells which are histologically identical with the cells of the suprarenal capsule, for the reason that this organ, especially during the period of its development, forms a physiologic paradigm for every variety of angiosarcoma."

"It is only the perithelium or the endothelium of the lymph-vessels or lymph-spaces that proliferates; the vessels themselves form only the stroma, the framework. Regarding, therefore, the morphology, when I maintain that the correct diagnosis of my tumors is lymphendothelioma or perithelioma, I base my contentions upon the following reasons: The cells are so markedly distinct from the network, that one may not speak of a sarcoma in the ordinary sense; a carcinoma is much more likely. Neither can it be this, because of the reasons already mentioned, and because in a carcinoma there never occur to such an extent pictures such as those presented by these coarsely reticulated formations,—capillaries with marginally encircling cells. The constancy and regularity of this appearance indicate a particularly intimate connection between the cells and the walls of the bloodvessels. In our cases the vessel-septa also contribute a characteristic to the tumors. There is an active production of vessels, an active production of cells,—the vessels persist and proliferate, as do also the cells directly attached to them; but, on the other hand, the cells within the meshes formed by the bloodvessels degenerate. The appearance of the tumor is determined mainly by the course of the bloodvessels,—the more so the older the growth. Having thus directed attention to the great importance of the vessels as regards the form of the tumor, it appears to me very plausible from the microscopic pictures, in view of the abundant proliferation occurring in conjunction with the vessels, that the endothelium about the vessels can constitute in part the parent-tissue, that is, either the perithelium or the endothelium of complete lymph-spaces, but, that, on the other hand, the endothelium of lymph-spaces without vessels also plays the same role. This is indicated by pictures that I have described in connection with Case III, and in which one may follow the increase of the perithelium from its normal size to that of the tumor-cells; it is indicated further, by collections of tumor-cells within spaces in the stroma, which I observed in the same part of the new-growth."

Hildebrand, however, admits that tumors may develop from aberrant adrenal tissue, as he writes:

"According to my opinion, therefore, there may occur in the kidney, not only renal adenomas, not only tumors arising from aberrant adrenal rests, but also endotheliomata."

Ricker<sup>81a</sup> has lately directed attention to the fact that small kidney-cysts are generally in close proximity to misplaced adrenal "rests," and more recently<sup>81b</sup> he has reported a case of renal cyst the size of a pea, in whose vicinity there were found very small portions of suprarenal tissue, with distinct zona fasciculata and zona reticularis. He deems himself, therefore, justified in concluding that an intimate relationship exists between aberrant adrenal tissue in the kidney and renal cysts in otherwise healthy kidneys. He also describes cysts that he always encountered in otherwise perfectly normal kidneys, and which are characterized by the marked fat-contents, the size and shape of the lining epithelial cells. These latter are from 4 to 6 times the size of the cells of the convoluted uriniferous tubules, and are flask-shaped or club-shaped. Concerning the manner of development of these cysts, he feels unable to express himself positively. He further describes "trabecular cystomas," as he terms them, which he places in the same category as the tubular adenomas. The characteristic of this trabecular cystoma is that the otherwise empty cyst becomes pervaded with "thick connective-tissue trabeculae in small number. These, like the cyst-wall, are covered with a single layer of cylindric epithelium, which is beautifully club-shaped,

and reveals the characteristic free fat-spaces in the protoplasm." The trabeculae, which are provided with capillaries, possess, so long as they remain present in small number, in addition to the capillaries, abundant connective tissue "which, with the development of a richer network toward the central part of the trabecular formation, becomes more and more scanty." . . .

"Thereby result tumors whose . . . fatty epithelium rests directly on the walls of the capillaries." In addition to these small benign trabecular cystomas, there occur other larger malignant neoplasms of similar formation. Ricker believes the trabecular cystomas to be true kidney-tumors, and that from the cyst with fatty club-shaped epithelium already mentioned—including the small benign trabecular cystomas—to the large malignant cystomas, there exist "a continuous, inseparable series of one and the same variety of tumor." In addition to their derivation from such cysts, these tumors are said to owe their origin to cicatrices or newly formed connective tissue, as do a number of tubular adenomas.

I have thus, I trust, rendered evident the various opinions (and the reasons therefor) maintained with regard to the histology and histogenesis, not only of certain benign, but also of some malignant tumors of the kidney. It is evident how, on the one hand, purely morphologic reasons, and on the other, both morphologic and biologic reasons are adduced in support of the individual contentions. This marked diversity of opinion is also manifest in the various designations that, from time to time, have been applied to these tumors. Thus, for the adenoma originating from aberrant adrenal tissue, Grawitz employed the term *struma lipomatodes aberrata renis*. Similar growths were recognized by Klebs, Sturm, Sabourin, and Weichselbaum and Greenish as renal adenomas, and more recently by Sudeck also as adenomas or adenosarcomas of the kidney; and these are synonymous with the sarcoma of Beneke, the angiosarcoma of de Paoli, the endothelioma of Driessen and Hildebrand, and the hypernephroma of Birch-Hirschfeld.<sup>36</sup> The last-named authority distinguishes "typical and atypical, or benign and malignant hypernephromas, and according to their origin, cortical and medullary forms." Lubarsch favors this latter designation, and speaks of hypernephroid new-growths, or tumors after the type of the suprarenal capsule, with or without destructive characteristics.

Of late, as has been indicated, the correctness of the views of Grawitz and Lubarsch relative to the histogenesis of many tumors of the kidney in general has been acknowledged. Excepting those that relate to the typical sarcomas, which may develop from any of the abundant connective tissues of the region, there are, nevertheless, many questions still in dispute. Of these I may mention particularly such as relate to cystic tumors, of which, for purposes of comparison, two instances will be reported, and, in addition, the his-



tologic character of certain malignant tumors of the kidney, which in many respects seem to be more allied to the carcinomas than to the sarcomas. It thus appears appropriate and desirable to review the recently published results of a number of careful histologic investigations concerning tumors of the kidney and, collecting a series of cases from a large necropsy-material, to endeavor to more accurately determine the relationship existing between hypernephromas and other primary tumors of the kidney.

I shall report my cases according to the following schema:

#### I. Tumors of the suprarenal capsule.

##### 1. Non-malignant.

*Case I.*—Struma of the suprarenal capsule.

##### 2. Malignant.

*Case II.*—Hypernephroma of the left suprarenal capsule.

#### II. Suprarenal tumors in the kidney.

##### 1. Suprarenal capsule of the affected side present in its normal situation.

##### a. Misplacement of the suprarenal capsule without alteration of its histologic structure.

*Case III.*—Union of the suprarenal capsules with the kidneys and misplacement of portions of the former within the latter.

##### b. Misplacement of suprarenal "rests," with alteration of the histologic structure—but non-malignant.

*Case IV.*—Hypernephroma, with cysts of the kidney.

##### c. Misplacement of suprarenal "rests," with alteration of the histologic structure—malignant.

*Case V.*—Hypernephroma of the left kidney.

##### d. Tumor developing from suprarenal "rests," with complete alteration of the histologic structure.

*Case VI.*—Hypernephroma of the left kidney.

##### 2. Suprarenal capsule of the affected side absent.

*Case VII.*—Hypernephroma of the right kidney.

Further, for comparison:

#### A. Primary tumors of the kidney—adenomas.

##### a. Associated with suprarenal "rests."

*Case VIII.*—Papillary adenoma.

##### b. Unassociated with suprarenal "rests."

*Case IX.*—Tubular adenoma.

#### B. Secondary tumors of the kidney.

*Case X.*—Adenocarcinoma of the thyroid gland.

*Case XI.*—Endothelioma of the iliac bone.

*CASE I.*—Struma of the suprarenal capsule.—Anna S., 72 years of age, died February 7, 1895.

*Clinical diagnosis:* Pulmonary tuberculosis, senile marasmus.

*Anatomic diagnosis:* Chronic granular pulmonary tuberculosis, senile marasmus. As an accidental discovery, there was found beneath the capsule of one adrenal body, a roundish, rather firm nodule, the size of a cherry,—on section between a whitish and a brownish-yellow color.

In microscopic preparations one sees pictures that, both as regards the form and arrangement of the cells, as also the cell-contents, very much recall the cortex of the normal adrenal body. One cannot distinguish a limit of transition of the cortical substance into tumor-tissue—both merge imperceptibly into each other. The cells are, for the most part, arranged into small nests, which have a marked resemblance to the zona reticularis of the normal adrenal cortex; in other

places there are rather cylinders of cells, as in the zona fasciculata. The cells are of polygonal shape, and when one may speak of cell cylinders, the latter usually have a thickness of more than two rows of cells. The cells are rather large, often indeed very large, and contain relatively large nuclei, with nucleoli that stain very well. The cells have only one nucleus each, but quite a few of the nuclei are, however, of considerable size. The cell-protoplasm is pale, faintly granular, and often shows rather large vacuoles, which are to be looked upon as the residuum of extracted fat. In certain parts of the tumor, this fat-contents of the cells is more marked, some cells in these parts revealing very large fat-droplets (vacuoles) without destruction of the cells. The tumor contains a quantity of dark-brown pigment which is deposited in the cells, especially about the nuclei, in the form of very fine granules. In other places rusty-brown pigment is present in the neighborhood of the bloodvessels. Rather large hemorrhages are also to be observed. The groups of cells are surrounded by a network of thin-walled capillaries, which have a beautiful and completely intact endothelial lining. Larger bands of connective tissue, showing some hyaline degeneration, penetrate from the capsule into the depths of the tumor, dividing it into larger and smaller parts. Portions of medullary substance, or of ganglion-cells are nowhere to be seen. The test for iron-pigment is negative. Glycogen is present in small quantity. The kidneys show old inflammatory changes, hyaline bloodvessels and small cysts in the cortex.

*Resumé:* Struma of the suprarenal capsule, exhibiting gradual transition from the normal suprarenal cortex, which having a marked histologic resemblance to the normal suprarenal cortex, and containing old and recent hemorrhages.

*CASE II.* *Hypernephroma of the left suprarenal capsule.*—Sebastian R., 68 years of age, died January 3, 1895.

*Clinical diagnosis:* Carcinoma of the peritoneum.

*Anatomic diagnosis:* Hypernephroma of the left suprarenal capsule, with infiltration of the retroperitoneal and pelvic cellular tissues; hydronephrosis from compression of the ureter; chronic adhesive pericarditis; meteorism of slight degree from compression of the rectum; neoplastic infiltration of the peritoneum of Douglas' culdesac; metastases in the inferior vena cava, the left vesical plexus, the vesical mucous membrane, and the lungs.

In microscopic preparations, the tumor is made up of nodules of varying size and shape, surrounded by a connective-tissue capsule, which is here and there infiltrated by the tumor-cells. The nodules consist of a network of capillaries within whose interspaces the real tumor-cells rest (Fig. 1). In contradistinction to the tumor previously described, these interspaces between neighboring capillaries are much larger and more irregular. Their shape is mainly dependent upon the direction of the section, but it is in general irregularly oval. The cells are also larger than those in the preceding case of struma of the suprarenal capsule, and they are arranged less typically. The first row of cells rests tolerably perpendicularly on the capillaries; the other cells within the intercapillary spaces are placed very irregularly. The nuclei are large, stain well, and exhibit distinct nucleoli.



FIG. 1.—Section through hypernephroma of the suprarenal capsule. The indication of tumors within tubular formations of the cells is noteworthy. Hematoxylin-eosin preparation. X 120.

In any places in the tumor one may note, between neighboring capillaries with the cells directly attached there to, a *hemorrhoidal cavity*, apparently the result of degeneration of those cells situated more in the center of the intercapillary spaces; because remains of nuclei and detritus are discernible within their lumen. The tumor shows in general much necrosis, which is often of considerable extent. In some portions the tumor appears completely necrotic, or the capillaries only are recognizable, as they alone take the stain. Here and there veins, some of rather large size, are almost entirely occluded by the tumor-cells. Fatty infiltration of the cells is present only in moderate amount, especially in those areas in which the longitudinal cavities are seen. The thrombus in the vena cava shows rather fine and delicate cell-nests, many with an indication of a lumen. The test for iron-pigment is negative; the test for glycogen is here and there positive. (The specimen was hardened in Müller's fluid and alcohol.)

*Resumé:* Large malignant tumor of the left suprarenal capsule, which shows, in part, arrangement of the cells into tubules having an indication of a lumen. The cells are directly attached to the bloodvessels. The tumor has invaded the surrounding tissues. It contains larger and smaller areas of necrosis, and has given rise to metastases, not by way of the lymphatics, but by way of the bloodvessels, especially the veins. The kidney is unaffected.

The class of hyperplastic tumors of the adrenal body to which Virchow applied the term *struma suprarenalis* has, through the recent investigations of Pilliet,<sup>86</sup> Marchand, Beneke, Berdez,<sup>87</sup> and especially Manasse,<sup>88</sup> been sufficiently well recognized, and the present instance (Case I) is reported particularly to illustrate a type whose marked similarity to tumors to be discussed later is of importance. The adrenal strumas are usually benign growths that clinically pursue a course devoid of symptoms, and are generally discovered accidentally at the autopsy-table. They commonly arise from the cortex, and may be composed of tissue resembling one or more layers of the normal cortex (as in Case I), or they may be made up solely of tissue of one layer, as in two cases of Berdez. One of these was made up of tissue resembling that of the zona glomerulosa, the other, that of the zona fasciculata. Occasionally they develop from the medullary substance; but, as pointed out by Pilliet, their situation within the medulla is no evidence that they took their origin from that tissue, as under such circumstances they may have been derived from the lowest layer of the cortex—the zona reticularis.

Our knowledge of these tumors was much enhanced by the researches of Manasse, who, in conjunction with Pilliet, Berdez, and Beneke, designated them adenomas, a designation that Lubarsch deems unjustifiable "because morphologically and biologically, the suprarenal capsules as little resemble a gland as do the hyperplastic suprarenal tumors true adenomata." It is for this reason that, for the present at least, he recommends the designation *hypernephroma*. Manasse directed particular attention not only to the increase in number of the suprarenal cells within the tumor, but also to their increase in size (giant-cells), and to the intimate relationship existing between the tumor-cells and the bloodvessels, particularly the veins, as a result of which metastasis may occur even from simple strumas. The last two peculiarities of these tumors are especially

worthy of note because of the similar characteristics possessed by malignant new-growths that develop from the suprarenal body or "rests" thereof. The giant-cells, which Manasse believes to be derivatives of the adrenal cells, were not discoverable in our tumor, but the intimate association of the tumor-cells with the bloodvessels was very evident.

A diffuse brownish-red coloration of the cortical cells of the suprarenal capsule and of certain cells of these tumors—first mentioned by Alexander<sup>89</sup>—is ascribed by Lubarsch, who confirmed, on rabbits and guinea-pigs, the observations of Alexander, to the presence of lecithin. In this connection I may also mention the yellowish or brownish color assumed by these growths when hardened in Müller's fluid,—a peculiarity first described by Weichselbaum.

In Case II, we have to deal with a large tumor of the suprarenal capsule, which, although it manifests great malignancy both clinically and pathologically, is much akin, histologically, to the previously described benign tumor of the adrenal (Case I). In this case also I would direct attention to the intimate association between the tumor-cells and the bloodvessels—both the capillaries and the veins; to the growth into the latter of the tumor-cells; to the relatively large size of the tumor-cells and the cell-nests; to the occurrence of cavities between the cells lining the intercapillary spaces; and to the marked tendency of the growth to become necrotic.

*CASE III.—Union of the suprarenal capsules with the kidneys, and displacement of portions of the former within the latter.* John F., 53 years of age, died December 17, 1896.

*Clinical diagnosis:* Alcoholism, left-sided pleurisy.

*Anatomic diagnosis:* Left-sided fibrinous pleurisy; chronic tuberculosis of the apex of the right lung; passive congestion of the viscera. In addition, each suprarenal capsule was found firmly adherent to the corresponding kidney, and parts of the cortex of the former within the renal parenchyma.

In microscopic preparations each kidney and the corresponding suprarenal capsule are found in intimate association, but with varying conditions at different localities. There are places where each adrenal is separated from the corresponding kidney through the interposition of bands of well-developed connective tissue, with rather few elongated nuclei; others where, through small openings in the connective-tissue capsule, portions of adrenal tissue have been deposited a short distance within the kidney-parenchyma; and still other, larger, places where a connective-tissue capsule separating both organs is completely wanting. Whereas, through the openings mentioned in the connective-tissue capsule, the columns of adrenal cells project rather wedge-shaped into the kidney-parenchyma, in those situations in which a capsule is wanting, the suprarenal cells are situated without regard to regularity within the renal cortex; that is, rather large and often ramifying plugs of adrenal cells are found without regular arrangement within the kidney-parenchyma (Fig. 2). There are also other places where, without the interposition of connective-tissue, the separation of the adrenals from the kidneys is as a straight line—corresponding to the normal delimitation by the capsule; and further, still others, where apparently the kidney-parenchyma penetrates into the suprarenal tissue, especially in those places where the latter appears deposited within the renal cortex in rather wide sections. Here one meets pictures of isolated or almost isolated islets of kidney-tissue within misplaced adrenal tissue. In these situations last mentioned, where the connection between the kidney and the suprarenal tissue is so close, the suprarenal cells are to be distinguished from the kidney-





FIG. 2.—Section through an area in Case III showing irregular deposition within the renal cortex of suprarenal cells. On one side (to the right), at the adjoining peripheries of renal and adrenal tissues, cysts are present, while at the other (to the left) the two tissues are separated in part by a narrow band of connective tissue. Hematoxylin-eosin preparation. X 50.

cells (1) by their different form and arrangement, (2) by their arrangement about the capillaries, (3) by their pigmentation, and (4) by their fat-vacuoles, which here and there almost entirely fill the cell-body. All portions of misplaced adrenal tissue correspond in their histologic constitution with the normal suprarenal cortex of the adult—with the zona fasciculata and the zona glomerulosa. Enclosed within the connective-tissue capsule, as also at the periphery both of the kidney and of the adrenal substance, but likewise further within the suprarenal tissue (both that which is deposited irregularly within the kidney and that which is separated from it by a capsule), there are smaller, and also larger, spaces—cysts—of various derivations. A portion of them are doubtless dilated bloodvessels; others are, however, spaces with a lining of a single layer of cubical epithelium, distinct membrana propria, and partly colloid contents. Prolongations of certain of these spaces from the suprarenal tissue through the capsule into the kidney-cortex clearly demonstrate their renal origin. They are, therefore, to be looked upon as dilated uriniferous tubules, which, as “rests” of kidney-tissue, have been retained within misplaced adrenal tissue.

**Resumé:** Union of both suprarenal capsules with the kidneys, partly through the intervention of a connective-tissue capsule, partly without a capsule; wedge-shaped or irregular invasion of the kidney-cortex by portions of suprarenal tissue; enclosure of kidney-islets within misplaced adrenal tissue; and cysts (dilated uriniferous tubules) at the adjoining periphery of both organs.

**CASE IV.**—*Hypernephroma with cysts of the kidneys.*—Ignatius F., 64 years of age, died August 24, 1894.

**Clinical diagnosis:** Arteriosclerosis, bronchitis, emphysema of minor grade, and cerebral hemorrhage into the internal capsule or its immediate vicinity, the lenticular nucleus, corpus striatum.

**Anatomic diagnosis:** Extensive hemorrhage in the external capsule and the adjoining parts of the central ganglia and posterior limb of the internal capsule of the right hemisphere of the brain; multiple cysts of the kidneys; hypernephroma of the left kidney.

The right kidney is of about the normal size; the left about one-fourth larger than normal; both are rather dense and bloody. The capsules strip readily. In the cortex of both kidneys and projecting beyond the surface there are numerous small cysts filled with clear, viscid fluid. On the surface of the left kidney, there are a few, rather wide, branching depressions. In the cortex there is a round, sharply circumscribed, yellowish-white nodule, the size of a bean. There is moderate arteriosclerosis of the renal and cardiac arteries.

In microscopic preparations, there are evident cysts which are limited to the cortex of the kidneys. A few of the larger ones are pervaded by bands of connective tissue, which divide them into smaller cysts. The cyst-wall is covered with a regularly arranged single layer of epithelium, as are also the

connective-tissue trabeculae. The individual epithelial cells are low, cylindric and cuboidal in shape, and have round nuclei. The tumor is separated from the renal parenchyma at certain isolated points only, and here by but a thin layer of connective tissue. A wedge-shaped portion of this latter tissue, in which a few dilated uriniferous tubules appear cut transversely, penetrates into one part of the growth, and gives to it a cordiform outline. The tumor-mass is made up of very fine and thin-walled capillaries, with well developed endothelium. At the periphery of one of the nodules, there are varicose blood-spaces, parts of the walls of which are formed directly by the tumor-cells. The capillaries form a rather fine network, with small interspaces, which are completely filled with the tumor-cells (Fig. 3). These latter are gener-



FIG. 3.—Section through hypernephroma in a cystic kidney—Case IV. Below and to the right is the kidney—above is the tumor-mass. Hematoxylin-eosin preparation. X 15.

ally rather large—some indeed very large—and of roundish or polygonal form. The cell-protoplasm is pale, and contains numerous large vacuoles. The nuclei are generally large, round or somewhat oval. They stain well, and contain large, distinct nucleoli. Other nuclei are large, irregular, and either hyperchromatic or fragmented. Karyokinetic figures are here and there to be seen. A few isolated cells have two nuclei. In certain of the nodules, larger hemorrhages and yellowish-brown pigment, without the iron-reaction, are to be detected. The test for glycogen yields a positive reaction.

**Resumé:** Two kidneys, with alterations in part due to arteriosclerosis, contain numerous small cysts, with a lining of cubical epithelium, and colloid contents. In addition, one of them contains a small, sharply circumscribed tumor of nodular conformation, made up of cells, which show fat-infiltration, are directly attached to the capillaries present in great abundance, and form the wall of certain widely dilated blood-spaces.

**CASE V.**—*Hypernephroma of the left kidney.*—Sebastian F., 59 years of age, died July 18, 1894.

**Clinical diagnosis:** Old left-sided pleurisy, chronic adhesive pericarditis, acute bronchitis.

**Anatomic diagnosis:** Hypernephroma of the left kidney, with metastases in the right lung; chronic left-sided pleurisy.

The body is of medium size, moderately well developed, and emaciated. The general integument is pale and withered. The neck is rather short and thick. The thorax is short and well arched; the left side somewhat flattened. The abdomen is slightly distended; the abdominal walls tense. The left pleural cavity contains about half a liter of almost clear, slightly blood-stained fluid. The parietal and visceral pleurae are covered with membranes from 5 to 10 mm. thick, in great part the seat of hyaline degeneration. There is obsolete tuberculosis at the apex, and atelectasis of the left lower lobe. The right lung, in the region of the middle lobe, is markedly adherent to the thoracic wall, and displays, directly beneath the pseudomembrane, pea-sized or cherry-sized nodules of a white, soft new-growth, with central fatty degeneration and necrosis. Similar nodules, some as large as wal-



ments are distributed throughout the parenchyma of the lower lobe. The intervening pulmonary tissue contains air and is bloody. The anterior edges of the lung are turgid. The right ventricle of the heart is hypertrophied; the cavities contain partially coagulated blood; the valves are competent. The liver is large, rather firm, and bloody. The spleen is displaced anteriorly, and is enlarged; the capsule is thickened, the pulp brownish-red and friable. The right kidney is in its normal situation and rather bloody. The right adrenal is likewise in its normal situation. The left kidney is enlarged from the presence of a tumor the size of a man's head, replacing its parenchyma in the upper half. The left adrenal is present, resting upon the superior pole of the kidney. On section, the new-growth is found to consist of white, soft tissue, showing fatty degeneration of large areas and others destroyed by hemorrhage. Below, it is limited by a thin layer of cortical substance; posteriorly, above, and externally, it reaches the connective-tissue capsule of the kidney, which it does not penetrate. The small veins of the preserved renal parenchyma in the vicinity of the tumor appear thrombosed. The left renal vein and the vena cava are unaffected.

In microscopic preparations, a rather long, narrow portion of suprarenal tissue is seen (Fig. 4), presenting almost the

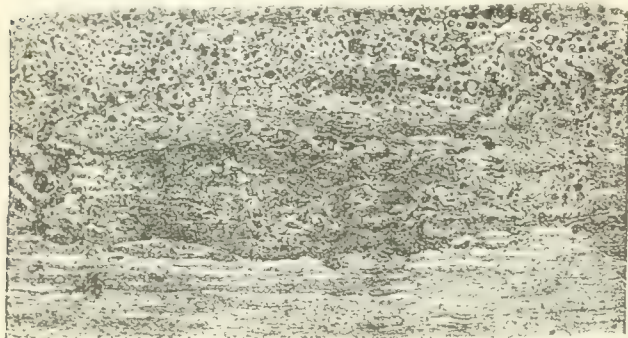


FIG. 4.—Section through hypernephroma of the kidney—Case V. The section shows in the center a longitudinal portion of suprarenal tissue, with the adjacent tumor-nodules (above), both separated from the kidney by a connective-tissue capsule (below). Hematoxyline-eosin preparation. X 5.

normal structure of the adrenal cortex, especially that of the zona fasciculata. This is completely separated from the adjoining kidney-parenchyma by a thick, dense connective-tissue capsule. This section of suprarenal tissue consists of fine, thin-walled capillaries, which form a network with longish interspaces. Adrenal parenchyma-cells are found within the intercapillary spaces, being intimately adherent to the walls of the capillaries. The cells are of moderate size, and have round or short, oval nuclei, which stain well and contain large nucleoli. There are, further, noticeable, in the cell-protoplasm, distinct vacuoles—residua of extracted fat, and, in the connective tissue, streaks of rusty-brown pigment. Close to this islet of suprarenal tissue, and separated from it by a narrow strip of connective tissue, the actual tumor is found. A few of the cells of this latter, to be presently described, are situated in streaks in the connective tissue and reach almost to the section of adrenal substance, and a few are also found infiltrating the strip of connective tissue intervening between this area of suprarenal tissue and the kidney. The tumor is made up of nodes of varying size and conformation. Certain of these present a structure similar to that of the islet of suprarenal tissue already mentioned. These nodules are pea-sized or cherry-sized, and are surrounded by a distinct connective-tissue capsule. There is present the same capillary network, in the interspaces of which are found the tumor-cells, commonly filling the interspaces, which are usually small. In certain of these cell-nests, in addition, there is in the center a space filled with detritus. The cells exhibit marked fat-infiltration. In other nodules the picture is totally different. These are likewise surrounded by connective tissue, and consist of large alveoli, of which only the cells directly attached to the capillaries and the endothelium of the capillaries themselves are distinctly discernible (Fig. 5). These cells, however, appear quite different from those of the nodules previously described. They are much larger, contain frequently hyperchromatic and often irregular nuclei, do not rest upon the capillary wall

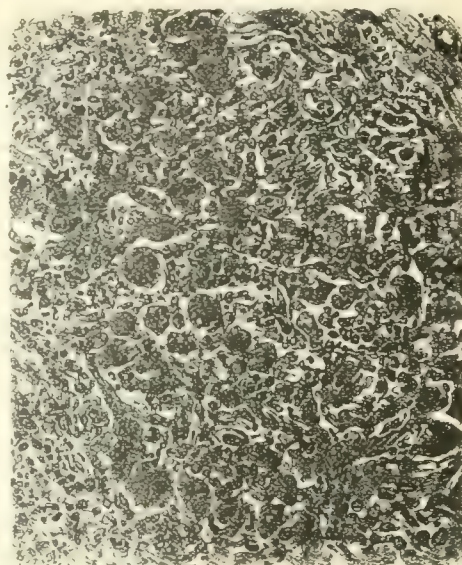


FIG. 5.—Section through another nodule of the last tumor—Case V. Hematoxyline-eosin preparation. X 120.

as palisades—but are attached irregularly, and they fill the entire intercapillary spaces of the network. The large protoplasmic bodies of these cells are pale, and contain numerous vacuoles, which are generally very large. The nuclei have large nucleoli. Karyokinetic figures are also present. Certain cells of excessive size have three, four or more nuclei. The tumor exhibits a marked tendency to regressive metamorphosis, and numerous large sections of it are completely necrotic; but those areas in the immediate vicinity of the large bloodvessels are usually well preserved. Large and small hemorrhages are also to be observed. Here and there the capsule has been broken through by the tumor-cells, and some small veins are totally occluded by them. The muscular coat of certain other veins has been rent asunder by the tumor-cells, which press forward, even to the endothelial lining of the vessel. It is impossible to determine positively whether or not a portion of the walls of some of the capillaries are formed directly by the tumor-cells. As has been noted in the strip of adrenal tissue, there is also at the periphery of certain of the tumor-nodules rusty-brown pigment that gives the iron-reaction. The pulmonary metastases are precisely similar in structure to the formations last described. The test for glycogen is negative. (The preparation was hardened in Müller's fluid.)

**Resumé:** Tumor of the left kidney containing islets of adrenal tissue of almost normal structure; distinct and usually well preserved encapsulation of the tumor-nodules, which exhibit considerable necrosis; fat-infiltration and variable form of the tumor-cells, which are in intimate association with the bloodvessels—the capillaries; metastasis only by way of vascular system; both suprarenal capsules present in their normal situations.

**CASE VI.**—*Hypernephroma of the left kidney.*—Charles K., 50 years of age, died April 13, 1897.

**Clinical diagnosis:** Tumor of the spleen, grave anemia.

**Anatomic diagnosis:** Hypernephroma of the left kidney, with hemorrhage, extensive fatty degeneration, and invasion of the renal vein and ureter; grave anemia; edema of the brain and meninges; general atrophy of the viscera.

The right suprarenal capsule is present; its cortex is dark brown in color. In the left renal region there is a longitudinal tumor of about the shape of the kidney, and of the size of a large ostrich-egg, pushing forward the peritoneum of the posterior abdominal wall. It has an uneven nodular surface, and is completely surrounded by a capsule. On section no kidney-tissue is discernible. The entire growth is composed of areas the size of small apples and smaller, without sharp demarcation. Some of these are of whitish color and soft consistence, without distinct juice; other larger areas are yellowish and dry; still others possess a honeycomb-like structure, in that between whitish bands there are visible spaces the size of peas or smaller, filled with yellowish, yel-



lowish-red, or blackish, masses. The left renal vein is excessively dilated and filled with a conical tumor mass, which is partly adherent to the vessel wall, and the extremity of which almost reaches the vena cava. It is entirely the seat of fatty degeneration. A similar prolongation projects into the upper third of the ureter. The left suprarenal capsule, unchanged, rests upon the upper extremity of the tumor. It appears twisted upon its horizontal axis, so that its base comes to lie above and to the front.

Microscopically the tumor is made up of nodules of varying size, the majority of which are surrounded by distinct and often rather thick bands of connective tissue. From this inter-nodular connective tissue, there proceed, here and there, very fine septa of similar connective tissue into the interstices of the nodules. In well-preserved and apparently young areas, the tumor is made up of cells and a stroma, the latter being composed of relatively large capillaries, which possess an apparently intact endothelium. In older areas, the stroma consists of very large capillaries, which are much distended with blood, and whose endothelium does not appear to be everywhere intact. The capillaries form a rather close network, whose interspaces contain the tumor cells, which rest directly upon the endothelium of the capillaries (Fig. 6). On



FIG. 6.—Section through hypernephroma of the kidney—Case VI. Aluminocarmine preparation. X 140.

horizontal section, they appear attached to the vessel as radii; in places where the vessel is cut longitudinally, the distal poles of a row of cells are almost in contact with the corresponding poles of cells opposite to them and attached to an adjoining capillary. There thus result tubule-like formations possessed of a lumen, which is seldom entirely empty, but is generally filled with desquamated cells and detritus. In older areas the spaces between the rows of cells are often very large and entirely filled with necrotic cells. The well-preserved tumor-cells are high-cylindric in shape, in part very much elongated and club-shaped; others, however, are irregular and polygonal. In certain sections, the cell-protoplasm contains in addition to fine, also a considerable quantity of large, vacuoles, which are to be viewed as residua of extracted fat. The cells have one—rarely two or more—very large, round nuclei, which are generally situated toward the free extremity of the cell, stain intensely, and contain a large nucleolus each. A few karyokinetic figures are to be seen. There are areas of necrosis of various size distributed throughout the tumor, and here and there large and small hemorrhages are to be detected. At the periphery of certain of the nodules—but never within the cells—rusty-brown pigment yielding the iron-reaction is found. In certain portions of the tumor, the tumor-cells can be distinctly observed penetrating the walls of the veins, and giving rise to complete occlusion of the lumen of many of the vessels. The glycogen-test is positive.

*Resumé:* Large malignant tumor of the left kidney, un-

accompanied by alteration of the left adrenal body; the tumor-cells are high-cylindric, contain fat-vacuoles, and are intimately associated with the bloodvessel system; the tumor invades the bloodvessels, and exhibits a great tendency to degenerate and to give rise to hemorrhages.

CASE VII.—*Hypernephroma of the right kidney.* Maice P., 54 years of age, died February 7, 1887.

*Clinical diagnosis:* Sarcoma of the right kidney; pericarditis; embolism of the left Sylvian artery.

*Anatomic diagnosis:* Hypernephroma of the right kidney, with metastases to both lungs.

The body is small, slender, and poorly nourished; the general integument is withered and pale; the face somewhat wasted. The neck is rather short, the thorax rather long and narrow. In the right lumbar region there is a short incised wound filled with degenerated new-growth and in process of cicatrization. The abdomen is slightly prominent, on the right more than on the left. The lower half of the body is somewhat edematous. The skull is mesocephalic, somewhat asymmetric, thick, and compact. The dura is thickened. On its inner surface there is a delicate false membrane, yellowish in color and pervaded by numerous small, generally flat, recent hemorrhages. The inner meninges are slightly opaque and edematous. The brain is anemic, moist, and somewhat atrophic. The diaphragm is pressed upward on the right side to the fourth intercostal space, on the left side to the fifth intercostal space. Both lungs are adherent to the parietal pleura below. Both contain air, are anemic and moist, and throughout their parenchyma there are scattered about twenty pea-sized or nut-sized tumor-masses. Some of the larger of these nodules are yellowish in the center, and rather opaque. In one of the branches of the pulmonary vein of the left lower lobe there is a tumor-thrombus about 1 mm. thick and 5 or 6 mm. in length. The heart is somewhat dilated, the cardiac muscle brownish-yellow. The free edge of the mitral valve is covered with fine wart-like excrescences; the other valves are smooth, and all are competent. In the right side of the abdominal cavity there is a flat, nodular tumor, the size of a child's head. It is attached to the anterior and lateral abdominal walls, and displaces the liver upward, the intestines toward the median line. The liver is rather large, anemic and yellowish. The spleen is somewhat increased in size, the pulp brownish-red and friable. The left suprarenal capsule is of normal size and in its normal situation. The left kidney is somewhat enlarged, its capsule non-adherent, its parenchyma pale, the structure of the cortex and pyramids well preserved. The right suprarenal capsule is absent. The upper extremity of the right kidney is directed outward and downward. Above it there is a new-growth, the size of a man's head, which consists of rather soft, light-brownish, nodular or lobulated tumor-masses. The larger nodules are in part the seat of central necrosis and are yellowish in color; others are hemorrhagic and softened. The kidney is somewhat enlarged and sharply delimited by its capsule. The renal parenchyma, with the exception of a narrow strip of cortex at its lower pole, is completely replaced by the tumor-mass, which here is of a whitish color. Below the kidney there are numerous white, soft nodules, forming a prolongation about the size of a closed fist, reaching to the linea innominata. The mucous membrane of the pelvis of the right kidney, into which a plug of the new-growth projects, is preserved. The tumor in its laterally situated upper extremity exhibits softened and puriform striations, which extend to the wound of incision already mentioned. A tumor-thrombus projects from the renal vein into the ascending vena cava. It is 1 cm. in length, and  $\frac{1}{2}$  cm. in width, and has a verrucose surface. The stomach, intestines, and the genitalia present no noteworthy alteration.

Microscopically the tumor consists, in the small and non-necrotic nodules, of a rather close network of vessels. The intercapillary spaces are filled with moderately large cells that are directly attached to walls of the vessels—to the endothelium. The cells appear, on transverse section of the capillaries, attached to the vessels as radii; on longitudinal section of the capillaries, the cells appear arranged along the walls of the vessels in rows—palisades, as it were (Fig. 7). In many places the nuclei are situated at varying heights in the cells, so that an appearance suggestive of a double layer of epithelium is presented; but such double layer does not in reality exist. The free ends of the rows of cells that accompany the



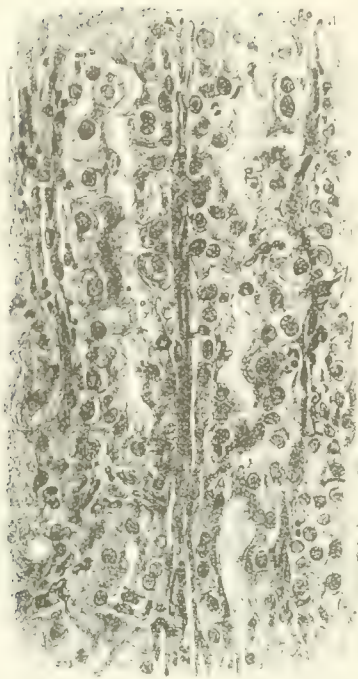


FIG. 7.—Section through pulmonary metastases—Case VII. Hematoxylin-eosin preparation, X 100.

vessels are, in many areas in contact with the unattached extremities of adjoining rows of cells. In many places, between two adjoining rows of cells there is a longitudinal space, in part filled with cells similar to those that line it, in part with cell-detritus. The shape of the tumor-cells attached to the capillaries (consisting only of endothelium) is somewhat variable. For the most part they are rather high-cylindric. On transverse section of the vessel, which reveals the radial attachment of the cells, the attached ends of the latter are seen narrow, their free extremities presenting a club-shaped enlargement. The cell-protoplasm is rather homogeneous; the nuclei are large, round or slightly oval, and frequently situated in the enlarged end of the cells. In areas in which the tubule-like formations already mentioned occur, the protoplasm of the free, enlarged extremities of the tumor-cells exhibits rather large, round vacuoles. Karyokinetic figures are present in small number within the tumor-cells. They are large and hyperchromatic. The endothelium of the capillaries is apparently intact. The tumor is made up of pea-sized nodules, surrounded by bands of dense connective tissue, which sends trabeculae irregularly into the interstices of the nodules. Here and there within this connective tissue, in the neighborhood of well-preserved portions of the new-growth, as also elsewhere, there are large quantities of rusty-brown pigment. Distributed irregularly throughout the tumor-nodules themselves there are hemorrhagic foci of varying size and more or less altered. There is, further, in some places swelling of the cells covering the capillaries, with the formation of a rather homogeneous substance, containing few nuclei, but many vacuoles. There are some areas in which the necrosis occurs in the form of small striations, especially in the larger nodules. In the pelvis of the kidney a zone of small round-cell infiltration separates the neoplasm from the tissues of the pelvis. The pulmonary metastases exhibit, in the smaller nodules, a distinct radial arrangement of the tumor-cells. The growth here consists also of a network of capillaries with long interspaces. The tumor-cells are attached directly to the endothelium of the vessels and exhibit the characteristics already mentioned. In the pulmonary metastases the capillaries in the peripheral layers of the nodules are distinctly of the same breadth as in the central parts, and no connective tissue enters into the tumor. The test for iron-containing pigment reveals the rusty-brown pigment in the connective tissue to be hemosiderin. The test for glycogen is positive.

*Resumé:* The tumor affects the right kidney; the left suprarenal capsule is absent. The growth is constituted of

rather large cells, which show in part fat-infiltration, and which are directly attached to the capillaries, forming a branching and anastomosing network; the growth gives metastases only by way of the bloodvessels, and shows a marked tendency to regressive metamorphosis and to the development of hemorrhagic foci.

Case VIII.—*Papillary adenoma.* Jacob R., 79 years of age, died July 17, 1895.

*Clinical diagnosis:* Pulmonary emphysema; degeneration of the heart; probable incompetency of the aortic and mitral valves.

*Autopsy diagnosis:* Pulmonary emphysema; degeneration of the heart; incompetency of the aortic and mitral valves.

As an unexpected discovery there is found at about the middle of the outer periphery of the cortex of the left kidney, a cyst, the size of a nut, about one-third of which projects from the surface of the kidney and is firmly attached to the capsule. The remainder is separated from the renal parenchyma by bands of connective tissue. On section, the cyst is found filled with brownish hemorrhagic fluid, and from its walls there project soft, villous-like excrescences, from 1 to 2 mm. in length.

In microscopic preparations (Fig. 8), the tumor is sepa-



FIG. 8.—Section through papillary adenoma of the kidney—Case VIII. The neoplasm to the right, the connective-tissue capsule in the center, the renal tissue to the left. Hematoxylin-eosin preparation, X 50.

rated distinctly from the surrounding renal parenchyma, by a thick, dense connective-tissue capsule, which is continuous with the capsule of the kidney, and contains, in addition to isolated areas of round-cell infiltration about the bloodvessels, a large quantity of rust-brown pigment that does not yield the iron-reaction. This pigment is present both in that portion of the capsule along the periphery of the kidney as well also as toward the renal parenchyma. From the connective-tissue capsule, numerous excrescences project into the cyst. These have mostly a narrow pedicle, and become wider toward their free extremity, where they not uncommonly present a bulbous enlargement. In the excrescences there are central, irregular, wide capillaries; nuclei are few, and between them there is, in part, irregular filamentous substance, in part, fine detritus; and here and there extravasations of blood. The various excrescences are covered with a cubical or cylindric epithelium, the nuclei of which are situated toward the base of the cells. A basement membrane is not discernible. A similar epithelial covering is also spread uniformly over the wall of the cyst. In one corner, toward the renal parenchyma, there is a secondary diverticulum of the cyst which is lined with similar



epithelium. The epithelial cells are in great part infiltrated with fine granules of rust-brown pigment, and the spaces between the excrecences are filled with disquamated epithelial cells, masses of pigment granules, and blood corpuscles, more or less altered in character. In the immediate vicinity of the secondary diverticulum already mentioned, there is a small area that contains still smaller aggregations of fat tissue between bands of connective tissue, with a rather plentiful supply of nuclei, and in which there are, in addition, fissure-like spaces covered with cylindric epithelium. The iron-reaction is negative, as is also the glycogen-reaction. (The preparation was hardened in Müller's fluid.)

*Resumé:* Cyst with papillary excrecences, covered with low-cylindric epithelial cells, which exhibit no fat-infiltration, but which are completely filled with blood-pigment. In the vicinity of the cyst is a small adrenal lipoma, containing small tubule-like formations revealing epithelium.

*CASE IX.—Tubular adenoma.* Barbara D., 39 years of age, died July 14, 1895.

*Clinical diagnosis:* Facial erysipelas; cardiac valvular disease.

*Anatomic diagnosis:* Facial erysipelas; cardiac valvular disease.

As an accidental discovery there is found in the cortex of one kidney, near the surface, a pea-sized, sharply circumscribed nodule, of yellowish-white color, and of rather soft consistence.

In microscopic preparations stained with hematoxylin, the tumor can be seen with the unaided eye to be of roundish outline, with a somewhat irregular periphery, and 6 mm. in diameter. It is situated in the cortex, reaches almost to the surface, and is sharply outlined against the surrounding tissue by its much darker color. Under the microscope (Fig. 9) it is seen



FIG. 9.—Section through tubular adenoma of the kidney—Case IX. The kidney-tissue is to the right, the tumor to the left. Hematoxylin-eosin preparation. X 50.

to be made up of spaces of varying size and conformation, which are mostly small and round; others, cut diagonally, are oval, and still others more elongated, curved, or tortuous. These spaces are lined with cells, which are commonly arranged in a single layer, especially in the very small and round formations. Many of the spaces, however, are lined with epithelium arranged in several layers, and some of them are completely filled with cells. These lining epithelial cells are very small and cubical. They present but little protoplasm, which has neither pathologic contents nor vacuoles, as though the residua of extracted fat. The nuclei are

situated toward the base of the cells; they are round or slightly oval, and large in proportion to the size of the cells. They are readily stained intensely, and exhibit distinctly one or two small nucleoli. In certain of the spaces of larger dimensions already mentioned one notices protruding invaginations, in others formations apparently free in the lumen. All of these are covered with epithelium similar to that already described. Between all of these spaces there is a delicate connective-tissue stroma which is most apparent between those spaces from which the epithelial contents have fallen. This stroma possesses a moderate number of red-shaped nuclei which course around the spaces and which are readily distinguishable from the nuclei of the epithelial cells within the spaces. Within the stroma there are a few capillaries which vary in width. At the periphery of the tumor-nodule, which is not encapsulated, the adjoining renal parenchyma is in part unaltered, in part compressed, and certain of the uriniferous tubules are pushed aside and separated by the invading neoplasm. The connection between the stroma of the tumor-nodule and the interstitial connective tissue of the kidney is very obvious. The central and peripheral portions of the growth do not present any differences in their histology. Larger cysts are not present. The tests for iron-pigment and for glycogen are negative.

*Resumé:* Small, non-encapsulated tumor, infiltrating between the uriniferous tubules; tubular adenoma of the kidney much akin to a cylindrical carcinoma.

TO BE CONTINUED

## THE CLIMATIC TREATMENT OF PULMONARY TUBERCULOSIS.<sup>1</sup>

By HENRY B. DEALE, M.D.,

of Washington, D. C.

Modern medicine is best illustrated by the tendency of the profession to utilize other methods than the application of drugs for the cure and alleviation of disease. During all the centuries of which we have the recorded experience of observers few specifics have been discovered, and it seems to be the opinion and custom of those best qualified to speak to resort to drugs in most instances merely as an emergency-measure to tide over a crisis until nature can reassert its power. This opinion is well exemplified in the majority of recent works on medicine as compared with those issued even a few decades ago. In the latter, page upon page is devoted to the therapeutics or the cure of disease by the application of drugs, many different prescriptions with a combination of many medicaments are given in full and the most absolute faith in their efficacy is evinced; in those of recent date the subject of treatment is so brief as often to cause disappointment to the student who seeks some remedy with which to fight disease; few drugs are suggested and even these few are for the most part not deemed curative, but tentative under certain phases of the disease.

The consideration of such subjects as diet, mode of life, and surroundings, both as regards soil, climate, etc., and their indirect bearing upon disease, is given deservedly greater notice.

Within the last few years it has been my fortune to visit several resorts advised for pulmonary tuberculosis.

<sup>1</sup> Read before the Medical Society of the District of Columbia, December 1, 1897.

The different localities presented so many different phases as regards climate, temperature, humidity, and sunlight, that one could not but be impressed that all could not possess equal advantages with their diversified surroundings; that one locality must combine more recognized elements favorable to this class of disease than another; while it may be wanting in certain favorable conditions that exist elsewhere. nevertheless its combined advantages outweigh the combined advantages of other regions.

Another point that is evident in looking up such a subject is the fact that the vast majority of literature on the subject of any particular climate in the treatment of disease has been written, and naturally so, by physicians who live in the region recommended. There is no intention to impute in the slightest degree any ulterior motive to any of these writers, to whom we are indebted for much that we know upon this subject. Indeed one is impressed with the conscientious effort of the majority of recorders to eliminate any bias from their observations and statements. Nevertheless, a brief resumé of the literature of this subject, together with a personal observation, though slight, by one untrammelled by any preconceived bias may not be aniss.

The consideration of the climatic treatment of disease must not be restricted merely to the effect of atmospheric conditions in themselves upon certain diseased states, but rather must we look into the collateral benefits that accrue when certain conditions exist for a greater or less time.

We shall here try to compare various regions as regards weather, rain or sunshine, heat or cold; altitude, humidity or dryness, and conditions of the soil in their influence upon tuberculous disease of the lungs.

It may be well to review what we know in regard to the tubercle-bacillus outside the body and what conditions favor and what retard its development and growth. It has been proved that this microorganism gains in virulence and growth when exposed to moist heat in badly ventilated and dark places, while on the other hand its power is lost or diminished when it is exposed to sunlight in a dry cold atmosphere, and to a less degree in a dry warm atmosphere.

Koch, in 1890, found that the tubercle-bacillus was killed by the action of direct sunlight in a time ranging from a few minutes to several hours, depending upon the thickness of the layer exposed; diffused daylight has the same effect, though a longer time is required.

Brown-Sequard and others found that animals inoculated with bacillary matter, and kept in confined spaces with imperfect ventilation, became tuberculous, while those kept in the open air, after similar inoculation, escaped. It will be well to examine, as far as possible, separately, the various elements that go to make up a climate (though this is difficult, as the one depends so upon the other), and the individual effect of each upon tuberculous disease in its various phases, before con-

sidering their combined action, as found in various localities, upon the individual.

Let us begin first with the temperature or the relative amount of heat. For many years the medical attendant considered his duty done when he sent his tuberculous patients to a warm climate, irrespective of other climatic factors, and to a certain degree this was an improvement upon the cold, damp, inclement weather to which the patient was probably exposed during the fall and winter months at his home. But moderate heat, or heat and moisture, may be considered as worse than useless, indeed, injurious to tuberculous disease, except in those hopeless and far-advanced cases with great softening and excavations, leaving little lung-tissue, and that weakened by its necessarily overtaxed powers.

A climate is not necessarily hot because it has abundant sunshine. The temperature of a locality is due to the amount of moisture contained in the air; it is the watery vapor of the atmosphere that absorbs the heat from the sun's rays passing through it, and if such a thing as absolute dryness of the atmosphere were possible, the sun's rays would pass through to the earth without loss of heat, and the difference of temperature in sun and shade would be most pronounced. Cold and moisture are always injurious, possessing no therapeutic value.

It has been shown that

"cold and moisture, and to a less degree warmth and moisture, retard the transpiration of the fluids of the body both through the skin and the respiratory mucous membrane, diminish the excretion of urea and carbonic acid, induce congestion of the internal organs, especially of the lungs and kidneys, favor cold and catarrh, lessen the hemoglobin and other vital constituents of the blood and tissues, and in this way weaken potential and kinetic cell-energy and thereby favor tuberculosis."

On the other hand, dry climate, a rather rare circumstance, has its place, and is of great benefit in the treatment of certain stages of the disease; as in the acute febrile condition, with active degenerative changes in progress, that cannot stand the exhilarating effects of altitude, a dry, warm climate of low or very moderate elevation is of great benefit.

A dry, cold climate has many features favorable to this disease.

"Cold and dryness, and to a less degree warmth and dryness, increase the transpiration of fluids of the body, facilitate the excretion of urea and carbonic acid, relieve the overtaxed congested viscera, favor oxygenation, increase the hemoglobin and other vital constituents of the body, and increase latent and active cell-energy, favor constructive metamorphosis, and thereby oppose tuberculosis."

In altitude or diminished barometric pressure we have a most valuable addition to the factor just considered. Undoubtedly, for a short time after going to a higher plane, the heart's action is increased in energy and rapidity; but this is accompanied by a lowering of the blood-pressure, so that previous hemorrhage is not a contraindication.



It was formerly considered that it was the diminution in the amount of oxygen that accounted for the shortness of breath, etc. As the actual amount of oxygen, even at the greatest heights, is in excess of that required for the blood to carry on its functions, this theory is unsatisfactory. We must not suppose that a given amount of fluid has lost a given amount of oxygen and nitrogen, but being removed from the center of the earth it is more expanded, so that a cubic inch at sea-level occupies at 5,000 feet  $1\frac{1}{2}$  cubic inches. Atmospheric pressure that is 15 pounds to the square inch at sea-level loses at the rate of half a pound for each thousand feet of altitude; so, also, lowered temperature, with its diminished humidity, occurs at the rate of  $3^{\circ}$  for each thousand feet.

It has been proved that it is a deficiency in the proportion of oxygen in each cubic foot of air inhaled, not in its actual amount. In fact the special effects of altitude are directly produced, not through the influence upon the lungs and heart of reduced pressure of the atmosphere or of a reduced amount of oxygen, but by reduction of oxygen-pressure. As each drop of hemoglobin can take up oxygen only in a certain proportion to the oxygen-pressure of the air, therefore, when oxygen-pressure is lowered, as in high altitudes, the newcomer is rendered uncomfortable because his blood is not properly oxygenated by each ordinary inspiration. To remedy this he breathes faster, so as to take in more air and oxygen in a given space of time; the heart has to pump more frequently into the lungs and the pulse is faster. The respiratory act is increased in vigor and depth, and this brings hitherto incompletely used portions of the lungs into active exercise, with a hypertrophy of normal lung tissue, vicarious emphysema in the neighborhood of the tuberculous tissue, and enlargement of the thorax. Circulation and respiration are at first quickened, but after 6 or 8 weeks they are found to have slowed and to have gradually fallen below normal. The breathing becomes deeper, the inspiration longer and the expiration more complete.

The advantages are well expressed by Stewart when he says:

"It is shown that if to dryness there be added a considerable degree of rarefaction, with its usual accompanying influences, namely—sunshine, lowered humidity, lowered temperature, and increased diathermancy (power of transmitting radiant heat) the above beneficial effects are doubly intensified; with the additional benefit of accelerated and strengthened heart action and respiration, increased appetite and assimilation, and increased pulmonary and thoracic ventilation, and increased absorption of infiltrated exudation and broken-down debris. This latter obviates the necessity of forcible expulsion by cough and expectoration and removes so much additional culture-soil for the bacilli, as well as the bacilli themselves."

Another remarkable effect of high altitude is the hematogenic effect. This is observed in the increase of hemoglobin and of the red blood-corpuscles. Benefit is thereby induced by the increased germicidal power of the blood, checking the further growth of the bacilli

and also by improving the anemia and cardiac weakness that usually coexist with tuberculosis.

These blood-changes are found almost invariably in patients going to higher altitudes, and often in the healthy, the increase reaching to the normal and often beyond, and lasting so long as exposure to the rarefied atmosphere continues, but its permanency is uncertain after changed residences to lower planes. It is not to be supposed that every case of pulmonary tuberculosis, irrespective of the stage of the disease or its complications, will do well at high altitudes. It may be briefly stated that the following conditions contraindicate the use of altitude treatment: Florid tuberculosis, or acute cases with pronounced symptoms of active extension, with fever; or those with extensive cavity-formations, with little normal lung-tissue; also cases complicated by mitral or aortic disease, *without* good compensation; cardiac dilatation; atheromatous disease; and diabetes.

Allbutt, in his recent *System of Medicine*, says:

"In the early days of high-altitude treatment a history of hemoptysis was looked upon as a bar to this treatment. The reasons for the belief were merely theoretical and a more extended experience has shown that the very reverse is the fact, and that hemorrhagic cases do remarkably well there."

This is borne out by my experience in examining a number of patients recently who had a hemorrhagic history previous to seeking high altitudes.

As a rule, all other cases do well at high altitudes, unless there is some individual peculiarity, which is rare. If there is any question in the mind of the medical attendant as to the patient being a suitable case for such treatment it may be well to begin with a lower, and later send him to a higher locality; though I am convinced that the best results are to be expected from high altitudes of 5,000 feet or more.

Humidity of the soil is even worse than atmospheric humidity. The influence of soil on the accumulation of moisture is well known, as is the close connection of non-permeability of the soil with the production of disease. The covering of the soil with vegetation protects it from the sun's direct rays and thus modifies the temperature.

Sunlight, or a number of clear days, besides its germicidal action, already mentioned, is a distinct gain to the patient in permitting greater outdoor life and the necessary benefits that follow.

Moderate rainfall in a locality where the soil is loose and does not hold the moisture is beneficial in two particulars, namely, it washes and cleanses the atmosphere and also prevents a great amount of dust.

Where the soil is unfavorable or holds moisture for a greater or less time, as when it is clayey, it is decidedly injurious, as damp soil is even worse than damp air.

Mobility of the atmosphere, or the prevalence of wind is succinctly considered by Solly in the following words: "Wind makes a bad climate worse, and a good

climate better." It is beneficial according to the temperature, humidity, and the condition of the patient. A cold, moist wind is generally soothing, though often depressing; it aggravates catarrhal affections, if they are of the relaxed type. Warm, moist winds lessen irritability. Cold, dry winds stimulate or else irritate the patient; they improve relaxed catarrhal affections, but they make those that are inflamed worse. We may infer from this that a moderate wind, dry and free from pathogenic dust, is not injurious, and sometimes is of benefit.

From the foregoing considerations of the various factors that go to make up a climate it seems justifiable to draw the following conclusions as to the relative beneficial effects upon pulmonary tuberculosis in its earlier stages:

1. Damp, cold, or to a less degree damp, warm climates of low altitudes are decidedly injurious.
2. Cool climates of moderate elevation and a certain amount of humidity of air and soil are less injurious and in some cases of slight benefit.
3. Dry, warm climates with high elevation are beneficial.
4. Dry, cold climates of high altitudes are of the greatest benefit.

We shall now examine and compare the most prominently recommended resorts for tuberculous patients in this country. I am indebted for the data of the appended chart to Dr. Phillips of the Weather-Bureau and to an article by Dr. Samuel Fisk, of Denver, Col., to both of whom I wish to express my appreciation for this material aid to the paper.

It may be well to explain certain terms used on the chart to more clearly appreciate their importance. By "relative humidity" is meant the ratio that the amount of vapor actually bears to the amount required to saturate the space at the given temperature; by "absolute humidity" the actual number of grains of water in a cubic foot of air.

A "clear day" is one on which the cloudiness, that is on the average of the day, does not exceed three-tenths of the sky; "a fair day" is one on which the sky is from four-tenths to seven-tenths covered with clouds, on the average of the day; and a "cloudy day" is one on which the sky is either completely clouded over or from eight-tenths to nine-tenths cloudy. The number of days of rain includes all days on which an amount equaling or exceeding  $\frac{1}{100}$  inch fell.

The omissions noticed in the chart are unavoidable, as the Weather-Bureau has no station at the respective localities. Some records contain the observations for one year only and these are necessarily not as accurate as the average for a number of years. The annual humidity of Saranac was approximated by combining that of the three nearest stations and taking their average, and it must not be considered as absolutely correct. The relative humidity of Washington is usually given as higher than that of the chart, about 72, and as the chart-estimate is for one year only it is liable to error.

If the views of the comparative value of the various factors of climate are correct, as set forth earlier in this paper, we may now draw our conclusions from the chart.

	ALTITUDE FEET, INCH.	MEAN ANNUAL PRECIPITATION	MEAN RELATIVE HUMIDITY.					MEAN ANNUAL HUMIDITY.	LATITUDE.	MEAN TEMPERATURE.					AVERAGE NUMBER OF DAYS.						
			SPRING.	SUMMER.	AUTUMN.	WINTER.	ANNUAL.			SPRING.	SUMMER.	AUTUMN.	WINTER.	ANNUAL.	YEARS.	CLEAR.	FAIR.	CLOUDY.	RAINY.	YEARS.	
Washington, D. C., 2,000 Population	112	29.96	62.3	70.0	66.6	70.0	67.2	1	3.31	38.75	52.6	74.9	56.6	35.6	55.0	20	111	147	107	131	26
Jack-onville, Pa., 17,501 Pop.	43	30.05	74.1	79.0	81.9	80.1	78.5	1	5.76	30.50	64.0	81.7	70.3	57.5	69.7	18	123	156	85	124	17
San Diego, Cal., 16,100 Pop.	67	29.91	76.0	78.7	75.7	72.0	75.6	2	4.38	32.00	59.1	67.6	63.4	54.7	61.2	17	133	149	82	42	19
Thomasville, Cal., 5,114 Pop.	218									30.50	67.6	80.3	67.8	53.7	67.3	13					
Los Angeles, Cal., 50,395 Pop.	350	29.6	74.0	74.8	71.2	67.5	71.0	9	4.23	34.00	61.2	70.4	64.7	54.4	62.5	14	173	142	49	42	13
Albany, N. C., 2,332 Pop.	320		57.5	65.9	66.0	63.9	63.3	16		33.50	65.9	78.3	63.0	47.5	62.9	20	204	105	55	92	4
Saranac, N. Y., 708 Pop.	172						76.3	1		44.50	38.6	64.2	43.1	15.9	40.5	1					
Asheville, N. C., 10,235 Pop.	1,094		61.3	71.0	66.3	63.3	67.0	1		35.50	54.1	70.7	51.2	39.3	54.5	15	196	93	76	130	6
El Paso, Tex., 10,338 Pop.	3,370	26.24	25.2	37.9	41.1	45.0	38.4	2	2.38	32.00	64.5	81.9	62.8	46.5	61.0	12	221	111	30	48	10
Denver, Col., 106,710 Pop.	5,284	24.71	49.5	47.2	45.3	51.9	48.5	9	1.89	39.70	47.9	70.1	50.2	40.6	49.7	20	154	146	55	84	10
Colorado Springs, Col., 11,140 Pop.	5,000	23.00	50.1	51.5	50.1	53.1	51.8	4		38.50	46.9	65.5	48.1	32.5	47.5	1	167	149	49	79	3
Santa Fé, N. M., 6,180 Pop.	6,802	23.29	36.8	40.6	46.6	54.8	44.8	9	1.67	35.75	43.4	68.1	49.8	30.9	49.3	17	167	155	42	82	15

Washington is included in this list merely to compare its climatic feature with that of the resorts selected. The amount of precipitation and wind in these localities has intentionally been omitted from the chart, for the reason that they are so often misleading unless one can consider the daily record. For instance, a large amount of rainfall may occur in a very few days in a region where rainy days are not frequent, and the average will be as high as or higher than that in some other locality where the same rainfall may have extended over weeks. Besides, the soil-conditions are important factors in considering rainfall.

Santa Fé, Colorado Springs and Denver may be considered as possessing a high altitude, low humidity, rather cold temperature and a high percentage of clear days—all most important factors for tuberculous patients, and they may with justice be considered the most favorable localities for early cases of tuberculosis. Of these Denver seems to hold out to the invalid certain extrinsic inducements. Being a large city, it furnishes the advantages of diversion and amusement, with possible occupation not to be found in other resorts. These, however trivial they may appear, are not unimportant to the happiness and contentment of



a patient seeking a new home. To those who cannot stand either the altitude or coldness of these localities El Paso offers a most favorable substitute.

Asheville is a city of moderate elevation, with a cool and somewhat damp climate, and is of benefit to those who for various reasons cannot seek a drier and higher altitude.

Saranac, from our imperfect data, presents more of a rather damp, cold climate, so that *theoretically* considered it could not be advised as a suitable resort for the tuberculous, though experience does not bear this out. The others may all be considered as belonging to the class of low altitude, high humidity and temperature, and may be said to possess none of the factors favorable to the *cure* of the disease; though to those invalids far advanced in its destructive processes, who cannot stand the exhilaration of altitude, they furnish warmth and sunshine, so that removed from the damp cold of the North and its tendency to increase the catarrhal processes, they permit more out-door existence and thereby prolong life.

The conduct of life as to exercise, diet, etc., as well as the length of residence in the new locality, should be left to the discretion of some physician there, to whom always the patient should be referred in order that he may be under immediate professional observation and direction.

Undoubtedly many of the resorts that do not possess all the favorable factors just considered have been of great apparent benefit to individual cases in the experience of all; but it is well not to be deceived by a few cases, as often temporary benefit has been observed by removal from a more suitable to a less favorable region. To what this is due we cannot say, perhaps a change in the ordinary habits of life; but it is certainly the part of wisdom in the medical attendant to advise, whenever practical, a location that furnishes the theoretic as well as the practical advantages favorable to tuberculous disease of the lungs.

## THE UNION OF MEDICAL AND PUBLIC LIBRARIES.<sup>1</sup>

By GEORGE M. GOULD, M.D.,

of Philadelphia.

I wish to say that the opinions I shall express are purely individual. I am a member, and even an officer of the Association of Medical Librarians, but I have had no means of consulting my fellow-members or the executive committee concerning this subject and do not, therefore, speak officially. I wish to urge the justice, the saving of expense upon the part of the community, and the pressing importance of uniting the work of public medical and public general libraries. I wish to secure your endorsement of the plan, and your coöperation in bringing it about.

It seems strange that, as a rule, medical men generally have not thought of this method, and, with some few noteworthy exceptions, have held it necessary to organize and carry on their own book-houses wholly distinct from the public ones. As a result of the impossibility of doing this they have, again generally speaking, utterly despaired of having any common medical library. I speak, of course, of the vast majority of American small cities, villages, and towns. There are different conditions in the dozen or more largest cities, but I am not sure that even in these, had the plan been tried, it would not have been better for all concerned. However, throwing out of consideration the few large cities that may find it possible to have separate medical libraries, it remains true that the preponderant majority of physicians in the United States have no common or public medical libraries, and of these, again, the larger number might have such library-service if they would but make use of the public general library.

Upon the part of the profession the advantage is so striking that one is astounded to find it almost wholly neglected. Theoretically there are 45 public general libraries with medical departments, but only a few of these are efficient, stocked, and active. In the first place, as has been said, it is only by the union that the physicians of villages and small cities can afford a library at all. The result of having no library at all is a terrible handicap for the profession, placing the small-city man or the rural practitioner at such a disadvantage with the big-city man that he rarely reads papers at medical gatherings or contributes them to journals. Almost worse than this, it forces him and all his competitors to buy each of them one copy of all good books, when one book in a common book-house would do for consultation by all the practitioners of the place or the neighborhood. This tax on the physician's slender income is often almost unendurable for those who, buying books, submit to it, whilst those who do not buy the books, drop into a boorish lethargy of intellectual and professional life, and you, their patients, suffer or die for their sin. You can tell *any* man's professional or mental status by a glance at his book-shelves. No library at all also serves to enrich lay book-publishers, and to make them monopolists and dictators, and—some of them—most uncommon egregious asses.

Another and most weighty advantage to the profession is that the union-library would be the means of saving and utilizing myriads of valuable medical books that are now wasted. The libraries of physicians retiring from practice, or dying, are now generally lost, lie rotting in attics, or are sent to the pulp mills. Thousands of volumes of the *Transactions* of medical societies in America and Europe are awaiting the establishment of such book-houses. Donations and codicils in wills would follow the surety that the gifts would be

<sup>1</sup> Read at the meeting of the American Library Association at Lake Worth, N. Y., July 5, 6, 7, 8, 1898.

cared for. The present method is the very worst and most stupid that could be thought of; a mere nod of the head would change it all into a consummate blessing for all time. According to Dr. Spivak, of Denver, Col., who at great labor has compiled the statistics, 2 cities in the United States with a population of more than 400,000 have no public medical libraries; 6 cities of over 100,000 also have none; 4 of over 70,000, none; 8 of over 50,000, none, and of 30 cities with a population of over 30,000, there are only 3 that have such libraries. This shows in what a deplorable condition of barbarism is medical literature. Massachusetts stands at the head of the roll of honor with one medical library to every 203 physicians; 13 States have each one medical library to less than 1,000 physicians; 6 have one each to 3,000, 4,000, and 5,000 physicians. The Dakotas, New Mexico, Oklahoma, Arkansas, Florida, Missouri, Nebraska, North Carolina, Wisconsin, Vermont, and even New Jersey (with over 2,000 physicians), have none at all. Probably not 1% of the physicians of the United States make any practical use of public medical libraries. The total number of volumes in all the public medical libraries in the United States also tells the same pathetic story in another way. It is only 659,116, with only 3 having about 100,000 volumes. Seventy cities have less than 10,000 each, most of them having only something above 1,000. In many cases the "library" is a small collection of old rubbish of which the resident physicians know absolutely nothing, sometimes even do not know that it exists.<sup>2</sup>

Upon the part of the public library, the advantages would be hardly less decided. Let me mention but one or two. If I understand the matter rightly, the devil is hard-pressing the angel of light in the way of the library-business. The community—that part of it which observes accurately and concludes logically—is in deep doubt whether much reading is productive either of much intellectual or of any moral living. Decidedly, it depends upon the kind of reading. In a democratic country, I gather that you find it sometimes a mighty hard tussle to square your consciences with the demands of your readers for trash, and for much that is worse than trash. In a word, would not the addition of the medical alcove result in a distinct gain in your own self-respect, and in the respect of the intellectual part of the world? Would it not be a salve to wounded feeling to hand out books on public health, physiology, the cure and prevention of disease, instead of Mrs. Southworth, or Mr. Nothing-worth, or a hundred haggard riders? I confess as I look over the shelves of the ordinary public library, or watch its statistics, that I am a bit frightened and disgusted at the trend and outcome of our much-vaunted public-school system.

Your American Library Association lists are brave, but the devil is mounted on a mighty war-horse, and shows no signs of winding. I believe the union I urge would help you to fill your shelves with proofs of the real intellectual and moral gains of the race, the solid and everlasting goods in the sciences allied to medicine—such as biology in all its hundred branches, botany, zoology, physiology, public health, sanitary science, bacteriology, preventive and curative medicine, etc. I am at times questioning if the *belles-lettres* and novelistic library, as at present commonly characterizable, is only a preparation for better things, is only, as it were, an apprenticeship, a learning and preliminary education in library technic, etc. Literature, the best of it, is essentially aristocratic, a thing necessarily for the few. Science, and especially the biologic sciences, and, more than all, the medical and sanitary branches, are essentially democratic. How soon will Lord Demos "find his soul," and come to a consciousness of his own rights and privileges? At present he is mightily interested in his quacks, his faith-cures, pink pills, wizard-oils, and a thousand evil spawnings of magic-mongering and savagery. How soon will it be, before you have to order 100 copies of each new work on hygiene, economics, domestic cookery, and the care of babies? You smile, but Demos has done stranger things than this in his time.

But, on the part of the community as a whole, what innumerable benefits would flow from the library-union. First and foremost, it is demanded by justice and common sense. The physician is devotedly, unselfishly, heroically working for the community. There is no such unselfish, charitable, and overworked laborer in the whole list as he. And, as a rule, you are mighty ignorant of the fact, and ungrateful to the man. But he pays his taxes for the library as well as the rest, and has just as perfect a right to have the community buy and care for his books as have the readers of "All for Her Sake," "Reginald's Wooing, or the Headless Horseman." The medical alcove would show recognition of the work of the physician, and, more than this, recognition of the duties and departments of which he is humanity's chief officer. Your readers all know of the great slayers and cursers of mankind; how little they know of the helpers and savers! They know their Napoleons and Zolas. Do they know as well their Pasteurs and Jenners? Do they know of the work in saving thousands of lives, and adding thousands of years to the life of a generation, done, for example, by a single physician of Buffalo? Do they know *how* these lives were spared, and the years gained? Perhaps even hardly one of you knows that it was by many years of warfare persisted in every day in the face of hatred, opposition, law-suits, bribery, and ignorant infamy, warfare against dirty and diseased milk, against filth in houses, in cesspools, slums, ash-pits, cellars, backyards, in stables, in drains, and sewers, against disease in water-supplies, in mate

<sup>2</sup> Complete details and statistical tables of this subject will appear in a most valuable paper by Dr. Spivak, soon to be published in the PHILADELPHIA MEDICAL JOURNAL.



and food of all kinds, warfare against dens of infamy, against overcrowding, laziness, city rings and bosses, and all the beloved vices of men and women. Doubtless, the lives of several hundred babies in this city alone have been saved during the last year by partially preventing the sale of long rubber-tube nursing-bottles, and yet every other mother and every second drug-store has broken the law, and laughed at their crimes.

I think the medical alcove in your libraries may directly and indirectly help to awaken the resident community—the poor, silly community, hypnotized by ignorance and befouled with quackery—to some realizing sense of its duty to itself and of its crimes to the medical profession. For at last, it is only self-interest, if the people but knew it. Half of the disease and death in the world, the disease and death that load down the tax-bill and burden the community with suffering and expense—a full half at least, is preventable. Wherever is this preventable half or more, there has been its causal moral or hygienic sin. The medical library, active, before the eyes of all, means a profession capable of coping with disease and preventing it, and means an awakening knowledge on the part of all that individual and communal guilt must stop breeding the ills with which humanity has groaned since the days of savagery.

The public library should be the intellectual and moral center of the life of the community, and its shelves should clearly show how far the people have traveled in scientific and ethical progress. The medical department in the public library, and the well-organized library in every city, village and town of the land, will be the proof that civilization has at last conquered barbarism, that health and long life are recognized as the first of all human duties, and that disease, filth, and the high death-rate—those history-long curses of humanity—have been met and conquered.

Perhaps you think it strange I urge this union-work upon you, who are generously willing to undertake it, while the most evident fact is that the medical profession is the sinner, indifferent, lethargic and lazy. I confess with shame that this is true. We have not improved the opportunities you have offered us, and are most ashamed of ourselves. I am appealing to you to help make us more ashamed and begging you to go home, and by tireless labor arouse medical men, trustees, etc., to a realizing sense of their duty and their opportunity. We are not wholly without excuse. We have been very busy curing your sick, and you have lavished your love most prodigally upon your pet quacks. You also have some sins to atone for. Do, then, let your atonement be shown in this way.

It may be said by some quibbler that the medical alcove will lead to an absurd multiplication of departments, the lawyers', the assyriologists', etc., etc., but this is all theoretic stuff and nonsense. In proportion to the need and service may the allotment be made.

"Children should not see medical books and journals?" Librarians and their assistants are neither children nor fools, and they know how to make and to enforce proper rules.

Shall the thousand lay-folk buy and care for the books of the half-dozen physicians? Most certainly, yes. What proportion of your readers last year read the best history of civilization, the best ornithologic or botanic treatise? The whole community is divisible into a hundred classes of readers, and no one branch of knowledge is psychologically or ethically separable from all others. What proportion of pages in the *British Encyclopedia* is devoted to subjects medical or physiologic? What work is so basic and primal as preventive and curative medicine in the well-being of the community? Individual and local conditions may modify the terms of union, the amount of purchases, the ownership of special works and journals, but these conditions cannot and must not be allowed materially to prevent the profoundly important and growing need of union and cooperation in library-service between the medical profession and the general public. It may be that the union as advised in small cities and in towns will ultimately turn out to be preparatory and temporary, and that the medical library distinct and carried on by the medical profession alone will be the outcome wherever the local profession progresses in numbers, wealth and unity. Speaking individually, as I again emphasize I am here doing, I doubt the wisdom and advisability of this ideal. The community owes a debt to the profession that can be paid in no better way than in the just and proper manner of purchasing and caring for his professional literature. The time is propitious; physicians stand at the parting of the ways in this whole library-matter. The community, the American Library Association, and the trustees of public general libraries have shown an entire willingness to aid the profession, to set aside a part of their funds for the purchase of books, to give space, alcoves or distinct rooms for them, and to provide librarian-service for their care, etc. It appears to me that it would be the most suicidal policy on our professional part not to accept the generous offer. The plan does not prevent local professional control, the supplementing of purchases by specially supplied funds, etc., etc., upon our part. Even the best of our separate medical libraries, even the four great libraries at Washington, Philadelphia, New York and Boston are hampered for funds, incomplete in many respects, and in a constant state of solicitude and trouble. I see no reason why they should not have had the help of the community, and every reason why they should have had this help. In all smaller places certainly the public library and the medical library could be united with great resultant good. In Denver the union has solved the problem and has given the local profession a fine library otherwise entirely impossible.

If you are convinced of the advisability of the union-plan I ask your endorsement of the following resolution:

WHEREAS, The public library should be the means of stimulating all neighborhood intellectual and scientific progress, and of representing the combined helpful forces, ethical, mental and sanitary, furthering the well-being of the entire community; it is therefore

*Resolved*, That in the opinion of the American Library Association it is both possible and advisable in the interests of the library, the profession and the community, that public libraries should have medical departments, and that physicians and medical societies be cordially invited to cooperate with the librarians and trustees of public libraries in establishing and maintaining such medical departments.<sup>3</sup>

### SOME NEW PRACTICAL PHARMACEUTICO-THERAPEUTIC NOTES, AND SOME NEW IDEAS IN SURGICAL INSTRUMENTS.<sup>1</sup>

By SAMUEL F. BROTHERS, PH.G., M.D.,

of New York City

Professor of Anatomy in the New York Post-graduate Midwifery School, and  
Attending Gynecologist at the Zion Hospital and Dispensary, the  
Columbus Dispensary and Hospital, and the  
Women's Polyclinic.

I HAVE on previous occasions demonstrated some new glass uterine irrigators having a real curve corresponding to the conformity of the vagino-uterine canal. I also showed how these could be made in a few minutes from a straight tube of glass, obtainable in any glass-apparatus place; how, for a nominal sum, these glass tubes can be obtained of any desired size, shape or thickness, and, with the aid of a Bunsen (blue flame) burner, or even a common alcohol-lamp, any desired form can be made in a few minutes; how readily these could be kept absolutely clean with the use of a long "nursing-tube brush," sometimes called a clay-pipe cleaner, sold at all drug-stores. I am at present also using glass female catheters, made and cleaned in the same way. Experience with the "pelvic-curve irrigators," however, has convinced me that, unless used with great caution, these instruments may induce harmful results, because they reach the highest parts of the uterine cavity, a result not achieved by those generally used. Instrument-houses now keep these pelvic shapes in stock.

On another occasion I showed you a water-motor storage-battery, available for every possible medical or even non-medical purpose, from faradic battery to motor, cautery, electric lamp, etc. This apparatus is only an 8 by 10 inch water-mill, adjustable to any hydrant or

pump-faucet, the revolving wheel producing an electric current through its connection by a pulley with an electric motor or a small dynamo. This current is collected into a storage-battery, and from this as much electricity is taken off as is desired, having appropriate arrangements for whatever use we wish to put it to.

For immediate utilization of an electromagnetic (alternating) current, we have only to use the current directly from the motor or dynamo, thus dispensing with the storage-battery altogether. I now use such a current from an electromagnetic machine, regulating it partly by the pump-faucet; and this without any outlay in over two years. It is said, however, that anybody using large quantities of water for this purpose will be liable for a water-tax; but even such an expense would be practically nominal if enforced.

Where the reservoir water-pressure is low, as it is in New York City, an extra-large pipe must be carried from the street-main, or two faucets from separate pipes will be required. There is so much resistance in the storage-cells, that the small motor ordinarily used must make at least 3,000 revolutions per minute to overcome it and charge the battery. The noise of its operation is one objection, as I have had it constructed.

Firms in the wind-mill business are recommending a similar apparatus in which the electricity is generated through the operation of their wind-mills. Of course, where an electric current is readily obtained from a company, it is hardly worth while to depend on any self-generated current. Outside of the water-motor battery, I have found the combination blue-stone and storage the best.

I wish in the present communication to call attention to the experimental use of the elementary substances in medicine, a subject that seems to my mind to have been thus far unduly neglected. There is no reason why we should not have an extended list of such medicaments, which are at present limited to iron (metallic), mercury, and perhaps a few others.

Chemists tell us that there are at present known about 71 elements, not counting argon and helium. Of this list we may say that bromine, carbon, chlorine, iodine, iron, mercury, oxygen, phosphorus and sulphur are the only ones at present employed in the elementary state—about  $\frac{1}{3}$  of the total number. Of course, most of the remainder, excepting aluminum, copper, gold, hydrogen, iridium, lead, magnesium, nickel, nitrogen, platinum, silver, tin and zinc are rarely found in the elementary state, many of them being more or less rare in any form. Such are beryllium, cesium, davyum, decipium, didymium, erbium, gallium, ilmenium, indium, lanthanum, lavoisium, mosandrum, neptunium, niobium, osmium, palladium, philipium, rhodium, rubidium, ruthenium, tantalum, tellurium, thallium, titanium, uranium, vanadium, yttrium and zirconium. Those found only in combination commercially are antimony, arsenic, barium, bismuth, boron,

<sup>1</sup> After adjournment of the meeting, the Executive Committee endorsed the resolution, and this is equivalent to the endorsement by the Association. The paper was read in abstract at the last session of the general body, and referred to the Executive Committee according to the rules.

<sup>3</sup> Paper read before the New York County Medical Association, May 16, 1898.



calcium, cerium, chromium, cobalt, fluorine, lithium, manganese, potassium, selenium, silicon, sodium, strontium, thorium, tungsten, and cadmium.

Of the methods of employing the elements in medicine I suggest first, solids in powder, tablets, pills, etc., for internal administration; or the same in alloys or amalgams. For external use the same powders or "leafs" (gold and silver) may be mixed with lanolin or other oil or fat, or the alloy or amalgam may be similarly mixed. It is not likely that a melted metal could be mixed with an unctuous material without decomposing it.

Liquid elements, of which bromin and mercury are the only ones commonly known, can be taken plain or diluted, or made into powders, tablets or pills when the dose is small, for internal use, or mixed with an ointment for external use.

Gases may be inhaled directly, used in solution or otherwise, or in elementary combinations as previously stated.

For a working formula for amalgam-ointments we may incorporate a dram of the finely divided element and a dram of mercury with 10 drams of lanolin; or, instead of this, we may mix the powder with 2 drams of a 50% blue ointment. I have learned recently that a blue pill and a blue ointment with iron has been already placed upon the market. There is no reason why these preparations should not be used, if obtainable in suitable forms, for hypodermic use, as enemata, as rectal, urethral, vaginal, or nasal suppositories, or as gargles, mouth-washes, or for aural, ophthalmic, or laryngeal purposes.

Lanolin is the best vehicle for external use when absorption is desired, and an average formula of one to ten is the most practicable. Most of these preparations will evidently turn out to be alteratives of various character, just as arsenic and mercury differ.

My next notes take up the consideration of solutions and triturations. The universally prescribed paregoric or camphorated tincture of opium seems to be an indispensable agent, especially to the pediatricist. This preparation is notoriously uncertain in strength, in spite of the efforts that have been made to overcome this difficulty. The principal cause of uncertainty at present lies in the fact that every pharmacist makes it according to a different formula. In discussions on this subject, it is usually contended that a solution of the principal alkaloid or active principle is not an exact substitute for the crude drug; it is, however, admitted by all that the main effect is ascribable to these. At any rate, the other constituents are present in so small a quantity, that it is clear that their effect must be altogether subsidiary. I have used morphin as a substitute for opiates for years, both in the oldest adults and the youngest infants, and have never observed any worse effects than would be seen from the drug itself, providing always that the dose has been properly graduated. For

these classes of patients, I have always calculated on  $\frac{1}{10}$  gr. as the adult dose, estimating from the formulas  $\frac{\text{age}}{\text{age} + 12}$  for children and  $\frac{\text{age}}{24}$  for patients over 12 years of age.

There is a great deal of autohypnotism among physicians, as well as among other human beings; medical men will become attached to a certain idea, and no amount of argument will free them from it, although perhaps, after years, their own judgment will correct their mistaken notions.

I wish to propose the use of the following solutions and triturations, most of which I have employed in my own practice with the most satisfactory results; I wish to recommend their consideration by our representatives at the next revision of the Pharmacopeia. The drugs suggested besides morphin are atropin, strychnin, and aconitin; the solutions and triturations to be in the proportion of 1 to 100 of glycerinated water, or of sugar of milk. Aconitin being insoluble, the trituration only can be made, unless an aqueous extract of aconite (assayed) be found efficient. For the benefit of those irreconcilably wedded to crude drugs, I would recommend the same preparations to be made with unvarying proportions of the various alkaloids and active principles.

It seems about time that we had some official substitutes for the old-time sirups. Besides being more elegant, "glycerin-sirups" are not open to the objection that they are nauseants and gastric irritants, and frequently defeat the objects for which they were administered, viz.: gastric and intestinal irritation. Further, it is not comforting to find a child suffering from broncho-pneumonia and weak enough as it is, vomiting not phlegm but food, as a result of some "sirupy" concoction. I suggest the following glycerin-sirups as substitutes. It is impossible to make them all clear, oil of peppermint being the only oil that mixes clear, as glycerin has an affinity for water and not for oil. I have added a number of flavors not usually used in medicinal sirups, our Pharmacopeia being sadly deficient in these very necessary flavoring materials; to my mind they are just as important as the remedies themselves. The list comprises almond, dill, anise, orange, brandy, caraway, bergamot, calamus, cinnamon, cloves, coriander, whisky, cardamom, licorice, fennel, wintergreen, juniper, lavender, lemon, peppermint, spearmint, bay, nutmeg, mulberry, musk, wild-cherry, allspice, rose, rosemary, blackberry, raspberry, tolu, sassafras, sarsaparilla, vanilla, ginger; gin, rum, brandy, whisky, wines, champagnes and alcohol may be used in making "glycerin-elixirs." Saccharin might be also used, if found to possess sufficient preservative properties, although it is said to have a metallic taste.

Of course compound glycerin-sirups or glycerin-elixirs may be made in any variety by mixing two or more together. As perfumes and cologne are now used in

baking and confectionery, glycerin-sirups, etc., of these might be found useful; such are violet, pansy, heliotrope, rose-geranium, etc.

The fruit-flavors used in soda-water sirups are most valuable; I frequently order them in milk, etc., when a patient has become completely disgusted with all fluids, such as cereal waters or bread or toast water, or koumiss, matzoon, kefir, beef-teas and juices, soups, and no change to solids is advisable. Such a patient will frequently take fluids in this way with avidity and relish. The flavors include, besides those already mentioned, chocolate, strawberry, pineapple, pear, peach, coffee, cherry, banana, etc. Cider might be found a useful adjuvant. As at present constituted peppermint-water and one or two other waters are about the only flavorings of any account in the Pharmacopeia that could be used with a glycerin-prescription.

Again, when we come to ready-flavored powders, we must turn to the German Pharmacopeia for its oleosaccharins. True, it is comparatively easy to order a volatile oil in conjunction with sugar or sugar of milk, but still we are not always sure of just how much a quantity of sugar will absorb, and again, we can only guess at the quantity necessary for a certain flavor. The oleosaccharins are made with two drops of oil to one dram of sugar. With the exception of calomel, it is best to use sugar of milk instead of cane-sugar for powders, even though this is not so sweet and has a somewhat "floury" taste; it is especially undesirable for dyspeptics.

I wish now to consider some new ideas in surgical instruments. I was surprised in looking over the display-samples of instruments at one of our stores, to see more "wire" instruments than I ever thought had been made. It was my intention to suggest the more general use of such instruments, for it is remarkable how few of these are seen in our dispensaries, clinics and hospitals; for, to my mind, these must be the ideal instruments of the future. Just imagine a genito-urinary surgeon using a urethroscope modeled after the pattern of a "putty-blower," when he could get a complete view of a large part of the urethra at a glance with a proper wire instrument, modeled on the same lines!

In approaching the final topic under consideration I shall ask, What would be the ideal treatment for the pregnant woman? And I shall answer this question by stating as my belief that every woman, the moment she complains of abnormal sensations during pregnancy, whether in the first or in the last month, should be placed in a plot of ground either with others of her temperament or by herself, and allowed to do nothing but look after her own personal wants, without molestation or interference. Such a plan is, however, not feasible and could not be carried out. In the early reports of Indian women during childbirth it was stated that labor among them was almost absolutely

painless; and yet later reports denied this positively, showing that already the advance of civilization (even though not actively participated in by them) had had its effect in making their labors more or less painful.

What is our present method of accelerating labor—for, to my mind, this is the main cause of its painfulness. We apply forceps and with two results: (1) we compress the head of the fetus; (2) we *wedge* the parturient canal open. Now, would it not seem more reasonable to enlarge the canal first, so that the fetus is given a fair chance to escape? Suppose we were to attempt a high-forceps operation, and the cervix were so rigid that it positively refused to yield, what would be the result? Why, the whole uterus would be torn from its fastenings, and would be pulled out of the body with the fetus. I have never heard of such an occurrence, but I am positive that extensive peritoneal lacerations are being constantly produced during childbirth.

Now what is my notion? It is this: that an instrument be devised that will not unduly compress the head of the fetus—that will not pull on the fetus, until the canal has first been sufficiently dilated to admit of it, if found at all necessary.

The instrument that I would have made is a combination of a uterine dilator and a pair of obstetric forceps, with this difference: the dilator will not only dilate the cervical canal; it will dilate the whole parturient canal—uterus, vagina, and vulva. In this way I hope to make labor, if not painless, at least rapid.

I admit that there is one fault still with this system of delivery, and that is that one of the principal elements, viz., pain, has not been as yet overcome; but I still hope to succeed, or to hear of another who will succeed in carrying Schleich's cocain and morphin or some other anesthetic through the instrument in such a way that the labor will not only be rapid, but painless as well.

### CLINICAL STUDY OF THE SPECIFIC GRAVITY OF THE BLOOD.<sup>1</sup>

By CORA LANE LICHTY, M.D.,

of Clifton Springs, N. Y.

As the value of hematology becomes more apparent to the general practitioner, the methods and instruments required for that study are objects of considerable interest. Accuracy, simplicity, and cost, are prime considerations relating to such methods and instruments, and any advance in these considerations is worthy of attention. Probably one cannot now claim anything new or original in the study of the specific gravity of the blood, but its accuracy and simplicity, and the small cost of the instruments necessary, are such as to commend it especially to the general practitioner as a method for estimating the percentage of hemoglobin.

The Fleischl hemometer is quite expensive (cata-

<sup>1</sup> Read before the Ontario County Medical Society, April 12, 1898.



log-price \$35.00); its use requires some practice on the part of the operator, and also the ability to detect slight differences in color; it is not convenient for bedside-work because of the need of a small, dark chamber to get the most accurate readings; and by all writers upon hematology it is said to be liable to errors of from 5 to 10%, even, in experienced hands. This is the instrument that is most widely used on the Continent and in the United States at the present time.

Gowers' hemometer is cheaper, and has been generally used in England, and for a time was also used in the United States, but experience seemed to demonstrate it to be less reliable than Fleischl's. The tube of colored gelatin, which was furnished as the standard, was found to fade after a time, and thus to give fictitiously high readings to the blood that was compared with the gelatin.

Hayem's instrument for hemoglobin-estimation has been little used outside of France, and of it I cannot speak.

On the other hand, the specific-gravity method seems to do away with the various objections mentioned. This subject has been studied by many different men, but the principal methods for determining it are Roy's, Landois', and Hammerschlag's.<sup>2</sup>

Roy's method requires a series of test-tubes, holding a mixture of glycerin and water in differing proportions, so that the specific gravity of these shall range from 1040 to 1080. A drop of blood is then drawn into a capillary tube of glass, and gently introduced into the middle of the mixture in that one of the test-tubes with whose specific gravity it is thought most likely to correspond. There the blood will rise or sink according to the density of the glycerin-mixture, and successive trials are made until a fluid is found in which the blood remains suspended. The density of this fluid is then that of the blood.

Landois' method is only a modification of Roy's, employing solutions of sodium sulphate, instead of glycerin.

Hammerschlag's method is also a modification of Roy's, but one that can be employed much more rapidly and conveniently. A mixture of chloroform and benzol, two liquids of widely different specific gravity and freely miscible, is put into a glass tube, and the drop of blood is gently introduced into this mixture. If the blood rises, the liquid is too dense, and benzol must be added. If it falls, the liquid is too light, and chloroform must be added. After each addition, the two liquids must be thoroughly commingled, and when the blood floats indifferently, the specific gravity is taken with the ordinary urinometer. The chloroform-benzol mixture can be filtered, and used over, again and again. The whole process occupies only a few minutes. The apparatus is already in the possession of the general practitioner, and the liquids are

readily obtained. Their cost is trifling, about a dollar for both, chloroform costing 60, and benzol, 40 cents a pound. No special skill is required to carry out the procedure, no errors from color-blindness or from rays of daylight can occur, and the method can be readily employed at the bedside. Its great practical value lies in the fact that there is a definite relation between the specific gravity and the hemoglobin of the blood. Siegl and Schmaltz found that the specific gravity varies with the proportion of hemoglobin, but not with the total number of cellular elements, and this has been confirmed by Lloyd Jones, and by Hammerschlag.

In 1880, Hammerschlag, after comparing the specific gravity with the hemoglobin-percentage in a series of cases, prepared a table, giving the different percentage of hemoglobin for the different degrees of specific gravity.

Dr. R. C. Cabot<sup>3</sup> says that the specific gravity of the blood-plasma varies very little (except in cases of dropsy from any cause), and in the corpuscles themselves the variable element is the hemoglobin. He is very much in favor of Hammerschlag's method, pronouncing it, when compared with Fleischl's, "cheaper, easier, more accurate, and equally quick," and adding that the table already given must not be accepted as absolutely accurate, and that further research will be needed to make it so.

Following this suggestion, I have endeavored to prove the accuracy of Hammerschlag's table in the laboratory-work of the Clifton Springs Sanitarium. The instruments used were a test-tube 25 mm. in diameter, with a base; an ordinary urinometer; a bottle each of chloroform and benzol; a small lance or needle, and a capillary glass tube, *i. e.*, the white-corpuscle pipet of the Thoma-Zeiss blood-counting outfit (an ordinary medicine-dropper may take its place).

The test-tube is filled two-thirds full of such a mixture of chloroform and benzol that the specific gravity shall be between 1056 and 1060. The tip of the ear or finger is cleansed with ether, is pricked freely, a drop of blood is drawn into the pipet and is gently blown out again into the middle of the mixture. Then the liquids are added as needed, until the blood floats. The fluids must be thoroughly mingled, but the drop must not be broken. With this apparatus, and the Fleischl hemometer, I have made comparative tests in over 300 cases. Not having benzol at hand, the first work was done with chloroform and benzine, and while a definite ratio between the hemoglobin and the specific gravity was soon proved to exist, the specific gravity was almost always lower than Hammerschlag's table gives. The mixture was also found to change rapidly on standing a short time exposed to the air. The change was not only in the liquid, because a drop of blood that, immediately after being obtained, floated indifferently in a mixture whose specific gravity was

<sup>2</sup> Clinical Diagnosis, Dr. Rudolf V. Jaksch, pp. 763.

<sup>3</sup> Clinical Examination of the Blood, page 109.

1056, would, 10 or 15 minutes later, float only in one whose specific gravity was 1052-53. These results were obtained with a purified form of benzine, which had been purchased for use with the Paquelin cautery. My experience would lead me to say that it is not good for blood-work.

Gasoline was next substituted for benzine, and with this, the ratio between the hemoglobin and specific gravity was shown to be more constant than with the benzine. Ordinary commercial gasoline was used, and its use was not attended with a reduction in the specific gravity upon standing a short time. The liquid changes, owing to evaporation, but when the blood was again made to float indifferently, the specific gravity was about the same as at the first moment's trial. On one occasion gasoline to which a little alcohol had been accidentally added was used, and in every case the specific gravity dropped several points lower than the usual ratio. As soon as pure gasoline was substituted, the former ratio was again obtained. With gasoline, however, the specific gravity is almost always from 2 to 4 points higher than Hammerschlag's table gives.

Pure benzol, obtained from the Mallinckrodt firm, was next used, and with this, it was at once apparent that somewhat greater care was required to avoid breaking the drop of blood, while mixing the two liquids. Over 100 cases were tested with the benzol-chloroform mixture, and the results were rather more constant than with either of the liquids previously used, but almost always the specific gravity was from 2 to 3 points higher than the records of Hammerschlag.

Although a large number of patients are examined at the laboratory, the usual range of hemoglobin, excepting in the very anemic cases, is from 65 to 100%, according to the Fleischl instrument, observing all precautions mentioned by the different authorities. The following tables show the comparison between Hammerschlag's work, and the results obtained in this study:

HAMMERSCHLAG'S		LIGHTY	
Specific Gravity	Hemoglobin	Specific Gravity	Hemoglobin
1033-1035	25-30%	1035-1038	35-40 "
1035-1038	30-35 "	1038-1043	30-40 "
1038-1040	35-40 "	1043-1045	40-45 "
1040-1045	40-45 "	1045-1047	45-50 "
1045-1048	45-50 "	1047-1049	50-55 "
1048-1050	55-65 "	1049-1052	55-65 "
1053-1053	65-70 "	1052-1054	65-70 "
1053-1055	70-75 "	1054-1056	70-75 "
1055-1057	75-85 "	1056-1060	75-85 "
1057-1060	85-100 "	1060-1063	85-95 "
		1063-1065	95-100 "

Candor compels me to say that the results obtained were sometimes quite different from the usual ratio, and I believe the errors lie with the Fleischl, rather than with the specific gravity method. Repeated examinations of the same patient's blood, at the same hour, on different days, gave exactly the same specific gravity, but not always exactly the same hemoglobin-reading. In all but 2 or 3 of my cases, the count of the corpuscles was also made, and the specific gravity

did not seem to depend upon the number of corpuscles. There were no children among the cases.

The figures between 25 and 40% were computed by proportion, as no cases in which the Fleischl instrument gave a reading between those extremes were found during this study.

The following precautions must be strictly observed in this method:

1. The glass tube must be scrupulously clean. Any particles of lint or dirt in the liquid are likely to adhere to the drop of blood, and so change the result. The pipet, or dropper, also should be cleansed each time with water, alcohol, and ether, so as to have it dry.

2. The blood-drop should contain no air, as that would give a false result. The pipet, or medicine-dropper, should be withdrawn before the last bit of the blood has been blown out, or air will also be forced out.

3. The chloroform and benzol are to be added a few drops at a time. The two liquids should be thoroughly mixed. Repeated gentle inverting of the tube, tightly closed with the hand, has seemed to me better than stirring with a glass rod. The motion must be gentle or the globule of blood will be broken. Cabot advises using a glass rod, but quite frequently the globule was broken in my use of it.

4. A little chloroform should be poured into the liquid before introducing the blood. This immediately sinks, and prevents the blood from touching the glass at the bottom, where it is very prone to adhere if left quiet for one or two minutes. There is not so strong a tendency for it to adhere to the sides of the tube.

5. Much squeezing of the part from which the blood is obtained is to be avoided. The prick should be made deeply enough to cause 2 or 3 drops to exude without much pressure.

6. It would be well to have a urinometer graduated up to 1070, but as 1060 corresponds to about 95% of hemoglobin in Hammerschlag's table, the higher gradations are not essential, because the clinically important specific gravities are usually the low ones. The reading should always be taken immediately after the blood-drop floats indifferently, because the evaporation of such volatile substances as chloroform and benzol will change the reading in a very few moments.

The conclusions to be drawn from this study are briefly:

1. A knowledge of the blood that will be of diagnostic value to the physician may be obtained even in the absence of a microscope for corpuscular study.

2. The hemometer in common use is an expensive instrument, requires considerable practice, and is liable to errors of from 5 to 10% under the most favorable conditions.

3. The chloroform-benzol method for hemoglobin-estimation requires apparatus that is inexpensive, can be readily performed, and gives more accurate results than the hemometers generally used.



# The Philadelphia Medical Journal

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\$3.00 PER ANNUM

**The Red Cross**, it seems necessary to say in all frankness, must be taught the limits of its office and duties. We find it requires not a little bracing of the moral fiber to write a line of criticism as to the outcome of so much most praiseworthy sentiment; it also requires quite as much restraint to speak dispassionately of the proofs of sentimentalism gone mad, of rampant officiousness, of conceited intermeddling as the members of this organization have filled the papers with during the recent weeks. The consummate impertinence of the multiplied complaints and criticisms of the medical departments of the army and navy, and of almost every surgeon connected with them, is sheer nonsense. These men are quite as unselfish, and we are sure have better business-capacity and managing ability than their critics. We repeat our conviction that the management of the Red Cross is a deal too hysterical and vain, needs investigation of its receipts and disbursements, and, above all, needs the control of some common-sense *male* brain.

**The Powers of Hypnotism.**—Allusion has already been made to the fact that a case in the English law-courts has turned upon the supposed powers of hypnotism. An old lady, whose medical man was a professed and expert hypnotist, died recently and was found to have made her medical man her residuary legatee, whereby he benefited to the extent of over £30,000 (about \$160,000, it is believed). Her son, with whom she was not on friendly terms, disputed her will, alleging that the big bequest to Dr. Kingsbury, the medical man in question, had been obtained by hypnotic suggestion. Dr. Kingsbury in the witness-box admitted that he had frequently attempted to hypnotize his aged patient—Mrs. Howard—but swore that he had always failed to do so. He swore, also, that he had made no such attempt since 1894, while the will making him residuary legatee was made in 1897. It was also given in evidence that before the hypnotic experiments were ever commenced Mrs. Howard had made Dr. Kingsbury the object of a large bequest in a previous will. The jury found the will a good one and confirmed the bequest to Dr. Kingsbury. They evidently did not believe that hypnotic suggestions, made to a patient in 1894, could, acting by post-hypnotic influence—to use the actual term of the practitioners of hypnotism—sway a sane woman's testamentary intentions three years later.

Curiously enough, the chief evidence against Dr. Kingsbury in the matter was furnished from his own book on hypnotism, in which he has detailed a case of extended post-hypnotic influence, which would to a certain extent account, if credible, for Mrs. Howard's action. The case of Kingsbury *vs.* Howard created an extraordinary amount of interest in the public mind, and to the public the verdict will amount to a sort of legal opinion that hypnotism is all rubbish.

**For the City Children of the Poor** there is no charity more thoroughly good than that of sending them for a day or a week or two to the country or seashore. Sir John Lubbock, in London, in appealing for funds, tells us that 31,412 were last summer sent to country-cottages for two weeks. In our country there are many such organizations. Look to the management!—not even the purest sentiment can be left unguided by reason and good sense (not even the Red Cross!)—but let us support the plan!

When the green fields and woods cannot be visited a small compensation remains in bringing their mementos to the children. Hence the blessing of *Plant, Flower, and Fruit Guilds*, for supplying slum-homes and hospitals with flowers, etc. Here is a selection from a report:—

"My best visit," it reads, "was at the *Hospital for Crippled Children*. I go there because they never had a flower sent them before now. I was such a lively kid myself, I know it must be awful to be minus a leg or two, and never be able, *never*, to run in the grass, and pick flowers, and climb the cherry-tree of your neighbor in the evening, when they couldn't set the dog on a fellow! Well, I went into the ward where the poor little crips were all gathered. They range from 2½ years old to 13. And not one of them has all their limbs intact. Hunchback, lame, some without arms, some with only one foot, there they were. Ready for my daffodil bunches, they were indeed!"

"Little mothers are children of the very poor, kept home to nurse the baby or babies, and to do all the housework while the mother is out at work or, as often, too ill to work. This child carries the burden of the family in more ways than one. You see the worried look that gets into and stays in their faces, till some stray brightness like this restores the child-look. She generally does the family washing (what there is of it), and all the cooking."

"One child lay on a stretcher, leaning on her elbow, half rising thus. I offered her a flower, and she only looked queer, grave and intense-like. I couldn't make her out, so after saying 'Take it' once or twice I laid it down impatiently in front of her, at which her face broke into such a beaming smile that I turned to her again, and said, 'If you like them so much, why on earth don't you take it in your hand, you little goose?'"

"I have no hands," she said."

**The Patenting of Antitoxin.**—The announcement that a patent has been granted in the United States to Behring as the "inventor" of diphtheria-antitoxin seems hardly credible. At any rate it is not to be believed that this distinguished scientist would in any way be party to any monopoly in the manufacture and distribution of antitoxin. We will not, as disciples of Hippocrates, undertake a discussion of the legal aspects of the case, but merely the ethical, *i. e.*, the moral. The principle of attenuation and antitoxication was established before Behring, and its development has been participated in by many. We cannot conceive, therefore, of any medical man joining in an application for a patent upon a process toward the evolution of which he has contributed only in part, however much. Such action is, further, contrary to the spirit that has ever pervaded the medical profession, and which if practised by Behring's predecessors would have prevented the admirable work for which the whole world is ready to give him credit. Suppose Jenner had patented vaccination and O'Dwyer intubation? It may be contended that the object of the patent is to control the quality rather than the supply and the price; but such a plea could scarcely be maintained, inasmuch as no objection has been raised to the quality of the product of numerous manufacturing pharmacists, as well as of boards of health in various cities. To attempt to monopolize or in any arbitrary way to restrict the manufacture and distribution of antitoxins of whatever kind would be a violation of the best medical tradition and would have a tendency to neutralize the life-saving usefulness that many of these products have shown themselves to possess. We repeat the hope that Behring has taken no part in applying for a patent on any antitoxin; and that if such an application has been granted it will not be enforced at the cost of life and health.

**The Accident to the Prince of Wales.**—As all the civilized world knows, the heir to the British crown has recently met with a disagreeable accident. He slipped on the staircase at Wadderton, the Baron Ferdinand de Rothschild's splendid house in Buckinghamshire, where he was paying a short visit, and fractured his left knee-cap. He was immediately brought back to Marlborough House, London, and his senior surgeon in ordinary, Sir William MacCormac, was called in attendance. It has been decided that the joint is simply to be kept at rest in the extended position and the pressure of bandages over properly adjusted splints will be trusted to for the proper bringing together of the segments. The more drastic treatment of laying open the knee-joint and wiring together the fragments will not be employed, and even the devoutest believers in modern surgery will learn this decision with relief. The Prince of Wales is well over fifty years of age and had grave circulatory troubles during his convalescence from a

severe attack of typhoid fever. He has suffered from varicose veins and though, speaking generally, he enjoys good health, he cannot be considered a fair subject for unnecessary operative interference. Lord Lister was called into consultation, as well as Sir Thomas Smith, the senior surgeon of the St. Bartholomew's Hospital, and Sir Francis Laking, the apothecary to Marlborough House, and all concurred that to wire the patella would be unwise. If Lord Lister, who first made it possible for the surgeon to open the knee-joint as a regular method of treatment for these injuries, considers out of his unrivaled experience that in a particular case the procedure would be unwise, it is certain that no other English surgeon will find the abstention from vigorous measures due to pusillanimity. It cannot be denied, however, that to trust only to fibrous union is to condemn the Prince, a very athletic and energetic sportsman, to a curtailment of his greatest pleasures.

**Hygienic Conditions at Santiago.**—During the past week there has been considerable cause for anxiety regarding the health of the American troops in Cuba. The daily reports issued seem to indicate that the assaults of the Army's enemies in Cuba—tropical fevers—have been very widespread. The formidable array of figures indicative of the extent of sickness has naturally been productive of a very depressing effect. Last week, General Shafter reported that the total number of sick among his troops was over 4,000, and of these three-fourths were fever-cases. More recently it is reported that one-sixth of the total number of the army of occupation at Santiago were on the sick-roll. These facts are naturally disquieting, but their depressing effect is much lessened by the accompanying returns, which show that about as many convalescents return to duty as others become incapacitated. It is thus fortunate that the diseases, particularly the fevers, by which the troops are attacked are of a very mild type. The number of fatal cases seems to have been relatively small. When to this is added the fact that Dr. Leonard Wood, now Brigadier-General, has been appointed Military Governor of Santiago, the outlook is rather encouraging. Certain it is that under his able direction the regeneration of Santiago has begun. The wisdom of his selection is well shown by the will he has manifested to clean the city. Carts by the hundred are busily engaged in carrying the accumulated refuse to the outskirts of the city, where it is destroyed by fire. Not only are the streets being cleaned, but the condition of private dwellings is being carefully and thoroughly inquired into, and the prisons and hospitals inspected. It can thus be confidently asserted that the city will shortly be cleaner and healthier than it has been since the days of Cortes. The energy exhibited by General Wood and the sweeping measures instituted by his subordinates at his direction have naturally not been



to the liking of the older inhabitants, accustomed as they have been to the dilatory methods of his predecessors, and it has been found advisable to establish a patrol to maintain order in the city.

The New English Vaccination-Bill underwent an extraordinary metamorphosis in the House of Commons toward the end of July, when a conscience-clause was introduced that virtually does away with all element of compulsion. The story of this clause is funny, and will make outside critics of the British Constitution wonder whether government by party is good for measures of public health. The new Vaccination-Bill was avowedly drawn up in accordance with the recommendations of a Royal commission that sat to consider the matter for five years or more, that deliberated on its formal report for two years or more, and that finally recommended that compulsion should be done away with. Then a strong conservative Government introduced a bill in which, while most of the Royal Commission's recommendations were accepted, there was introduced a measure of compulsion. Immediately two sets of opponents were created, the unintelligent or antivaccinationists, and the really advanced liberal-minded thinkers, who considered that to frame laws that could not be enforced without the creation of pseudo-martyrs and attendant scandals, was a waste of time. The bill was read in the House and passed by the conservative majority—*i. e.*, this measure of public health was treated as a party-question. The standing committee on law (the committee that settles the final shape of bills that are to become Acts) made a few alterations and referred the bill back to the House. The House, instead of taking, as agreed, the measure upon which they had already deliberated and decided, showed a manifestation to support a clause, proposed by Sir Walter Foster, a medical man sitting on the Liberal side of the House, permitting a parent to save his child from being vaccinated by making an affirmation that to do so would be against his conscience. The conservative Government at once bowed to the feeling of the House, and themselves introduced a clause making an identical provision with that suggested by Sir Walter Foster, thereby cutting out of their bill the element of compulsion that they had originally prided themselves upon including. The story, as we have said, will be calculated to make disrespectful outsiders wonder whether the British House of Commons is a good tribunal to decide firmly and consistently upon the merits of a scientific procedure.

**Supercilious German Criticism.**—If a man wants to know who are his real friends, let him fall into misfortune or get into a fight. The American Republic is at war, and her citizens can already see some important results that are to come from it. To change a proverb slightly: War has her vic-

tories not less beneficent than those of peace. Not the least among these are self-reliance, the sense of national unity, public spirit, the display of native resources, the ability and purpose to be strong. We are accused of being a boastful nation, but the charge is not entirely just. A large minority of us have always been too acutely sensitive to foreign criticism; and of this criticism we have been having some lately of a sort that is likely to cure the most sensitive among us of the habit of caring much for it.

It is remarkable that Germany, which boasts of being the most warlike and most scientific nation in Europe, has been the most irrational and prejudiced of our critics. Wherever our battles have been won, German critics have been refuted; whenever a volunteer regiment has been raised, German theories have been weakened; when diseases have been met and wounds treated, German prophecies have, as a rule, come false. When Dewey won at Manila, it was an "accident;" when Sampson won at Santiago, it was an "assassination." When Shafter landed his troops on Cuban soil in three days, the German military strategists, who had said it could not be done under several weeks, were silent. When a ship ambulance-service was organized that lands sick and wounded soldiers and sailors (Spanish as well as American) in our home-ports in a few days, the Berlin bureaucrats could find little to endorse. The test of action is in attainment; the validity of criticism is strictly according to results.

What effect, if any, this German attitude will have upon the future educational relations of the two countries, it is as yet impossible to say. The influence of Germany upon scientific medicine in this country has been potent and, perhaps, in the main beneficial. Science is strictly international; it is not confined within geographical limits. It makes its way in spite of racial prejudices or conflicting dynastic interests. Still, there are discerning observers among us who think that the constant deference paid here to German methods and German criticism, even in scientific medicine, is not as conducive to independence of thought and originality in research as could be desired. It weakens a nation's culture, in science, in letters, or in art, for it to take its tone and color too exclusively from an outside source.

War, the great crucible from which so often has come forth the true metal of a nation's individuality and power, may in this instance divert, for a time at least, the activities of the arts of peace. Surely a nation which, like Germany, is so ignorant and unsympathetic as to be so unjust, cannot regain at will her prestige and influence among us even in letters and in science.

**A Further Phase of the Dispensary-Abuse.**—An occurrence in the city of Philadelphia during the past week invites discussion from several points of view. A minister's son was treated in the dispensary-service of

one of the hospitals for a wound of the foot inflicted by a rusty nail. About a week later the lad suffered a wound of the hand from the accidental discharge of a blank cartridge in a toy-pistol, for which he applied to and received treatment in the dispensary-service of another hospital. Arriving late at the hospital where the foot was being looked after, the boy was told that he could not receive treatment on that day. He returned home, and symptoms of tetanus developed, eventually resulting fatally. The father, on going to the hospital to make an investigation and lodge a complaint, was himself made the subject of some not complimentary and perhaps not well-chosen remarks on the part of a resident physician. At the inquest, where these facts were ventilated, the jury properly rendered a verdict that death was due to tetanus resulting from injuries received; but, upon the suggestion of the coroner, who beside went out of his way to criticise the conduct of the resident physician, added a word of censure of the latter. The first point to be considered is the propriety of a member in the family of a man of presumed intelligence and morality and of comfortable position in the community, who even insisted that he could afford and was willing to pay, receiving gratuitous treatment intended only for the worthy poor, not alone at one, but at two different charitable institutions. If it be contended that the first visit was an emergency-one, subsequent visits can scarcely be so considered. The next point is the conduct of the coroner. His duty was ended with the determination of the cause and the mode of death and the responsibility therefor, and his criticism and censure of a physician who had nothing whatever to do with the medical aspects of the case, for something that had nothing to do with the death, is entirely gratuitous and unworthy of so efficient an officer in his own proper lines. We have detailed this case at length with the hope of throwing further light upon the abuse of the privileges offered by hospitals and dispensaries for the worthy poor that may show the way to the correction of an evil that has attained proportions that can be truly designated colossal; and to parenthetically make the suggestion that public officials, who are not always too polite and considerate of the interests of that public they serve, will do best by confining their energies and their zeal to their own proper channels.

**Hysteria in the Lower Animals.**—Among infectious diseases of man there are but few that are not found also in the lower animals; and still fewer that are not communicable to them by experimental means. These facts attest, or at least help to attest, the close relationship existing between man and other animals, even if in themselves they are no proof of community of descent. But while the homology, as we might term it, existing between *homo sapiens* and animals has been conclusively demonstrated to cover morphologic struc-

ture and organic diseases, it has not yet been universally recognized that it also extends to those affections that we call functional, and particularly to the neuroses. The report of two cases of hysteria in lower animals, just published by Higier, of Warsaw, has, therefore, peculiar significance. The first case concerns an intelligent young cat, 9 months old, which was attacked by a dog and bitten in the back. Instantly the cat fell as if paralyzed, and from that moment on dragged the trunk and hind legs in walking. The posterior third of the trunk and the posterior extremities were totally anesthetic, as was the tail, which had also lost its power of movement. Wasting of the muscles was not observed, and the sphincters of the well-mannered cat performed their functions as before. One day, about two months after the encounter with the dog, a maid, with the naive purpose of seeing whether the paralyzed animal would, like other cats, light on its four feet, threw it out of the first-story window. And, indeed, the cat did stand on all fours, and after a moment ran briskly away, entirely cured of its sensori-motor paraplegia.

Fright was also the *agent provocateur* in the second case, which concerns Dr. Higier's canary. A cat had unobservedly entered the room and had thrown the bird-cage to the floor. Startled by the noise, the doctor turned and chased the cat away before the canary had been injured or even touched. The bird lay stiff and motionless on the floor of the cage, and was only revived by repeated sprinkling with cold water. He became as lively as ever, and showed no abnormality except that he was absolutely mute, having until then been a magnificent singer. For 6½ weeks the total aphonia continued, and then, entirely unexpectedly, it was suddenly replaced by the pristine wonderful warbling of the artist.

Gilles de la Tourette, in his great work on hysteria, describes three instances of hysteria in dogs, which are quoted by Dr. Higier. In one of them, a case of sensori-motor paralysis, an autopsy showed a normal nervous system.

Probably more careful observation of our domestic and also of wild animals will show that they are subject to hysteria in a marked degree. The peculiar semi-hypnotic influence said to be exercised by snakes on birds may be explicable on the ground of a suddenly developed hysteria in the terror-stricken bird. And, if it is not too far-fetched an hypothesis, may it not be possible to explain the peculiar temporary motionlessness of frightened beetles as due to hysteric inhibition of motor activity, rather than as arising from an instinctive simulation of death in order to deceive the enemy?

**Criticism of the Medical Department of the Army.**—We have noted, mostly with silent disapproval and dissent, the tendency in the newspapers to criticise the conduct of medical affairs in the present war. This



criticism has been about what we expected, for we felt sure at the outbreak of hostilities that the gravest problems would have to be met too quickly by the medical department of the army, and that this department would find itself hampered in many ways through no fault of its own. This was bound to give the critics the opportunities for which they always yearn, to find fault and to display their ignorance.

We are enabled, through the courtesy of Surgeon-General Sternberg, to give a statement of some exact facts which will enlighten the medical public and enable it not only to judge for itself, but also to correct in many ways the erroneous opinions that may be formed by the public at large.

The total number of medical officers allowed by law in time of peace is 193—an inadequate number even then, and entirely insufficient to cope with the requirements of a foreign war. Deducting the number of those assigned to staff and general service, and to general hospitals, there are left but 96 experienced army medical officers for service with troops in the field. This deficiency has been met by employing 300 "contract"-surgeons from civil practice, and more are being employed every day. Dr. Sternberg says that most of these doctors from civil life are doing good work, and many of them are thoroughly well-equipped physicians and surgeons with ample hospital-experience; but it has been impossible to make a careful selection by means of an examining board, owing to great pressure of business in the Surgeon-General's office. When we consider the suddenness of the outbreak of the war and the rapidity of later events, all this is readily understood.

Dr. Sternberg states that General Shafter's army at Tampa was completely equipped with medical supplies for field-service, but owing to insufficient transportation the commanding general left behind at Tampa his reserve medical supplies and ambulance-corps. Owing to the difficulties of landing supplies at Siboney, the fighting men with guns and rations were landed first and hurried to the front. The *Relief*, loaded to her utmost capacity with medical supplies, arrived at Siboney four days after the fight at El Caney. This was through no fault of the Medical Department, which had asked for a hospital-ship in good time, but was disappointed by an unavoidable delay in securing a suitable vessel and preparing her for service.

The Medical Department did not expect that every wounded man would receive immediate attention from a surgeon on the field. This is impracticable, and no acting army makes provision for such a large number of surgeons. This first aid to the injured was expected to be done by the Red Cross Corps of the army, which has now more than 4000 men in service, who have been instructed, as well as could be in such short time, to apply a first antiseptic dressing to a wound; and this is all that is, as a rule, required at first.

All the surgeons from the front have testified to the remarkably good results attained with such a dressing, applied by the Red Cross men or even by the soldiers themselves or their comrades. Every soldier carries a "first-aid" packet, and is especially instructed in its use.

Dr. Sternberg claims that his position with reference to sending women-nurses with the army in the field has given offence to some members of the Red Cross Society and that the unjust attacks made upon himself and the Department result from this fact. Women-nurses are now employed in the general hospitals, where they are giving great satisfaction, but with an army in the field, mobilized for active operation, such nurses, the Surgeon-General claims, are an incumbrance. At the hospitals near Santiago, however, he has now employed nearly 100 immune women-nurses. It is evident to our mind that the employment of women-nurses on the field of battle, just as on battleships, is a doubtful question, and must be left to the decision of the Surgeon-General and his advisers. He is not opposed to the Red Cross Society under proper regulations, but he calls our attention to the monstrous fact that many of its so-called nurses had never received any special training to fit them for the duties they were so eager to undertake. The medical profession at large, we doubt not, will entirely agree with Dr. Sternberg that such women have no appropriate place at the front to attend to wounded men. As for transportation, the Surgeon-General says that the Red Cross Society should have been entirely independent of Government transportation if it expected to fulfil its proper function of affording aid to the wounded of both armies, in accordance with the terms of the Geneva Convention.

As for the *Seneca*, if she was overcrowded or inadequately supplied, the Medical Department was in no way responsible. A large number of convalescent patients were transferred to the *Seneca* from the *Relief* and from the shore-hospitals, because it was expected at the time that our troops would storm Santiago and that room would be needed for a large number of wounded men. Two acting assistant surgeons were assigned to the *Seneca* with a supply of the most necessary dressings and medicines.

For our own part we would call the attention of amateur newspaper critics to the fact that war is not naturally a strictly hygienic business. It sometimes makes its own laws, regardless of the best sanitary precautions. When General Shafter was sent with a large army into a yellow-fever country in the yellow-fever season, he probably regarded this disease as he regards bullets—as among the chances of war. His business was to go ahead, to fight and to conquer. To claim, as some critics seem inclined to do, that the medical authorities could under such circumstances practise successfully the ordinary rules of preventive medicine is to utter a captious criticism so preposterous

as to need no refutation from us. We believe that the Medical Department of the United States Army is fully alive to its responsibilities, and will maintain its reputation. In the meantime we suggest that it is not wise to talk too much to the man at the helm.

## War Correspondence.

### The Hospital of the Second Division of the Seventh Army Corps.—The Prevalence of Typhoid and Malarial Fevers.—Approbation for the Red Cross Society.

CAMP CUBA LIBRE, Jacksonville, Fla., July 26, 1898.

YOU ask me for war-news, but I can send you only some army field-notes that are too peaceful to suit the soldiers here. Medical officers as well as line-officers are all anxious to go to the front. My experience is limited to one army division, but in this one division-hospital, the medical wards of which are under my charge, many interesting problems are continuously presenting themselves. The hospital of the Second Division of the Seventh Army Corps is located in a pine-grove near the division-camp. It consists entirely of tents. A central, circular, thirty-foot tent forms a convalescent ward, and radiating from this the floored army-hospital tents are ranged in rows of six, the six being broken into groups of twos by arbors that admit air and permit of separation of the patients. There are additional single isolated tents for the treatment of the critically sick or noisy patients and for a surgical operating-room, clinical office and dispensary. The medical officers' tents face the hospital at a distance in its front, and the hospital-corps nurses and stewards are encamped in the rear. Each hospital-tent contains six large, comfortable, canvas-covered cots. Over each cot, pinned into the seam of the canvas, is a curtain-hook pin on which hangs a printed clinical chart bound in pad form. These forms I devised and they were printed for me by the Red Cross Society.

The nurses of the corps are formed into three platoons, the squad for each ward being in charge of an acting steward, who is "ward-master." At 1 o'clock A.M. and P.M., these squads are marched to their wards and remain on duty for 12 hours. Each week the hours are changed and the third platoon, which has been doing practice-duty, takes its turn at nursing. Each morning the nurses are drilled as litter-bearers, and each afternoon they hear a lecture on nursing.

The sickness in this command, though not excessive, is already so great as to have increased this hospital beyond its regulation-size. We have now about 250 patients, in great part medical—indeed nearly all are fever-cases. The fevers are typhoid and malarial, nearly all of the fatal cases being typhoid fever. There were, from May 29th to July 22d, 808 patients admitted to the hospital, with 13 deaths in a command of 13,000 men.

Camp Cuba Libre is located in a pine-grove, a mile from Jacksonville. The ground is sand, sparingly covered with grass. It is flat and not well drained. At this season there are daily heavy rains, so heavy that after a shower the water stands for a short time several inches in depth on the ground. The night-dews are so heavy that anything left in the open air is thoroughly wet, and the water drips from awnings. The sun's heat from morning to 3 o'clock in the

afternoon is so excessive as to prevent much labor. With such conditions, among young men careless of health, sickness is not to be wondered at.

The one great favorable feature of this camp is its most excellent water-supply. Artesian water in unlimited quantities is piped to the entire camp. This water is above the suspicion of germ-contamination and its properties are of the best. The source of supply is constantly guarded, to prevent poison being added to the water, though the poison that could be used to contaminate such great quantities of water I have found no one able to suggest.

This, in brief, is the situation with this army-division. We have good water, hot sun, heavy rains and dews, the intemperance usual in armies, and some necessary work. The result is much typhoid fever and more of the shorter continued malarial fevers, of which I may write you more. Whether this typhoid fever was brought here from State-camps is a question often discussed. I find a prevailing opinion among the regular army-surgeons that the typhoid bacillus is but a modified form of the bacillus coli communis, frequently so changed in its behavior by the conditions of army-life. Besides presenting all the classic symptoms of typhoid fever we have confirmed the diagnosis by post-mortem examination in several cases. I have found the plasmodium of malaria in two cases that appeared otherwise to be mild typhoids, with recovery in 12 or 14 days, and were probably simply remittent malaria.

We have had in all three interesting epidemics: First, nearly all our typhoid-fever cases came from the Virginia regiments. The men reported bad water at the Richmond camp. Post-mortem examinations showed the most pronounced lesions. The second epidemic occurred in Company F of the Second Illinois Regiment. On May 30th, the members of this company were severely poisoned by the meat served them. Nearly all the men suffered with severe abdominal pains, vomiting, and diarrhea, some even becoming unconscious. Two weeks later we had very many men sent to the hospital from this company with typhoid fever. Three of these patients died, two with perforation, one with meningeal symptoms. Did the beef contain the typhoid-bacilli? Last week our third epidemic began. From the First Wisconsin Regiment we have had 60 admissions, many of which are developing typhoid fever. One unexpected fact is presented by a study of our records. In June, the six Northern regiments in this division sent 172 men to the hospital, while the three Southern regiments sent 216 sick men to us—the South thus, with half the number of regiments, sending 25% more patients. One would have thought that Southern men could stand the Florida climate better than Northerners.

I believe the Hospital-corps is the hardest-worked part of the army, even without any other battle than that with disease-germs. We volunteers find the regular-army surgeons most pleasant and obliging gentlemen. They overlook our lack of knowledge of military forms, and facilitate our work in other respects. All realize the difficulty of hastily meeting the needs of so great a military force at once and attach little importance to hastily made and unjust criticisms of the medical department of the army.

But no one should write from the front without giving great credit to the Red Cross Society for the great work it is doing. Without the aid of this Society it would have been difficult to care for the sick in this hospital. Each day the Red Cross gives us 50 gallons of milk, 2,000 pounds of ice, 30 dozens of eggs. Besides this it has built for us store-



houses, floored our tents, given us hundreds of night-shirts, pajamas, pillows, sheets, buckets, bedpans, and dozens of other articles necessary for the care of the sick. In military channels the stream of supplies flows slowly and with many stops and much formality, but Dr. Kent, who represents the Red Cross here, gives freely and without delay. He has no regulation that prescribes how many bedpans one division must use, but gives all that are needed. This week, with the people of Jacksonville furnishing the motor power, he is going to put electric fans in all the tents.

J. FRED. CLARKE, M.D.,  
Major and Surgeon, U. S. V.

## American News and Notes.

**The Chicago Polyclinic** has finally been enabled to discharge its indebtedness. The grounds, building, and appurtenances thus belong entirely to the faculty.

**Uniforms for Surgeons.**—The Secretary of War has decided that acting assistant surgeons may wear the undress uniform of the United States Army Medical Corps, bereft of all marks and insignia of office.

**Chester County (Pa.) Hospital.**—A home and school for nurses are about to be erected under the stipulations set forth with a donation of \$10,000 recently made by Rev. William L. Bull, of Ivy Cottage, Chester Valley.

**Dr. John S. Fulton**, Secretary of the Maryland State Board of Health, will deliver an address entitled: "The Work of the State to Prevent Disease," at the quarter-centennial celebration of the Michigan State Board of Health, to be held at Detroit, August 9th.

**College of Physicians and Surgeons of San Francisco.**—Dr. George Adam has been elected honorary professor of electrotherapeutics; Dr. Charles Rosenthal, acting professor of clinical medicine; and Dr. Stephen Crowe and Dr. E. S. Pillsbury, lecturers on bacteriology.

**A Hospital at Montauk Point**, Long Island, is to be established, by order of Surgeon-General Sternberg and Secretary Alger, for the reception of sick and wounded soldiers who may be sent north from General Shafter's forces at Santiago. They will remain at that camp until entirely convalescent.

**Providence Hospital, Washington, D. C.**—The Commissioners of the District of Columbia have directed that plans be prepared for the construction of an isolating building for minor contagious diseases on the grounds of the Providence Hospital. It is anticipated that the addition will cost about \$25,000.

**The Lehigh Valley (Pa.) Medical Association** held its eighteenth annual meeting at Pottsville, July 23d. The presidential address, by Dr. Mary Greenwald, of Stroudsburg, entitled: "The Relation of Pelvic Diseases to Hysteria and Insanity in Women," was read by Dr. C. H. Ott, of Sayre. The following are the officers elected: President, Dr. J. E. Baumar, of Telford, Montgomery County; vice-presidents, Drs. C. D. Shaeffer, of Allentown; G. H. Halberstadt, of Pottsville; A. A. Seem, of Bangor, and Jos. A. Horn, of Mauch Chunk; secretary, Dr. Charles McIntire, of Easton; treasurer, Dr. Abraham Stout, of Bethlehem. The winter meeting of the association will be held at Bethlehem, January 26, 1898.

**Military Hospital in Honolulu.**—It is the intention of the Government authorities to shortly establish a military hospital in Honolulu, upon the grounds known as Independence Park. The pavilion at present upon the premises will be altered, enlarged, and refitted so as to conform in all possible respects to the requirements of a well equipped military hospital.

**Dr. John Ingals**, of Chicago, the *Columbus Medical Journal* states, has been appointed director of the Au Ling Hospital, in Peking, China, under the control of the American Presbyterian Church. In addition to having charge of the hospital and dispensary, which have a service amounting to 20,000 patients yearly, Dr. Ingals will also be a lecturer in the Imperial College of the Chinese Government, in Peking.

**Dr. Edward Skinner**, coroner of North Hempstead, L. I., was shot and seriously, if not fatally, injured at his residence early on the morning of July 28th. Shortly after he had retired, he was aroused to go see a patient. While his back was turned toward the window, he received a large charge of shot in the lower part of the back. Dr. Skinner is about 60 years of age, and has been coroner of North Hempstead for a number of years.

**Obituary.**—DR. JAMES M. WARREN, Rockingham County, Va.—DR. F. H. BODENIUS, Madison, Wis., July 20th, aged 54 years.—DR. JAMES T. BALL, Colorado City, Colo., July 15th, aged 39 years.—DR. HENRY E. WERNER, Le Claire, Ia., July 16th.—DR. E. LEWIS STURTEVANT, well known as an expert on scientific agriculture, Framingham, Mass., August 1st, aged 76 years.—DR. THOMAS MURRAY, Beaver, Pa., July 31st, aged 89 years.—DR. A. I. STERNBERG, Gouverneur, N. Y., July 31st, aged 57 years.

**An Echo of the Denver Meetings.**—A complimentary dinner was given by physicians of Colorado to Dr. J. W. Graham, chairman of the Committee of Arrangements, and Dr. W. A. Jayne, assistant secretary of the recent meeting of the American Medical Association, in appreciation of their work in organizing and rendering so successful the visit of two thousand physicians and their families to that State. The dinner was held at the University Club, Denver, July 26th, about fifty physicians participating.

**The National Relief Commission** has been informed by cable that its committee is busily engaged in assisting in relieving the wants and sufferings of the sick and wounded soldiers at Santiago and vicinity. The Committee states that large quantities of tea, condensed milk, beef-extracts, jellies, canned fruit, mineral waters, mosquito-netting and light blankets are badly needed. As these articles are constantly of use in Cuba, the Commission has arranged with the United States Government for their transportation on Government transports at once, and preparations are being made to send the supplies requested as soon as arrangements are perfected for the departure of the Government vessel.

**The Sanitary Condition of the Camps.**—Typhoid fever is reported to be considerably on the increase at Camp Alger, 40 suspected cases having been reported in one day this week. As a consequence the entire Second Division has been ordered to more healthy farms south of the present camp.—The camp at Miami, Florida, is to be abandoned because of inadequate facilities for its proper preparation, and because of the considerable amount of illness among the troops. The predominating ailments are typhoid and malarial fevers. The troops will be transferred to Jacksonville.—The morbidity-returns from Chickamauga are encouraging—

it being reported that not 5% of the troops are on the sick-list.—At Fort Washington, Alexandria, Va., there are a few cases of diarrhea, and malarial and typhoid fevers.—At the Presidio, San Francisco, the sanitary conditions, as indicated by the number of sick, do not seem to improve.—At Walla Walla, Washington, 42 men of one company were suddenly seized with severe cholera morbus, but they eventually recovered.

**The White Cross Society**, an association organized largely upon lines similar to those of the Red Cross Society, was recently incorporated in Oregon. While the latter-named society is international in scope, the former is purely American. The War Department is reported to have granted permission to the members of the White Cross Society to send hospital-supplies and a corps of trained nurses to Manila on board the steamer *Arizona*, which is expected to leave San Francisco about the middle of August. It is said that Mrs. Creighton, the president of the society, will go to the Philippines and will be accompanied by 21 trained nurses. The badge of the society is a white bandage crossed in the blood-red field of the battle-ground and surrounded by a circle of blue—thus combining the red, white, and blue of the American flag.

**The "Seneca" Investigation.**—The investigation undertaken by Surgeon-General Sternberg relative to the allegations of improper equipment of the *Seneca* on its recent homeward trip has resulted in the demonstration of the fact that the statements made were grossly exaggerated. There was some overcrowding with passengers, but this was largely due to the presence of a number of civilians who were not properly entitled to the privileges of the ship. In addition there were 42 soldiers, who were not so badly wounded as to require their immediate transfer, many of them being able to walk aboard the vessel; they were ordered from the hospital at Siboney, however, because the officers feared another bloody engagement that would have overtaxed their resources. The physician in charge was found to be thoroughly competent, and much of the complaint on the score of insufficient medical attendants was ascribable to the unexpected illness of the other physician. There was some medicine aboard of the most necessary kind. It is understood that General Sternberg's investigation has satisfied the Department, and no further inquiry regarding the complaints will be made.

**Investigation as to the Management of the Medical Department at Santiago.**—An effort will be made by the War Department to ascertain the official at Shafter's headquarters who is responsible for despatching to the United States transports loaded with soldiers, which boats are alleged to be unfit for the work to which they are put. With this end in view, Surgeon-General Sternberg has sent the following despatch to Major Lagarde, the chief surgeon with Shafter's army:—

"The management of the medical department at Santiago is severely criticised. Sick and convalescents sent on quartermaster's transports are said to be overcrowded, not properly supplied with medicines or medical attendance, or with suitable light diet. Who is responsible? Report in full and take measures to prevent similar occurrences in future."

At the same time a rigid investigation is to be made of the charges by the Red Cross officials and others concerning the unfitness of the transport *Concho*, which reached New York several days ago. Secretary Alger has taken much interest in this matter, following so soon the case of the *Seneca*, which, about ten days since, brought to New York a large

number of sick and wounded, and which vessel also was said to be unsuitable. The investigation will be made by Colonel C. H. Heyl, of the Inspector-General's office.

General Sternberg feels that injustice is done the officers of his department in the criticisms made of the use of the transports in bringing the sick and wounded north, and in the preparations for the journey. As a matter of fact, he said he did not know that the *Concho* was to be used for a temporary hospital-ship, the first intimation of that character being received when a telegram reached him announcing the arrival of the vessel at Norfolk. The loading of the ship with supplies, including ice, other than of a medical character does not come under the supervision of his bureau, and his officers, he says, should not be charged with any derelictions of that character.

Dr. Sternberg has received the following voluntary telegram from Dr. A. M. Lasser, the Surgeon in-Chief of the American National Red Cross Association, who was aboard the *Concho* on her trip from Santiago to New York:—

"Every unfavorable criticism of persons belonging to the regular medical department of the United States Army or Navy published as being my statement is not authentic and has not come from me. I have only the highest praise for them."

**Shafter's Responsibility.**—The *Chicago Tribune* of July 28th publishes the following statement by Dr. Nicholas Senn, Chief of the operating staff of the army at Santiago:

"SIBONEY, CUBA, July 17.—In the present war with Spain every one knew that our army would be exposed to an unusual extent to disease and the debilitating effect of the tropical climate of Cuba. The invasion of the province of Santiago meant certain exposure to yellow-fever infection. The commanding General must have been aware of this. It is said the seafaring men along the coast of Cuba fear Santiago more than any other port. Yellow fever reigns there more or less throughout the entire year. At Siboney and Baiquiri it is known as 'hill-fever.' It appears that the precautions outlined by Colonel Greenleaf, Chief Surgeon of the army in the field, were entirely ignored by the commander of the invading force.

"I was more than astonished when I arrived at Siboney, on July 7th, to find that thousands of refugees from infected districts were permitted to enter the camps unmolested and mingle freely with our unsuspecting soldiers. All along the road from the base of operations to the line of intrenchments could be seen at short intervals scenes which were sure to bring about disastrous results. Our soldiers, in a strange land and among strange people, enjoyed at first the novelty and were free in buying the fruits of the land and exchanging coins, not knowing how dearly they would be called upon to pay for such a questionable privilege. Houses and huts in which yellow fever had raged were visited freely, and the dangerous germs of the disease were inhaled, as a matter of course. The results of such intimate association of our susceptible troops with the natives could be readily foreseen.

"It required only the usual time for the disease to make its appearance, and when it did so it was not in a single place, but all along the line from our intrenchments to Siboney.

"Dr. Guiteras, the yellow-fever expert, recognized a few of the cases on the day of my arrival. He is extremely cautious, and will only make a positive diagnosis in cases in which albumin is exhibited in combination with the usual symptoms which accompany the disease. On the recommendation of Dr. Guiteras our isolation-hospital was established a mile and a half from Siboney, and in less than three days it



contained more than 100 yellow-fever patients, among them General Duffield, of Michigan, and Professor Victor C. Vaughan, of the University of Michigan.

"During my first visit to the front I found 200 fever-patients near the First Division-Hospital, most of them under shelter-tents, others lying on the moist ground, with nothing but a wet blanket to protect them.

"The appearance of yellow-fever cases in such a short time in such large numbers and originating in so many different localities simultaneously proved a source of surprise and alarm to the medical officers. They realized the danger and the necessity for the employment of most energetic measures, but this could not be done without a hearty co-operation on the part of the general in command. Major Lagarde applied to General Shafter for a detail of a company of infantry to aid him in fighting the disease. His request was promptly denied under the pretence that all of the troops available were needed more at the front than in the rear. This action left the major powerless in checking the extension of the disease. Fortunately, Major-General Miles arrived in the nick of time, and, with him, Colonel Greenleaf, Chief Surgeon of the army in the field.

"Colonel Greenleaf made the same request of General Shafter for troops to aid him in gaining control of the disease, but it was ignored as peremptorily as that of Major Lagarde. He now turned to General Miles, who placed at his disposal not only a battalion, but a whole regiment of colored troops.

"The work of sanitation was then taken earnestly in hand. At present there are about 800 cases of yellow fever here. Fortunately the disease is of a mild type, the number of deaths being small. General Miles has done everything in his power to aid the medical officers in limiting and weeding out the disease."

**Lieutenant-Colonel Nicholas Senn on the Medical Corps of the Army.**—Major and Surgeon George B. Torney, of the United States Army, has made public a statement by Lieutenant-Colonel Senn, United States Army, Chief of the operating staff with the army in the field, in which Colonel Senn replies to numerous criticisms of the surgeons that have come from various quarters, reflecting on the efficiency, foresight and proper management of the Medical Department of the army during the Cuban campaign.

After paying a high tribute to the ability of Surgeon-General Sternberg, he declares that the head of the department has shown good judgment in the selection of his advisers, Colonels Allen, Greenleaf, and Smart, all men of large experience and admirable executive ability.

In answer to a recent statement that the work of the Red Cross was the only redeeming feature in the campaign, he says:

"The steamer *Olivette* was on July 7th anchored close to the shores of Siboney. This steamer, in command of Major Appel, U. S. A., was used as a hospital-ship. This ship was in place and ready to receive the wounded during the battle. The steamer, at the time mentioned, had on board 300 wounded, who received the best surgical attention and nursing. The next day the steamer left for the United States, the medical staff being reinforced by the addition of Acting Assistant Surgeon Brown, of Chicago, and the hospital-ship *Relief*. General Sternberg, at an early date, recognized the importance of hospital-ships during this war.

"The Surgeon-General accepted the legitimate services of the Red Cross Association and had reason to expect aid from

this source should pressing contingencies present themselves. The medical officers, the wounded and sick have every reason to be grateful to Miss Clara Barton for what she did in furnishing ice, delicacies and medical supplies. The *State of Texas* did excellent work in aiding the Medical Department.

"It is a source of great regret that there should be any friction whatever between the Medical Department and the friends and supporters of the Red Cross Association. It must be clear to every unprejudiced mind that the treatment of the sick and wounded must remain under the direct care, control and management of the Medical Department, and that the legitimate function of the Red Cross is rather auxiliary to it than as an independent organization, if the greatest amount of good is to be realized from it.

"The lack of proper transportation-facilities for the sending of supplies to the front cannot be charged to the Medical Department. It took more than a week of the hardest kind of work to land all the supplies, and, considering the limited facilities available, it is and always must be regarded as a source of satisfaction that it was made possible at all.

"The complaint that the sick and wounded lacked medicine and dressing material is true to only a certain extent. Some of the medicines were exhausted owing to the unexpectedly enormous demand, but they were supplied as quickly as could be done under the existing circumstances. The writer had the privilege to operate in all the hospitals, and was always able to find the essential antiseptics and dressing material required in military practice, and this was at a time when the supplies were at the lowest. There was no lack at any time of stimulants and anesthetics. There is no use in denying the fact that immediately after the battle the tent and blanket supply was inadequate, but these defects were corrected promptly.

"War always has had its hardships and discomforts. It cannot be prosecuted in parlor-cars and club-houses. Our soldiers expected deprivation and unavoidable discomforts, but on the whole they were subjected to less actual suffering than they had reason to look for. To the credit of the medical officers it must be said that they shared the inevitable hardships in common with the soldiers. They lived on the same food, drank the same water, and made the moist ground their beds. The writer will always cherish the memory of the hardships incident to the campaign in a foreign country, a tropical climate and among a strange people. The Cuban campaign was planned and executed so quickly that some omissions and defects had to be expected. Among the thousands of sick and wounded with whom I have been brought in contact during the Cuban campaign I have heard nothing but words of praise for the hard-working, self-sacrificing medical officers and the department they represented in the field."

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Medical Inspector M. C. DRENNAN, detached from the New York Navy Yard and ordered home to wait orders.

Asst. Surgeon W. E. HIGH, ordered to the Naval Academy.

Asst. Surgeon D. G. BEEBE, ordered to the "Richmond" immediately.

Asst. Surgeon W. B. CRANE, detached from the "Oregon" and ordered home to wait orders.

Asst. Surgeon W. S. THOMAS, detached from the naval hospital, New York, N. Y., and ordered to take passage on the "St. Paul" for duty on the "Oregon."

Asst. Surgeon J. R. WHITING, detached from the "Richmond" and ordered to the naval hospital, New York, N. Y., immediately.

Asst. Surgeons F. L. BAXTER and J. S. CHAFFIN, detached from the "Oregon" and ordered to the naval hospital, New York, N. Y., immediately.

Asst. Surgeon J. I. SARGENT, detached from the "Lancaster" and ordered to the "Niagara" immediately.

Asst. Surgeon F. M. BROWN, detached from the Norfolk Navy Yard and ordered to the "Sterling" immediately.

Asst. Surgeon C. A. CRANE, detached from the "Vermont" and ordered to the "Sterling" immediately.

Asst. Surgeon R. K. McCLANAHAN, detached from the "Vermont" and ordered to the Norfolk Navy Yard immediately.

Asst. Surgeon S. H. FLEMING, detached from the "Vermont" and ordered to the "Vermont," at Chicago, Ill., and ordered to the "Vermont."

Asst. Surgeon A. G. GRUNWELL, detached from the Washington Navy Yard and ordered to the Naval Post-Office General Indian Head, Md., temporarily.

Medical Inspector J. C. SPEAR, retired, detached from duty in connection with the Auxiliary Naval Force, and ordered home.

Surgeon H. SMITH, retired, detached from duty in connection with the Auxiliary Naval Force, Charleston, S. C., and ordered home.

Passed Asst. Surgeon J. S. SAYRE, retired, detached from duty in connection with the Auxiliary Naval Force, and ordered home.

Passed Asst. Surgeon N. H. PIERCE, detached from the "Vermont" and ordered to the "Vermont" immediately.

Asst. Surgeon F. E. WAGNER, detached from the Washington Navy Yard and ordered to the "Ajax" immediately.

Asst. Surgeon W. H. TURKEY, ordered to the "Nahant" immediately.

Asst. Surgeon T. L. RHOADS, ordered to the headquarters of the Marine Corps, Washington, D. C., immediately.

Surgeon A. F. MAGRUDER, retired, detached from the headquarters of the Marine Corps, Washington, D. C., and ordered home.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 days ended July 28, 1898:

BAILHACHE, PRESTON H., Surgeon.—Granted leave of absence for 6 days from July 18, 1898.—July 15, 1898.

PURVIANCE, GEORGE, Surgeon, Chairman of Board of Examiners.—To proceed to Port Tampa, Fla., for the examination of officers of the service preparatory to promotion.—July 26, 1898.

CARTER, H. R., Surgeon.—To proceed to Fort Monroe, Va., for special temporary duty.—July 22, 1898.

CARMICHAEL, D. A., Surgeon, Recorder Board of Examiners.—To proceed to Port Tampa, Fla., for the examination of officers of the service preparatory to promotion.—July 26, 1898.

GLENNAN, A. H., Passed Asst. Surgeon.—To report to Chairman of Board of Examiners at Port Tampa, Fla., for examination to determine fitness for promotion.—July 26, 1898.

WASDIN, EUGENE, Passed Asst. Surgeon.—To report to Chairman of Board of Examiners at Port Tampa, Fla., for examination to determine fitness for promotion.—July 26, 1898.

BROOKS, S. D., Passed Asst. Surgeon.—To proceed to Point Pleasant, N. J., for special temporary duty.—July 23, 1898.

WHITE, J. H., Passed Asst. Surgeon.—To report to Chairman of Board of Examiners at Washington, D. C., for examination to determine fitness for promotion.—July 20, 1898. To proceed to Fort Monroe, Va., for special temporary duty.—July 21, 1898.

GEDDINGS, H. D., Passed Asst. Surgeon.—To proceed to Fort Monroe, Va., for special temporary duty.—July 21, 1898. To proceed to Port Tampa, Fla., for special temporary duty.—July 25, 1898.

CUMMING, H. S., Asst. Surgeon.—Relieved from duty at Immigration Depot, New York, N. Y., and to report to commanding officer of U. S. Marine-Hospital at same port for duty.—July 18, 1898. Reassigned to duty at Immigration Depot New York, N. Y.—July 25, 1898.

CLARK, TALIAFERRO, Asst. Surgeon.—Upon being relieved by Sanitary Inspector R. E. L. BURFORD, to rejoin station at South Atlantic Quarantine.—July 20, 1898.

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CLARK, TALIAFERRO, Asst. Surgeon.—Upon being relieved by Sanitary Inspector R. E. L. BURFORD, to rejoin station at South Atlantic Quarantine.—July 20, 1898.

Major OGDEN RAFFERTY, brigade-surgeon, will proceed to Fort Hamilton for temporary duty.

Major CHARLES L. HEIZMANN, surgeon, is relieved from duty pertaining to muster in of U. S. Volunteers, and will join his proper station.

First Lieutenant EDWARD J. BARRETT, A. S., Second U. S. Volunteer Engineers, now at the headquarters of his regiment, Fort Sheridan, will proceed to the Presidio and report to Major William C. Langfitt, Second U. S. Volunteer Engineers, commanding third battalion of that regiment, for duty.

Acting Asst. Surgeons GEORGE A. McHENRY and J. R. TACKETT will proceed from Miami to Tampa, Fla., and there await transportation by the first transport to Santiago de Cuba, and, upon arrival there, will report for duty.

The following-named acting assistant surgeons will proceed from the places designated to New York, N. Y., and report to Lieutenant-Colonel JUSTUS M. BROWN, D. S. G., to await transportation by the U. S. steamer "Olivette" to Santiago de Cuba, and, upon arrival there, will report to Major-General William R. Shaffer, for assignment to duty: E. F. GEDDINGS, from Charleston, S. C.; SOLOMON P. GREEN, from Warrington, N. C.; JAMES S. KENNEDY, from Chambersburg, Pa.; A. H. SIMONTON, from Birmingham, Ala.; CHARLES H. FISCHER and A. M. BROWN, from Washington, D. C.

Acting Asst. Surgeon HENRY L. BROWN will report to Major AARON H. APPEL, surgeon, in charge of U. S. steamer "Olivette," New York City, for duty.

Acting Asst. Surgeon H. P. WILKINSON will proceed from this city to New York City and report to Major AARON H. APPEL, surgeon, in charge of U. S. steamer "Olivette," at that place, for duty.

Acting Asst. Surgeons URBAN S. BIRD and JOHN R. HICKS, now on duty on the U. S. transport "Seneca," at Quarantine-Station, Staten Island, N. Y., will proceed to this city and report to the Surgeon-General of the Army.

Acting Asst. Surgeon EDMUND BARRY will proceed to Falls Church, Va., for assignment to duty.

Acting Asst. Surgeon P. CONOVER FIELD will proceed to Jacksonville and report to Major-General Fitzhugh Lee, commanding Seventh Army Corps, for assignment to duty.

Acting Asst. Surgeon BAEN STREET is relieved from duty at the U. S. General Hospital, Fort Monroe, and will proceed to Atlanta, Ga., for assignment to duty with the encampment of recruits at that place.

Acting Asst. Surgeon EDGAR L. GRIFFIN will proceed to Fort Pickens, Fla., for duty at that post.

Major WILLIAM S. BRYANT, brigade-surgeon, will proceed to Jacksonville, Fla., and report to Major-General Fitzhugh Lee, commanding Seventh Army Corps, for assignment to duty.

Major LAWRENCE C. CARR, brigade-surgeon, will proceed to New York, N. Y., and report to Lieutenant Colonel JUSTUS M. BROWN, D. S. G., for transportation on the steamer "Olivette" to Cuba, for assignment to duty.

The following-named acting assistant surgeons will proceed from the places designated to New York, N. Y., and report to Lieutenant-Colonel JUSTUS M. BROWN, D. S. G., to await transportation by the U. S. steamer "Olivette" to Santiago de Cuba, for assignment to duty: WILLIAM T. HAMILTON, from Ironatons, Ala.; JAMES T. PERSONS and H. B. MOHR, from Mobile, Ala.

Acting Asst. Surgeon HENRY B. LEE will proceed from Somerville, S. C., to Washington, D. C., and report to the Surgeon-General for instructions.

Acting Asst. Surgeon M. M. WALKER will, pending further orders, report to Captain ISAAC P. WARE, A. S., as assistant in examining recruits.

Major FRANCIS C. FORD, brigade-surgeon, will proceed from Nacogdoches, Tex., to Jacksonville, Fla., and report to Major-General Fitzhugh Lee, commanding Seventh Army Corps, for assignment to duty.

Major EUGENE L. SWIFT, brigade-surgeon, is relieved from duty with the Third Army Corps, and will proceed to Atlanta, Ga., for assignment to duty at the camp of recruits near that city.

Captain JEFFERSON D. POINDEXTER, A. S., is relieved from duty in New York, N. Y., and will proceed to Tampa, Fla., and report to Major General John J. Coppinger, commanding Fourth Army Corps, for assignment to duty.

Acting Asst. Surgeon JOHN R. HICKS will proceed to New York City and report to Colonel Amos S. Kimball, A. Q. M. G., depot-quartermaster, for duty as medical officer on the U. S. transport "Manitoba" at that place.

Acting Asst. Surgeon HENRY B. LEE will proceed to New York City and report to Colonel Amos S. Kimball, A. Q. M. G., depot-quartermaster, for duty as medical officer on the U. S. transport "Minnewaska," now at that place.

Acting Asst. Surgeon GEORGE MAURER will proceed from New York City to Jacksonville, Fla., and report to Major-General Fitzhugh Lee, commanding Seventh Army Corps, for assignment to duty.

Acting Asst. Surgeon J. H. MITNICK will proceed from Baltimore, Md., to Tampa, Fla., and report to Major General John J. Coppinger, commanding Fourth Army Corps, for assignment to duty.

Acting Asst. Surgeon PERCIVAL S. ROSSITER will proceed from Denver, Colo., to Jacksonville, Fla., and report to Major-General Fitzhugh Lee, commanding Seventh Army Corps, for assignment to duty.

Acting Asst. Surgeon E. P. HOWELL will proceed to Fort McPherson,



and report to the commanding officer of the general hospital, for duty.

Acting Asst. Surgeon J. M. NYWELL will proceed from St. Louis, Mo. to Washington, D. C., and report to the Surgeon General of the Army for duty.

Acting Asst. Surgeon F. A. E. DISNEY, and detachment of the Hospital Corps of the U. S. Army will proceed with the detachment to St. Louis, Mo., for duty.

Major E. M. E. H. will proceed from St. Louis, Mo. to Fort Monroe, Va., and report to Major General D. W. Sargent, and duty to the U. S. General Hospital at that post.

Captain ALEXANDER N. STARK, A. S. C., will proceed to New York City and report to Major Wm. H. ARTHUR, chief surgeon, for assignment to duty.

Acting Asst. Surgeon C. S. B. will proceed to Camp, and assignment to duty.

## Foreign News and Notes.

**An Epidemic of Pertussis** of severe type is prevailing in Aberdeen, Scotland.

**Professor Köster** has been elected rector of the University of Bonn for the ensuing academic year.

**Dr. Heinrich Walb** has been promoted to the honorary professorship of otology at the University of Bonn.

**Dr. Dante Cervesato** has been appointed ordinary professor of diseases of children at the University of Padua.

**Dr. Victor Fossel** has been appointed extraordinary professor of the history of medicine at the University of Gratz.

**Professor Karl Hennig**, of the University of Leipzig, celebrated, on July 8th, the fiftieth anniversary of his doctorate.

**Professor von Leyden**, of Berlin, has been elected corresponding member of the Académie des Sciences de Paris.

**Dr. Theodore Steinbrügge** has been appointed ordinary professor of diseases of the ear at the University of Giessen.

**The Monument to the late Professor Charcot** will be formally unveiled in the Salpêtrière in Paris on October 23d.

**The Aberdeen City Hospital** is to be enlarged at an estimated expense of about \$20,000, which is to be furnished by the local tradesmen.

**Dr. Charles Hunter Stewart** has been appointed to the newly created Bruce and John Usher Chair of Public Health at the University of Edinburgh.

**University of Moscow.**—Dr. Zograf has been elected extraordinary professor of zoology, and Dr. Mrensier, extraordinary professor of comparative anatomy.

**Sir William Henry Broadbent, Bart.**, has been appointed Physician Extraordinary to Her Majesty, Queen Victoria, in succession of the late Sir Richard Quain.

**Dr. Armand Routh** has been appointed obstetric physician to Charing Cross Hospital, London, in succession to Dr. Watt Black, who retires after 30 years of service.

**Honors to Nurses.**—The 11 nurses who devoted themselves to succoring the typhus-stricken peasantry of Inniskea, Ireland, during the epidemic of 1897, have, by the sanction of the Queen, been enrolled Honorary Serving Sisters in the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England.—[*Medical News.*]

**Dr. Podvisotski**, professor of pathologic anatomy at the University of Kieff, has been entrusted with the organization of a newly-established medical faculty of the University of Odessa. He will be the dean.

**Prince Bismarck**, the Iron Chancellor of Germany, died somewhat unexpectedly, though after a long illness, on the night of July 30th. He was but one day short of 1,000 months old, having been born April 1, 1813.

**School of Medicine of the Royal Colleges, Edinburgh.**—The number of students in attendance at the summer session just closed amounted to 1,239. Many of these had taken advantage of the extramural teaching offered by the University.

**M. Henri Durant**, of Geneva, who, as is well known, though largely instrumental in the organization of the Red Cross Society, is now much impoverished, is to receive an annuity of 1,000 rubles from the Russian Branch of the Red Cross Society.

**Annual Review of the Progress in Neurology and Psychiatry.**—Beginning with this year, Karger, of Berlin, is to publish a *Jahresbericht über die Leistungen und Fortschritte auf dem Gebiete der Neurologie und Psychiatrie*, of which Prof. Mendel of Berlin is to be the editor.

**The proposed Congress of Polish Medical Men**, to be held in Posen, the capital of Prussian Poland, this summer, has been forbidden by the German government, the authorities surmising that the movement for the congress was actuated more by political animosities than by scientific ardor.

**Dr. Ribemont Dessaignes**, physician to the maternity department of the Beaujon Hospital, and distinguished also as a sculptor whose works have been honored with a place in the Paris Salon, has been elected a member of the Académie de Médecine de Paris, in succession to the late Professor Tarnier.

**Prof. Bechterew**, the occupant of the chair of mental and nervous diseases at the Military Medical Academy of the Ural district in Russia, has been detached from active service at his post, and commissioned to conduct an investigation of the causes of endemic cretinism that occur in the Ural regions.

**A Roentgen-ray Society in Berlin** has just been organized and has received permission from the Minister for Medical Affairs to use one of the rooms of the Institute for Physics at the University as a meeting-place. This will be most convenient for demonstrations, as it is especially arranged for that purpose. The first meeting is to be held in September.

**Dundee University College.**—Dr. Alexander Mitchell Stalker, physician to the Dundee Royal Infirmary, has been appointed professor of medicine; Dr. David MacEwan, surgeon to the same infirmary, professor of surgery; Dr. Charles Templeman, Lecturer in Forensic Medicine and Public Health; and Dr. David Fraser Harris, Lecturer in Physiology and Assistant to Prof. Pettigrew.

**Dr. S. S. Botkin**, professor of bacteriology and infectious diseases, has been appointed professor of internal medicine, and director of the medical clinic, at the Military Medical Academy of St. Petersburg, in succession to Professor Leo Popow, who retires because of having reached the age-limit. Professor Botkin thus succeeds to the chair occupied by his father, Professor S. P. Botkin, from 1866 to 1889.

**Women at German Universities.**—Of special interest, in view of the recent discussion on Doctors' Day at Wiesbaden in Germany, is the number of women, who as Hospitantinnen (on sufferance as guests) are in attendance at the German Universities, namely 309, of whom 166 are at Berlin, while Breslau, Bonn, Göttingen, Heidelberg, Marburg, and Königsberg have each about 20.

**The Berlin Institute for Infectious Diseases.**—The department for the treatment of hydrophobia by the Pasteur method and for the scientific study of the subject of hydrophobia has just been opened. This is the first institution of its kind in Germany, and finds at least some reason for its existence in the fact that despite the stringent laws relative to muzzling, 5 persons died during last year from rabies.

**A Special Institute for Instruction in Hydrotherapy** is to be erected in connection with the Charité Hospital, Berlin, together with the new buildings and the remodeling of the institution that is in progress. The new feature is a sign of the renewed interest in hydrotherapy in German medical circles, and of the attempt to take it out of the hands of irregular practitioners, to whom it has thus far been left too largely.

**Obituary.**—DR. CARLO GIACOMINI, Professor of Anatomy in the University of Turin, aged 57 years.—DR. VICTOR MICHAUX, Surgeon to the Civil Hospitals of Metz, aged 70 years.—DR. C. DUFAY, formerly Senator for the Loir et Cher and President of the Medical Association of that Department.—DR. ERNEST CADÈZE, Medical Superintendent of the Lunatic Asylum of Liège and a very distinguished entomologist, aged 72 years.

**French Association for the Advancement of Science.**—The next Congress of the French Association for the Advancement of Science will be held at Nantes from August 4th to 11th. In the Section of Medical Science, of which Professor Lépine of Lyons is President, the following question is proposed for discussion: On Diabetes in General, and Particularly on the Progressive Increase in the Prevalence of that Disease in the Principal Towns of France.

**The Sale of Saccharin** and other purely chemical sweetening materials of the same kind has been forbidden in Austria, except as drugs. They will hereafter be obtainable only through an apothecary. This is an echo of the sentiment so freely expressed at the German Congress for Internal Medicine at Wiesbaden that saccharin is by no means the harmless and indifferent substance it had been supposed to be, but that it has a distinct antifermentative action, and probably, when taken too freely, other chemical qualities calculated to disturb digestion.

**The Repression of Tuberculosis in Roumania.**—The *British Medical Journal* notes that the Council of Hygiene of Bucharest recently appointed a committee to prepare a handbook of advice as to the means of preventing pulmonary tuberculosis. The committee has recommended, among other things, that persons suffering from the disease be excluded from workshops and placed in sanatoria, where they should be treated and maintained at the cost of the municipality. With the object of giving effect to this recommendation, steps have already been taken to obtain buildings to be transformed into a sanatorium. A special medical inspector is also to be appointed, whose duty it shall be to discover cases of tuberculosis in workshops and factories.

**The 70th Annual Meeting of the Deutsche Naturforscher und Aerzte** is to be held this year at Düsseldorf, from September 19th to 24th. This is always considered one of the most important annual medical meetings in Germany, before which in the past have been read some of the most noteworthy contributions to scientific medical progress, and its proceedings are followed with a great deal of interest. This year there is to be an additional special section, that for the history of medicine.

**Match-making without Phosphorus.**—The Paris correspondent of the *British Medical Journal* states that the French State engineers have succeeded in giving a formula for making lucifer matches that does not include either white phosphorus or any substance injurious to the health of the hands or that of the public. Machinery has also been invented that will contribute to the health and safety of the hands. The machinery has been tested; after a few improvements have been made in it, it will be generally adopted in the Government lucifer-match factory.

**Staining the Nuclei of the Red Blood-corpuscles.**—At a recent meeting of the Academy of Natural Sciences of Catania, Italy, Petrone recommended that the preparation be first stained with Lugol's solution and then with either gold chlorid or silver nitrate. The resultant reaction is peculiar to the red blood-corpuscles, thus distinguishing them from the leukocytes and other cells. The reaction is thought to be dependent upon the iron in the nuclei. The hemoglobin contains much less iron. The nuclei of the leukocytes contain none at all, whereas the protoplasm contains a slight amount. In various forms of anemia this chemical reaction shows that the nuclei of the erythrocytes contains much less iron than normally.

**Color-tests for Artificial Food-preparations.**—At a recent meeting of the Berliner medicinische Gesellschaft, Prof. Posner demonstrated a series of color-reactions in artificial food-preparations, by which he hopes it will be possible to get a reasonable idea of their constituents, both as to kind and to quantity, without the necessity for a detailed analytical investigation. The iodine-reaction is used for starch, and certain of the aniline-colors, especially Biondi's triple stain, for the detection of albuminous constituents. The report is a preliminary one, but it is hoped that with the aid of the microscope further investigation will make it possible to determine the relative value of any given preparation and whether successive samples of it are of a constant value.

**A Russian Woman-physician as an Italian Revolutionist.**—Among the revolutionists who have been recently convicted for participation in the May riots in Milan is a Russian woman-physician, Anna Michalowna Kulischewa, a native of Moscow. She began the practice of Medicine in Milan in 1885, and shortly afterward identified herself with the socialistic movement and was known as the confidential friend and abettor of several of the prominent radical labor-agitators and extreme socialists. For her agitation among the women employed in factories and their organizations for purposes that were considered by the government as subversive of order, she was exiled from Italy in 1894, but later she was allowed to return. As she was considered to be one of the ringleaders in the revolutionary movement and in fact was convicted as such it was expected that her sentence would be heavier than it has turned out to be, namely imprisonment for two years.



**Attendance at German Universities.**—During the present summer semester there were registered at the various German Universities 32,230 students, as compared with 31,110 during the last winter semester and 30,932 during the preceding Summer semester. Of these 2,269 were foreigners, as against 2,383 in the last semester. Most of the falling off in numbers of foreigners during the present semester—and it is among these that the decrease is especially noticeable—is attributed to the fact that the war has kept some at home, while it has led others to leave for home sooner than they otherwise would have done.

**Secret Preparations: the Law in Germany.**—The German courts have just decided, in an appeal against certain police-regulations as to the sale of patent medicines, so-called secret preparations, that they may be sold only under the following conditions: (1) Their exact contents must be known to the apothecary; (2) they must contain only such remedies as are allowed to be sold under ordinary circumstances without a prescription from a physician; (3) they must be sold at a price that does not exceed that at which the various ingredients are allowed to be sold in the ordinary course of business. The government fixes by law a limit to the price that may be charged for drugs and watches carefully for any infringement.

**The Hematozoon of Goiter.**—At a recent meeting of the Académie des Sciences de Paris, Grasset detailed the results of his investigations regarding the pathology of goiter, which he had prosecuted in the department of Puy de Dôme. He believes the affection to be not a local one, but a general one, with a predominating local manifestation—the goiter. Similarly as the enlarged spleen is a predominant manifestation of malaria, so also is the enlarged thyroid a predominant manifestation of goiter. There is also a curious parallelism between goiter and malaria. Both have a special geographic distribution; both affect mainly a gland having an internal secretion; and in both, when they reach an extreme degree, cachexia supervenes—in one cretinism, in the other the well-known malarial cachexia. In the blood of 8 persons suffering from recent goiter, Grasset was able to demonstrate a parasite. It appeared as a spherical segmented body, larger than a red blood-corpuscle, and recalled the malarial parasite.

**An Anthropologic Institute at Leghorn.**—The *British Medical Journal* announces that the Institute Anthropologico Italiano, which has recently been opened at Leghorn, has for its aim the popularization of anthropologic work and the collection of material for scientific purposes. The Director of the Institute is Dr. Giuseppe Marina. Its scope comprises psychologic work, anthropometric, pathologic and ethnographic investigations. Persons can for a moderate fee have themselves examined by the most approved modern methods in all these directions. A careful record is kept, and the same individual may return from time to time to have the examination repeated—a procedure in which he has a personal interest, while the comparative results thus obtained will prove of value to science. In addition to this, lectures are to be given, pamphlets published, and public discussions on anthropologic and other methods of making the science attractive to the public will be employed. Particular prominence will be given to the history of civilization, demography, sociology, and hygiene.

**Professional Secrecy in France.**—The *Echo médical du Nord* for July 3d records a legal decision in the French court of appeal which is of great interest professionally.

According to article 378 of the French penal code, a physician is forbidden to reveal any secrets confided to him, or of which he becomes cognizant, in the exercise of his profession. A married woman, applying for a divorce from her husband, sought permission to introduce in evidence certain letters addressed to her by Dr. Cordonnier, who had attended her husband, to show the nature of his malady. The court commenced by laying down that the physician does not exceed the limits of his rights when he informs by letter the wife of a man whose husband he is attending of the causes and nature of his disease. But it adds that these letters must not be divulged, even by agreement between the sender and the recipient; as the obligation to professional secrecy imposed by the law does not permit of his consenting to their publication. This rule permits of no exception, and must be applied even when the applicant for divorce wishes to put them in evidence as proof of her wrongs; for confidences which the interest of the patient can alone justify, must not, under any pretext, be used against him.—[*New York Medical Journal*.]

**Health-Reports.**—The following statistics concerning small-pox, yellow fever, cholera and plague, have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending July 30, 1898:

## SMALL-POX—FOREIGN.

		CASES.	DEATHS.
CHINA: Hong Kong.	May 28-June 4 . . . . .	2	1
CUBA: Manzanillo.	June 14 . . . . .	15	
ENGLAND: Liverpool.	July 2-9 . . . . .	1	1
Newcastle-on-Tyne.	July 2-9 . . . . .		Doubtful.
FRANCE: Paris.	July 2-9 . . . . .		1
INDIA: Madras.	June 11-17 . . . . .		1
JAPAN:			
Osaka Fu.	June 16-26 . . . . .	1	
Tokyo Fu.	" . . . . .	6	
Awamori Ken.	" . . . . .	28	6
Miyagi Ken.	" . . . . .	1	1
Miyazaki.	" . . . . .	1	
Niigata.	" . . . . .	1	
Shiga.	" . . . . .	1	
The Hokkaido.	" . . . . .	8	
RUSSIA:			
Odessa.	June 28-July 2 . . . . .	1	
St. Petersburg.	" . . . . .	6	1
Warsaw.	" . . . . .		

## CHOLERA.

JAPAN: Kanazawa Ken.	June 16-26 . . . . .	1	
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## YELLOW FEVER—FOREIGN.

SAN SALVADOR	June 18-25 . . . . .	1	1
	June 25-July 2 . . . . .	5	2

## PLAGUE.

JAPAN: Taiwan, Formosa.	June 16-26 . . . . .	120	58
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**The Meeting of the British Medical Association in Edinburgh.**—The sixty-sixth annual meeting of the British Medical Association was formally opened on Tuesday, July 26th, in McEwan Hall, Edinburgh, under the Presidency of Sir Thomas Grainger Stewart, Physician in Ordinary to the Queen in Scotland and Professor of Medicine in the University of Edinburgh. A reception-room for all members, as well as one for all invited and foreign guests was opened on Monday, and provision was made at the University Union for daily luncheon at an inclusive tariff of 2s. 6d. per head. The President's Address and the Addresses in Medicine, Surgery and Psychology were, through the courtesy of the *British Medical Journal*, published in last week's JOURNAL; while the Presidents' Addresses in the Sections of Medicine, Surgery, Psychology, Dermatology, Laryngology and Otology, and Medicine in Relation to Life-assurance are published this week. Our correspondent

will supply us, besides, with notes of the meeting, which has been a large one and in some scientific directions an important one. Among the interesting debates may be mentioned that on the Significance and Consequences of Different States of Vascular Tension, which was opened by Sir William Broadbent; that on the Social Aspect of Suicide, which was opened by Professor Morselli, of Genoa; that on Intracranial Tumors, which was opened by Dr. David Ferrier, F.R.S.

#### **Tubercle-bacilli as the Cause of Heart-lesions.—**

At the last meeting of the Berlin Society for Internal Medicine, Michaelis presented microscopic specimens from some valvular lesions of the heart in rabbits produced experimentally. After an injury to the heart-valves tubercle-bacilli were injected through the carotid into the circulation. Some of these lodged at the injured spots on the valves and gave rise to chronic inflammatory processes. In the sections made from these lesions the only microorganisms found were tubercle-bacilli. The present work has been done by Dr. Blum, of San Francisco, under Michaelis' direction in Leyden's laboratory, and it is believed to substantiate the theory that tubercle-bacilli alone may produce valvular lesions in human subjects, and that their presence in such vegetations often is not a mere coincidence, but an evidence of their active causative agency.

**The Paris Academy of Sciences.**—Of interest because of the recent accession of Prof. v. Leyden of Berlin to corresponding membership in the Academy of Sciences in Paris is the comparatively small number of German scientists who in recent years have shared that honor. Since 1870 only 5 corresponding members of the section for medicine and surgery have been Germans: Virchow, Ludwig of Leipzig, Ehrmann of Strassburg, Rokitansky of Vienna, and Lebert of Breslau. It is Virchow's place that von Leyden is chosen to fill, Virchow becoming a foreign associate of the Academy. Of these there are but eight altogether, one other, Prof. Robert von Bunsen, the chemist of Heidelberg, being also a German. Despite the conditions of national feeling between the two peoples, most of the names of prominent German scientists have figured in the list of corresponding members of the Academy, including Helmholtz; Weber, of Göttingen; J. R. Mayer, of Heilbronn; Kirchhoff, the spectroscopist; Purkinje, of Breslau; Siebold, of Munich; Cohn, of Breslau. Prof. Cohn's recent death has left a vacancy that it has been thought Prof. Röntgen, of Würzburg, might be called upon to fill.

#### **The Anaerobic Bacterial Treatment of Sewage.—**

In connection with the statements that have appeared from time to time in this JOURNAL, relative to the pollution of streams used for drinking-purposes, and to the disposal of sewage and other refuse, the following letter in the *British Medical Journal*, from Dr. R. Boyce, professor of pathology in the University College, Liverpool, is of interest: "The most recent advance in the treatment of sewage was subjecting it to aerobic fermentation. This now seems likely to be reinforced by an anaerobic method, and one which may play a most important part in the solution of a very difficult and costly problem. I should like, therefore, to direct attention to some early work upon the subject which, as far as I am aware, appears to have been overlooked. In January, 1893, my father received a very interesting letter from the British Consul at Barcelona, bringing to his notice a new method for the treatment of sewage, a method which the writer stated had been published in France about the year

1883 by the Abbé Moigno. The Consul stated that the system had been tried by a well-known merchant of Barcelona, at first at his factory and then at his private residence, and that at the time of writing the method had been in operation for five years with perfect success. The Consul had himself inspected the tank and had seen the almost colorless and odorless fluid which came away, and which was removed in casks and employed for manure purposes without causing the slightest repugnance. With the letter the Consul enclosed a very remarkable pamphlet upon this automatically discharging cesspool, entitled 'A New, Hermetically-closed completely Inodorous, Incessantly Self-emptying Cesspool, invented by M. Louis Mouras, propriétaire, Vesoul (Haute Saône).' The pamphlet was written by the Abbé Moigno, and the substance is briefly as follows: In the year 1881, Monsieur Mouras asked the Abbé to publish his observations upon a cesspool system which he had in use for twenty years. According to the Abbé the system was hermetically closed, absolutely inodorous, and rendering infection impossible. 'By a mysterious action which reveals an entirely new principle it transforms all that it receives, both solid and liquid evacuations, in a tolerably short time, and without any addition of chemical ingredients into a homogeneous and scarcely turbid liquid, which holds everything in suspension in a state of filaments almost invisible, without leaving any deposit against the sides of the soil-pipe or at the bottom of the drain-pipe.' The apparatus is constantly discharging, and the fluid is admirable for domestic irrigation. The septic tank is then accurately described and figured and the capacity calculated for the amount of work it has to do. It is in effect the perfect septic tank as now understood. The Abbé discusses the theory of action of the complete decomposition of the fecal and refuse material in the airless tank, and hints that it may be due to the action of a hydrosulphate of ammonia, but he adds that this is a conjecture, and proceeds, 'May it not be discovered that the mysterious agents of the fermentation, cause of the decomposition and liquefaction of the feces, are the vibrios, or rather the anaerobes, of M. Pasteur, which the oxygen kills, and which only employ their devouring activity when excluded from the air?' A laboratory septic tank was constructed with glass sides, so that the whole process of fermentation and liquefaction could be observed; the layer of about 5 cu. cm. which forms upon the surface is described and the manner in which it undergoes disintegration. A tap was placed on the top of the tank and over this a bladder was securely fastened, and it was found that little, if any, distention of the bladder occurred. If, however, air was admitted to the tank there was a rapid development of gas-bubbles, and soon the bladder was distended, and therefore for the effective working of the bacterial destructor it was essential to exclude the air. He points out that a certain proportion of water is requisite to prevent saturation of the fluid with the product of decomposition, and in consequence arrest of the process. Chemical analysis of the fluid showed that it possessed strong fertilizing properties. The Abbé conjectures that during the putrid anaerobic fermentation any pathogenic germs which might be present are destroyed, and that therefore the fluid can be turned with impunity into the sewers or used for irrigation. Practical details were added, in conclusion of this very remarkable document, showing how ordinary cesspools may be converted into the new form. The process was patented in 1881. I may add that we are erecting in the Hygienic Laboratory in Liverpool experimental tanks for further testing the process."



## Obituary.

WILLIAM PEPPER, M.D., LL.D., distinguished as physician, educator and man of enlightened public spirit, died suddenly on July 28th at Pleasanton, California. The end had been foreshadowed by but few and brief warnings, and his death from angina pectoris came with shocking suddenness. He had been ill during the past winter, but was improved by a month's sojourn in the South. A short time ago he left for California to rest and recuperate. Dr. Pepper's life has been marked by the accomplishment of noble and magnificent purposes, and his death, when not yet fifty-five, is a source of universal public and professional regret.

Dr. Pepper was born at Philadelphia on August 21, 1843, the son of Dr. Wm. Pepper, a distinguished physician and occupant of the chair of the theory and practice of medicine in the University of Pennsylvania from 1860 to 1864. Young Pepper was graduated from the Collegiate Department of the University in 1862 and from the Medical Department in 1864.

Following the choice his distinguished father had earlier made he devoted himself especially to the study of clinical medicine and pathology with earnest determination and enthusiasm. In 1868 he was made lecturer on morbid anatomy in the medical school of the University of Pennsylvania, being the first to teach this branch as a separate subject in that University. In 1870 he was advanced to the post of lecturer on clinical medicine, and in 1876 he became professor of this subject, holding the chair until 1881, when he succeeded Dr. Alfred Stillé in the chair of theory and practice of medicine. In the same year he became provost of the University and this position he held until 1894. He was medical director of the Centennial Exposition in 1876, and he held many positions of trust and importance. Dr. Pepper was an earnest teacher, a careful observer, an acute diagnostician, an able clinician.

He was a voluminous writer, his most important literary production being a "System of Medicine by American Authors," published in 1885-86, which he edited and contributed to. In collaboration with Dr. John F. Meigs he prepared the well-known work on "Diseases of Children." He was also the editor of and a generous contributor to the "American Text-book of the Theory and Practice of Medicine." In 1870 Dr. Pepper founded the *Medical Times*, and he was for two years its editor. Among his numerous contributions may be mentioned "Anematosis, or Pernicious Anemia;" "The Local Treatment of Phthisical Cavities," "Trephining in Cerebral Disease," "Catarrhal Irritation," "Report on the Mineral Springs of America," "Epilepsy," "Phthisis in

Pennsylvania." Among other publications are: "Sanitary Relations of Hospitals," "Higher Medical Education, the True Interest of the Public and the Profession," "Report of the Medical Department of the Centennial Exposition," public addresses on "Force vs. Work," "Benjamin Franklin," "Benjamin Rush," and "The Relations of Graduate and Undergraduate Curricula."

Dr. Pepper had been largely instrumental in the establishment of the University Hospital, securing the gift of a site from the city. The material progress of the University during his occupancy of the provostship is shown by the following comparative figures:

	1881	1891
Land.....	15 acres	52 acres
Number of students.....	981	2180
Fees of students.....	\$92,701	\$230,567

During the same period there were created the following departments of the University:

The Wharton School, the Veterinary School and Hospital, the Biological School, the Graduate Department, the Department for Women, the Department of Physical Education, the Department of Archeology and the Laboratories of Hygiene and of Chemistry.

Dr. Pepper early insisted upon prolonging the medical course of instruction from two to three years, and, upon his retirement from the provostship in 1894, he made possible the extension of the course to four years, by agreeing to subscribe \$50,000 toward a permanent endowment-fund of \$250,000, together with \$1,000 annually for five years toward a guarantee-fund of \$20,000 per annum.

In 1895 Dr. Pepper gave over to the University of Pennsylvania the William Pepper Laboratory of Clinical Medicine, in memory of his father. What we said of him on that occasion

in another place may be appropriately repeated now: "Dr. Pepper has in the past been lavish to the University of Pennsylvania in the giving of time, energy, influence and money to advance the interests and to secure the welfare of the institution with which he has for many years been so closely identified, but this last gift is the crowning act of a career marked by tireless activity and munificent generosity. He has created for himself a monument more noble than carving of stone or casting of bronze, and his example should be an incentive to others to forward the great work which he has thus begun."

But Dr. Pepper was not only a distinguished physician and teacher. The burdens of his numerous cares, the constant devotion to a large practice, and the exactions upon his time and strength demanded by the University, did not suffice to fill his whole life. Restless in his endeavors to give to the public the fullest measure of his capacities, he organized archæo-



logical expeditions to Babylon, Peru, Florida, and the great Southwestern States, and by his liberal donations and his energetic guidance saw these enterprises crowned with the fullest international recognition, and his favorite University the repository of priceless treasures.

Still not content, he established for his native city and his country a system of museums, absolutely novel in conception and far-reaching in the benefits that must accrue through them. Drawing to his aid the ablest assistance, as was always his method, he secured from foreign nations many of the commercial exhibits of the World's Fair, and, with these as a nucleus, founded the commercial museums, which have already grown to extraordinary proportions and importance. These collections of produce and fabrics from all parts of the world, with their accurate catalogs and systematic arrangement, have become in the few years since their foundation of the very greatest value to the commercial world. Not the least remarkable matter in connection with this enterprise is the fact that its conception originated with a man who himself had no direct interest in commercial affairs.

Dr. Pepper's interest in the education of the masses led him to establish, in connection with the University, popular lecture-courses, and later the University-Extension, and last of all the Free Library of Philadelphia. Only recently he secured a donation of a million dollars for a public art-gallery. The Free Library was one of his greatest achievements. Beginning with a small foundation, he soon interested the municipality and a number of prominent citizens and established a central library, from which numerous branches have now taken origin. The circulation, as shown by the last report of the Librarian, is unequaled by that of any similar organization in the country. Dr. Pepper's interest and successful efforts in behalf of the Loan-Bill and a pure water-supply are of too recent memory to require further reference.

We have spoken of but a part of Dr. Pepper's multitudinous interests. The inauguration of the Pan-American Medical Congresses was wholly the result of his energy and interest in a closer relation of North and South America, and he was the first president. He interested himself actively in the establishment of a Department of Public Health as a branch of the general government; and had his life been spared, the fulfilment of this project would doubtless have owed much to his interest and endeavors. To his devotion to all these projects while his health was failing must be attributed his untimely death. Dr. Pepper was a member and he had been an officer in many scientific bodies, and he had received various public honors.

In the death of Dr. Pepper the city of Philadelphia has lost a most public-spirited citizen, the medical profession a most distinguished representative, the cause of education and of art a most liberal patron and advocate, and the University of Pennsylvania a loyal, sincere, and self-sacrificing friend.

This JOURNAL deplores the loss of one who, as an incorporator and vice-president of its Board of Trustees, has from the beginning shown the deepest interest and activity in its welfare and has persistently insisted upon its success.

The following pretty little incident that occurred within the past few months is related in illustration of the character of the man. A visitor calling upon him found him asleep in his office. He opened his eyes and gave a cheerful though weary greeting. At this moment a boy brought in a letter. Without rising, Dr. Pepper read it and handed it

with the attached slip of paper to his visitor with the remark, "This is the sort of thing that is killing me." When the visitor read the slip—which was a check for \$10,000 for one of Dr. Pepper's numerous works of beneficence—he said, "Most men would be made very much more alive by such work as this of yours." "Each endowment I get costs me so much life," he replied. To the further question why he should not prolong his life by working less intensely and constantly, he half-contemptuously said, "If the same work is done in ten years for which others take thirty, it is in reality doubled, and more than doubled." It was the public duty upon which his eye was ever fixed, and everything, even his own life, certainly his own selfish interest, must be sacrificed to the noble cause. He might be called our greatest institution builder. He was assuredly Philadelphia's best friend and greatest citizen.

## Philadelphia News and Notes.

**Presbyterian Hospital.**—A new ward is to be erected as a memorial of the late Margaret Welsh Dulles.

**Dr. John Guiteras,** who has been in service at Santiago, was expected to arrive home on August 3d, having been granted a leave of absence because of ill-health.

**The Alvarenga Prize of the College of Physicians of Philadelphia** for the year 1898 has been awarded to Dr. S. A. Knopf, of New York, for his essay entitled: *Modern Prophylaxis of Pulmonary Tuberculosis, and its Treatment in Special Institutions at Home.*

**Infectious Diseases in Philadelphia** for the week ending July 30th:—

Disease.	Cases.	Deaths.
Diphtheria .....	44	10
Scarlet fever.....	27	2
Typhoid fever.....	63	10
Pulmonary tuberculosis...		61
Total mortality.....		465

**The German Hospital** is being materially improved in many respects. An extensive addition to the laundry-building is about completed and two stories are being added to the older part of the hospital-building. Further, an entirely new pathologic institute is being erected. The former mortuary has been torn down and the new edifice is being built upon its site. It will be two stories in height—the first comprising the postmortem room, the second the pathologic and bacteriologic laboratory. The latter will be fitted with all modern appliances for advanced scientific work.

**Pennsylvania Hospital.**—The recently issued report for the last fiscal year, ending April 23d, shows that during the year 3,241 patients were treated at the Pine Street hospital, and 14,455 patients admitted to the receiving ward. In the out-patient department, 1,994 new medical patients made 2,992 visits, and 8,717 new surgical patients made 30,419 visits. In the Department for the Insane in West Philadelphia, 266 men and 318 women were treated. The expenses of the Pine Street hospital, which were \$104,722.46, exceeded the income by \$50,266.77. The expenses of all departments were \$316,399.18. There were received during the year in gifts, legacies, etc., \$143,898.60.



**Bequests to Hospitals.**—By the will of the late Emily Lippincott, of Cheltenham, who died July 23d, the following charitable bequests are made: To the Episcopal Hospital, for the endowment of a free bed, \$5,000; to the Children's Hospital, \$2,500; to the same institution, for the endowment of a perpetual free bed, an additional \$2,500; to the Philadelphia Home for Incurables, \$500.—By the will of the late Jane Kennedy Barclay \$5,000 are bequeathed to the Presbyterian Hospital.—By the will of the late Mrs. Eliza H. Frailey, her estate valued at about \$20,000 will revert to the Episcopal Hospital upon the death of her surviving daughter-in-law.

**The May's Merciful Mission.**—Mr. Alexander Van Rensselaer's yacht *May*, the services of which were tendered the United States Government by the owner, sailed August 5th, for Porto Rico. It has aboard the four special commissioners appointed by the National Relief Association: Hon. William Potter, ex-Minister to Italy, chairman, Mr. Alexander Van Rensselaer, Mr. Louis C. Vanuxem and Dr. G. G. Groff. The yacht will carry supplies for the soldiers, which, by order of Surgeon-General Sternberg, will be placed at the disposal of Colonel Greenleaf, Chief Surgeon of the troops under General Miles' command. Having discharged the supplies, the yacht will carry to the United States any sick or wounded soldiers or sailors that may be awaiting transportation.

**Obituary.**—DR. JACOB S. SHIMER, July 28th. He was born in Shimersville, Lehigh County, Pa., in 1836, was graduated from the medical department of the University of Pennsylvania in 1857, and began the practice of his profession in Bethlehem. About thirty years ago he removed to Philadelphia, where he resided until his death.—DR. HENRY MULLEN, of Philadelphia, died at the home of his son, at Ozone Park, Long Island, July 31st, at the age of 64 years. He was graduated from Jefferson Medical College in 1864.—DR. THEODORE H. E. GRUEL, died suddenly July 31st. Dr. Gruel was born at Kirchheim on the Teck, in Wurtemberg, Germany, November 3, 1846. He came to this country in 1864 and graduated from Jefferson Medical College in 1870. For many years prior to his death he was physician-in-chief to the German Society.

**Congenital Absence of Both Kidneys.**—G. Zuñal *Prager med. Wochenschrift*, June 16, 1896) reports the delivery of an 8-months male child, in which neither kidneys nor ureters could be discovered at the necropsy. The child was well developed and all the other organs were perfectly normal.

**The Diagnosis and Prognosis of Cerebral Hemorrhage and of the Apoplectic State.**—Gilles de Tourette (*Semaine Médicale*, June 8, 1898) calls attention to the importance of a study of the temperature in cases of cerebral hemorrhage. At the time of the attack the temperature will fall; but this fall is not permanent. In 3 or 4 hours the temperature will have risen to 38° or 39° C. (100.4° or 102.2° F.). At this point the temperature may remain stationary; but it should be carefully taken every two hours. The prognostic importance of the reading of the thermometer may be stated as follows: If, at the end of 12 or 24 hours, the temperature has risen above 40° C. (104° F.) death may be expected rapidly. If the temperature oscillates around 39° C. (102.2° F.) and there is, in addition, conjugate deviation of the head and eyes, or precocious contraction of the pupils, the prognosis is grave. If the temperature remains stationary about 39° C. (102.2° F.) for 2 or 3 days and acute decubitus develops the prognosis is also grave. If, on the contrary, the temperature remains below 39° C. (102.2° F.) for the first 24 hours after the attack, the prognosis is favor-

able. The outlook is still further brightened if, during the days next succeeding, the temperature continues to fall. It is well not to promise too much in the first 3 or 4 days, however, for there is always danger of a second hemorrhage. The thermometer may be used, too, for the purpose of differential diagnosis between organic cerebral lesions, such as tumor, softening, and fracture, and epilepsy on the one hand, and the intoxications and hysteria on the other hand. In organic cerebral lesions and in epilepsy the temperature is always elevated; in the intoxications, such as alcoholism, opium-poisoning, belladonna-poisoning, digitalis-poisoning, aconite-poisoning, hyoscyamus-poisoning, uremic coma, and diabetic coma the temperature is below the normal; in hysteria the temperature will remain normal.

**Fracture of the Tuberosity of the Tibia.**—Ivar Friis (*Hospitalstidende*, May 11, 1898) reports a case in which the tuberosity of the tibia was torn away by muscular action. This injury is quite rare, fracture of the patella usually occurring in case such force is applied to the quadriceps extensor tendon. Friis has collected 11 cases from literature and gives brief abstracts of them. The condition has been variously treated; by incision and wiring, by plaster-of-Paris bandages, adhesive strips, and simple bandages, and the results have been usually good. In the case reported, firm union did not take place until 2½ months after the injury, but an excellent result was eventually obtained.

**Logorrhea**, a daily paper, has gathered the following list of synonyms illustrative of our tendency to multiply names: Vitascopie, kinetoscope, phantoscope, criterioscope, cinematograph, biograph, kinematograph, wonderscope, animatoscope, vitagraph, panoramograph, cosmoscope, anarithmoscope, katopticum, magniscope, zeoptrotrope, phantasmagoria, projectoscope, variscope, cinograph, cinomograph, hynoscope, centograph, x-ograph, electroscope, cinagraphoscope, craboscope, vitaliscope, cinematoscope, mutoscope, cinoscope, animaloscope, theatograph, chronophotographoscope, motograph, kinetograph, rayoscope, motorscope, kinetophone, thromotrope, phenakistoscope, venetrope, virtescope, zinematograph, vitopticon, stinetscope, vivrescope, diaramiscope, lobsteroscope, cormonograph, kineoptoscope.

**Fractures of the Spine.**—B. B. Davis (*Western Medical Review*, July 15, 1898) states that the statistics of laminectomy since the advent of antiseptics show cure in only 6.7% or cases and improvement in 25%. While this mortality is high, it is 30% less than that of non-operative treatment. In the presence of slight lesions, operation should certainly not be undertaken; in the event of severe injuries, with other than spinal lesions likely to cause death, operation should be delayed to determine the outcome; if the injury to the cord is so great that it is impossible to determine whether cure or improvement can be expected, it seems best to give the patient the benefit of the doubt and operate. Three cases are reported. A man fell from his wagon whilst intoxicated, and suffered paralysis of the bladder and rectum, and almost complete paralysis of the legs. He was able to pass urine without a catheter in a week, soon gained control of his bowels and at the end of five months he could walk without difficulty. No operation was performed, the treatment consisting in absolute rest on a hard mattress. In the second case a gibbosity of the second dorsal vertebra and complete paralysis of the legs, bowel and rectum followed a fall from a hand-car. No operation was performed. Bedsores appeared in a few days and death followed at the end of five months. In the third case a miner was crushed by a heavy mass of slate whilst bending at his work. Total immediate paralysis of the lower extremities, bladder and rectum followed and the condition had remained unimproved up to the time of admission to the hospital, about four months later. After a few days' treatment of the bedsores and cystitis, laminectomy was performed and the arches of the last dorsal and first lumbar vertebrae were removed. There was slight shock and primary union of the wound. On the fourth day sensation was found to have extended slightly downward and improvement has continued, until now the muscles contract under the influence of the faradic current. The case is probably one in which either the damage to the cord was too serious for complete restitution or pressure-changes had advanced so far as to limit the benefit from operation.



## BRITISH MEDICAL ASSOCIATION.

Sixty-sixth Annual Meeting, held at Edinburgh, July 26,  
27, 28, 29, 1898.

Through the courtesy of the Editor of the *Philadelphia Medical Journal* we are able to present simultaneously with our translation of the address a number of the addresses delivered before the British Medical Association at its meeting at Edinburgh during the past week.

(Continued from p. 259.)

## Section of Medicine.

**President's Address.**—DR. GEORGE W. BAILEUR delivered an address, entitled **Personal Experience of an Almost-forgotten Episode in Medical History.** There are not many now alive who remember the time when bloodletting was the panacea for almost every ailment, and when patients could be no longer safely bled they were certainly leeches or cupped. There must be few survivors of the time when one of the earliest lessons in surgery was to distinguish between an ordinary blood-clot and one that was buffed and cupped, or who were taught that in uncomplicated pneumonia such confidence was to be placed in bloodletting that "the only essential action of the prognosis was the day of the disease on which the treatment was commenced," as it sometimes failed when delayed more than two or three days from the commencement of the disease. Yet such were the earliest lessons in medicine that I received, lessons which were daily exemplified in the wards of the old Royal Infirmary.

When within a year of my graduation I made my way to Vienna with the view of studying homeopathy, which had just made a convert of one of our ablest professors (Henderson), I occupied my time at first in improving my knowledge of percussion and auscultation under the world-renowned Skoda, and you may imagine my astonishment when I found that in his wards the severest cases of pneumonia were treated with poultices and regulated doses of extractum graminis (hay-tea), and with nothing else unless much pain was complained of, when a few grains of Dover's powder were superadded.

It was truly astonishing to behold in bewildered amazement a pneumonia melting away under the magic influence of the decillionth of a grain of phosphorus, but it was indeed a *reductio ad absurdum* to find this magic influence emulated by the virtues of hay-tea, and to be told by Skoda that pneumonia was a disease that tended not to dissolution but to resolution.

The *ὁμοίως παθος*, known to Hippocrates as one of many theories available to guide and to explain the treatment of disease under certain circumstances, was raised to a paramount position by Hahnemann, who enunciated the doctrine that by it alone could disease be not only cured *tuto, cito, et jucunde*, but silently and at once extinguished. In this respect homeopathy was the eighteenth-century analog of our modern antitoxin-treatment. Remedies were selected not for any healing virtues they were supposed to possess, but because of the power they were believed to have of exciting a disease similar to that they were supposed to cure. A crude dose of such a remedy could not, as you may well suppose, benefit a patient, but by superadding a medicinal disease to that he already suffered from was bound to make him worse. This was called medicinal aggravation or exacerbation, and, to prevent any risk of this, Hahnemann invented a most elaborate system of preparation by which all the noxious qualities of the drug were gradually removed and nothing but its healing virtues left. The first step in this preparation was necessarily dilution, by which the active and noxious properties of the drug were gradually eliminated. At the same time, by a series of rubbings and handshakings, the already spiritualized remedy had its dynamic power so developed, that when administered in a fitting dose, the disease for which it was appropriate melted quietly away without any previous exacerbation. In spite of all this elaborate care, and in spite of the terrors of medicinal aggravation forever before their eyes, there was still the widest discrepancy in regard to the doses employed by even professed homeopaths, for while some administer drop-doses of the mother-tincture at reasonable intervals (Schmid), others used nothing lower than the 800th or 900th dilutions (Grosse), and sometimes only permitted the patient to smell one globule damped with this

dilution once during an illness of 4 or 5 weeks' duration, so powerful were these high dilutions supposed to be, so mild and certain in their remedial action.

The enormous discrepancy between these doses may be faintly imagined when you reflect that the 30th dilution contains in each drop 1 decillionth of a grain of the original drug, and that to bring about this attenuation each grain of the drug has to be dissolved in an ocean of 14 septillion cubic miles of diluted alcohol, a quantity equal to many hundred spheres, each with a semidiameter extending from the earth to the nearest fixed star.

Fleischmann of the Vienna (Gumpendorf) Hospital was not an extremist, and the dilutions he employed were seldom higher than the third or fourth, yet for one fresh from a school where it was taught that "in the case of inflammation no one would think of trusting the safety of the patient to any other remedy than bloodletting," it was a sufficiently startling experience to observe cases of true sthenic pneumonia not only entrusted to these infinitesimals, but making excellent recoveries under their use. Naturally the first and most obvious idea was that there really must be some occult virtue developed by the various triturations and succussions, and some truth in the homeopathic aphorism—*similia similibus curantur*. Fortunately the excellent results obtained by Skoda with his hay-tea sufficed to dispel these clouds of mysticism, while the success of Dietl in the same class of cases in another hospital with simple aqua colorata showed that there was nothing specific even in hay-tea, and but confirmed the unmistakable conclusion that, as Skoda put it, pneumonia tended not to dissolution but to resolution, and that the large bloodlettings thought necessary for its treatment were, to say the least, uncalled for.

Among some even in Vienna the idea prevailed that this singular result was due to the presence of a less sthenic type of pneumonia. I need not say that this idea was not shared by Skoda, nor by his colleague Bittner, a benevolent-looking old gentleman of by no means a truculent aspect, but a great stickler for the old faith, who had no difficulty in bleeding his pneumonic patients freely with very considerable success, and when he could no longer bleed them he always cupped them; he applied to them those now forgotten instruments of torture, the cucurbitula cruenta so that when his patients did arrive at the *post-mortem* theater they were always readily recognized.

Though so much stress continued to be laid upon the necessity for bloodletting in the Edinburgh school, it had ceased to be carried to such an extreme as in the immediately preceding generation. I have been told by an old gentleman that he heard Professor Gregory in a clinical lecture boast that he had bled a man into convulsions, adding that the students had rushed terror-stricken from the ward, and that he himself had been disconcerted for a moment. Fortunately the patient recovered, and Gregory's boldness and success were so rapidly blazoned abroad that, though long before the days of railways and telegraphs, yet within a week it was heard of at Geneva. In a series of MS. clinical lectures still extant, Gregory narrates the still more remarkable case of Betsy Moffat, who during an attack of pneumonia had suffered much from bloodletting, tartar emetic, and other perturbative treatment at last she was found at visit insensible, her pulse 104 and feeble, and a rattle in her throat like one dying. Even Gregory admitted she could not be further bled, but by dint of stimulating her with hartshorn and sack-whey he was able to apply a few leeches to her head, and before he left the ward he was able to take 4 more ounces of blood from her arm, blood which, as Gregory tells us, was still buffed and cupped. It must be a relief to you, I think, as well as an astonishment, to learn that this patient did not die, but on the contrary was able to be discharged exactly one week after her last bloodletting.

Gregory was a very able man and no fool; he quite recognized the danger of large bloodlettings, especially in weakly patients; he considered the remedy unsafe, but he thought it less dangerous than the disease, and in this opinion he was supported by the pathology of his day.

Towards the end of the seventeenth century the researches of Bonetus into human morbid anatomy confirmed the statement first made by Laelius a Fonte in regard to the presence of hepatization in the lungs of those dying from pneumonia. By and by the further experience of Valsalva, Morgagni, and Lieutaud, showed that the lungs of all who died with symp-



toms of pneumonia were always either in a state of red or gray hepatization, were either, as was supposed, filled with coagulated blood or were in a state of suppuration the result of effusion of blood into their tissue. Cullen, impressed with the idea, based upon the presence of red or gray hepatization in all fatal cases, that pneumonia was always fatal by the rupture of a vessel within the lung, connecting this with Hoffmann's theory that all inflammatory action was due to spasm of the small arteries, and regarding bloodletting as the only certain resolvent of spasm, was led to advocate free bloodletting *usque ad deliquium*—as the only cure for pneumonia. For the first time in the history of medicine phlebotomy as a treatment for pneumonia was removed from the domain of empiricism and placed upon the thoroughly scientific basis of an apparently indisputable pathology. When we recall the remarkable relief that followed venesection, the quiet restful repose of a patient who but a few moments previously had been sitting up gasping for breath and complaining of intense pain, we cannot wonder at the reluctance displayed by the profession when asked to cast aside a remedy so powerful to relieve and believed to be so certain to cure. And if we put ourselves in the position of the men of that generation, we almost cease to wonder that wise and able men yielded themselves to the fascination of infinitesimals which seemed capable of replacing so pleasantly and efficiently a remedy so powerful, but attended by so many serious drawbacks.

On my return from Vienna I read to the Medico-Chirurgical Society of this city a report of what I had observed in the wards of Skoda with an account of 392 cases of pneumonia, treated on what might be termed the expectant principle, and showing a mortality of only 54, or 1 in  $7\frac{1}{4}$ , equal to 13.7%. I pointed out that the Vienna cases were certainly not less sthenic than those in Edinburgh, that they had the disadvantage of being daily unceremoniously auscultated, percussed, and lectured over, which was not the custom in our infirmary in those days, and that they had not the advantage of having been freely bled, yet their mortality was only 13.7%. In the reports of our own infirmary during the five years and three months from July 1, 1839, to September 30, 1844, there are recorded 253 cases of pneumonia who escaped the lecturing, and had the advantage of having been freely bled, and of these 91 died, a mortality of 1 in 2.78, or 35.9%, showing a proportion of recoveries of nearly 3 to 1, or over 20% in favor of those who were not bled, to say nothing of the time gained by their more rapid recovery, or of the less exhausted condition in which the patients were left, whereby they were sooner fit to return to the duties of active life. I urged upon the Society the importance of giving the eclectic system of treating pneumonia a fair trial, throwing out the suggestion—made to me by a distinguished Austrian physician—that possibly some change in the type of the disease might underly the apparent change in its relation to perturbative treatment. My words fell on deaf ears, and the conclusion arrived at may very well be summed up in the words of one of the ablest physicians of the day—Dr. John Gairdner: "Nothing was better established than the good effect of bloodletting in Edinburgh, whatever might be the case in Vienna. . . . Of the benefits of early bloodletting he entertained no doubt whatever; they were positive, immediate, unequivocal, and admitted by almost every physician whose experience and judgment entitle him to consideration; and if Dr. Balfour, or any one else, could shake his conviction in the truth of his opinion, he would also succeed in producing in his mind a general distrust of medical evidence in all cases of every description, since in no case whatever can we have evidence which is stronger or more satisfactory."

I need not pursue the subject further; the eclectic treatment passed gradually into the hands of the general practitioner, and within less than ten years the late Professor Bennett wrote: "It is admitted that the practice of bleeding in acute inflammations has, within a recent period, undergone a great change; that whereas it was formerly the rule to bleed early, largely, and often repeatedly, now such bleeding is rarely practised, and is not necessary."

After this we had the war of opinions in regard to whether this change was due to a better knowledge of the natural history of the disease and of its pathology, or to an actual change in the type of disease, which had become less sthenic in character, and no longer required the same heroic remedies.

But into this I need not enter; it forms part of the history of medicine, and the object of this short sketch is to point out the importance of a knowledge of this subject.

If at the end of last century the profession generally had been fully alive to the fact that since the days of Pythagoras—a contemporary of Hippocrates—there has never been wanting a body of eclectic physicians, many of them the most renowned physicians of their day, who shunned perturbative medicine, and guided their patients safely through the most acute diseases without having recourse to any so-called heroic practices, it seems unlikely that even the skilful special pleading of Cullen would have sufficed to establish bloodletting as a treatment upon a foundation apparently so stable. And in the absence of the factitious contrast between the supposititious curative action of heroic medicine and that of infinitesimals, it seems equally unlikely that Hahnemann's wildly improbable ideas as to the preparation and powers of infinitesimals would have taken any hold on the profession at all.

We are now on the threshold of new discoveries, and of quite a new pathology, which is indeed but a higher development of ideas that have long been slumbering in the professional mind—the connecting links being Dwight, Raspail, Hallier, and Pasteur—but which seem likely now to attain a development of the highest importance for the well-being of mankind. It is well, however, in the light of the past, to remember that disease may be recovered from under many different forms of treatment.

The practical certainties of our art in all ages have been sufficient for the welfare of mankind, and we must be careful never to subordinate to any vague ideas of what may possibly be curative of disease that which is, after all, the paramount object of our art—the relief of suffering.

### Section of Surgery.

**President's Address.**—DR. JOHN DUNCAN delivered an address on the **Modern Operating Theaters.**

We in Edinburgh have been engaged of late years in putting our medical house in order, and possibly some of the recent changes may be worthy of your attention.

As you know, the staple commodity of Edinburgh is education. Of this staple, medical education forms an important part, and you can therefore readily understand that these changes have been made largely for the purpose of improving our facilities for medical and surgical teaching.

To one who can look back over 30 or 40 years, no fact in medical education bulks more largely than the increasing importance of our examination-system. Formerly examinations were meant to eliminate the useless; now they dominate the teaching. In some respects this is matter for regret, but there is hope that, if a little breathing-space be accorded, we shall gradually educate the examiners to recognize that the candidate is not a finished practitioner familiar with every meaningless detail, but that the chief business of the teacher is to make men think, and of the examiner to find out how far that has been successful.

Meantime, however, this educational movement has done much good, and one of the most distinct benefits has been increased attention to the practical and clinical. You will find evidence of this in the laboratories and museums which are now attached to every department in our new university buildings and in the associated schools, and which culminate in the admirable laboratory of the College of Physicians and in the important museum of the College of Surgeons.

The managers of our infirmary have not been slow in responding to this movement. Extensive additions have been made to the pathological and other departments, but I may specially direct your attention to two points which are surgically interesting.

The first is that we have now all but completed the arrangements whereby a surgical theater shall be placed at the disposal of each set of wards. When not many years ago we moved into the present buildings, we found that one spacious theater had been provided, in which it was intended that all operations should be performed. But the antiseptic system has thrown open to surgery so wide a field, and the population of our towns has so greatly increased, that our youngest surgeon now performs almost as many operations as were performed in the whole infirmary in the days of Syme.

Moreover, students do not flock nowadays to the surgical



theater as the populace used to flock to an execution, or at least not to the same extent as formerly. The glorification of mere manual dexterity has also greatly diminished. It is seen that if you know what to do there is little difficulty in doing it. And so a surgical operation has come to be regarded as an incident in a case, and the theater has become an appanage to the ward, in which whatever manipulation is necessary may be carried on in the way most advantageous to the patient and most beneficial to the student as a sequel to the diagnosis, and a preliminary to the after-treatment.

You will see, also, that not only have the new theaters been constructed according to modern ideas, but that the older have also been remodeled on the same lines. Our managers deserve all credit for this endeavor to meet modern requirements, but I am not of those who have great faith in surgical upholstery. I cannot believe that the expense that has been incurred here and elsewhere in transforming clearly and well-ventilated theaters into structures of tiles and glass was a necessary expenditure. It may be said that it is all in the right direction, but these are considerations worth bearing in mind before the money of a charity is expended in costly reconstruction.

In the first place smooth and impermeable materials are not necessarily those which are most easily rendered aseptic. It is a fallacy to suppose that you render a theater aseptic by douching its floor with antiseptic solutions. I am not sure but that the cleansing of a good old wooden floor is antiseptically as satisfactory as the treatment applied to its modern substitute.

In the second place, if the principle be sound on which this change has been made, much more is necessary to carry it to a logical conclusion.

The emanations from spectators are more dangerous than those from walls and floor. Must we not, therefore, follow those who have cut the spectators off more or less by an impermeable but transparent screen?

The emanations from the operator and his assistants are far more likely to reach the wound than those from spectators. So I picture to myself a time when everyone concerned in an operation—patient, surgeons, and assistants—having been rendered from top to toe cutaneously aseptic, shall cover each natural orifice of the body with an antiseptic mask, and clothing themselves in raiment scientifically pure, shall pass into an atmosphere freed from germs by the air-pump and by heat.

Many years ago we had here a little controversy as to the value of the spray which was then in vogue. Incidentally I convinced myself by experiment and clinical observation that in surgical operations the air was a negligible quantity. If that be so—and if not absolutely true it is very near it—it would be unfortunate if in cases of antiseptic failure the surgeon should be led to seek in unfavorable surroundings for a loophole of escape from self-blame, or to believe that he cannot operate with perfect success save in a glass case or a crystal palace. Our ingenuity need not be directed to the air, which may be trusted to efficient ventilation, and the germicide action of the tissues. The skin, the instruments, the apparatus, are the true objects of our care.

The other improvement to which I venture to direct your attention is the introduction of electricity into the infirmary. We have taken the opportunity afforded by the substitution of electric for gas-light to rearrange our means of applying electricity medically and surgically. The use of electricity in surgery is doubtless extending, but has been hitherto restricted by the troublesomeness and costliness of the apparatus.

In the matter of lighting there are surgical operations and investigations which cannot be satisfactorily accomplished without it. The surgical value of rendering the body diaphanous by means of the Röntgen rays is now amply proved. The electric cautery has this advantage over others—that it can be placed in position before being heated.

For 30 years I have preached, in and out of season, the surgical uses of electrolysis, but I feel assured that even now it has not met with the appreciation it deserves. Yet in cirroid aneurysm no other treatment can be compared with it for a moment.

In nevus of the usual mixed variety, if you desire to avoid a scar there is nothing so sure and so safe. It does excellently in some other forms of angioma. It gives good results in goiter. It is useful in uterine fibroma. It is an efficient depilatory.

Many of these are common diseases which ought to be treated by the ordinary surgeon, and I have hope, now that electricity is being introduced into our infirmaries, that electrolysis will come into greater favor, and that the surgeon will have no more hesitation in employing it in suitable cases than in performing lithotomy or amputating a finger. In some applications of electricity it will probably always be necessary to ask the aid of an expert, but this is not usually the case, and assuredly not with electrolysis.

I am sure that it will interest many of you to see the methods which have been adopted in our infirmary in utilizing the current supplied by the town. They have been introduced under the direct advice and supervision of Dr. Milne Murray. His large knowledge of electricity, his ingenuity and the great amount of time he has devoted to this matter have enabled us to make an installation which I believe is second to none.

### Section of Psychology.

**President's Address.**—MR. T. S. CLOUSTON discussed **The Neuroses and Psychoses of Decadence.** In 1890 I directed attention to that series of nerve-disturbances and diseases occurring early in life that might properly be grouped together under the heading of "The Neuroses of Development." To-day I desire to make a few suggestions that will point to another series in which would be included a considerable number of the nervous and mental diseases and disturbances that occur in the later periods of life, and which might, I think, be properly grouped as "The Neuroses and Psychoses of Decadence." The one series all have as their chief and often their only cause, faulty development of nerve-centers; the other series have as their predisposing cause unphysiologic decadence of brain and nerve. In the former series a neurotic heredity is always present; in the latter it is not necessary. In the former series there need not necessarily exist any exciting or proximate cause; in the latter such exciting causes as toxic agencies in the form of syphilis or alcohol, the effects of hard work or unphysiologic conditions on the brain extending over many years, worry or strain, the access of the climacteric, or senility are commonly present. In the former class, the strain of taking up new functions, especially the all-dominating one of sex and of the reproduction of the species, has upset or arrested nervous development from an inherent weakness of power to produce a sound, strong fabric of nerve-centers; in the latter, the breakdown is not due only to the cessation of reproductive energy, but commonly to want of staying-power of the centers to do the work imposed on them, or the want of resistive power against undue strains or poisons. The most of developmental neuroses may in one way be looked on as Nature's effort to stop a bad stock before it reaches the time to reproduce itself. A large number of the neuroses of decadence may be looked on as premature senility and nervous death before its allotted time. In the one case we are face to face with imperfect, delayed, or irregular maturation of tissues, organs, or organism; in the other with premature, irregular, or abnormal nerve-retrogression. Man's normal, average life may be divided into three periods of 25 years each. During the first quarter of a century his body is growing and his functions are maturing, the last organ to attain physiologic perfection being the brain-cortex. During the next period the fullest muscular action, the highest resistive power against disease, and the most reliable and intense mentalization are found. During the last period a slow process of retrogression and decay sets in, and goes on till the physiologic ending of death is reached.

As during development one organ or function may lag behind its normal maturation-time in reaching perfection, thus constituting a neurosis from unrelational development, so during decadence every physician and every alienist has had experience of a premature decay in individual organs and functions, constituting a neurosis through unrelational decadence. One man's trophic energy fails at 55, and he then loses 3 stone of flesh, and falls a victim to the first severe bronchial catarrh that attacks him. The cardiac innervation of another fails at 60, and influenza cuts him off. The memory of another quite gives way at 66, while another loses originating volitional power at 70, so that he cannot then manage the simplest business.

Then the cessation or slackening down of the great reproductive energy at the climacteric period in both sexes is



attended by such frequent nervous and mental disturbances that in their lesser degrees they are commonly regarded as rather normal than abnormal in their character. There are low forms of animal life that terminate their existence with reproduction. Continuation of the species with them is death to the individual. There is no intermediate sexless barren zone between fecundity and death, as in man and most of the higher animals. A period of slower ebbing of life—of decadence, in fact—in the latter takes the place of the absolute termination of existence of the former, but the whole barren period becomes subject to many diseases and defects that are incidental to this period.

The last epoch of all, that of vascular disease and imperfect blood-supply, and demonstrable nerve-cell and fiber degeneration, is one necessarily attended by many neuroses and psychoses. Then it is that senile endarteritis, fatty vessels, atrophies, apoplexies, softenings, senile dementia, with irritative maniacal states superadded, come on. It is the time, too, for the more partial breakdown of muscular weakness and incoordination, senile amnesia, senile irritability, senile paralysis of family and natural affections, and senile immoralities.

The life-history of the neuron and the sheathed nerve-fiber in their stages of growth, development, and decadence, histologically and functionally, has yet to be written. A very important part of such life-history would be the account of the degrees of their reactivity to different stimuli, and susceptibility and resistiveness to the causes of different kinds of diseases at different ages and under different conditions. The effects of stimuli and of poisons on the nutrition as well as on the kinesis of nerve-cells are certainly different at different ages of life. Sudden loud noises, or the excess of oxygen carried by blood at temperatures over 100°, send many young children into convulsions, but will have no such effect on boys of 10. The psychoses we slump together under the name of delirium are easily producible in childhood by high temperature or by nerve-toxins circulating in the blood, but they are not so readily produced in the later periods of life by the same causes. But, on the other hand, the nerve-degenerations and more serious disturbances of function are far more apt to be set up in the senile periods of life by alcohol and the other nerve-toxins than in early life. Such changes of structure of function as occur in the natural growth-development or decadence of a neuron or sheathed nerve-fiber, cannot properly be counted as disease. The imperfect observation, attention, and reasoning of the child of 3 is no psychosis any more than its difficult equilibration at 18 months is a motor neurosis. So the weakened memory and the lessened force of origination and volition of the man of 80 is no psychosis, nor do his less firm grip of the ground and his uncrisp articulation constitute motor nervous diseases. Yet the imperfect development of the cortical cells and the only partial existence of fiber-connections in the one and the fewer dendrites, the chromatolysis, as well as the diminished blood-supply of the other, may be both conditions predisposing to diseases special to each through non-resistiveness. The wondrous and as yet mysterious process of innate progression of structure and function, whereby the neuron gradually acquires the capacity of exhibiting the energies we call coordinated motion, sensation, and mentalization, certainly depends on a hereditary potentiality within it, together with favorable conditions of environment. If this potentiality is in any way faulty, we know that the organism is likely to suffer from the developmental neuroses in various forms. The process of decadence also implies a potentiality to be carried out in natural and physiological fashion. There are risks of the nerve-cell and fibers falling into many diseases from weakened powers of resistance, from non-competency to undergo strains that earlier in life would have been easily borne, from the effects of previous unfavorable conditions of life.

Though bad heredity does not come in so powerfully in decadence as during development, it does operate in some cases, and thereby brings on decadence or disease before their time. Operate it must, for all the recent investigations into the conditions that conduce towards centenarianism and prolonged life point to heredity as being by far the most powerful cause. The answer to the question, How to live long? seems to be, Have an ancestry that did so. But I think heredity operates in a different way in decadence from what it does during development. In the one case it is the sword

that smites the potentially unfit, and so stops the reproduction of a bad stock; it is nature's chief means of weeding out the organisms that do not make for the physiologic ideal she sets up in all species; it is then an actively destructive force. But in the period of the decadence of the organism bad heredity is more like the weakening of the supports and roots that keep a full-grown tree from being blown over by the storms to which it is exposed from without. A tree in a sheltered spot, though spindly and not well-rooted, may live long. So a man with a nervous heredity, if he has got safely through childhood and adolescence, may with care and obedience to nature's laws live to a good old age; but if he drinks too much, or carries within him an old syphilitic gland, or has to work too hard, or has occasion of much worry, or lives in an influenza-cycle, he has not the staying-power to resist these things. With a good heredity he might have withstood them; with a bad heredity in his nerve centers he falls a victim to general paralysis, locomotor ataxy, brain-softening, climacteric melancholia, or senile dementia during decadence.

A glance at the general statistics of the neuroses, and the ages at which they prove fatal, conveys some idea of how they are related to the periods of development and decadence. Taking the report of the Registrar-General for Scotland for 1895, we find that there were 55% of the population living between 1 and 25, both inclusive—that is, during brain-growth and development. The number of deaths from diseases of the nervous system during this period amounted to 3,262 out of a total of 9,307, or 35%. At the next period, that of full strength, from 26 to 50, the proportion of the population alive was 30%, while the proportion of deaths from the neuroses sank to 12.2%. In the next period, when decadence has begun, from 51 to 75, the proportion alive was only 12%, while the proportion of the fatal neuroses rose to 33.2%; and the last period, from 76 to 100, that of marked senility, showed only 3% of the population alive, while 14.8% of the deaths from neuroses occurred then.

The general conclusions from this comparison of figures are that the neuroses prevail largely in the period of brain-growth and development of function (the detailed statistics for each year show that the first two years are very deadly neurotic years), that the very best years of life are very free from them, and that decadence brings them on with a rush to a far more deadly degree than even during development, senility being the most deadly neurotic period of all. The functional nervous explosions of convulsions are the most deadly of the developmental neuroses; the organic vascular-neurotic destructive lesions of apoplexies and brain-softenings kill most frequently after 50.

Looking to the prevalence of the insanities of development and those of decadence, I find that about 12% of the whole number of new cases occurring each year may be put down to development, not including idiocy and congenital imbecility. If these are included, bad brain-growth and development account for about 40% of the whole existing insanity and weak-mindedness in the country. On the other hand, decadence (climacteric, senile, and paralytic insanities) accounts for about 20% of the insanity and 5% of the combined insanity and idiocy of the country. At least our statistics at the Royal Edinburgh Asylum over 20 years give these results.

We shall not be able to put on a really scientific basis the diseases of decadence until we know the exact steps in the normal processes of decay of structure and function in every tissue and organ. As regards the neuron of the brain-cortex and its higher functions, we know only a few of the steps in its downward course, especially towards the end. No histologist could undertake to describe the exact differences between a group of neurons at 20, 30, 50, and 60. Yet differences there must be of a marked enough kind, could we but see and estimate them. We know that in the very senile period of life, say at 75 and 80, the cell-body appears granular, and has fewer processes as prepared by the Bevan-Lewis method; that as prepared by the Nissl method, its chromatic granules are disposed differently; and as prepared by the Golgi method, its dendrites and their gemmules are changed, and many of them have undergone atrophy or bulbous swellings. The actual number of neurons in any given field of the microscope is fewer than in youth, just as is seen in brain-sections from demented. We know also that mentally their functions have lost much in quality and intensity. The pro-



cess of mental decadence we can perhaps trace more definitely, if we cannot measure it more exactly, than the motor, the sensory, and the trophic lessening of intensity. Different men decay mentally in different ways, but taking the majority, the process begins at the memory of names and things that have no associated ideas, the mere labels and tickets that convey no descriptive meaning. Place-names and personal names are examples. Then there comes a diminution of the affective faculties, with a lowered intensity of poetic and idealized images of things and of feelings. This no doubt accompanies a lessened sexual and reproductive energy. Few of the great poets have written glowing verse after 50. What is the latest age at which a man or woman can really "fall in love?" would be a proper and a very interesting psychologic inquiry. Like the other faculties of the associated neurons of the cortex, this no doubt fails gradually, not suddenly. Then comes a time when mental energizing generally gets slacker, when originality and spontaneity cease to be all-powerful. The reasoning faculty weakens at a later period still. The highest of all departments of mind, the self-control, the volition, the mental inhibition generally, with the moral faculties, suffer as real senility advances. Emotionalism, irritability, lack of perseverance in action, and even immorality in speech and action, are then met with. Every one of these steps in mental decadence must be correlated to physical alterations in the neuron.

Advancing age brings with it not only these mental failures but also diminished motor energy in various ways. The skilled workman is found to do less skilled work and less of it after 35. The finer coordinations especially suffer. When a combination of specially fine motor coordination with the exercise of an acute sensibility is needed, as in the wool-sorters' trade, the effects of advancing age are very disastrous to the worker. The old man's gait and speech both show lack of output in the motor cortical areas, and lack of fine coordination of muscles.

The great regulative action of the higher cortex on the nutrition of all tissues and on the function of all organs undergoes a steady deterioration as age advances. The whole body shrinks in volume, except the less organized fat cells in some cases. No doubt it is owing to this fact that there is a less general resistive power in the organism to certain diseases from within and from without. Rheumatism and gout become chronic, bronchitis kills off its victims after 60 by the 100,000, and neoplasms then become more numerous. The enemies of the tissues and of the organism get too strong for them.

During all this process of decadence of the higher nerve-centers it is not surprising that diseases and disorders special to the period should appear, namely, the true psychoses and neuroses of decadence. The different ways in which a decadence affects the resistive quality of the brain and spinal cord against nerve-toxins is, I think, best illustrated by studying a number of alcoholic cases past the prime of life, and correlating their symptoms—mental and bodily—with their ages, their heredity, their occupations, and their habits in youth. We have all had experience of the immense variety in the alcoholic neuroses and psychoses in different cases according to whether the patient was in midlife or beyond 50. The most common case is that in which a man has taken alcoholic stimulants freely, but not to manifest excess, from his youth, and they have had no appreciable mental or bodily effects till he reaches the age of 45 or 50, when all at once, within two or three years, his eye and face get bleary, his hair gets gray, his hand gets shaky, his memory and acuteness of mind fail, his force of character lessens, his morals deteriorate, his weight either goes up by the deposition of useless fat or drops a stone or two through lack of trophic energy, his walk changes so that he no longer has a firm "grip of the ground," and he looks 20 years older in these two years. What has happened? The chief thing, I think, has been that his nerve-centers—mental, motor, and trophic—have suddenly lost their resistive power against the alcohol, and its full toxic effects on their functions have thus become apparent, and this because commencing decadence has begun, and altered the quality, structure, and energizing of his neurons.

I have known other cases with a bad neurotic heredity in which men had drunk hard in youth, but with apparent impunity, and stopped drinking about 40, yet after 50 they

passed into an alcoholic dementia. No doubt the cortical tissues resisted the toxic effects till decadence set in, and then a something destructive from the old alcoholic poisoning killed off their higher energizing.

A parallel series of clinical facts can be observed in regard to syphilis and lead-poisoning. I have known many cases where men have acquired syphilis in youth or midlife, and its germs have lain apparently harmless in their brain-cortices till they began to turn the corner of life, when, the resistiveness of the tissues becoming weakened, they became insane or paralyzed, or developed various forms of ataxia or aneurysms. It is well known that plumbism is more common in men of 50 or 60 than between 25 and 40.

The varieties of technical insanity directly connected with decadence are the climacteric and the senile forms, while indirectly we have most cases of paralytic insanity or organic dementia. Climacteric insanity is typically a timorous melancholia, while senile insanity is typically an irritable dementia. But the insanities are largely the mental bodily exaggerations and morbid representations of the normal psychology of the climacteric and senile periods of life. The one cannot be properly understood without a study of the other. At the climacteric the sexual desire weakens or ceases, the affectiveness in the female tends to change from the male to the progeny; the imaginative and poetic force is lessened; the fire, the impulsiveness of life are slackened; poetry and love-rites then cease to set the brain on fire; action ceases to be so pleasurable for its own sake; the all-pervadingness of sex in the emotional life ceases; life becomes slower mentally and in movement; a gentle sadness is often present. In the male sex the state of Antonio, the hitherto active, pushing merchant, was typically climacteric when he said:

In sooth I know not why I am so sad;  
It wearies me. You say it wearies you;  
But how I caught it, found it, or came by it,  
What stuff 'tis made of, whereof it is born,  
I am to learn;  
And such a want-wit sadness makes of me  
That I have much ado to know myself.

No doubt the course of human history has often been changed and battles lost and great projects left unfinished because the grand climacteric came on the makers of history.

He would be a bold man who would attempt to compete with the picture Shakespeare has given us of the senile psychology verging into the senile insanity of King Lear. Forgetfulness, fickleness, childishness, bursts of passion, actual delirium, all mixed up with shrewdness, sense, and natural affection, translated into physiologic language, meant that the neuron was degenerating, shrinking, and ceasing to receive new impressions or to hold firmly old ones, and was getting irritable and explosive in action. Whether from the feeling that after Shakespeare no one need attempt anything in that line or not, but it always strikes me that our general and medical literature is very deficient in studies of old age, its memory and affectiveness, its reasoning and conduct, its speech and walk, its nervous incoordination, and its facial expression and attitudes.

It seems to me that we have three chief types of nervous and mental lesion connected with decadence. The first consists chiefly and primarily of a vasotrophic degeneration, through which the cerebral vessels first lose their elasticity, and then gradually their walls take on various trophic changes and degenerations generally or in patches, when in the course of their constant expansions and contractions, as more or less blood is called for by the neurin, they can no longer sustain the blood-pressure and they burst. This is the cause of the vast mass of the destructive brain-lesions, the softenings, the apoplexies, which bulk largest as the causes of death in the Registrar's returns.

No doubt the chief degenerations of the vascular coats are the atheromatous, the inflammatory (senile endarteritis), and the hyaline. It cannot be doubted that the brain-tissues regulate by innumerable vasomotor-centers their own blood-supply, and there can be as little doubt that the nutrition of their walls is also regulated from centers in the brain. No doubt in most cases of apoplexies from vascular disease we have also some amount of surrounding nerve-degeneration. There is a solidarity throughout the whole brain,



through which a tissue-change seldom occurs in one organ, or system, or center, or envelop without some amount of pathologic change in some or most of the others. The second typical lesion of decadence seems to me to be best represented by those degenerations of the motor and sometimes sensory systems that constitute the ataxies, the sclerosis, and the other progressive degenerations. The third typical series is constituted by the mental disturbances and diseases grouped under the climacteric and senile insanities. In them undoubtedly the primary lesions begin in the mental tissues and mental areas.

#### Section of Laryngology and Otology.

**President's Address.**—DR. PETER MACBRIDE discussed the **Expansion of Laryngology and Otology.** The time is long past when there was a necessity for defending the existence of laryngology and otology as special branches of study. It used to be said by the opponents of specialism that it tended to a narrowing of the mental horizon on the part of its votaries. The inclination now is rather to complain that the surgical limits of our specialties are being unduly extended. Indeed I have been told that a well-known teacher of surgery in this school is in the habit of demonstrating a very small area in the neighborhood of the umbilicus, which in the near future will represent the region upon which the general surgeon will still continue to exercise his skill.

Experience has shown that no charge of mental narrowness can be brought against the best workers in our specialties, but the danger of excessive extension is, perhaps, more real. Let us consider first how easy it is for the laryngologist gradually to extend his field, both on the medical and the surgical side. You are all familiar with the indications of general disease which are often first detected by the laryngoscope. We discover, it may be, some lesion of the chest, nervous system, or even kidneys, which we feel ourselves perfectly able to treat, and so, unless the laryngologist be careful, he may be led to encroach seriously upon the domain of the general physician. Turning now to the surgical aspect of the same specialty, the old rule used to be to call in a surgeon when external incisions were required. Of course to carry out this absolutely would be impossible, for tracheotomy is an operation we must all be prepared to perform when the indication is urgent. The laryngologist of to-day, however, does not confine himself to this. He performs thyrotomy and excisions, removes goiters and sometimes cervical glands, so that he thus annexes, as it were, a considerable portion of the general surgeon's territory. If these operations are to come within our sphere of work, then it almost logically follows that we shall in the near future undertake external operations on the esophagus and stomach, as well as extensive dissections involving the removal of tumors from the neighborhood of the large vessels of the neck.

In otology there is the same tendency toward extension on the surgical side. Thus the aurist no longer fears to open the cranial cavity, nor does he hesitate to perform such operations as ligation of the internal jugular; he has not, however, the same direct temptation as the laryngologist to enlarge his field at the expense of the physician. The same expanding tendency may be observed, too, in connection with the nose, although here there is not quite the same scope.

There is a good deal to be said for and against this growing desire of the younger specialties to annex fresh territory. It is a question for each one of us to decide for himself how far he shall take part in this policy of expansion. Only if it creates against us a certain feeling of antagonism on the part of physicians and surgeons we must not be surprised, and I think much could be done toward mitigating such antagonism by taking care that our position—be it in the van or rear of this movement—is logically unassailable.

Another direction in which our expanding tendencies have manifested themselves is in our immense literary activity. I suppose I shall not be considered far wrong in saying that most of the best that is written sooner or later finds its way into English, French, and German, as being the most widely known languages, although we are well aware that much excellent matter makes its first appearance in Russia, including Poland, Scandinavia, Denmark, Holland, Spain, and Italy. To most of us, however, only those works which appear in the three languages first referred to are accessible.

It may not be uninteresting to glance for a moment at the most striking national peculiarities of our literature. The Anglo-Saxon writer (whether European, American, or Colonial) usually aims at brevity, and on the whole I am inclined to think that there is a slight tendency to put points of purely scientific and theoretic interest on one side in favor of the more directly practical, and in some cases to dispense with all literary references to the subject treated of. In striking contrast to the Anglo-Saxon is the German author. In his work we find the most elaborate attention to detail and a very strong tendency to discuss the subject from every possible point of view, and even then not always in the fewest possible words. His literary references to the works of his compatriots are generally full and accurate, but this cannot always be said of those to foreign literature, and withal he is not over-tolerant to the foreigner who overlooks a Teutonic authority. Moreover, there is among Germans a great tendency to polemic writing, and sometimes even to personality. With all these drawbacks, however, we must admit that the best literature in our specialties at the present time is produced from Germany. It may be because of the large number of workers, or due to greater facilities afforded by the Government, and circumstances of the country, but the fact remains. As we all know, many excellent works emanate from French pens, and in the absence of polemic writing we have reflected the racial courtesy. It has sometimes appeared to me as if the amount of material did not quite justify the existence of all the journals that are devoted to our subjects in that language, but the frequent appearance of excellent, interesting, and original articles in all of them must be fully admitted. In speaking of French journals, however, I cannot refrain from noticing the odious custom of interleaving advertisements with the text—a practice that certainly cannot conduce to the dignity of medical journalism.

Let us now turn from national to individual characteristics, for in the study of the individual we come nearer the forces which make for and against expansion.

The first and best type of author is undoubtedly represented by the man who has really something new and valuable to communicate. It may be the result of scientific research or of clinical observation, while sometimes it takes the form of valuable generalizations, deduced from facts either original or quoted from literature.

There are, however, numerous other and less praiseworthy types. We all know that in most instances diseases that are least amenable to treatment are those for which innumerable curative agents have been recommended, and further, how each new remedy is said to be followed by numerous successes, often occurring only in the hands of its inventor. When the method employed is harmless little mischief results, but when operative measures are advocated in this way a grave evil arises.

A danger of specialism has always been the tendency of some specialists to magnify the importance of the part of the body with which they are familiar, and I do not think that otology, laryngology, and rhinology can plead that their votaries have been altogether guiltless in this respect. Specialism is only good so long as it rests upon a broad basis of anatomic, physiologic, and pathologic facts, and so long as no attempt is made by writers to juggle with these facts in order to elevate the part at the expense of the whole.

Far be it from me to suggest that there are many writers who indulge in misrepresentation. Absence of the highest critical faculties, and a limited knowledge of general medical and surgical science, sometimes associated with an almost morbid desire to magnify the importance of a special organ, account for much writing that is ill calculated to bear the clear light of criticism.

Again, what I may call undue therapeutic credulity is responsible for much that is scientifically worthless. It is but rarely, I trust, that lower motives, such as a desire to establish a temporary notoriety, and to benefit directly therefrom, actuate authors in our specialties. Still, it must be remembered that we are but human, and that there is no more certain way of establishing a reputation of a sort than by originating some new and startling theory, remedy, or operative procedure. Under these circumstances, would it be surprising if some, driven by vanity, and others spurred on by hopes of aggrandizement, were to fall before the temptation?



Let us finally turn to another great difficulty that has arisen of late years, and that confronts the serious student not only of laryngology and otology, but of almost every branch in medicine and surgery. It is of course necessary for every specialist to follow the literature of his subject, but perhaps the burden falls most heavily upon those who are engaged in lecturing and upon writers of textbooks. All of you know how voluminous are the works devoted to our specialties; you are aware of the numerous journals which appear in French, German, and English; there is further a considerable array of monographs, and finally we have an ever-increasing number of textbooks. All this bears very heavily upon the conscientious reader, for it must be remembered that until a work has been read it cannot be classified or criticised. No separation of "wheat from chaff" is therefore possible without an immense amount of wasted time and energy. Among our large current literature there is much that is good, but more that is valueless. This may seem a rather sweeping statement, but if you will throw your mental glance back over recent years and compare the actually valuable additions to our knowledge with the amount written in the same period I am sure that you will agree with me that they are not proportional; indeed, we might be not far wide of the truth in calling them inversely proportional. It may be urged that the system of abstracting papers, now so largely in vogue, is valuable in saving time and labor to the over-burdened student. No doubt this is to some extent true, and certain journals are, by employing a carefully selected staff of workers, enabled to present an epitome of all that is being done in various parts of the world. It is, however, necessary to warn readers that such abstracts are by no means always correct representations of authors' views, and it is perfectly certain that some periodicals that profess to give abstracts of current literature are lamentably defective, in so far that they confine their attention to reviewing only articles which appear in a few of the better-known journals of each country. I have thus merely outlined some of the difficulties that every experienced reader can fill in and amplify for himself. The important question I wish to bring forward is, Can this be remedied? It appears to me that it might be by adopting some such method as this:

1. The establishment of a body composed of men of ripe experience and wide reading in each country equivalent in position to the collaborateurs of the *Centralblätter* and journals of to-day.

2. The selection of two or three of those collaborators to form a small central committee in each metropolis.

3. The employment of a staff of abstracters composed of young workers.

The advantages of such a scheme would be obvious. The collaborateurs would each have assigned to them certain journals, and it would be their duty to send in a return to the central committee, indicating the names of the papers that were considered worthy of a place. The list so accumulated would be again checked by the central committee, and in this form handed over to the abstracters.

It will be seen that the adoption of some such method as this would produce a periodical of reasonable dimensions, because many published works would probably be rejected by those responsible for selection. Of course, we have something similar in the various year-books, but it must be remembered that the reading specialist can hardly accept any single author as his guide; while, on the other hand, he might be quite satisfied to have the important works chosen for him by a strong, responsible committee of each country.

In conclusion, I beg to say that I desire in no sense to reflect upon the excellence of works that endeavor to give, and in some cases actually do give, abstracts of nearly all papers that are written on our subjects. In doing so, however, they must give the bad with the good, for although every now and then we find an abstracter bolder than the rest, who describes a paper as containing nothing new, yet a desire to avoid discourtesy prevents this being frequently done. If it were once understood that only papers of importance were to be abstracted, an immense amount of space would be saved, and a most valuable publication would result, which, if it were published in English, French, and German, ought to be successful commercially as well as scientifically.

### Section of Dermatology.

**President's Address.**—DR. W. ALLAN JAMIESON discussed the **Application of Rest in the Treatment of Diseases of the Skin.** First it is necessary to inquire, What is meant by rest? Certainly not absolute inactivity. This the surgeon may aim at, at all events for a brief preliminary period, in the coaptation of fractured bones, but even he has very early to think of the tendons, muscles, vessels, and nerves in the neighborhood, to say nothing of the related joints, which would all suffer were complete quiescence insisted on for too long a time. Absolute rest is impossible in the case of the skin. To see this we have but to remove a bandage which has been for a week or so coiled around a limb. On passing one's hand over the surface a cloud of dry loose epidermic particles arises, showing that though occluded from the air, and immovable, yet the process of cornification has been continuously going on, the thin protective layer of keratin that forms the outer boundary has been constantly renewed from beneath, but has not been shed imperceptibly, as in healthy normal conditions of freedom. And if the desquamation from the surface thus becomes visible to the eye, in quite similar fashion does the insensible perspiration, or the secretion of the oil-glands, if allowed to accumulate through defect of ablation, assert its presence by impinging on the olfactory nerves. The renewal of the integument and the secretion of its glands are therefore uninterrupted throughout life.

But, while it may be out of our power to procure, by the means at our disposal, absolute and entire quiescence, comparative repose is attainable, and this in the great majority of cases is sufficient for our purpose. Rest, then, consists in the removal of irritants, whether these be such as worry and distress the mind or tease and vex the body.

Before proceeding further, there is a question which demands reply—namely, Why is rest necessary? Now, there are many circumstances under which rest is required, but for our present purpose only one will be commented on. We need rest as a consequence of fatigue or exhaustion. After the expenditure of energy, a time arrives when indications are afforded that its further continuance must cease. The wise man assents, yields to nature's law, and desists from further effort. He takes rest. But there are many who will not heed the dictates of reason, and decline to rest. In place of rest these substitute what may be called a "pick me up." This is by no means merely alcohol in some form, or coca, or such drugs as antipyrin, phenacetin, caffeine, and the like, though such are largely indulged in. The most frequent mode in which a so-called restorative is ingested is as tea. Tea is made to take the place of rest, so that the jaded brain and wearied muscles may lose consciousness of fatigue, and may be driven on regardless of the thus oft-postponed yet inevitable final breakdown. I leave to physiologists and biologic chemists to explain the action of tea and its congeners, but the undoubted fact remains that the employment of nerve-stimulants is at the present day, in an increasing proportion of cases, made to supplant natural needful rest.

Turning now to the skin, the very name applied to the cutaneous manifestations of disorders of the integument suggests the idea of rest. We speak of an "eruption" as the visible feature from which most of our conceptions of the nature of the ailment are drawn. Now, the term eruption is associated in our mind with some disturbance from within; something which, having interfered with the normal balance of economy, has come in this way to the surface. To the popular understanding, which has not even yet been able to free itself from the influence of the old humoral pathology, this indicates a diseased state of the blood, and from this view even educated members of the profession have not entirely dissented. Yet, so far, there are few demonstrable alterations in the blood that we can fix on as causative of a skin-disease. Anemia poses as a predisposing and maintaining factor, scorbutus as a determining one; but of all the conditions which the microscope or bio-chemic investigation have so far revealed, there is hardly any one we can positively assert is solely blameworthy. At the same time it is undoubtedly our duty to rest the skin from the deeper side by what therapeutic means are at our command. Thus all internal causes which may be suspicious are to be eliminated, by correction of dietary, by cutaneous sedatives, of which antimony may be taken as a type, by hematinics, and by agents that influ-



ence metabolism, such as arsenic, or flush the sudoriferous canals as pilocarpin.

More closely considered, rest is procured for the skin by freeing it from the effects of the over-activity of its own constituents or appendages. Of this an example is provided by ichthyosis. The most prominent feature here is the continual accumulation of the horny layer on the surface, in place of its regular and imperceptible desquamation. The researches of Ohmann-Dumesnil and Bowen point to the cause of this anomaly as being due to a failure of the normal separation of the epitrichium, owing to an arrest of development of the hairs and sebaceous glands, the epitrichium thus becoming fused with the outer layers of the epidermis. In this way perversions of nutrition arise, and should the adhesion take place on the palms or soles, the masses of keratin may acquire great thickness. The same result may occur elsewhere, as proved by the examples of ichthyosis hystrix that are occasionally met with. This theory supports the efficacy of external therapeutic measures in this disease as opposed to mere internal remedies. The ingenious reasoning of Byrom Bramwell, that as the hard, dry, scaly integument of confirmed myxedema becomes again soft, pliant, and natural if thyroid extract be administered, similar consequences might be expected to follow were it given in ichthyosis, has hardly been borne out by experience, any results of its exhibition being but temporary. But there are keratolytic applications which, used early enough, can restore the normal polish to the skin. Of these resorcin is the chief, and used as soap, supplemented by its employment as an ointment or in combination with glycerin of starch, we can in many cases perfectly remove the abnormality. We can compel the over-active epidermis to rest by these means.

We find evidence of increase of the secretive energy of both the sebaceous and sweat-glands, and in this way also is the quietude of the skin disturbed. Round the question of the nature and significance of seborrhea war still wages, though more languidly than was the case a year or two since. Thus it may be said, however, that the rôle of the oil-glands as being something more than mere appendages of the hair-system, and their function merely to grease the capillary growth, has again come with greater prominence to the front, while that of the sweat-glands has rather retired from the position of cutaneous lubricants to that of being more purely the irrigating and refrigerating element. Under many and various circumstances we find that sebum or an oily coating concretes on the surface. Whether this is directly due to the stimulus imparted by microorganisms, whether it is to be viewed as an expression of chemiotaxis, how far the altered condition of the soil, commonly an anemia, is to blame, or whether organisms and their toxins are merely secondarily present, can hardly be yet said to be positively settled. That seborrhea, either of the concrete or the oily form, does prove an irritant is certain, though possibly all the deleterious results ascribed to it may not be thoroughly well grounded. Our efforts to obtain rest in this instance must go further than merely removing the accumulation of oil and degenerated epidermic scales. The anemia must be corrected by toning up the soil, not merely by iron to enrich the blood, by mercury to neutralize the syphilitic virus, should that be present, but by ergot or ichthyol to constrict the vessels of the periglandular plexuses. Locally, sulphur, which has a peculiar and specific desiccating effect, quite apart from any presumed antiparasitic one, and the astringent action of cold water are our most reliable remedies. Hyperidrosis weakens the tissues by converting the integument into a swamp. And just as in marshy ground in warm climates the air becomes pestilential, so the soddened skin is prone to give off offensive odors, and from the rancidity of the secretion to occasion irritation, which may go on to inflammation. Here we employ the keratoplastic properties of small quantities of salicylic acid, 3% in a bland pulverulent medium as powdered talc, or orthoform may prove valuable in the same way. In this manner we can give rest to the weary sole of the afflicted general servant.

Another state in which our efforts must be directed to procure rest for the skin is that in which it is necessary to modify abnormal perversions of functional activity. This is usually manifested by some form of hyperesthesia, of which pruritus is the commonest expression. Pruritus, or the sensation of itching, is such a frequent accompaniment of cutaneous disorders of all kinds, and is often the chief, if not the sole, sub-

ject of complaint, that its relief is continually being demanded. As examples, we may select those forms which are especially aggressive at the two extremes of life, and in both cases it constitutes the most prominent, if not the only, symptom visible to the eye, or merely cognizant to the sufferer. The age of the patient has a special bearing on the methods that must be adopted for its repression; the locality has in general a minor claim. In infants and young children one must bear in mind the tenderness of the skin, its yet imperfect development, particularly as regards the as yet incomplete evolution of the hair and oil-glandular systems, as children may and do perspire readily enough. One of the most troublesome of the neuroses that affect them is lichen urticarius or urticaria papulosa, a complaint that, while found occasionally in the better ranks of life, has its most perfect manifestation in the poorer classes. The skin in those afflicted by it almost always exhibits evidence of malnutrition, partly the result of bad hygiene quite as much, perhaps, as that ascribable to improper dietary. Thus it is usually dry, thin, and anemic, so that those remedies, both external and internal, calculated to correct this are indicated; hence our duty in endeavoring to give rest to the integument is to discover and amend all faults of feeding or attention discoverable, and these, even among the poor, are in most cases attainable, since they mean no more than a simplification in the matter of food, and in more judicious modes of cleansing. In place of the strong carbolic soap often employed, we prescribe either merely ablutions with gruel or with a superfatted naphthol-soap; cotton or flannelet to be worn next to the skin; accompanied by the inunction of glycerin of starch made with double the quantity of glycerin of that in the *Pharmacopœia*, medicated by the addition of naphthol, camphor-chloral, tumenol, or resorcin. Sometimes an oil containing menthol and a little lanolin or adeps lane proves more grateful. Internally, antipyrin in small doses at night is valuable in promoting sleep.

At the other extreme of life we encounter pruritus again, that termed senile, though it may cause annoyance at an age not old if counted by the years since birth. Here, too, the skin is prone to be thin and anemic, but the cause is less remediable, since it is the result of atrophy; the peripheral circulation has shrunk, and as a consequence the glandular structures diminish or wholly cease their activity, and the integument becomes dry, hairless, and devoid of oil. With this wasting, perversions of sensation arise, and the old man or woman has his or her rest disturbed by night and by day by tormenting itching. Now, while it may be impossible to create new capillaries, yet those that still exist can be made to do more duty, and the sweat and possibly the sebaceous glands are not so completely damaged that their functions cannot be in a measure resuscitated. The sudorific action of pilocarpin can be brought into play to calm the pruritus. We thus flush once more the periglandular plexuses, and if this be repeated night after night for a couple of weeks a great amelioration will certainly, sometimes a permanent cure, be obtained. As in the young, glycerin of starch is likewise a valuable adjuvant, and temporary relief at least can often be procured by gentle ablutions with a well-made superfatted menthol-soap. Warmth too is essential in the old, but the underclothing selected must be of the softest and smoothest wool, that derived from the Australian breed of sheep being particularly serviceable.

But in the large group of the inflammatory affections of the skin we find many examples in which we must have recourse to measures for procuring rest. We naturally turn to eczema in the first place as being the commonest to invoke our aid. Whatever view of the nature of eczema may be determined on in the discussion that is to follow, its relations to catarrhal processes cannot be overlooked, and our most successful efforts to cope with it are those that follow the lead given by this theory. It does not matter whether we regard it as a parasitic catarrh or not, provided we bear in mind that it is a catarrh. We treat it on the same principles as we do an internal catarrh, though we can apply remedies that are impracticable in the case of internal catarrh. Just as in bronchitis we endeavor to soothe the inflamed and irritated mucous membrane by keeping the air of the apartment continuously moist and warm, so in eczema we envelop the raw, denuded leeting surface with a soft, bland, aseptic medium, a starch-jelly with which is combined a proportion of boric acid, the least irritating if



perhaps the weakest of our available correctors of putrefaction.

The microorganisms that set up putrefaction in eczema seem easily neutralized, but at times they resist boric acid. In general dusting with a weak salicylic-acid powder or painting with silver nitrate dissolved in sweet spirit of niter before renewing the poultice is sufficient in such cases to get over the difficulty. One of the most obstinate of the characteristics of eczema is the infiltration or induration that accompanies it, and that persists as a leathery condition after the surface has healed. This often melts down marvelously under the continued employment of the boric-starch jelly. But in certain cases of long-standing disease we cannot wholly get rid of it by their agency even if we could prolong their use. Until this has disappeared the eczema is not cured, and will certainly recur on very slight provocation, if not spontaneously, so soon as the patient attempts to return to his usual habits of life. When a limb is the part affected one of the most efficient methods of causing the absorption of the infiltration is by closely enveloping it in strips of the salicylic soap-plaster that Pick of Prague has introduced. The strength used may be the 2½% or the 5%, according to the degree of infiltration, the age of the patient, and the sensitiveness of the skin. The plaster is worn for several days up to a week, and on its removal a distinct, sometimes a remarkable, restoration of pliancy will be found. It is important that the plaster should contain no resin, as this gives rise to redness and irritation, and largely neutralizes the absorptive action.

But there are some cases of eczema in which neither the boric-starch poultices nor the salicylic vaselin subsequently applied prove curative. Such may present the seborrheic type, and implicating the cheeks, seem to have had their origin in seborrhea of the scalp or eczema of the margins of the eyelids. In a case of this kind, the treatment referred to above served merely to aggravate the disease, and to occasion its further extension. Hebra recognized the advantage of smearing an ointment such as his diachylon-salve on cotton or linen pretty thickly, and then placing the strips so prepared in close approximation to the skin, over the plan hitherto adopted of simply rubbing it on, and emphasized this in his prelections. But Unna greatly improved on this in his salve-muslins, a porous cloth carrying on and in its substance a thick stratum of an ointment of such hardness and consistence that it just melts slightly at the heat of the body, but does not become fluid or run. It also does not become rancid by keeping, if reasonable precautions are taken. When pieces of, say, his zinc-ichthylol salve-muslin, that of which my experience has been the largest and the longest, are applied to the skin of the face, we obtain an amount of rest attainable by no other means with which I am acquainted. It cannot be from the action of the muslin as a parasiticide; it does not seem to me to go very far in proof of the microbic origin of eczema, be that true or not, but it most efficiently gives rest to the skin, and cure results. My friend Prof. Chiene explains its action as not tending to disturb the young layer of epithelial cells; these are thus permitted to pass through the stages of normal cornification without interruption, and he compares it to his plan of healing an ulcer by placing over it a piece of tinfoil, which, equally unirritating, does not on its removal tear away the pellicle of epidermis, which, starting from the margin, spreads as a film over the denuded surface. When, then, expense is not a serious objection, this treatment with zinc-ichthylol salve-muslin is one of our best methods, in many cases curing our patient by giving as entire rest as is perhaps possible to his skin.

So far reference has been made to examples in which it is not necessary to do any more than rest the part, but there are instances in which such partial measures are not sufficient. When eczema is already extensive, when large areas of the trunk or the lower limbs are involved, or threaten to become so in no long time, then confinement to bed is imperative. By placing our patient in the horizontal position, the blood-stream pursues a placid course, the strain on the heart and vessels is at once taken off, while at the same time the temperature of the external surface is maintained at or about that of the internal organs, and friction and compression or irregular pressure are all done away with. The act of undressing is often cited as the period of commencement of itching. This is no doubt due in part to ex-

posure to a cooler atmosphere, but partly also to setting free certain parts from constriction. This may be merely linear, as by garters or strings, or more general by waistcoats or corsets; but in either case the part so circumscribed is forthwith flushed, seen as a reddening on inspection, and with the returning blood the sensation of itching is excited. Dressings, too, that were inapplicable with the day-clothes on can now be easily coapted, and if the facility for scratching is greater, the demand is lessened. In all cases of widespread eczema, therefore, either actual or threatening, confinement to bed is almost essential.

Before leaving the subject of eczema one other point may be alluded to. We have seen that rest in general is obtained by alternation of occupation. It sometimes happens that a case of eczema confined to bed and carefully treated ceases to further improve after a considerable degree of progress has been attained. When this is the case it is not infrequent that cure rapidly follows an entire change. The patient is sent home, the ordinary pursuits are again engaged in, and recovery is uninterrupted. The rest has done its work, and the time for activity has come.

In acne again, the question of how we can best procure repose for the skin comes prominently forward, but is a much more complex one than is offered for our solution in most cases of eczema. As to the primary difficulty in acne, the researches of Unna have pretty well placed us on sure ground. We have to deal with "a superficial hyperkeratosis of the epidermis, which, extending to the follicle-mouths, leads to the formation of comedones." We all recognize that the worst examples of acne are to be encountered in those subjects whose skins are coarse, thick, muddy, and pale, yet in them the acne is a transitory matter that will in time cease its troubling, no doubt at the expense of indelible scars and much disfigurement. Yet the thick skin remains for life, the superficial hyperkeratosis of the epidermis is permanent. It is the epoch of developmental activity—that between puberty and manhood or womanhood—which is the period *par excellence* of acne. To my mind the microorganisms that have been invoked as the essential causes of acne are mere contributory factors; they determine the access of suppuration, but they are not the source of the comedo, though no doubt a component part of it. Hence, treatment in acne has several sides. On one hand we must endeavor to thin down the abnormally thick epidermis. This is effected by various methods in accordance with the degree and the resistancy of the integument. Sometimes ointments that contain salicylic acid, soap, and sulphur, as in the admirable one of Boeck, suit our purpose, or it may be necessary to have recourse to the resorcin desquamating paste suggested by Unna, or to the application of his resorcin or salicylic-plaster muslins. At the same time the sulphur nullifies the pus-determining properties of the microorganisms. But all this time it is necessary to watch over the evolutionary movements that are going on, and to direct these as far as we can in their proper channel, repressing any excess, and correcting any derangements that may exert a reflex influence.

Certain skins exhibit an exaggerated sensitiveness to light, but to only one of the methods in which such react will reference be made at present. Some individuals, particularly those with reddish hair, freckle readily during the brighter part of the year. This impressibility may be congenital, the result of changes due to age, or acquired as the consequence of excessive exposure to intense radiation. There can be little doubt that these freckles are an effort on the part of nature to protect areas that are from some cause more than usually delicate, to impart rapidly to limited spots the same safeguard that the progress of the ages has given to the darker races of humanity. The researches of Bowles have proved that it is the chemic rays that are thus active, and, though their effects are most pronounced on uncovered parts, they are not restricted to these. They in this respect correspond to the X-rays, as freckles are met with on portions of the body on which the sunlight never impinges directly for any length of time, if at all. The most remarkable example of this susceptibility occurs in xeroderma pigmentosum. Not only have we intense freckling, but dryness and hyperkeratosis, at first diffuse, after a time taking on a warty and then a carcinomatous degeneration. Unna has thrown out the suggestion that by due protection from the chemic rays the freckling might be modified in this



melancholy if rare disease, the further malignant changes postponed or arrested, and amelioration, if not cure, obtained. A case of this kind has been under my care for 2½ years, and in it we have been able to check the advance almost perfectly. An ointment stained brown by the addition of raw umber has been pretty constantly applied to the face, a dark-brown veil worn whenever the child—now 6—has gone out, and the warts on their earliest appearance treated with salicylic collodion. In this way fairly perfect rest has been obtained for the abnormally tender skin.

The inquiry as to how to secure rest when parasitic agencies are to blame has been left to the last. At the present moment the trend of investigation is try to find an organism that can be credited with the causation of every cutaneous disease. The effort is a laudable one, for in due time it will demonstrate which ailments are and which are not parasitic in origin. Hence in this tentative stage too much stress is very probably laid on the accidental presence of microorganisms that are not pathogenic. Take the case of seborrhea. Is that to be ascribed to microorganismal action, either direct by toxins or by chemiotaxis? Is the organism that sets up the seborrheal flux the same as that which occasions the dermatitis or the alopecia?

There is an entire consensus of opinion that erysipelas regarded as a medical disease is caused by the streptococcus of Fehleisen, giving rise to spreading inflammation of the skin, or mucous membrane, having contagious characters. The micrococci grow in chains in the lymphatic vessels and spaces of the corium, and are most numerous at and just beyond the extending margin of the disease, while in the earlier affected parts no living cocci are to be found, but in these leukocytes invade the lymphatic channels, and the organisms die. Unna, however, maintains that while this may to some extent be true of the cutis, the process extends to the hypoderm, which swarms with cocci, both in the marginal and central zones. He believes that from its more constant and higher temperature, the subcutaneous tissue provides better conditions of nutrition for the cocculus of erysipelas than the parts nearer the surface, as it is notoriously sensitive in this respect. While the streptococci, having gained entrance through some breach of continuity of the skin, grow in the lymph-vessels of the cutis, the veins and capillaries are dilated and distended with red blood-corpuscles, and in the arteries there is a large amount of coagulated fibrin. It is believed that the contagion may proceed from the desquamated flakes of epidermis, or may linger in the crusts, or attach itself to the dressings or bedding. The point is that it is from the superficies that the danger of the spread arises. Now, as in the high temperature of the affected part we find the favoring element for the growth of the organism, and in the separation of the dead epidermis and *débris*, the element of communication, we have a clear indication for treatment. Though constitutional symptoms manifest themselves almost consecutively with the onset of the disease, it is for a time a surface-ailment. And there is one remedy at least which can, in the large majority of cases, strangle it, so to speak, at its birth, if used promptly and efficiently. This is ichthyol. If thickly smeared over the inflamed area as a 25% ointment made up with prepared chalk and vaselin, a base much like that suggested by Sir Dyce Duckworth, and covered with a layer of cotton-wool, which has the double advantage of excluding the air and acting as a cushion to shield the very sensitive surface, an agreeable feeling of coolness is at once experienced, the further progress is arrested, and simultaneously the fever and other disturbances abate. The treatment of erysipelas with strong ichthyol-ointments affords one of the best examples of medicinal rest to an inflamed skin that can be cited.

Only two more illustrations, drawn from the more frankly parasitic affections, and I have done. The treatment of pityriasis versicolor is well enough established, but the prevention of recurrences is scarcely such a simple matter. These very probably originate from small points having escaped treatment, and so acting as foci, from which the disease once more spreads. Now it occurred to me that if the entire surface of the body so far as covered by the clothes—that on which the disease flourishes—were thoroughly washed with a soap capable of thinning down the epidermis, the last traces might be got rid of. I therefore have been in the habit of directing my patients affected with pityriasis versicolor, after the course of treatment calculated to rid them of

all evident traces had been carried out, to continue to wash for a week or two with a resorcin and salicylic-acid soap, and in this way, so far as my experience enables me to state, a permanent cure has been effected. We have thus procured rest by eliminating the cause.

We sometimes meet with instances of pediculosis vestimentorum in elderly people, who are seriously anxious to be rid of the infliction; but there are some skins that seem to afford a specially favorable feeding and rearing ground for these obnoxious parasites. The patients may change their linen with exemplary frequency, may wash with carbolic or other soaps more or less distasteful to the insects, yet they reappear. It struck me that possibly by utilizing the property of sulphur to undergo slow oxidation at the temperature of the body, one might eradicate these pests. I therefore tried the plan of making such persons wear, in a bag made of some porous material, a number of fragments of sulphur next the skin night and day, after the manner of a reliquary. The method proved eminently successful, and I have been able thus to preserve the skin from the ravages of these insects, and to arrest the annoying itching.

There are numerous other illustrations of the value of rest in cutaneous diseases which may occur to you, and to which reference might have been made. Thus, in the large range of syphilitic affections of the integument, rest is an important factor in cure. But my object has been more suggestive than didactic, and will have been fulfilled if I have been successful in enlisting your interest in what is by no means a minor point of detail.

### Section of Medicine in Relation to Life-Assurance.

**President's Address.**—DR. CLAUD MUIRHEAD delivered an address entitled **Medicine and Life-Assurance.** For the first time in the history of this Association a section has been instituted for the consideration of Medicine in Relation to Life-Assurance. And I think our President deserves the congratulations of the members of the Association for the happy inspiration which prompted the formation of it. For to him, I believe, the idea is entirely due. And indeed when one considers the matter it is rather a surprise that the formation of this Section has been delayed so long, and that only now it is taking its position in the Association to which it is fairly entitled.

As you are all probably well aware, the business of life-assurance has of late years made enormous advances, and huge sums of money are now and again set aside in this way, not merely for the original humane and beneficent purpose of securing to the widow and her children on the death of the head of the house some means by which they may be saved from the terror of actual poverty, but it is also largely used for commercial purposes, and more lately as a method by which to meet the demands of the Chancellor of the Exchequer when he claims the estate-duties. It may astonish some of you—as it certainly amazed me—to learn that in the United Kingdom the liabilities of life-assurance companies amount to no less than £268,829,625. The sum is so huge that one has difficulty in appreciating it. But it serves to give one some small idea of the vastness of this enterprise, and of the enormous responsibility imposed upon those who have to administer and find safe and profitable investments for these ever-growing funds.

Perhaps it may help to give you a better conception of its magnitude were I to quote the statistics given in the last Insurance-Company's Blue Book, which is annually furnished to the Board of Trade, and by it presented to Parliament, in which I find it stated that the annual—

	Ordinary Companies	Industrial Companies	Total.
Premium Income	£10,000,748	7,100,000	17,100,748
Number of Policies	1,400,000	1,000,000	2,400,000
Sum Assured	£50,000,000	1,000,000,000	1,050,000,000

That is to say, nearly one-half of the population of the United Kingdom (accurately 2.288% persons)—men, women, and children of all ages—is insured in some form. The value of the average policy taken out in the ordinary companies amounts to £364, while that of the industrial companies amounts to about £9.5s.

Now, what relation to this vast enterprise does the medical profession hold? What is our position in regard to life-assurance? In the first place, let me say in answer to this



question that I trust every one now in this room has already, in some form, accepted the invitation of one or other of the numerous companies, and has become a member of one of them. And if any one of my younger friends still hesitates about the propriety or necessity of such a step, let me advise him, without another year's delay, to join one of the companies; and if he will suffer me to still further advise him, I should most strongly urge him to select the endowment-form of assurance. To no class of assurers does this method appeal more urgently than to the professional man. For as years wear on he of necessity loses some of the spring and energy of his younger years; the pursuit of his profession, though always a charm to rouse him to enthusiasm, still finds him more readily fatigued by it; a fact which his friends and patients are perhaps more quick to perceive than he himself to acknowledge; and so, as age advances, patients cease to fill the ranks of those who inevitably drop off, and practice gradually dwindles. Now is the time when, if he be wise, the professional man will retire, with his laurels still green upon him. And to enable him to accomplish this otherwise not always easy though most commendable act, the falling in of this endowment seems to have been specially devised. It is easy, when one is in the full swing of professional life, to spare the necessary sum to secure so great a boon in after-life. By this means the professional man puts himself in the same position as some of his more fortunate friends who have the prospect of a pension to retire upon when they attain the specified age at which retirement is enforced.

But apart from this purely personal relation to life-assurance, the medical profession is, and has for long been associated with the companies in enabling them to make judicious selection of lives proposed for assurance. Not much before the commencement of this century were the services of a medical man asked for. On reference to the first proposals of the Scottish Widows Fund Society in 1814, I find that the applicant had to appear before a medical man, and produce a certificate to this effect. I quote the words:

I . . . do hereby certify that . . . mentioned in the written declaration . . . application form did appear before me this day, and that I have known . . . for . . . years, and that to the best of my knowledge he hath never been afflicted with gout, asthma, or any disease which tends to the shortening of life, and that I do believe . . . present state of health to be good, and his habits of living not such as to endanger . . . life. Given at . . . this . . . of . . . 18 . . . Signature. Note appended. This, or any other form adapted to the case, to be used.

This not very elaborate report continued in use up to the year 1830, and it will be observed that most attention was paid to the general appearance of good health, without apparently any examination of the applicant whatever. It is curious to note how concerned the directors were, at that early date, to ascertain if the applicant had suffered from gout. It does not appear how they dealt with a case where the man confessed to having been afflicted with gout, but evidently they were impressed with the fact that gout tended to the shortening of life, a fact which was later lost sight of, and has only recently been recognized as a condition calling for a surcharge on the premium, and for which our friend, Mr. Meikle, will, at a later stage, bring forward ample justification. In the year 1830 these perfunctory reports were no longer considered satisfactory, and a certificate was required from the private medical attendant, to whom a series of specific questions were addressed with regard to the general state of health of the applicant, the nature of any serious illness, suspicion of any organic affection, any injury, his habits and constitution. This report was returned to the manager or medical officer of the Society. About this time vouchers as to character and health were required from friends. This is apparently the first time the Society deemed it prudent to retain the services of a physician to aid them in the sifting of cases; and in 1835 they went a stage further, and required applicants to appear before their own medical adviser, as well as to produce answers to a more elaborate set of questions as to health and family history, addressed to the private medical attendant. A report from the agent and two private friends were also called for.

It would thus appear that, coincident with the advance in medical science and the spreading of the knowledge of more precise means of physical diagnosis, the companies sought for and obtained more exact information as to the actual

condition of proposers before admitting them to the benefits of their societies. And so the process of selection of the most healthy lives has gone on to this day, each company trying, from time to time, to improve upon the medical forms which are placed before their examiners, in order to obtain as complete and faithful an account of the proposer as possible, as to his family history as well as to his physical condition, at the moment of application.

There exists a popular belief that all this care is of little use, and that the benefits of selection are entirely lost after the first 5 or 6 years. Acting on this assumption, companies have been started to accept lives without any medical examination. But, so far as I am aware, they have not proved a success, as one would naturally predicate. For to them all the rejected of other offices would as a matter of course repair, and the healthy would, equally as a matter of course, carefully shun such offices. But the fallacy of this has been repeatedly exposed, and by none more effectively than by our two friends Dr. Sprague and Mr. Meikle of this city, who have shown that after elimination of the voluntary withdrawals the advantages of selection diminish at all ages with duration of the policies, rapidly at young ages, slowly at middle life, while in the older it probably never entirely disappears.

Mr. Edgar Holden thus defines selection: "Of any number of persons we know many will attain a given age, how many will die each year, and the mathematical value of the chance of any to attain his expectancy; but to know which ones will do so is impossible; to decide which are most likely to do so is selection." And it is to the credit of the medical profession that they, by their careful examination of candidates for assurance, largely contributed the data which enabled the actuaries to formulate their tables of Expectation of Life for Healthy Males—and thus to estimate the mathematical value of the chance of a man attaining his expectancy.

But infinitely more difficult is the problem which is constantly submitted to us, namely, how equitably to assess the value of under-average lives; how sufficiently to protect the societies against loss, and how, at the same time, not to overcharge such candidates for assurance. Here we have no fixed and mathematically correct data by which to guide our decisions. We have no aggregated groups of persons suffering from the same disorder, though perhaps differing greatly in form, which might supply a basis by which to adjudicate upon the special case before us. And if the extra rates recommended by medical officers have in the past saved the offices from loss, I am bound to admit that this happy result has been arrived at without the aid of any scientific formula, and by merely empirical methods.

Now, gentlemen, it appears to me that one of the most important functions of this Section is—by our discussions, our interchange of views, the communications brought before us, and by stimulating medical officers to investigate the records of their various companies, to endeavor to devise some more scientific, I shall not say more equitable, principles to guide us in our estimate of extra risks. Our good friends, the actuaries, have already calculated for us the after-life of groups of healthy males; and if we can only supply them with sufficient data from which to calculate by how much the expectation of life of unhealthy men is diminished in special groups of disease, they would quickly provide us with a table of the expectations of unhealthy males, and thus our task would be immensely simplified.

**Gangrene of the Intestine as a Result of Thrombosis of the Mesenteric Veins.**—Sigurd Lund (*Hospitals-tidende*, March 23, 1898) reports the case of a woman of 39 who came into the hospital suffering from abdominal pain, with distention, tenderness on pressure and general tympany on percussion; the pulse was regular and strong, the temperature 36.9° C. The attack had begun three days previously with rigors and severe abdominal pain. Sudden collapse, followed by death, occurred early on the morning after admission, and at the necropsy thrombosis and phlebitis of the mesenteric veins were found, with incipient gangrene of the jejunum and the ileum and a mild degree of fibrinous peritonitis. The patient had given a history of treatment with inunction and evidences of syphilis were found. Microscopic investigation disclosed the evidences of periphlebitis, probably syphilitic in origin.



## The Latest Literature.

### British Medical Journal.

July 16, 1898. [No. 1599.]

1. The Public Duties of the Doctor and his Relations to the State. ROBERT FARQUHARSON.
2. The Advancement of Public Health During the Last Quarter of a Century. WILLIAM BERRY.
3. The Old and the New in Medicine. L. A. WEATHERLY.
4. The Pharmacological Action of the Thyroid Gland. ROBERT HUTCHINSON.
5. Remarks on a Case of Penetrating Gunshot-wound of the Abdomen: Immediate Laparotomy: Suture of Stomach: Recovery. JOHN WARD COUSINS.
6. A New Suture for the Intestine, Mesentery, etc. ARTHUR E. BARKER. (*Illustrated*.)
7. A Contribution to the Surgery of Hepatic Abscess Caused by the Bacillus Typhosus. JAMES SWAIN. (With Chart.)
8. A Case of Operation for Perforated Gastric Ulcer. JOHN CAMPBELL.
9. Keloid (Alibert) and Intractable Patches of Chronic Inflammation of the Skin Treated by Scarification. HERMAN LAWRENCE.
10. Morphin in Uremic Eclampsia. L. A. FRANCIS.
11. Measles: Rash on First Day of Symptoms. EDWARD MACKEY. (With Chart.)
12. The Diagnosis of Pyelitis. JOHN SMITH.
13. Scarlatiniform Urticaria. JOHN J. A. RAYE.
14. A Case of Popliteal Aneurysm in a Female. E. M. HAINWORTH.
15. Case of Membranous Inflammation of Tongue and Mouth, with Presence of the Staphylococcus Pyogenes Aureus and Other Micrococci. ARTHUR J. HALL.
16. Cases of Phthisis Treated With Guaiacolate of Piperidin. T. D. ACLAND.
17. The History of a Cancerous Family. J. H. POWER.

2.—Berry attributes the **advancement of public health** in England and Scotland during the past 25 years to the advent of bacteriology and its establishment on a firm scientific basis, by the ability to obtain pure cultures of microorganisms. During this period the mortality per 1000 has decreased from 22, in 1871, to 18.7 in 1895. These figures represent a saving of more than 1,500,000 lives. Further, the mortality has been reduced mainly below the middle age. In 1874, the death-rate was 37; the zymotic death-rate 10.1; and the birth-rate 47.4. In 1897, the death-rate was 20.0; the zymotic death-rate 3.11; and the birth-rate 37.1.

4.—The recent addition of **thyroid gland** to the British Pharmacopeia seems to Hutchinson a sufficient warrant for discussing its **pharmacologic action**. He treats his subject from the point of view (1) of the effect of the gland upon metabolism; (2) of its effect on the circulation and the blood; (3) of the excretion of the active constituents of the thyroid; and (4) of the dosage of thyroid preparations. (1) The effect of the administration of the thyroid is to increase oxidation in the body. The products of the disintegration of the nitrogenous tissues appear in the urine almost entirely in the form of urea; uric acid and the xanthin-bases being neither regularly nor appreciably increased, while the products of the fat-destruction are eliminated as carbonic acid by the lungs, and as water by the kidneys. Diuresis is an important, and, often, one of the first effects of the drug, and a considerable proportion of the very sudden fall of weight may be attributed to the loss of water only. There seems to be a considerable increase in nitrogen-elimination from the destruction of the circulating proteid, while the fixed proteid is attacked only when the store of fat has been largely reduced. The practical inference from this action would be that while administering thyroid to cases of obesity, the diet should not be much restricted and nitrogenous matter should be especially abundant. This action is unique among medicinal agents. It is not yet determined whether the action of the thyroid is directly on the tissues or through the intervention of the nervous system. It undoubtedly hastens the life-history of the cells, and thus is explained its beneficial influence on backwardness in growth in children and on such skin-diseases as psoriasis and ichthyosis.

The secretion of the thyroid is constantly finding its way into the circulation and exercising its effect on metabolism, and, in cases of simple goiter, it may be that there is an increased demand for this secretion. In this way could be explained the beneficial action of the administration of the drug for such a condition; the addition of thyroid by the mouth lessening the demand upon the natural product of the gland. The appearance of glycosuria during the administration would indicate that the thyroid may affect the carbohydrate metabolism in such a manner as to diminish the power of the tissues to utilize sugar. (2) Clinically, the thyroid induces rapidity of pulse, irregularity of the heart's action, palpitation, and threatened failure. Experimentally, however, these phenomena are not observed after the administration of iodothyron or the colloid material, and it is probable that the heart is acted on by some substance produced during the exaggerated metabolism that follows thyroid administration. This specific effect renders caution necessary in administering the drug to patients with cardiac debility. The same action has suggested its use for functional bradycardia. It has been found that the active part of the thyroid has no influence on the blood-pressure, the fall of pressure seen when decoctions of the gland are injected being caused by the action of the organic extractives. Experimental evidence notwithstanding, patients who are taking thyroid present clinically a slight fall of blood-pressure, due, probably, to enfeeblement of the heart's action. In the healthy individual, small doses of thyroid produce no effect on the blood, while large doses cause an increased destruction of its corpuscles, as of all other cells. In cases of myxedema, the stimulus that thyroid feeding gives to all growth and division is manifested by a rise in the number of corpuscles. (3) The active constituent of thyroid appears to be excreted entirely by the kidneys. Iodin has been found in the urine of a dog within three hours after the administration of one gram of the colloid matter. Iodin has not been found in the bile of animals taking thyroid preparations. In the human species it is difficult to detect iodine in the urine after the administration of thyroid preparations, probably because of the well-known power of the normal thyroid to lay hold of and to store up iodine in whatever form it is administered. In case thyroid is administered to a patient possessing a healthy thyroid, iodine does not appear in the urine unless a large excess is administered. The absence of the thyroid in myxedema, on the other hand, prevents the storage of iodine, and it is, accordingly, more easily detected in the urine. The excretion is gradual. (4) Liquor thyroidei, prepared according to the directions given in the British Pharmacopeia, contains about 4½% of colloid matter. An ordinary dose of the latter is about 0.1 gram, and that would be contained in about 37 minims of the liquor. The dose recommended by the Pharmacopeia (from 5 to 15 minims) is, therefore, too small, and would better have been from 15 to 60 minims. Whatever the preparation employed, experience seems to show that it is best to give it in small doses and frequently, rather than in large quantities at longer intervals. "Thyroidism" is probably due to a combination of the presence of toxic products in the preparation employed and a specific action of the thyroid or some product of the exaggerated metabolism. Hutchinson is not in favor of the new thyroid compound "thyroglandin" proposed by MacLennan.

5.—The following case is reported as the text for a few remarks on **penetrating gunshot-wounds of the abdomen**. A revolver was accidentally discharged by the patient, the muzzle pointing to the region of the stomach. The bullet, which was about ½ in. in length and ⅝ in. in thickness, entered the abdomen 2 in. to the left of the umbilicus, at a point midway between it and the ninth costal cartilage, passing out on the right side of the spinous process of the twelfth dorsal vertebra. Two hours afterward the patient was in a state of collapse, which was treated with appropriate remedies, and after she had rallied somewhat, celiotomy was performed. There was found an irregular wound, 1½ in. in length, at the greater curvature of the stomach, close to the reflection of the omentum. The colon and small intestine were free from injury. After suturing the gastric wound and carefully cleansing the region round about, the abdomen was closed. The patient made a rapid recovery. While there have been reported cases in which patients have survived dangerous wounds of the stomach and intes-



times without operative interference, such instances are rare. When recovery does follow, it is likely to be attended with serious consequences due to peritonitis, excited at the time of the injury, or to the cicatricial contraction following the track of the bullet as it passes through the abdomen. The diagnostic signs of visceral injury are usually well marked, injury of the stomach, however, being attended with more definite indications than injury of the intestines or other organs. In these modern times there is but one treatment for perforated gunshot-wounds of the abdomen, namely, immediate celiotomy; that is to say, abdominal section performed when the patient has rallied sufficiently from shock, as it would be useless to operate when the patient is rapidly sinking. While the mortality following operative interference for gunshot-wounds of the abdominal cavity is extremely high, surgeons should not on that account be discouraged, as the nature of these injuries is such as to make the death-rate a necessarily high one.

6.—Baker has devised a **new suture and needle-holder**, the employment of which it is believed will save time. The instrument consists of 2 fine steel blades, 1 in. broad at the handle end, and tapering to  $\frac{1}{4}$  in. at the needle-end; these are held together by screws with tooth-shaped heads. There is an interval of  $\frac{1}{4}$  in. between the blades, in which are fastened 3 reels armed with the suture-material. The instrument is so constructed that it will hold the finest needle at any angle, and only requires to be threaded once. The suture recommended especially for the intestines and the mesentery is the ordinary sewing-machine stitch.

7.—But few cases are on record of **hepatic abscess complicating enteric fever**, and caused by the typhoid bacillus, and in all the abscess has resulted from an infective suppurative pylephlebitis, by direct extension from the intestinal ulcers. Every case hitherto recorded has terminated fatally. The case reported by Swain occurred in a child, 5 years of age, who had had a mild attack of enteric fever followed by symptoms of a relapse. When the presence of the abscess had been confirmed, it was decided, if possible, to open and drain it. This was accomplished without any difficulty; the abscess-cavity being about  $\frac{1}{2}$  in. from the anterior surface of the liver, and about the size of a cricket-ball. An agar-culture of the fluid was taken at the time of the operation and was found to contain actively motile typhoid bacilli. The child made a rapid recovery and in about two months from the time of operation had thoroughly convalesced. The points of interest in this case are the finding of the typhoid bacillus in the fluid from the abscess, and the demonstration of the fact that an hepatic abscess complicating typhoid fever may be successfully treated by operative interference. This is the first case on record that has not terminated fatally.

8.—Shortly after the symptoms of **perforated gastric ulcer** had developed, the patient, a woman aged 35 years, was **operated upon with gratifying success**. The ulcer was situated on the lesser curvature of the stomach, about one inch from the pylorus, the perforation being as large as a threepenny piece. After the margins of the opening had been trimmed with scissors, the raw edges were drawn together by a suture of fine silk, and over this interrupted Lembert's sutures were introduced. As the stomach-contents had not spread far in the gastric region, the abdomen was not flushed out, but was thoroughly sponged and drained, from a fear that the flushing might further disseminate the gastric contents, and contaminate the entire peritoneal cavity.

10.—Francis reports a case of **puerperal eclampsia** successfully treated with **morphin**.

11.—Mackey reports the case of a child, aged 5 years, that developed **measles** while being treated for simple fracture of the lower end of the femur. The exposure to the contagion occurred through a case that developed in the same ward. On February 26th the child's temperature was 97° F. at 6 A.M.; at 8 A.M. a discrete, papular eruption had made its appearance; at 9 A.M. the temperature was 100° F., and at 2 A.M. on the following day the thermometer registered 108° F. The subsequent course of the case was typical of measles.

12.—Smith thinks that the use of the cystoscope is of distinct value in the **diagnosis of pyelitis**, and he relates a case that indicates the usefulness of such an examination.

13.—Raye reports the case of a man who had eaten a

meal composed of canned salmon and cucumbers three or four days before he applied for treatment, and who had also been taking copaiba for an attack of gonorrhea. As a result of the copaiba, an acute erythematous urticaria developed, which, on account of its resemblance to the rash of scarlet fever, is designated **scarlatiniform urticaria**.

14.—A woman, 55 years old, presented herself with a **popliteal aneurysm**, the size of a large orange. There was no history of trauma, but a suspicion of syphilis. The **femoral artery was ligated** in Hunter's canal; and the patient left the hospital in 10 days. Six weeks after the operation the aneurysm was found to be consolidated, the circulation of the foot had greatly improved, pulsation being present in both the anterior and posterior tibials, and the edema of the leg had entirely disappeared.

15.—A patient, who was being treated for acute nephritis, developed a **severe membranous glossostomatitis**. The tongue was much swollen and protruded from the mouth. Bacteriologic examination of the membrane showed staphylococci pyogenes, aureus and albus in abundance. It is thought that the infection came from cases of follicular tonsillitis, which had previously occurred in the same ward. The patient was treated with the local application of sulphur to the membrane and a mouth-wash of solution of chlorinated soda.

16.—Acland reports two cases of **tuberculosis of the lungs** in which treatment with piperidin guaiacolate (guai-perol) had been employed. The first patient had suffered from cough, chest pain, night-sweats, and dyspnea for three years. There was a tuberculous family-history; but no tubercle-bacilli were found in the sputum. The diagnosis was disseminated pulmonary tuberculosis, without softening. The patient took 5 grains of piperidin guaiacolate 3 times a day and, subsequently, 10 grains at like intervals. The symptoms were ameliorated, the patient gained 9½ lbs. in weight; but there was no change in the physical signs. The second patient had noticed the usual symptoms for a year; there was a tuberculous family-history; and tubercle-bacilli were found in the sputum. The diagnosis was chronic pulmonary tuberculosis, not active. The patient took 5 grains of the drug after meals for about 3 months. The symptoms were ameliorated and fewer râles were noted at the end of this period. The patient gained 1½ lbs. in weight.

17.—Power reports the case of a patient whose history is interesting on account of the **prevalence of carcinoma in the family**. The man had had his right breast removed for scirrhus about 2 years before, and malignant glands had been removed from the axilla a year later. He now presented a malignant growth in the axilla too far advanced for complete removal. The family included eight sisters and two brothers; and of these the patient's father, aged 46 years, died of carcinoma of the left breast; a brother, aged 65, of carcinoma of the throat; a second brother, aged 24, of carcinoma under the left arm; the first sister, aged 65 years, died of carcinoma of the right breast; a second sister, aged 46, died of carcinoma of both breasts; a third sister, aged 40, died of carcinoma of both breasts; a fourth sister, 54 years of age, died of carcinoma of the breast, and the fifth and sixth sisters, both alive, have both carcinoma of the breast.

Lancet.

July 16, 1898. [No. 3907.]

1. Fracture of the Neck of the Femur in Childhood. R. HAMILTON RUSSELL. (*Illustrated*.)
2. South African Drugs in the Treatment of Dysentery and Ulceration of the Stomach and Intestines. JOHN MABERLY.
3. Hematuria as a Symptom; Methods Employed in making a Differential Diagnosis; with 19 Cases illustrating points of interest in the Diagnosis of Renal Affections characterized by the Presence of Blood in the Urine. DAVID NEWMAN. (*Concluded*.)
4. A Case of Intrathoracic Tumor with Secondary Growths in the Brain and Alternate Paralysis. WILLIAM CECIL BOSANQUET.
5. Two Cases of Halfpennies impacted in the Esophagus for Five and Six Months respectively, Revealed by X-Rays and Removed. A. W. MAYO ROBSON. (*Illustrated*.)



6. Case of Pemphigus Serpiginosus. ROBERT Y. AITKEN. (*Illustrated.*)
7. Vitality: an Appeal, an Apology, and a Challenge addressed to Brother-Practitioners. LIONEL S. BEALE. (*Continued.*)
8. A Case of Gastro-intestinal Hemorrhage in a Newly-born Child; Treatment by Large Doses of Calcium Chlorid: Recovery. L. A. PARRY.
9. The Spontaneous Occurrence of Vesical Fistula in the Groin in a Case of Paraplegia with Retention of Urine. JAMES COLLIER.
10. A Case of Porencephalus Simulating a Depressed Fracture of the Skull with a Cephalhematoma; Necropsy. (Under the care of H. P. DEAN.)
11. A Case of Transperitoneal Ligature of the External Iliac Artery for Aneurysm of the Common Femoral; Cure. (Under the care of F. PAGE.)

1.—The diagnosis of fracture of the neck of the femur in childhood is not as easy as one would at first sight be led to believe. The majority of the symptoms are not unlike those observed in incipient coxalgia. There is one symptom, however, that, if present, is of positive diagnostic value in differentiating between these two affections of the hip, that is, atrophy of the muscles of the thigh and calf. If this be absent, it can be definitely asserted that the affection is not coxalgia; while it may be present in both affections, it is never absent in incipient coxalgia. As has been pointed out by Whitman, fracture of the neck of the femur is not so uncommon in children as was formerly supposed, and a mistake in diagnosis is followed by quite serious consequences, as the shortening steadily increases as the years pass by, and goes on increasing. The explanation of this progressive shortening is twofold; shortening follows the depression from yielding, resulting from too early use of the limb during the process of repair, and to the later sinking of the neck from the strain to which it is exposed by the deformity. The most potent factor in the etiology of the increased shortening is the alteration of the upper fragment containing the growing epiphysis, and the consequent elongation of this upper fragment in a faulty direction.

2.—Maberly refers to previous papers in which he gave records of 100 cases of acute and chronic dysentery treated with monsonia ovata and monsonia burkei, two South African drugs. He has since used a tincture and a powder made from an unidentified species of pelargonium, native of South Africa, in a case of chronic dysentery and a case of gastric ulcer. The pelargonium in question contained three principles: (1) a reddish, amorphous body, yielding the typical reactions of the tannins, and constituting about 6% of the whole dried roots; (2) a somewhat similar body, soluble in hot water, and not precipitated by gelatin; and (3) a fatty acid. The first-named substance is probably the active principle of the drug. It is believed that the monsonia and the pelargonium contain no poisonous properties; that the pelargonium are more suitable for use in cases of ulceration of the stomach and upper portion of the intestinal tract; and the monsonia for that of the lower portion of the intestinal tract; that doses of two drams are about the minimum for adults, except, perhaps, in cases of typhoid fever. In cases of the latter disease, dram-doses of tincture of monsonia may be given after the eighteenth day of the disease. The use of this remedy should be followed by a laxative, such as olive-oil.

3.—Hematuria is a symptom that manifests itself when the kidney is in a state of passive hyperemia, either from pressure on or torsion of the renal veins, as, for example, in cases of movable kidney. Hematuria following reflex inhibition of the renal functions is not uncommon, and occurs not infrequently with acute abdominal affections; it is due probably to morbid motor impulses, conveyed from the nerves proceeding from the solar plexus. Sudden release of intra-abdominal pressure, as for example, following the removal of a large abdominal tumor, may be followed by either albuminuria or hematuria. Whether or not this condition should be treated by release of tension is a question that should be carefully considered. Hematuria is, of course, a symptom of acute and chronic nephritis, when there exists a condition of inflammatory hyperemia. It is a question whether these conditions of the kidney will not soon be included in the domain of surgery. Improvement has taken place frequently after free incision of the kidney, without any

lesion being disclosed sufficient to account for the symptoms. According to Reginald Harrison it is the relief of internal tension that accounts for the improvement secured. The condition of the urine in tuberculous diseases of the kidney presents marked variations at the different stages of the malady. In the early stages hemorrhages occur that are analogous to the hemoptyses in the initial stages of pulmonary tuberculosis. Profuse hematuria rarely occurs in renal tuberculosis. Hematuria is a symptom of cystic degeneration, and of hydatids of the kidney, sometimes being profuse, in other instances moderate. It occurs in about one-fourth of the cases tabulated in this paper. As almost all tumors of the kidney are malignant, and as their early recognition is important, it is well to know that in many hematuria is a prominent symptom, occurring in 75% of carcinomata of the kidney. In the early stages the loss of blood is not marked, but as the disease advances the bleeding becomes more profuse. Little credence is placed in the finding of so called carcinoma-cells in the urinary residue, as it is believed that cells resembling those of a carcinomatous growth seldom find their way from the kidney to the bladder.

4.—Bosanquet reports the case of a woman who presented crossed paralysis, suggestive of a lesion of the pons; but the slowness of the affection made it difficult to conjecture what the exact nature of the lesion might be. The patient had previously complained of cough, and there was epigastric pain and tenderness, flatulence, dyspepsia, and emaciation. She was mentally dull, her memory was impaired, and speech was indistinct and hesitating. Signs of intrathoracic pressure developed and death resulted. At the autopsy a gastric ulcer was discovered, which had not been suspected during life. The mesenteric glands and those along the aorta were much enlarged. The right pleura was studded with carcinomatous nodules, and the lower lobe of the right lung was collapsed and puckered into a carcinomatous mass. A metastatic carcinoma was found at the vertex of the brain, near the longitudinal fissure, occupying the posterior and inner part of the right superior frontal and the right marginal convolutions; another was found in the posterior limb of the right internal capsule; a third was seen on the right external capsule, at the edge of the lenticular nucleus; and a fourth was found in the right centrum ovale, just beneath the cortex, and on a level with the posterior end of the caudate nucleus. There was a small patch of softening at the anterior extremity of the left internal capsule. The exact seat of the original carcinoma could not be determined. The cerebral growths were evidently secondary; the growth in the lung was the most advanced, and the early occurrence of cough, which had been complained of before admission, might point to this as the original lesion; but the rarity of primary carcinoma at this point makes the suggestion doubtful. No primary focus could be found in the abdomen to account for the enlarged glands there, and it is noteworthy that these occurred late in the history of the case. Judging from the apparently normal condition of the uterus and appendages no severe operation could have been performed, such as might throw any light on the origin of the malignant disease. The large nodule at the vertex occupied part of the leg-area; the growth in the right internal capsule explained the weakness of the arm, and indirect pressure exerted by it on the fibers of the posterior limb of the capsule was no doubt the origin of the anesthesia. The facial paralysis on the other side was apparently due to the minute patch of softening in the left internal capsule, but the origin of this lesion was not easily explicable. The paralysis must be classed as "functional," and due to some disturbance in the activity of the nerve-units, not to their destruction.

5.—Mayo Robson reports two cases of halfpennies impacted in the esophagus for 5 and 6 months respectively, and ultimately removed by the coin-catcher of the late Mr. Samuel Smith. The location of the foreign bodies was simplified by the use of the X-rays.

6.—As it has been said that no internal medicine has proved efficacious in the treatment of pemphigus, Aitken reports a case of pemphigus serpiginosus that responded promptly to the internal administration of Fowler's solution, in 4-minim doses.

8.—Parry reports the case of a newly-born child that vomited some dark, reddish-brown blood and passed blood from the bowel on the fourth day of life. The infant had several



stools containing blood during the next two days; but after that no more blood was passed. The case is considered to be one of **hematemesis and melæna neonatorum**. The child took 5-grain doses of calcium chlorid every hour through the day and every two hours through the night, 160 grains in all being taken in three days.

9.—Collier records a case of **spontaneous vesical fistula, opening in the groin**. The patient was a paraplegic and had been treated for retention of urine. The long-continued distention had, probably, caused a slough in the bladder-wall, which, in turn, was followed by a perivesical abscess, and this had then opened in the groin.

10.—As there was a history of trauma immediately preceding the examination, a diagnosis was made of depressed fracture of the skull, with a cephalhematoma, which proved, when the parts were explored, to be a **porencephalus**. When the exploratory incision was made under chloroform-anesthesia, a quantity of cerebrospinal fluid gushed out. Over an area about the size of a florin, the covering of the cavity inside the brain was extremely thin, and at one spot it was adherent to the scalp. The right parietal bone was divided into two almost equal halves by a fissure almost an inch in breadth, running from its anterior to its posterior margin, and anteriorly to the depression mentioned. Beneath the fissure could be seen a smooth-walled cavity, evidently in the brain-substance; on the floor of this cavity was noticed an opening of sufficient size to admit the little finger, and communicating with the right lateral ventricle. The case belongs to the group of true porencephalus, and death was due to the alteration in the vascular mechanism of the brain resulting from the draining away of the cerebrospinal fluid.

### New York Medical Journal.

July 30, 1898. [Vol. lxxviii, No. 5.]

1. Acute Gastro-intestinal Infection in Infants. CHARLES GILMORE KERLEY.
2. Unilateral Loss of the Pupillary Light-Reflex (Reflex Iridoplegia); Its Pathology and Clinical Significance. WILLIAM M. LESZYNSKY.
3. Cerebral Neoplasms: Clinical Analysis of Sixteen Personal Cases (Fifteen Tumor, One Abscess). With Report of Five Cases. WILLIAM C. KRAUSS.
4. Sanitarium-Treatment of Pulmonary Tuberculosis. J. EDWARD STUBBERT.
5. Professor Behring's Patent on Diphtheria-Antitoxin. B. T. WHITMORE.

1.—Kerley insists upon the necessity of recognizing acute **summer diarrhea** in infants as **gastro-enteric infection**, as he considers this essential in order to lead practitioners to treat the condition by first cleaning out the bowels with calomel and lavage, after which the diet must exclude milk and consist of barley-water, whey and the like. The medication should consist in a combination of bismuth subnitrate and bismuth salicylate, the former in large doses, the latter in small doses. Other drugs have not been satisfactory in Kerley's hands, and his experience with tannigen and tannalbin has been unfavorable.

2.—Leszynsky states that his purpose is chiefly to prove the incorrectness of the view that **unilateral loss of pupillary light-reflex** is associated with *tabes dorsalis* or paresis only, and to demonstrate that there is unnecessary diversity of opinion as to whether the lesion causing this symptom is situated in the afferent or efferent portion of the reflex arc. He records the case of a woman, 38 years of age, in which there was a pretty clear history of specific infection. There was shooting pain down the legs, but no disturbance of the sphincters, and there was some loss of power in the legs. The gait was normal, and the knee-jerks were exaggerated. There was no tenderness over the nerve-trunks, and no ataxia. The left pupil was larger than the right, and did not react to light consensually or upon faradic irritation of the skin, but it contracted when both eyes were converged. There was hyperopic astigmatism. The fields and fundus were normal; the urine also was normal. The woman largely recovered on the use of specific treatment. After a study of 17 cases of unilateral reflex iridoplegia, besides his own, Leszynsky notes that there was in 9 a history of previous syphilitic infection, and in 4 there was so much

suspicion of this as to justify the probability of syphilis. In one case the condition followed injury, and in 4 others the cause was unknown. In 13 cases the left pupil was affected. In 11 cases the affected pupil was dilated; in 6 it was contracted, and in one both the pupils were equal. The condition of vision or refraction bears no relation to the state of the pupil. In 7 accommodation was normal; in 3, in which the pupil was dilated, accommodation was diminished. Consensual reaction was absent in 14 cases. But one tabetic, and but 2 paretic dements were among these cases, and in but 2 was there traumatism. (The paper is to be continued.)

3.—In a study of 15 cases of **intracranial neoplasm** and one of abscess seen personally, with 9 autopsies, Krauss found 13 cerebral and 3 cerebellar. The most common symptom was pain in the head; the next most common optic neuritis, and next mental apathy. Nausea and vomiting were not especially common, occurring in only 11 cases. Vertigo was found in only 6 of the 13 cerebral cases, so that it seems to be reckoned as a much more common symptom than it really is. The tendon-reflexes were exaggerated in 7 cases, in all of which there was paralysis of the member in which the reflexes were exaggerated. The reflexes were never abolished. The pupils reacted to both light and accommodation in every case. The nature of the tumors was glioma in 3 cases, gumma in 2, sarcoma in one, tubercle in one, and unknown in 4. Details of the cases are given.

4.—Stubbert contends that the **treatment of pulmonary tuberculosis in sanatoria** is no more irksome nor more unpleasant to the patient than treatment outside, and that it is followed by much better results than the latter. He insists upon the value of treating incipient cases in a sanitarium and upon the fact that one of the especial advantages of this treatment is that the patients are obliged to be prudent. Besides exercise and fresh air, hot-air inhalations have been found valuable, particularly in cases of pleurodynia and asthmatic dyspnea, as well as in those of profuse purulent bronchorrhea, causing decrease of the cough, expectoration and pain. Antituberculous serum furnished by de Schweinitz from the Government Laboratory at Washington has been employed in the treatment of 47 cases, with improvement in all particulars in three-fourths. The treatment is advantageous in that it does not disturb digestion, causes the bacilli to disappear and, in the cases in which cure resulted there were no relapses; so that it seemed as if some degree of immunity had been produced. Ichthyol has been used with some success; and creosote was used to a considerable extent, but, although the results seemed to be satisfactory, they do not favor this drug, as disagreeable complications are likely to arise during its administration. The best preparation of creosote is the subcarbonate.

5.—Whitmore protests against allowing a **patent on diphtheria-antitoxin**, maintaining that no one person is entitled to the credit for this most beneficent discovery.

### Medical Record.

July 30, 1898. [Vol. liv, No. 5.]

1. Recent Experiences in Military Surgery after the Battle of Santiago. N. SENN.
2. The Etiology of Gastric Ulcer, and an Outline of its Therapeutics. A. A. BERG.
3. Cerebral Hemiplegia Following Diphtheria, with Report of a Case. JOHN WINTERS BRANNAN.
4. The Study of Epilepsy. EDGAR J. SPRATLING.
5. Subjective Therapeutics. W. P. HARTFORD.
6. When Lancet was King and Calomel Prime Minister. JAMES WEIR, Jr.
7. A Unique Case of Appendicitis: Operation. JOHN YOUNG BROWN.
8. A Case of Partial Vaginal Occlusion in a Woman Pregnant Eight Months. CARL F. GISSLER.
9. Extraordinary Case of Foreign Body in the Lung. J. HENRY BARBAT.
10. Vicarious Menstruation from the Umbilicus. JAMES A. GARDNER.
11. A Unique Case of the Cocain-Habit. JOHN H. BILLINGS.
12. An Antidote to the Rhus-Poison. A. T. HUDSON.
13. Displacement of the Bladder Caused by a Railroad Accident: Corrected by Laparotomy. F. L. FORKER.



1.—Referring to his experiences with the wounded after the battle of Santiago, Senn states that he is more and more impressed with the importance of the first dressing and suggests that the gauze in the first-aid dressing package be substituted by cotton and that a mild antiseptic powder be included in the package. The cotton constitutes a more perfect filter and the powder will, with the blood, form an antiseptic scab and hermetically seal the wound. The modern military surgeon will have to contend with less wound-infection than the surgeon of the Civil War. As a matter of fact the wounds inflicted by the small-caliber bullet in Cuba were more often aseptic than septic. If infection did occur it was usually superficial, rarely involving deep tissues. Senn attributes the failure to prevent infection in the more serious wounds to three principal causes: (1) inadequate supply of first dressings; (2) faulty application of first dressing; (3) unnecessary change of dressing. The first cause was in this campaign unavoidable; the third, however, might be avoided by the adoption of a simple plan, such as is suggested by Senn. As the dressings were removed too frequently, owing to the fact that the patients were frequently and unavoidably transferred from one surgeon to another, Senn suggests that in every case, in which the first examination does not reveal the existence of complications requiring subsequent operative treatment, a diagnosis-tag should convey this important instruction: "Dressings are not to be touched unless symptoms demand it." The effects of the bullets on the soft tissues were particularly noted. In recent cases the wound was surrounded by a narrow zone of contused tissue, which later was marked by an area of discoloration, enabling one to trace the course of the bullet, if the wound was not too deeply seated. In more than 10% of cases the bullet was lodged in the tissues; this high percentage was explained by the fact that in many instances the bullets were deflected or spent. The probe as a diagnostic instrument, and the bullet-forceps as an instrument for extracting bullets, have been almost entirely superseded by dissection and the X-rays. If the bullet is located and its removal is deemed advisable, this can be done by free dissection along the track of the bullet; if its whereabouts are unknown, the X-rays will determine its exact location. The skiagraphic plant on board the hospital-ship *Relief* was of inestimable value not only in localizing bullets, but in diagnosing the existence or absence of fractures in doubtful cases, in ascertaining whether or not the fracture extended into the joint, and in showing the displacement of fragments in gunshot-fractures of the long bones. Senn recommends that a portable apparatus and an expert be supplied to the chief surgeon of every army-corps. Gunshot-wounds of the head were in a number of cases fatal within 12 days after the reception of the injury, intracranial infection being the immediate cause of death. Gunshot-wounds of the spine, with serious damage to the cord, have proved uniformly fatal, death being due to sepsis or exhaustion from decubitus. It was a matter of great surprise that so many of those with gunshot-wounds of the chest not only lived long enough to reach the hospital on the coast, but suffered comparatively little, the symptoms being unusually mild, unless hemorrhage was severe. All of these cases were treated by the expectant plan. Not infrequently patients with penetrating gunshot-wounds of the abdomen recovered without operative interference. There were only 4 celiotomies for such injuries, all terminating fatally. Of those cases that recovered without operative interference, the wounds were, in most instances, in the umbilical region or in one of the iliac fossæ. While but few primary amputations were performed for gunshot-wounds of the extremities, a number of secondary amputations have been necessary to save life in cases of infected compound fractures involving the adjacent joint.

2.—Burg reviews previous theories of the etiology of gastric ulcer and the objections to them, and advances his own view that the cause is stagnation of food behind an abnormally narrowed pylorus, the cause of the latter being, in most cases, a chronic gastritis. Thus he would make the condition analogous to the ulcers that occur behind a stricture in any hollow viscus, owing to propulsive force and stagnating contents. His treatment is directed against the supposed chronic gastritis aided by surgical interference if Leube's indications for this procedure—profuse or repeated hemorrhage, progressive inanition, abscess, perigastritis or sudden perforation—are present.

3.—Brannan reports the case of a girl, 19 years old, who had received no antitoxin during her attack of diphtheria. She left his care before fully convalescent, while albumin was still present in the urine, though casts were absent, and soon showed weakness of the throat-muscles, followed by temporary paralysis of the right arm, which recurred and was then associated with paralysis of the leg and face and difficulty of speech. This last symptom persisted and she had several convulsions, but the other paralyses improved. The heart-sounds were normal and owing to the slowness of onset the cause was believed to be thrombosis. Of the 35 similar cases reported 7 were thought to be due to hemorrhage and 14 to embolism; the others were of doubtful character. Of 6 cases examined after death 1 was due to hemorrhage and 5 to embolism. Post-diphtheric hemiplegia is most common in children between 8 and 15 years of age. The prognosis has the same gravity as with similar lesions in adults.

4.—In studying epilepsy, Spratling points out that we should determine whether depraved functions, emotion, local disease, or hereditary tendencies are active in causing the disease.

5.—Hartford bases his therapeutics upon an apparent recognition of the truth of Hudson's "Law of Psychic Phenomena," that there exists both an "objective" and a "subjective" mind, managing the cases with the former type of mind by reasoning, and the latter by suggestions as to the efficacy of treatment and the curability of his disease.

7.—As an argument in favor of operating in all cases of appendicitis at the earliest possible moment, Brown reports a case in which the patient had suffered for 3 days from the usual symptoms of a moderate attack, the temperature never being higher than 99.8°, and the pulse never above 82. When the abdomen was opened on the fourth day, a quart of infective offensive serum was found free in the pelvis; there was a perforation about the size of a pea, and the appendix itself was gangrenous at the tip and adherent to the cecum. It is presumed that had operative interference been delayed 24 hours the case would have terminated fatally. As for the treatment of the appendix, the method of complete excision is advised, the wound in the cecum being closed by a double row of sutures.

8.—Gissler records a case of partial occlusion of the vagina in a woman 8 months pregnant, due to the presence of a firm, elastic and congested hymen, which presented a small central orifice just admitting an ordinary metal catheter. Excision was performed under cocaine-anesthesia, with perfect results.

9.—The patient had swallowed a cherry-pit 20 years before, and had, after this, been subject to severe cough, with foul expectoration and hemoptysis. After an X-ray photograph was taken, the patient ceased spitting blood, and after some months he spat up the cherry-stone.

10.—Gardner records a case of vicarious menstruation from the umbilicus in a girl 16 years of age.

11.—Billings reports the case of a man who habitually dilated his rectal sphincter with a bougie and injected cocaine by introducing a syringe into the bowel. Upon one occasion both bougie and syringe escaped into the bowel during this procedure, and were removed after some difficulty as they had passed well upward.

12.—Hudson uses a solution of half an ounce of ammonium chlorid in 2 quarts of water in treating poisoning by rhus toxicodendron.

13.—Forker reports a case of upward displacement of the bladder, the result of a railroad-accident, in which the patient came under observation about a year afterwards. In this interval the patient had suffered from pain and difficulty in micturition, shooting pains about the pelvis, and two attacks of diarrhea, in one of which the stools were very black and very fetid, and in the other rather of a typhoidal nature. At the operation the bladder was found displaced upward, between the peritoneal and abdominal walls, to within an inch of the umbilicus; it was elongated and suspended in such a manner that it was impossible for it to empty itself. From the history of the case it was assumed that a large pelvic hematocoele had formed immediately after the accident, and was spontaneously evacuated by perforation into the rectum. The displacement of the bladder was believed to be due to this large hematocoele, which pressed upon the urethra so as to form an obstruction to the outflow



of urine, and as a result overdistended the bladder to such an extent that its summit reached the umbilicus and was held in this position by the adhesions resulting from an accompanying peritonitis.

### Boston Medical and Surgical Journal.

July 28, 1898. [Vol. cxxxix, No. 4.]

1. The Immediate Correction of the Deformities Resulting from Pott's Disease. JOEL E. GOLDTHWAIT.
2. A Case of Colpitis Emphysematosa. JAMES M. JACKSON and JAMES H. WRIGHT.
3. Earache: Causes, Treatment, Relation of the Exanthemata Thereto. GEORGE L. RICHARDS.
4. Fracture of the Nose Complicated by a Rhinolith. TIMOTHY J. REARDON.

1.—Goldthwait describes a method for the **immediate correction of the deformities resulting from Pott's disease**, for which he claims many advantages over that made famous by Calot. The principle of this new method is based upon the fact that the spine can be over-extended much more than is possible with suspension or horizontal traction, if all the weight of the body is borne upon a small upright resting directly over the apex of the kyphosis. It was found, too, that in a large number of cases no other force than the weight of the body is required. The essential points of distinction from Calot's method are these: The method of reduction requires less force and no assistants; ether is administered only when the disease is of several years' duration; several sittings are often necessary to obtain a satisfactory position; the plaster-of-Paris jacket does not include the head. In Goldthwait's experience the immediate results have been gratifying in every case, but the after-treatment must be faithfully attended to, or relapses are sure to follow. It is still a matter of conjecture, whether in the severer cases new bone-formation will ever occur sufficiently to fill in the gap and prevent recurrence. In these cases complicated with paralysis, this symptom has disappeared with great rapidity, an observation supporting the pressure-theory as the most feasible in the causation of paralysis. The operation is chiefly indicated in the early stages before the occurrence of extensive bone-destruction, while in cases complicated by paralysis it is without question the best treatment. It is also indicated when the deformity is so marked as to interfere with the respiratory and digestive functions. The presence of a discharging abscess is not considered a contraindication, but there is considerable risk attending the operation if there be present a small abscess, too deeply seated to be detected by examination, and liable to rupture if too much force be used.

2.—Jackson records a case of **emphysema of the vagina** in a woman, 46 years of age. The cervix and the upper half of the vagina were somewhat injected and studded with what appeared to be numerous small vesicles, varying in size from a pin's head to a split pea. The membrane over these apparent vesicles was thin and distinctly pale in color. In the center of some of the larger ones was a small black spot, evidently a little hemorrhage. A clear, mucous secretion covered the vaginal wall, but no pus was present. On pricking the vesicles a hissing sound was heard, which proves conclusively that gas or air had been confined within the cyst. The disease occurs with greater frequency in the pregnant than in the non-pregnant. Nothing is known of its etiology, but there is no evidence pointing to its being an acute inflammatory process. The only symptoms that have ever been noted are a smarting sensation high up in the vagina and a slight leukorrhea. The process is, for the most part, confined to the upper two-thirds of the vagina and to the cervix. The nodules appear singly and in groups, varying in size from a pin's head to a split pea. The mucous membrane covering them is pale and very thin, while the surrounding tissue is normal or slightly injected.

4.—Though complications are common with **fractures of the nose**, such a fracture **complicated by a rhinolith** is rather unique. An examination of the nose immediately after the accident, in the case reported, revealed a fracture of the nasal bones, without any depression, a septum, movable at its junction with the nasal bones, but not fractured, and a rhinolith situated on the right naris close to the lower turbinate. It is probable that the rhinolith acted

as a buttress, thus preventing a fracture of the septum and depression of the nasal bones. Its removal was followed by all the annoying symptoms that, according to the history elicited, the patient had suffered from for years.

### Medical News.

July 30, 1898. [Vol. lxxiii, No. 4.]

1. Hereditary Infantile Syphilis. J. HENRY FRUITNIGHT.
2. The Treatment of Fracture of the Patella by Immediate Suture. WILLIS G. MACDONALD.
3. A Study of the Recent Epidemic of Typhoid Fever at St. Charles, Missouri. H. H. VINKE.
4. A Few Things to Look Out for in Manila. JOSEPH EARLE STEVENS.
5. Supplementary Antitoxin-Report. J. H. LOPEZ.

1.—Fruitnight contributes a general article on the recognized views as to the pathology and treatment of **hereditary infantile syphilis**.

2.—**The treatment of fractured patella by immediate suture** has in 17 cases of Macdonald's yielded uniformly good results, the patient in each case returning to his previous occupation. The method employed was as follows: After evacuating the effusion of blood through a puncture at the lower border of the lower fragment, an encircling suture of silver wire is introduced, tightened and left in situ. This encysted wire suture is allowed to remain after dressings are removed and serves to act in maintaining the position of the fragments and in preventing stretching when union is fibrous and defective. It is claimed that bony union is made possible in all and does occur in many cases. [It is difficult to accept the last statement, if by "bony union" is meant *true* bony union, as it is generally conceded that this is of the rarest occurrence.]

3.—Vinke reports the results of observations upon 161 cases of **typhoid fever** among 200 that occurred in a town of 7,000 inhabitants. In 149 of the 161 recovery ensued, giving a mortality of 8.7%. Of the fatal cases there was intestinal hemorrhage in 5, and perforation in 4 cases, one of the latter occurring in a child 8 years old, who died 4 weeks after the fever had subsided. Meningitis is mentioned as a fatal complication, but it is not stated whether or not a post-mortem examination was made. Erysipelas caused death in one case. Among the complications, orchitis was observed once. Recrudescences were common, but there was only one true relapse. The onset of the disease was often atypical, and was likely to be sudden. Of 3 cases treated by the Woodbridge method, there was fever in one for 41 days, in one for 28 days, and in one for 24 days, so that there certainly was not much abortive effect. The cause of the epidemic was readily traced to the water-supply, as most of those attacked got their water from a source the intake of which was below a sewer that collected sewage from a house in which there was a case of typhoid fever.

4.—Stevens advises visitors at Manila to sleep at least several feet above the ground, and not at all in the lowlands if possible to avoid so doing. Fever is extremely common, as are "colds" and dysentery. Flannel sleeping-suits should always be used. Smallpox is extremely common, but it apparently does not seem to be very virulent. The water-supply is now good, and cholera is infrequent. Sprue is common, and the only way to recover from it is to, at least temporarily, leave the country at once. Sunstroke is uncommon.

5.—Lopez records an epidemic of 36 cases of **diphtheria** in which the original infection came through a child's garment. Seven of the patients died. In a second beginning outbreak antitoxin was administered to all children that had been in any way exposed (110 in number) and no further cases appeared. In another epidemic of 41 cases, 4 did not receive antitoxin and all died, while of 37 treated with antitoxin only 2 died. Excluding the few fatal cases there were no ill-effects seen in the whole list and no sequelæ following the administration of antitoxin.

### Journal of the American Medical Association.

July 30, 1898. [Vol. xxxi, No. 5.]

1. Indol: Its Relation to Prolonged Suppuration and Lardaceous Change. F. LEONARD VAUX.
2. Surgery of the Lung. (Continued.) J. B. MURPHY.



3. Rest—a Neglected Factor in the Treatment of Gastro-Intestinal Disorder. C. D. SEIVAK.
4. Dilatation of the Stomach, with Reports of Cases Treated by Massage and Intra-gastric Electricity. BOARDMAN REED.
5. The Diagnosis and Treatment of Diseases of the Duodenum by Direct Methods. FENTON B. TURCK.
6. Chronic Diarrhea Associated with Achylia Gastrica. ALLEN A. JONES.
7. Hemoglobinuria and Hemoglobinemia. Report of Cases. Two Deaths and Four Recoveries. GEORGE J. HIRTH.
8. Some Considerations of Uremia and its Treatment. E. W. MITCHELL.

1.—See this JOURNAL for June 18th, p. 1141.

2.—See this JOURNAL for June 11th, p. 1094, and for June 18th, p. 1130.

3.—See Vol. I, p. 1142.

4.—Reed has found **intra-gastric electricity** in the form of a strong faradic current most efficient in strengthening the weakened gastric muscle in cases of dilatation of the stomach. The mildest cases often yield to diet and exercise alone. The more severe, even if of long standing, usually improve on a careful and nonfermentable diet, lavage, special exercises for strengthening the muscles of the abdomen, or intra-gastric electricity, the choice depending upon the activity of the secretion of the gastric glands. Massage suits best when there is a deficiency of the gastric juice. The special exercise with pulleys and elastic cords has been found the best suited for the development of the abdominal muscles in patients with dilatation of the stomach, with the exception of rowing. The diet varies with the different indications, but particular care is taken to have patients with atonic stomachs avoid eating large meals and to take never more than half a pint of fluid, including soup, with each meal. Reed has used intra-gastric electricity in 15 cases, 12 of these having enlarged stomachs, with more or less muscular insufficiency. Of these one patient lived at a distance and received only two treatments; in the remaining 11 there was decided reduction in size, with an increase in motility. Detailed reports are given of 6 cases. The methods described are highly commended, because of their safeness and comparative simplicity.

5.—The **gyromele** is described and the methods of using it in the diagnosis and treatment of various disorders of the esophagus, stomach and intestine are explained. Attention is particularly called to its value in managing cases that have hitherto been exposed to the dangers of exploratory celiotomy.

6.—See Vol. I, p. 1142.

8.—See Vol. I, p. 1143.

### Edinburgh Medical Journal.

June, 1898. [Vol. xlv, No. 516.]

1. A Fit of Gout (Paroxysmus Podagræ): A Study in Pathology. GEORGE W. BALFOUR.
2. Is the Work of the Neuron of an Electrical Nature? JULIUS ALTHAUS.
3. Observations on Two Cases of Mediastinal Tumor in Women. J. O. AFFLECK.
4. The Diagnosis of the Position of the Interventricular Septum in some Cases of Cardiac Disease, by means of the Conduction of the Second Cardiac Sounds. S. H. HABERSHON.
5. Antiseptics in Aural Surgery. ARTHUR H. CHEATLE.
6. The Treatment of Smallpox: Palliative and Prophylactic. JOHN MOIR.
7. Intubation of the Larynx. KILICK MILLARD.
8. Alcoholic Dilatation of the Heart. FRED. TRESILIAN.
9. Folie à Deux. HAMILTON MARR.

1.—Balfour believes that the absence of excessive heat in joints affected with **gout** and the fact that some observers have found such joints lower in temperature than surrounding parts, together with the early turgescence of the veins, the redness and the pain, indicate that the cause of the attack is thrombosis of the vessels about the joints. Earlier clinicians found in some cases that massage of the joint relieved the pain, but, as Balfour states, such treatment is too painful to be popular [and it seems to us that massage is neither a

commendable nor a harmless method of treatment in the hands of those who suspect that thrombosis exists].

2.—Althaus suggests that the myelin-sheath of nerves acts as an insulating medium, and that the peripheral filaments are not myelinated in order that electric impulses may pass to surrounding parts that are active in receiving impulses. Some of the more recent literature on nerve-structure and function is reviewed.

3.—Affleck reports an **aneurysm of the transverse arch of the aorta** that ruptured into the mediastinum and dissected along the muscles and about the pharynx and larynx, causing death, with marked lividity and swelling of the face and neck and some dyspnea; also a case in which there was diminution of the respiratory signs over the left lung, with complete dulness on the left anteriorly down to the fourth rib, and posteriorly in the supraspinous fossa, together with backward curvature of the vertebræ from the fifth cervical to the second dorsal and paraplegia. As there was a family-history of tuberculosis the most probable diagnosis seemed to be **spinal caries**, with enlargement of the mediastinal glands.

4.—Habershon believes that by careful attention to the area of distribution of accentuation of the second sound of the heart one may determine the position of the interventricular septum and thus the size of the two ventricles, the accentuated second sound being conducted most readily along the ventricle behind the valve from which arises the sound. This method is not of much value when the second aortic sound is accentuated, as the sternum then seemingly conducts the sound down the right ventricle, but in cases of mitral disease it is believed that the interventricular septum is limited by the point at which the marked accentuation becomes much decreased when the stethoscope is moved toward the left.

5.—The introduction of thorough **antiseptic principles** has revolutionized **aural surgery**. The following is the technic for purifying the meatus employed by Cheatele. After syringing out all foreign matter with a 1 to 40 carbolic solution, the cartilaginous meatus, auricle, and surrounding parts are fairly rubbed with a 1 to 20 solution, and finally a solution of this strength is allowed to remain in the deep meatus. A piece of gauze wrung out of the same solution is allowed to remain in the meatus till the time of operation.

7.—**Intubation of the larynx** has scarcely received from the medical profession of Scotland the consideration it deserves. Its advantages over tracheotomy are now so well recognized that it should be the operation of choice in all cases of laryngeal obstruction. Millard's experience is limited to 9 cases of obstructive laryngitis, occurring during convalescence from scarlet fever, in 5 of which recovery and in 4 death ensued. The results are better than would have been obtained had tracheotomy been performed.

6.—Moir has had experience with about 4,000 cases of **smallpox**, with an average mortality of 0.11%. His chief measures in treatment included plenty of ventilation, the use of cooling acid drinks, and ice. Puncturing the pustules, the use of masks and the like were found valueless procedures. The elasticity of the skin should instead be improved and the tension lessened by rubbing with oil. The danger of corneal ulcers and other ocular complications is lessened by painting the inside of the eyelids with a paste made from the extract of belladonna. There were no recoveries from hemorrhagic smallpox, but recovery was observed in cases with bloodshot eyes, bleeding from the bowels, and a few purpuric spots, following treatment chiefly with tincture of ferric chlorid and sulphuric acid. Two cases are reported of women confined during an attack of smallpox, the infant in neither instance acquiring the disease. In convalescence warm baths were used, with a gradual increase in the diet. In prophylaxis complete disinfection, absolute isolation, and compulsory vaccination are insisted upon.

8.—Tresilian states that the two abnormal conditions of the **heart** that are likely to result from **alcoholism** are dilatation and tachycardia. In both these conditions there is weakness of the heart-muscle, and in either the most important point is probably disturbance of innervation. A number of cases are recorded in which alcoholic dilatation occurred and was recovered from after complete cessation of the use of stimulants, together with proper treatment, which consists chiefly in the administration of calomel followed by strychnin with ammonia and capsicum; prolonged rest is



absolutely necessary, and if required, digitalis or strophanthus may be used.

9.—Marr records the case of husband and wife, both of whom had delusions of persecution. These arose first in the husband, and in the wife obviously the mental trouble was due to her observation of her husband's anxiety and delusions. The chief therapeutic indication in such cases is the separation of the patients. Under this treatment, the wife became much improved.

### Berliner klinische Wochenschrift.

June 6, 1898. [35. Jahrg., No. 23.]

1. Tracheotomy Without General and With Local Anesthesia. B. FRANKEL.
2. Effect of the Neuenahr Sprudel upon Gastric Digestion. B. WENDRINER.
3. Concerning the Skin-changes Resulting from the Action of the Röntgen Rays. G. BEHREND.
4. Fever and Hyperthermia. MEISSEN.
5. Diabetes and Mental Disorders. R. LAUDENHEIMER.

1.—It has not infrequently been observed that patients with chronic stenosis of the larynx are subject to sudden and serious attacks of asphyxia under chloroform-anesthesia. It is supposed that in such individuals, the respiratory act is not an altogether automatic one, but dependent somewhat upon voluntary effort. The abolition of the latter in the narcotic state, and sometimes in natural sleep as well, suggests an explanation for the attacks of asphyxia under these conditions. To obviate this serious complication in the performance of **tracheotomy for chronic stenosis**, Frankel has in a number of cases practised **local anesthesia**, preferring from a 10 to a 20% solution of cocaine to the Schleich infiltration-method. In none of the cases in which local anesthesia has been thus employed, has it been necessary to hasten or foreshorten the operation on account of attacks of asphyxia; for this reason local is greatly to be preferred to general anesthesia.

2.—Wendriner has analyzed the gastric contents of individuals with and without gastric affections after the use of both **Neuenahr water** and plain distilled water, and was unable to find any distinct difference in the two results, except that in every case the motility seemed distinctly better after the use of Neuenahr water, as he always recovered a smaller amount of stomach-contents.

3.—The pathology of the **changes in the skin, due to the prolonged or frequent use of the Röntgen rays**, is not unlike that of burns, eczema, and the acute exanthemata. The superficial and deeper layers of the skin are infiltrated with a serous exudate, which separates the individual cellular elements one from the other. The clinical manifestations are vesicle-formation and later desquamation. The hair and nails may be attacked in a way analogous to that in which the skin suffers. When the inflammatory reaction is not too intense or of too long standing, reparative processes will take place; if it be long continued, however, the process may become chronic in the epidermis, the hair-follicles may be destroyed, and the nails may be entirely lost or thickened and fissured.

4.—Meissen reviews the work of other writers upon **hysterical fever**. The term was first applied by Pomme and other French writers, and the subject has received much more attention from the French than from others, being somewhat neglected, he believes, especially in Germany.

5.—Laudenheimer reports a fourth case of **diabetes associated with insanity**. The patient was a man, 53 years of age, who had suffered for 20 years with diabetes associated, in the last 7 years, with loss of memory and irritability. These symptoms, however, disappeared temporarily after treatment at Carlsbad. They recurred, however, and the patient became unable to attend to his business. Sugar was found in the urine and there were some motor disturbances in the face. With the disappearance of the glycosuria, intelligence returned, and the patient has been able to work for 18 months. Of course this case may be one of progressive paralysis. Another class of cases may be designated as acute diabetic delirium. Of these the following is an example: A man, 46 years of age, with neuropathic heredity, had suffered from glycosuria for 8 years. This increased during a period of anxiety. Subsequently there developed

paresis of the right arm and leg, with facial paralysis. There were some hallucinations; acetone was found in the urine, together with a large quantity of sugar. Death occurred in diabetic coma. At the autopsy there was found atrophy of the pancreas and hyperemia of the brain; but no focal lesion. The result of the autopsy served to exclude post-apoplectic insanity, and Laudenheimer is inclined to consider the mental disturbance as the equivalent of diabetic coma. According to du Saulle, all cases of diabetic insanity present typical delusions of ruin. These, however, are not to be distinguished from the similar form of delusions that occur in the aged. Diabetes appears also to occur as a physiologic condition in a small proportion of this class. [The paper is still unfinished.]

June 13, 1898. [35. Jahrg., No. 24.]

1. The Treatment of Bronchitis. H. QUINCKE.
2. A Contribution to the Knowledge of So-called Polyneuritic Psychoses. E. SCHULTZE.
3. A Case of Polyneuritic Brachial Paraplegia. E. MENZ.
4. Fever and Hyperthermia. MEISSEN.
5. Diabetes and Mental Disease. R. LAUDENHEIMER.

1.—Quinke advises that patients who are in the habit of expectorating large quantities in the early morning should lie flat for about two hours before arising, in order that the greater amount of fluid may flow down from the large bronchi and thus be more readily coughed up. This is sometimes unpleasant and difficult for the patient at first, but excellent results follow its continued use, the secretion diminishing largely. It is suitable for cases that have cylindrical or saccular dilatations of the bronchi in the lower lobes, especially during exacerbations. In cases of diffuse and especially fresh bronchitis, in those of abscess-cavities that communicate with the bronchi, or in those in which there is a continual free catarrhal secretion from the bronchial mucous membrane, it is not of much use. Hence, Quinke believes that a trial of the therapeutic effect of this measure may aid in arriving at a diagnosis.

2.—Schultze reports several cases of **mental disturbance** that occurred after prolonged use of **alcohol**. In only one of these, however, were there typical symptoms of **polyneuritis**. A man, 56 years of age, had been for a long time a chronic alcoholic. He became somewhat irritable and soon exhibited extreme confusion of ideas, with loss of memory. The right hand was paralyzed, the left hand paretic. The patellar reflexes were absent and there was weakness of the extensors of the right foot. In the course of time the neuritic symptoms improved, although the mental condition remained unchanged. Schultze disputes the conclusion of Korsakow that the symptoms were due to the polyneuritis, and is rather inclined to ascribe them to the alcohol, particularly as he has observed similar mental disturbances in 2 other cases, without neuritic symptoms. In the first of these, in a man, 52 years of age, there was pronounced confusion of ideas and inability to state accurately the year or day, of his own situation or occupation. There was no symptom of neuritis, although the examination was rendered difficult by the man's almost total inability to fix his attention; and there was rapid loss of memory, so that a command would be forgotten in the course of a minute or two. The second patient, a man, 48 years of age, presented similar symptoms, although examination with regard to neuritis yielded entirely negative results. (The paper is unfinished.)

3.—A man, 42 years of age, was exposed in a storm and immediately afterward felt severe pain in his sides, probably pleural in nature, which continued for some years. Four years later there was some restriction in the respiratory movements of the left half of the thorax. At about this time the man was seized suddenly with severe pain in the left arm, which became paralyzed. A few months later power disappeared gradually also from the right arm. There were reactions of degeneration in the muscles of both shoulders. The condition appears to be the result of **polyneuritis involving the brachial plexus**. In several similar cases reported in the literature the cause was either pulmonary disease or traumatism.

4.—Meissen records the case of a woman, 23 years of age, of an extremely nervous temperament, who had for a long time had an irritable cough. There was some dulness on



percussion at the left apex and rales in the lungs, and a diagnosis of tuberculosis had been made. There was slight fever at first, but it was found that the patient, who had been taking her own temperature, did not give the proper records, having more fever than she reported. Subsequent careful thermometric records showed that she had for two weeks an extremely irregular temperature, reaching an enormous height at one time, the axillary temperature being 113.5° F. There were no general signs suggestive of meningitis. The temperature was too high to be explained by the tuberculosis, and practically the only symptoms beside this irregular temperature was some headache and depression or nervous excitement. Malaria seemed to be the chief difficulty in diagnosis, but such temperatures are not observed in malaria, and the other symptoms of the disease were not present except that during convalescence there was enlargement of the spleen. No plasmodia were ever discovered; hence, it is concluded that the case was one of **hysterical hyperthermia**. The patient recovered entirely excepting for slight headache and nervousness.

5.—Laudenheimer has examined the urine of 60 **seniles** without mental symptoms and found **sugar** present in 5% ; this is only one-fourth as frequently as among senile demented. He reports one case of senile dementia with glycosuria, in a man 79 years of age, who suffered from delusions of ruin and depression whenever the amount of sugar in his urine increased. Laudénheimer concludes his article by urging the importance of a careful study of the psychic conditions of apparently otherwise normal diabetics. He finally distinguishes two forms of mental disturbance, (1) the apathetic, and (2) that in which there is increased irritability, excitement and insomnia. Extended bibliographic references are given.

#### Deutsche medicinische Wochenschrift.

June 2, 1898. [24. Jahrg., No. 22.]

1. The Morphologic Differences between Resting and Stimulated Ganglion-cells. FRIEDEL PICK.
2. The Immunity of Badgers to Cantharides. A. HORVATH.
3. Cerebral Tumors not Operated on. H. FISCHER.
4. Intermittent Exophthalmos and Enophthalmos. O. SCHEFFELS.
5. Two Cases of Scleroderma in Germany. HEERMANN.

1.—Pick has made some observations upon animals that had been kept for a considerable time in a cage, exposing and stimulating with electricity the motor region for one of the legs, at the same time exposing the spinal cord in its canal and, by successive section of the root, stimulating the segment from the irritated cortex of the brain isolated. By this method all possibility of direct influence upon the spinal cord by the electric current was avoided. The segment selected was then examined microscopically and it was found that the cells of the active side showed distinct decrease in chromatic substance, which, instead of forming masses, was distributed as fine granules throughout the protoplasm. These changes affected not only the pyramidal cells of the anterior cornua, but also those lying more dorsal, or in the lateral horn, indicating the likelihood of the presence of intermediate neurons between the cells of the cortex and those governing the anterior roots. The results are to be published at length later.

2.—Horvath has fed badgers on live cantharides; the animals eating as many as 60 in one day. No poisonous results ensued. The only unfavorable manifestation was loss in weight, which may perhaps be owing to insufficient nourishment, as they were fed solely on the cantharides. It is suggested that the immunity to these poisonous insects may be due to the fact that badgers have for centuries been in the habit of eating insects, cantharides among others.

3.—About 8.8% of all **tumors of the brain** are of **traumatic origin**. For obvious reasons it is difficult in any case to furnish absolute proof; when, however, the tumor develops within a reasonable time after the accident and is located at the site of original injury, it is justifiable to assume that it is of traumatic origin. The question of operative interference is still a mooted one; in general, cerebral tumors should be considered inoperable when the clinical manifestations point to their being very extensive and not encapsulated. Fischer reports a case of gliosarcoma of the

brain, that developed reasonably soon after the occurrence of an injury to the head.

4.—Scheffels reports the case of a servant, 21 years old, without specific or other noteworthy history, who first noticed that her left eye became prominent after straining or bending forward. This increased, especially at the menstrual period, and was accompanied by discomfort in the head and a cloudiness before the eye. On standing erect, both eyes were quite normal. Pressure upon the jugular vein caused exophthalmos at once. The patient had not been in the habit of using tight collars or other constriction about the neck. The difficulty disappeared almost entirely after applications of cold water to the abdomen during the night, and the use of a tonic mixture. Scheffels has collected 23 cases from the literature, and divides them as to etiology into those of congenital, traumatic, and reflex origin, those of mechanical origin from pressure, and those of unknown origin. Of this number 13 belong to the last category. The prognosis is good, no unfavorable results having occurred in any of the cases, excepting in two that were complicated by other troubles.

5.—Heermann reports two cases of **rhinoscleroma**. In the first the disease was limited to the nose, in the discharge from which were discovered the specific bacilli, of which cultures were made. In the second, there was a tumor in the subglottic region that caused extreme dyspnea. This was removed and was found to present the microscopic appearances of rhinoscleroma; and bacilli were discovered in the sections.

#### Centralblatt für innere Medicin.

June 4, 1898. [19. Jahrg., No. 22.]

1. The Occurrence of the Meningococcus Intracellularis (Weichselbaum) in the Nasal Cavities of Individuals Not Suffering from Meningitis. ARTHUR SCHIFF.

1.—Schiff, as well as several others, has obtained the meningococcus intracellularis from the fluid secured by lumbar puncture in cases of epidemic cerebrospinal meningitis. The organism has also been found in the meningeal exudate, and there is now a general conviction that it is the cause of many cases of acute meningitis, although the pneumococcus of Fränkel must still be credited with being the etiologic factor in a considerable proportion of instances. As to the portal of infection, it has long been suspected that the bacteria enter by way of the nose, and Strümpell early pointed out that the disease is often preceded by an intense coryza. Weichselbaum, indeed, was able to demonstrate the presence of the meningococcus in the pus from the nasal sinuses; later Scherer found it without exception in the nasal mucus of 18 cases of cerebrospinal meningitis, and Jäger in 4 of 5 cases. They were practically unable to find it in the nasal mucus of healthy persons, and considered its demonstration in suspicious cases a valuable differential sign; and furthermore, they laid stress on the infectiousness of the nasal mucus in cases of the disease, which led the Prussian Government to issue precautionary regulations. Schiff, however, shows that for purposes of differential diagnosis the meningococcus is of little value. Thus, he found masses of such cocci in the nasal mucus of a case that proved to be one of tuberculous meningitis, tubercle-bacilli being found in the coagula of the fluid obtained by lumbar puncture. He also found the meningococcus in 5 of 27 patients suffering from indifferent affections. The germs were as virulent for mice and rabbits as those obtained from cases of meningitis. During his investigations Schiff infected himself in some way and acquired an acute rhinitis and laryngitis, and was able to demonstrate the presence of the meningococcus in pure culture in the nasal mucus. Heubner has also found the meningococcus in two cases of tuberculous meningitis, and Lenhartz in one. Jäger found the meningococcus and the pneumococcus associated; in such cases the clinical picture is usually dominated by the pneumococcus, which produces a severer form of meningitis than the meningococcus. The presence of the meningococcus, as of the pneumococcus, in the nasal chambers and adnexa in many persons clears up the infection-atrium, and offers an explanation for the frequent occurrence of meningitis after cephalic trauma.



June 11, 1898. [19. Jahrg., No. 23.]

1. The Treatment of Acute Phosphorus-Poisoning and Morphin-Poisoning. E. SCHREIBER.
2. The Therapy of Atrophic Rhinitis. FRANZ BRUCK.

1.—By means of experiments on dogs Schreiber has shown that **sodium permanganate** is a useful **antidote** against **phosphorus**. Larger doses can be given than of potassium permanganate, which of itself may act as a poison. Lavage of the stomach is recommended with a 0.2% solution of the sodium-salt, after which the patient is urged to drink a pint of the solution. The lavage is repeated in a few hours.

2.—Bruck is opposed to the use of Sænger's nasal obturator (see PHILADELPHIA MEDICAL JOURNAL, April 30, p. 776), and recommends a permanent tamponade with gauze, which can be renewed as soon as it is saturated. This has furthermore the cosmetic advantage that it is invisible.

### Wiener klinische Wochenschrift.

June 9, 1898. [11. Jahrg., No. 23.]

1. Concerning Tyson's Glands. JULIUS TANDLER and PAUL DOMÉNY.
2. A Further Contribution to the Knowledge of the Condition of Bones after Nerve-section. GEORG KAPSAMMER.
3. A Case of Sarcoma of the Larynx. FRIEDRICH HANSZEL.

1.—Tandler and Dömény have undertaken to settle the long-mooted question as to whether sebaceous glands (Tyson's glands) exist in the glans penis and prepuce. They show, in the first place, that these are constantly occurring dermal crypts of greater or lesser extent, found especially in the region of the frenulum. Sebaceous glands do occasionally occur on the glans and in the coronary sulcus, but they must be considered as aberrant structures. It would be wise to drop the name of glands and to speak of them as crypts or lacunæ. The smegma, it must follow from these observations, is not a secretion, but represents macerated epithelium.

2.—The **influence of nerve-section upon bones** is still under debate. Schiff and Edwards, from a series of experiments, concluded that after section of the nerve hypertrophy of the bones occurred with great regularity, if the motor disturbances were excluded; and further that the hypertrophy was the result of vasomotor paralysis. The results obtained by Kapsammer in a more recent series of experiments, though not confirmatory of, do not absolutely contradict, these observations.

3.—**Sarcoma of the larynx**, a case of which is here reported, is extremely rare. As to the etiology Bergeat has observed the relative frequency of this affection among men who have to deal with or handle horses. This was the case with the patient in question, a man some 51 years of age, who was a horse-dealer. A firm, dense tumor, about the size of a hazel-nut and pale red, was situated on the anterior wall of the larynx and involved more than half of the vocal bands. A month after having been discharged from the hospital, the growth having previously been extirpated, the patient was without warning seized with sudden and fatal asphyxia. Histologic examination proved the growth to be a spindle-cell sarcoma.

### Revue de Chirurgie.

May 10, 1898. [18. Ann., No. 5.]

1. Tumors of the Thoracic Skeleton. E. QUINN and L. LONGUET.
2. Tumors of the Liver from the Surgical Point of View. A Study of Resection of the Liver. F. TERRIER and M. AUVRAY.
3. Carbolic-Alcoholized Catgut. OSCAR BLOCH.
4. Benign Tumors of the Clitoris. LAMBRET.
5. A Case of Marked Shortening of the Left Arm Due to Arrest of Development of the Humerus. P. S. DE MAGAHEIES.
6. Theory and Technic of Ligation of the Uterine Artery (Application of a Method for Inducing Atrophy of Uterine Tumors.) PIERRE FREDET.

2.—**Tumors of the liver** that may be studied from a surgical point of view include syphiloma, carcinoma, tuberculoma, lymphadenoma, and biliary cysts. The diagnosis is in many cases extremely difficult, but it may be facilitated by attention to the following points: Tumors of the liver

are to be suspected when a tumor is located in the superior region of the abdomen, chiefly to the right of the median line, developing from above downward; they follow the respiratory movements; dulness on percussion is usually continuous with the hepatic dulness. It is important to note that there is often a certain degree of mobility, especially in a lateral direction; this is quite characteristic. When these physical signs are present, and are associated with the usual symptoms, the diagnosis is comparatively easy. It is only when exceptional conditions present themselves that mistakes are made. Tumors of the liver have been mistaken for those of the uterus, mesentery, colon, kidney, cysts of the ovary, and aneurysm of the aorta. Surgical intervention is only justifiable when the tumor is single, when it is accessibly situated, pedunculated and free from adhesions. If the tumor be syphilitic, surgical interference is indicated only when the attacks of pain or symptoms of pressure will not yield to appropriate internal treatment. Operations may be performed for their palliative effect or with a view to securing absolute cure. The palliative procedure is recommended only when complete extirpation is impossible, or when it is desirable to relieve pain or pressure symptoms. Various incisions and methods have been employed, at one time or another, to gain access to the growth. The operator must vary his incision according to the circumstances attending the case, and any maneuver is justifiable that will allow of the liver being well exposed through the abdominal wound. The growths have been variously removed, some with the cautery, some with the knife and cautery, and others with the curet.

3.—In the opinion of Bloch, **catgut** can be rendered absolutely **sterile**, and is not responsible for the many cases of suppuration often attributed to imperfect methods of sterilization. He employs catgut very generally both as a suture and as ligature-material. In the process of sterilization that he has employed for the past 9 years, with great satisfaction, the catgut is disinfected with carbolic acid and alcohol.

4.—Lambret states that cysts of **benign tumors of the clitoris** are the rarest. He reports 6 cases gathered from the literature, and he divides them into 3 classes: (1) cysts with bloody contents, (2) dermoid cysts; and (3) retention-cysts. Solid benign tumors of the clitoris are more common, 31 cases having been recorded. They may be grouped into 2 great classes, according to their nature and anatomic construction, viz., tumors with a bony or cartilaginous structure, and tumors that represent fibrous hypertrophy of the clitoris.

5.—The patient, aged 16 years, presented himself with **marked shortening of the left humerus**. No history of traumatism or acute inflammation could be elicited. The movements of the left arm were almost normal. The difference in length between the left humerus and the right was 11 cm. The bone, excepting in length, seemed equally well developed with its fellow, and the circumference of the two arms was practically the same. Further examination revealed the fact that there existed a luxation of the head of the humerus beneath the coracoid process. This arrest of development cannot be explained by the occurrence of the luxation alone. It must have been attended with an epiphyseal separation, an injury that would account for the failure of development, and is not uncommonly associated with luxation. The remarkable feature of this case lies in the fact that no history of any traumatism whatever could be elicited from the patient or from the patient's parents; nor was he at any time incapacitated or cognizant of any deformity, other than the shortening.

6.—Fredet reviews the history of **ligation of the uterine arteries** to control the growth of uterine tumors and describes the following processes that have been suggested: 1. Ligation of the trunk of the artery at its origin by the transperitoneal route; Rumpf's procedure, *i. e.*, ligation of the artery in the ovarian fossa by an incision parallel to the anterior border of the ureter; Altuchoff's procedure, *i. e.*, ligation of the artery in its ovarian fossa by opening the broad ligament between the tube and the round ligament. 2. Ligation of the artery close to the uterus by the vaginal route; the method of Martin and Gottschalk, *i. e.*, ligation of the uterine portion of the hypogastric pedicle as a whole close to the uterus through the vagina; Goelet's modifications, *i. e.*, section of the uterine pedicle between the ligatures.



## Original Articles.

### ON HYPERNEPHROMAS OF THE KIDNEY.

Being a Critical Dissertation Concerning Various So-called Adenomas, Carcinomas, Sarcomas, Endotheliomas, and Peritheliomas of the Kidney, with Particular Reference to their Derivation from Aberrant Adrenal "Rests;" Reports of Eleven Cases Heretofore Unpublished, with Nine Original Illustrations.

[From the Proseatory of the Imperial-Royal Emperor Francis Joseph Hospital, Vienna.]

By ALOYSIUS O. J. KELLY, A.M., M.D.,  
of Philadelphia.

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(Concluded from page 233.)

THE number of necropsies performed during the time devoted to the collection of these tumors ( $3\frac{1}{2}$  years) is 3,098. Among these there were found 1 instance of tubular adenoma—a true kidney-tumor; 1 papillary adenoma—a tumor of doubtful genesis; 1 struma and one malignant tumor of the adrenal, and 4 other tumors of the kidney itself. The last and the tumors of the adrenal we may, for the present at least, with Birch-Hirschfeld, designate as hypernephromas, admitting that the terminology is not scientific, but believing it more in conformity with the practical requirements of the times, and sufficiently distinctive until the precise nature of the growths is determined. There was further discovered one instance of abnormal situation and partial displacement of both adrenal bodies in the kidneys. In addition to these, there was found but one other case of primary tumor of the kidney—an alveolar sarcoma, in a child, aged 9 years. Thus, of 7 tumors of the kidney, 4 were of the class designated hypernephromas. The congenital cystic kidneys were not included in the investigation.

Case III is an instance of that class in which the literature abounds, in which there is demonstrable an abnormal, and in this case a bilateral, approximation of the kidneys and the adrenals. Not only are the corresponding organs of both sides closely adherent throughout their entirety, in general through the interposition of a connective-tissue capsule, but portions of misplaced adrenal tissue appear deposited, either through openings in this connective capsule, or, where the latter is absent, directly, into the kidney-parenchyma. In addition, there is noticeable the total or almost total enclosure of areas of kidney-tissue by these portions of misplaced adrenal tissue.

The numerous investigations of recent years have directed attention to the frequent occurrence of accessory suprarenals, and have sufficiently well established

the great variety of displacements, in whole or in part, to which the adrenals are subject. I need mention only the observations of Grawitz, Chiari, Lubarsch, Beneke, Ulrich, Schmorl,<sup>40</sup> Marchand, Pilliet,<sup>41</sup> and Ricker. Accessory adrenals or portions of tissue thereof have been found not only in the kidney and in the immediate vicinity of the normal situation of the organ itself, but also in such distant regions as the retroperitoneal connective tissue, in the spermatic cord, between the testicle and the epididymis, in the broad ligament (Marchand), in the solar plexus (Pilliet), in the celiac ganglion (Wahneau<sup>42</sup> and Lubarsch), and in the liver (Schmorl). These displacements or malformations vary much as regards their size, and authorities differ as to their relative frequency. Schmorl states that they are to be found in 92% of all bodies. Lubarsch, on the other hand, contends that this assertion is incapable of general application, as he was able to find these misplacements but 8 times in 300 bodies. These aberrant "rests" consist, as a rule, of the cortical substance only, and may be made up of one, two, or all three of its zones. May,<sup>43</sup> however, records two instances among ten cases in which he found medullary as well as cortical substance.

Of interest in our case, and to this I wish to direct especial attention, is the total or almost total enclosure of islets of kidney-parenchyma within misplaced adrenal tissue, and the occurrence of cysts, either in the capsule intervening between both tissues, or, where the capsule is absent, at the periphery of both tissues,—cysts, not dilated bloodvessels or cavities, the result of degenerative processes, but cysts whose characteristics permit the inference, and some of which apparently furnish the proof, of their derivation from the uriniferous tubules. It was Ricker who first drew attention to the connection between cyst-formation in the kidney and misplaced adrenal "rests." He supposes that new-growths of the suprarenal glands may originate from misplaced kidney—"rests," and that certain tumors of more than ordinary irregular formation—generally containing true cysts, and therefore atypical hypernephroid neoplasms—may develop from suprarenal tissue, which has either enclosed, or is otherwise intimately associated with, renal "rests," commonly in the form of small cysts. They are, therefore, to be looked upon as mixed tumors. We still await confirmation of these views, but possibly herein may be found the solution of the question, the subject of much acrimonious discussion, as to whether these tumors, derived from suprarenal tissue, may contain true cysts or not. This may be the case with respect to some, and not with regard to others.

There was found, as already mentioned, but one tumor that is to be considered a true tumor of the kidney—a tubular adenoma. This is essentially different from the other four tumors of the kidney, which in principle agree among themselves and with tumors of

the adrenal. In Cases IV, V, VI, the suprarenal body of the affected side was present and exhibited no deviation from the normal. In Case VII, the adrenal of the affected side was absent.

The results of our investigations coincide with the views expressed in the literature on the subject. We observe here that the so-called hypernephromas, though described under a variety of names, are, relatively speaking, of common occurrence. On the other hand, the cylindric-cell carcinoma and still more so the squamous epithelioma, arising from the pelvis of the kidney (Kundrat<sup>44</sup>), both of which are without doubt primary tumors of the kidney, are of the greatest rarity. These latter varieties of tumors of the kidney present characteristics that immediately permit of their ready discrimination from the first-mentioned, a fact of surgical importance emphasized by Billroth.<sup>45</sup> Both varieties of true carcinoma of the kidney infiltrate, as do other carcinomas, primarily the neighboring lymphatic channels, and are thus, in contradistinction from the more frequent hypernephromas, tumors that, although they be of more moderate size, are firmly united with the surrounding structures and can be extirpated with difficulty. There is another distinction between these two classes of tumors: the hypernephromas give rise to metastasis exclusively by way of the bloodvessel-system in the lungs, liver, and bone—and under certain circumstances very early; the cylindric carcinoma and the squamous epithelioma of the kidney commonly give rise to metastasis to the adjoining lymphatic glands. The hypernephromas both of the adrenal body and of the kidney are, in this respect, absolutely alike. In addition, they sometimes present the peculiarity that the metastasis, as in Case VII, almost completely reproduce the structure of the zona fasciculata of the adrenal body, whereas the primary growth exhibits many very different pictures. This peculiarity is manifested also by tumors of other organs, notably by those of the thyroid gland. Because of this and also because the renal metastasis was originally considered a primary neoplasm of the kidney, I report the following case:

CASE X.—*Adenocarcinoma of the thyroid gland.* Magdalene R., 57 years of age, died April 10, 1897.

*Clinical diagnosis:* Carcinoma of the right kidney; nephrectomy.

*Anatomic diagnosis (original):* Secondary sarcoma of the liver and of the region about the inferior vena cava, with projection of the tumor-mass into the vena cava itself; atrophy of the viscera; marasmus. (Death ensued 24 hours after nephrectomy.)

The body is that of a much emaciated female. The general integument is very pale. In the neck there is a struma of the thyroid gland, the size of an orange. Toward the periphery this is colloid and pervaded by cysts; toward the center it is gelatinous and fibrous. The abdominal walls are tense and on a level with the chest. In the middle region of the abdomen there is a celiotomy-wound, 12 cm. in length, directed diagonally from above outward, below and inward, and recently sutured. Both lungs are free, atrophic, anemic, and crepitant throughout. The heart is small; the superficial vessels tortuous; the epicardium turbid. Over the right ventricle there is a "milk-spot." In the cavities of the

heart there are soft, reddish-black coagula of blood. The cardiac muscle is brown and atrophic. The peritoneal cavity is free from pathologic contents. The liver is somewhat enlarged. The right lobe is pervaded by numerous nodules, upward of the size of walnuts, which in part project beyond the surface of the organ. On section they protrude and reveal a finely lobulated appearance—prominent whitish spots and depressed grayish bands of tissue with reddish-black streaks. In some of the tumor-nodules there are recent and old hemorrhages. Some nodules are of soft consistency; others denser. On section a slight amount of juice exudes. In the lower portion of the abdominal cavity of the right side there is a large quantity of iodoform-gauze, one end of which projects through the lower end of the operation-wound. In the cavity filled by the gauze there is no noteworthy extravasation of blood. The right renal vessels are ligated. Between the abdominal aorta and the vena cava there is a large nodular tumor-mass, similar in appearance to those described in the liver. Parts of this project through venous branches into the vena cava. The cava itself is dilated and free from thrombi. The left kidney and suprarenal body present no alteration except a slight degree of atrophy. The intestine is slightly distended, and its mucous membrane somewhat atrophic. The right kidney and adrenal are absent.

Microscopically the extirpated kidney-tumor is distinctly encapsulated, with rather thick and dense bands of connective tissue. From the capsule there proceed connective-tissue trabeculae, of varying thickness, which pervade the entire tumor and divide it into larger and smaller nodules. The larger nodules are further subdivided by more delicate trabeculae. The bloodvessels course in these connective-tissue septa, whence some of them enter the tumor-nodules. Herein the vessels in part form a network; in part they are arranged in closely apposed ramifying excrescences and covered with more or less connective tissue. Within the spaces formed by the ramifications of the vessels, and in many places separated from these by a variable amount of connective tissue, are situated the tumor-cells. Some of these are attached directly to the vessel or the connective-tissue covering; others are free. The former are commonly cubical or cylindric, the latter polymorphous in shape. Certain of the nuclei are situated toward the base of the cells. Some of the latter show colloid degeneration. There is no fat-infiltration. The hepatic and pulmonary metastases present a structure similar to that of the tumor-nodules described. A preserved portion of the thyroid gland contains follicles that vary much in size and show colloid degeneration. Between these there are many smaller tubular formations, which exhibit no colloid metamorphosis, but which present numerous invaginated, branching, papillary excrescences, of varying size. The epithelium of these formations is higher than that of the follicles.

*Resumé:* The tumor of the kidney was originally considered a primary new-growth of that organ. The discovery of colloid matter, however, indicated another source of the neoplasm, and an accidentally preserved portion of the thyroid revealed extensive adenomatous formations between the follicles. The tumor is, therefore, an example of those not especially rare cases of adenocarcinoma of the thyroid with metastases, in which the primary growth becomes completely overshadowed by the metastases, as regards both size and clinical manifestations.

The tumors of this organ frequently present themselves as slowly developing new-growths of variable conformation. They give rise to metastases, especially by way of the bloodvessels and to the bones. The metastases reproduce the structure of the primary tumor, and the nodules also often manifest colloid metamorphosis (Hinterstoisser<sup>46</sup>). In our case, it is to be noted that colloid material is sparingly present, and that fat-infiltration is absent. In addition there is an abundance of adenomatous formations with papillary excrescences and carcinomatous areas. In those places where the papillae are present in great number and



mutually compress one another, there occur pictures of double rows of cells, which possess a certain resemblance to similar formations found in neoplasms that develop from adrenal tissue. The original and mistaken anatomic diagnosis was occasioned by the excessive size of the renal metastases and because the suprarenal body of the affected side was found neither about the extirpated tumor nor in the cadaver.

Variability in the histologic structure of the hypernephroid tumors has been repeatedly noted. As a consequence we read, therefore, at times of an alveolar, again of a tubular, or further of a trabecular arrangement of the elements of the new-growth. It is this undeniable variability of the morphologic or structural peculiarities of these neoplasms that has engendered the discussion relative to their nature, a fact to which allusion has already been made. The question at issue is not to determine what these tumors look like or what they appear to be, but to demonstrate their true nature. The investigation of the cases herewith reported afforded an opportunity of observing, side by side, various stages of the development of the neoplastic structure. This was particularly the fact with regard to Case V. In this tumor, situated beneath the capsule in the kidney and separated from the renal parenchyma by a band of connective tissue, there is a narrow strip of adrenal tissue—of the zona fasciculata. In addition, likewise separated by connective tissue, there is tissue of similar texture, but containing larger cell-nests; and directly adjoining these there are irregular collections of large cells, some of them polynuclear. The latter are surrounded by a network of capillaries, the meshes of which, as also the caliber of the vessels themselves, vary considerably. Other cases, such as Case VI, tumor of the kidney, and Case II, a primary tumor of the suprarenal body, present, in addition to the well-known picture of a network of capillaries surrounded by a mantle of cells, certain nodules with well-marked alveolar structure.

The morphologic characteristics of these tumors, particularly the intimate association of the tumor-cells with the vessel-network or stroma, led Hildebrand, following de Paoli and Driessen, to regard them as endotheliomas. Whereas his predecessors referred them to a proliferation of the endothelium of the lymph-spaces, Hildebrand ascribed them to a multiplication of the perithelium of the bloodvessels and the endothelium of the lymph-spaces; that is, they were asserted to be peri-endotheliomas; but one cannot resist the thought that he endeavors to adduce arguments in support of his first impressions. That his arguments are not especially weighty is very obvious. He admits that, as regards the character of the cells, the contents of the cells (fat), and the relationship of the tumor-cells to the interstitial tissue, his tumors bear an indisputable resemblance to the normal suprarenal body; and as further characteristics of his tumors he mentions their

situation immediately beneath the kidney-capsule, and their encapsulation,—characteristics brought forward by Grawitz in support of his own views; and, in addition, the presence of glycogen in the tumors, to which Lubarsch first directed attention. Hildebrand asserts, however, that he did not detect "such arrangement of the cells into rows, as is presented by the suprarenal body." These tumors should not be compared with the normal suprarenal body, but rather with tumors that are derived therefrom. The resemblance of such new-growths to each other is proved by the microscopic descriptions already detailed. In addition, Hildebrand observes that the shining, glass-like appearance of cells of the normal suprarenal capsule does not, as does that of the cells of these tumors, depend upon the presence of glycogen, as according to his investigations the former contain no glycogen; but his assertion, that this appearance is dependent upon the presence of glycogen, is absolutely without justification. Rather does it depend upon the quality of the fat, whereby it refracts the light, and possibly also upon the presence of lecithin in addition to the glycogen. The perivascular lymph-spaces, in which, according to Hildebrand, the tumor-cells repose, can hardly be possessed of much importance as regards differential diagnosis. They were not distributed very extensively throughout his tumors; they are not depicted in his illustrations; he admits that he found such formations at least once in the normal adrenal body; other authorities have not observed them; and, finally, they were not discoverable in our tumors. The increase in size of the perithelium from the normal to that of the tumor-cells was observed neither by Gatti nor by myself; nor is this evident in Hildebrand's illustrations. His lymph-spaces (not the perivascular lymph-spaces) that were said to have been filled with cells, as they were unprovided with an endothelial lining, may well be viewed as small cell-nests in the stroma, the development of which is readily conceivable.

Another point, upon which Driessen, Hildebrand, and Hanseemann lay considerable stress, is the resemblance of these tumors to certain new-growths of other and distant organs, notably the bone. Driessen likens them to endothelioma of the bone, and Hildebrand to what he designates tubular perithelioma of the humerus. Excluding the erroneousness of basing an opinion as to the genesis of a tumor upon its appearance, there are many other factors that must be taken into consideration. Without desiring to assert that these tumors of bone are due to the misplacement of adrenal "rests," I may nevertheless recall the intimate association between the cells and the bloodvessels of the suprarenal body, an association to which Manasse in particular directed attention, and the importance of which he demonstrated. This same intimate relationship exists also between the cells and the bloodvessels of benign new-growths of the suprarenal capsule. As a result, it can be conceived

how metastases may readily ensue from such commonly designated benign neoplasms of this organ. These tumors are often small, clinically devoid of symptoms, and are doubtless frequently overlooked at the necropsy. We have further to remember that Löwenhardt reports a case in which there developed a large tumor of the clavicle, which on microscopic examination exhibited a structure similar to that of tumors of the adrenal body, and in which, at the necropsy, there was found in the kidney a tumor of precisely similar conformation, in addition to numerous other metastases. Further, Israel<sup>47</sup> reports a case of malignant struma of the kidney, which had given metastases to the lungs, to the tissues of the lumbar region, to the spine of the ilium, to the liver, and to the ribs. In his examinations of tumors of the bones, Driessen appears not to have considered the possibility of the occurrence of such metastases. I do not assert that all so-called angiosarcomas and peritheliomas of bone originate from misplaced suprarenal "rests"; I believe with Hildebrand that "the requisite for the development of such tumors is found also in other organs, without there being present any tissue of the suprarenal body." The possibility of metastases occurring from such benign new-growths of the adrenal body, however, cannot be denied. I have already alluded to the fact that the morphologic peculiarities of a tumor alone do not form sufficient evidence upon which to base an opinion relative to its genesis. As detailed by Lubarsch, the designation of the hypernephroid tumors as angiosarcomas or peritheliomas, though justifiable from a purely morphologic standpoint, is directly indicative of their derivation from the suprarenal capsule, for the reason that this organ, especially during the period of its development, forms a physiologic paradigm of such new-growths.

In connection with these neoplasms of bone, and illustrating the possibility of such error in diagnosis, I report the following case:

**CASE XI.—Endothelioma of the iliac bone.** Barbara M., 67 years of age, died December 22, 1896.

**Clinical diagnosis:** Kyphoscoliosis; arteriosclerosis; hypertrophy and dilatation of the heart, especially of the left ventricle; cardiac insufficiency; probably relative insufficiency of the mitral valve.

**Anatomic diagnosis (original):** Hypernephroma of the left kidney, with subsequent secondary neoplastic infiltration of the sacro-iliac regions of both sides, and extensive destruction of the iliac bones, especially the left; metastases in various organs; a single metastasis in the skin.

Body of a small, excessively emaciated woman, with a high grade of kyphoscoliosis in the upper thoracic region (dextro-convex). Beneath the right mamma, situated in the subcutaneous tissue and adherent to the skin, is a node the size of a hazelnut. On section it is soft, of pulpy consistency, and of brownish-red color. The lungs at their lower parts are slightly adherent to the thoracic walls; the right lower lobe is almost completely atelectatic; the pulmonary parenchyma is much pigmented, denser than normal, and it contains a moderate amount of blood. Distributed throughout the peripheral portions of the lungs are various nodules, varying in size from that of peas to that of hazelnuts. They are whitish-gray in color, of soft consistency, and have a rather homogeneous surface on section. The heart is of

moderate size. The epicardium is here and there opaque. The vessels are tortuous. Both ventricles are contracted. The mitral-valve leaflets are soft and smooth, and the line of contact rather lower than normal, but preserved. The muscular tissue of the right ventricle is slightly hypertrophic, and the muscle itself firm. The liver is in a condition of brown atrophy. The spleen is small. The right kidney is somewhat larger and firmer than normal. On section the cortex is pallid, and has a faint tinge of yellowish color. Scattered throughout the periphery of the organ are various lentil-sized nodules, which are rather firm and homogeneous. The left kidney is distinctly enlarged. On section the renal parenchyma is found almost completely replaced by a tumor that occupies the entire hilum of the organ, and extends through it almost to its surface. The growth consists of two nodular masses, of which the smaller is the size of a nut, the larger that of a small apple; both are sharply circumscribed without apparently being possessed of a real capsule. At its lower part, the tumor-mass invades the pelvis of the kidney, which it completely fills. The tumor is of very soft consistency; in part translucent, grayish-red and homogeneous; in other and extensive areas, it is drier and yellowish in color. Both suprarenal capsules are present and rather large. After extirpation of the pelvic viscera, the posterior third of the left ilium is the seat of an extensive new-growth, which invades also the regions both anterior and posterior to the sacro-iliac synchondrosis, and which is in great part softened. Similar alterations, but of a less marked degree, affect the right ilium.

Microscopic examination of the tumor reveals a rather close network of vessels, in the meshes of which are nests of cells coursing in all directions. The cells are of uniform size, rather large, somewhat elongated, and contain large, round nucleoli; their protoplasm is clear. They are arranged in varying directions with regard to the capillaries, generally diagonally thereto, or they run along them in a parallel direction. They are not attached directly to the endothelial layer of the vessels, but are separated therefrom by delicate or rather dense bands of connective tissue. There is no fat-infiltration of the tumor-cells. There are isolated karyokinetic figures, which are generally large and hyperchromatic. Larger and smaller foci of hemorrhage are to be detected here and there. There are likewise masses of rust-brown pigment, which, however, are found in the connective tissue or at the periphery of the tumor-nodules. Some sections of the tumor are necrotic. Certain of the veins are completely occluded by the tumor-mass. The pulmonary metastases present a structure precisely similar to that of the primary nodules. The test for glycogen yields positive results.

**Resumé:** The new-growth was originally thought to be a hypernephroma of the kidney. Microscopically, however, it is distinguished from the other tumors described, (1) by the uniformity of the histologic structure in all parts examined (2) by the absolute absence of vacuoles in the cell-protoplasm which might be referred to the extraction of fat; (3) by the much less intimate association of the tumor-cells with the walls of the capillaries. The original and erroneous anatomic diagnosis was occasioned by the size, and by the macroscopic appearance of the surface on section, of the renal metastasis.

It is hardly necessary to dwell much upon the views of Sudeck, who considers the hypernephroid tumors renal adenomas that have arisen through proliferation of the epithelium of the uriniferous tubules. Lubarsch, Askanasy, Ulrich, Manasse, Gatti, and others have so well refuted his assertions and so completely demonstrated their untenability, that a citation of their arguments would prove but an unprofitable repetition. I would say, however, that there is no ground whatever for the view he expresses that there first occurs a proliferation of the epithelium of the uriniferous tubules and that there subsequently ensues a formation of newly developed bloodvessels, which penetrate the proliferated cells, and about which these cells arrange



themselves; further that the cysts, to which he ascribes such importance, are but seldom true cysts; and that the tumor-cells present no resemblance whatever, either in form or in arrangement, to the cells of the uriniferous tubules. The tumor-cells, on the other hand, despite the rather marked anaplasia to which they are at times subject, do, nevertheless, manifest still a similarity to the cells of the suprarenal body.

Histologically, the structure of these new-growths is, at times, that of an anastomosing reticulum (plexiform structure). These we may very well designate as "trabecular," a term employed by Ricker, who, however, feels impelled to withhold a definite opinion as to the genesis of the cystic formations. It must be borne in mind that the trabeculae are closely apposed and do not form real cysts with fluid contents. An approach to cystic formation occurs only in those isolated areas, wherein cell-detritus keeps apart the well-preserved cells that cover neighboring capillaries. By comparison of these formations in certain of Ricker's cases of "trabecular cystomas," we cannot refrain from viewing as derivatives of the suprarenal capsule such cases of this writer as possess club-shaped, cylindric epithelium. The correctness of this view is indicated by two features of the cases: (1) The constancy of the accompanying and distinguishable "rests" of suprarenal parenchyma; and (2) the form of the cells constituting the epithelial covering. This latter is in these cases in marked contrast with that of true renal adenomas, which have a much lower epithelium; but what is especially characteristic, the cell-protoplasm is absolutely free from fat-vacuoles. That in addition to these cases which, according to our view, permit of but one interpretation, there are others concerning the nature of which another conception is permissible, is indicated best by Case VIII. In this case there is situated beneath the capsule in the renal cortex a papillary adenoma, in the neighborhood of which there is also a small "rest" of adrenal tissue containing fat, and surrounded by kidney-parenchyma. The conformation of the epithelial cells, the connective-tissue framework of the papillae, and the excessive richness of the cells in rust-brown pigment suggest that this new-growth is most properly classified among the true kidney-tumors—and this, too, despite the fact of the intimate association with the neoplasm of a misplaced "rest" of adrenal tissue. It is quite conceivable—and this supposition seems to me the most plausible—that a disturbance in the development of the kidney during embryonal life gives rise to an abnormal inclusion within it of portions of adrenal tissue and at the same time leads to the formation of true kidney-cysts.

Reverting to the structural peculiarities of the hypernephromas, and merely mentioning the occurrence of multinuclear cells that have also been frequently observed in strumas of the suprarenal body, I shall refer again more in detail to the cellular elements of

these new-growths and to the various modifications in shape to which they are subject. In the zona fasciculata of the adrenal body the cells are situated rather closely together, in part flattened by mutual pressure, elongated, and polyhedral. In aberrant or misplaced adrenal "rests" precisely similar conditions may obtain, the structure of the trabeculae being at the most less regular. Entirely analogous histologic details are also found in the hypernephromas. Even in the metastases (Case VII) the cells, as regards both their shape and arrangement, may almost completely reproduce the structure of the adrenal cortex, and this, too, in cases in which the kidney-growth, at the same time, presents many cell-forms deviating from that type.

In the normal suprarenal cortex of man I have been unable to detect any high-cylindric or club-shaped cells such as are present in these tumor-growths. I have not had an opportunity of examining preparations of human embryos with a view of studying the development of the adrenal body. Through the kindness of Dr. Hans Rabl,<sup>48</sup> assistant in the Vienna Histologic Institute, however, I have been afforded an opportunity of studying his preparations illustrative of the development of the suprarenal body in birds. These disclose the interesting fact that such high-cylindric epithelial cells are present in the formations that he has designated the "main cords" (Hauptstränge) of cells—the analog of the suprarenal cortex of man. These cells give rise, under certain circumstances, to well-shaped tubular formations that much resemble the double rows of cells frequently found in the hypernephromas.†

We may therefore consider these high-cylindric cells in tumors of suprarenal derivation as indications of reversion to the embryonic type (of another vertebrate). The embryologic development of the cells of the suprarenal cortex (or of the "main-cord cells") from the celom-epithelium is of interest in another particular. It is from this epithelium that other organs of an exquisitely epithelial nature develop, and the frequently noted resemblance that many hypernephromas bear to carcinomas indicates that even in tumors affecting man the epithelial character of the cells may become again evident.

The intimate relationship between the tumor-cells and the bloodvessels, as also the common occurrence of necrosis in these tumors, has become so well known through the investigations of Lubarsch, Manasse, Hildebrand, and others, that I am unable to adduce any new facts relative to these characteristics. Nor is it possible to say much additional as regards the situation of the tumor, its color, its nodular appearance, the hemorrhagic tendency that it manifests, or the relation of the tumor with the kidney-capsule, the importance of which as regards the macroscopic diagnosis, will be referred to later.

The fat-contents of the tumor-cells, which, however,

may be wanting in certain cells, is to be viewed as a particular characteristic of these new-growths. It furnishes an important proof of their suprarenal genesis. This fat-content is certainly to be considered a fatty infiltration, and not, as Sudeck asserts, a fatty degeneration, the result of defective nutrition.

Considerable attention has been directed to the presence of glycogen in these tumors and to the importance to be attached to this fact. As already mentioned, Lubarsch attributes great importance in differential diagnosis to the presence of glycogen in such new-growths. Others, among them Manasse and Gatti, are more conservative in the expression of their opinions. With the latter I feel constrained to agree. As a matter of fact, I found glycogen in all of the hypernephromas examined, except one (Case V), a very old and poorly preserved preparation. In addition, it was detected in a simple struma and in a malignant neoplasm of the adrenal body, whereas it was not demonstrable in Cases VIII and IX. Langhans,<sup>49</sup> who first directed attention to the occurrence of glycogen in tumors, found it in so-called sarcomas and carcinomas of the kidney—new-growths that doubtless belong to the class of hypernephromas—and also in tumors of bone. Lubarsch detected glycogen in hypernephroid tumors, but not in other new-growths of the kidney. Askanasy, Driessen, Manasse, Gatti, and others, also discovered it in these neoplasms; but as the same substance has also been found in tumors—especially carcinomas—of other organs (among them carcinoma of the testicle), as also in sarcomas, adenomas, enchondromas (Neumann<sup>50</sup>) and endotheliomas (among others, Case XI), and in the renal epithelium in cases of diabetes, and as I have, in addition, demonstrated it in a specimen that is beyond doubt an instance of primary cylindric-cell carcinoma of the kidney (not of suprarenal genesis), I cannot but express myself rather reservedly as to its importance. Importance it possesses beyond question, but hardly that which Lubarsch ascribes to it. As regards certain tumors of bone that contain glycogen, I cannot exclude the possibility that at least some of them may owe their origin to metastatic adrenal tissue; but this same substance has, however, been frequently found in new-growths that have developed from a tissue that normally manifests no glycogen-reaction; and these tumors cannot be referred to aberrant adrenal tissue.<sup>‡</sup>

As glycogen does not occur in the normal adrenal body, but does appear in simple hyperplastic strumas and in malignant tumors of this organ, as also in the embryo and in new-growths that have developed from adrenal "rests," it seems as though there must exist certain biologic relations between the tissue of the suprarenal capsule and this substance, and that these rela-

tions are of a much more intimate character with embryonal tissue, or tissue that shows a reversion to that type, than with tissue of the normally developed organ.

Lecithin, a substance to which Lubarsch, following Alexander, directed attention, and which Gatti discovered in his tumor, may possess certain diagnostic importance relative to the genesis of these neoplasms; but as we have no microchemic reaction for its detection, and as the ordinary test requires a large portion of tissue, the substance loses considerable of its possible differential diagnostic value.

I have not been enabled to sustain Lubarsch in his assertion that the peculiarity possessed by the nucleoli, in consequence of which they stain differently from the nuclei, is of great differential diagnostic importance. This is a peculiarity that, as is well known, is common to a great number and variety of new-growths arising from different tissues.

Case IX is a tumor of epithelial nature whose peculiarities permit of no doubt as to its derivation. It belongs to the class of true kidney-tumors that take their origin from the epithelial lining of the uriniferous tubules. The size of the new-growth; its shape; its situation within the cortex; its non-encapsulation—though general sharp circumscription; its commencing infiltration into the adjoining renal parenchyma; the connection of its connective-tissue stroma with the connective tissue of the kidney; its low epithelium with relatively large and deeply staining nuclei, situated toward the base of the cells; the absence of fat and glycogen, testify to its renal origin, and distinguish it from the class of hypernephroid tumors described. Despite the marked anaplasia of the cells, and although the appearance of the tumor approaches that of the cylindric-cell carcinoma—especially in the alveoli that are completely or in great part filled with the epithelial cells and at those places where the growth infiltrates the surrounding renal parenchyma—still in the form and staining peculiarities of the cells one may detect characteristics of those cells from which they have taken their origin.

These adenomas, which may be multiple or single, are usually unprovided with a capsule, so long as they remain small. With increase in size, however, there develops a capsule, the formation of which is due in part, at least, to compression and thickening of the surrounding renal parenchyma. In the capsule itself, or in its vicinity, atrophic uriniferous tubules and obliterated glomeruli are often to be noticed.

Depending upon whether the epithelium of the adenoma is cubic or cylindric, Sabourin distinguished between cubic and cylindric adenomas. We now recognize the fact that such a distinction is impracticable, as both varieties of epithelium may occur in the same tumor. Further, there can hardly be any question that many of Sabourin's adenomas were not adenomas at

<sup>‡</sup> The methods employed for the detection of the glycogen were the following: Langhans' iodine-method, Ehrlich's gum-arabic-iodine method, Lubarsch's cotton-violet method, and, to a slight extent, Lubarsch's iodine-hematoxylin method.



all, but that they belonged to the class of tumors that we designate for the present as hypernephromas.

It was likewise a misappreciation of the nature and genesis of these tumors that led Weichselbaum and Greenish to distinguish between alveolar and papillary adenomas of the kidney. Truly we may distinguish two varieties of renal adenomas, but there is no doubt that the alveolar variety of Weichselbaum and Greenish belongs to the hypernephromas. Of this fact Weichselbaum<sup>61</sup> himself more recently makes admission, stating that "the second (alveolar) form probably always arises from aberrant adrenal tissue.—'rests' either deposited on or within the renal cortex."

In contradistinction to Ricker, who was able to distinguish differences between the central and peripheral parts of his tubular adenoma, I find it impossible to do so in my case. In the central part of his new-growth there were more cystic formations than in the periphery. In my case there was detected some dilatation of the tumor-formations, but this is quite as common in the periphery as in the center.

From the foregoing, therefore, and in accordance with the views of other writers, notably Grawitz and Lubarsch, I must maintain that the hypernephromas—tumors replete with cells and rich in bloodvessels—are both typical and relatively common new-growths of the kidney. A knowledge of this fact is not only of theoretic interest, but is also of surgical importance. As a consequence of the conservation of the capsule, these tumors, even when they have attained a not insignificant size, may be, comparatively speaking, readily and entirely extirpated. The surgeon, therefore, at the operation for the removal of tumor of the kidney, will consider those neoplasms, which in the process of development have become adherent to the surrounding structures, as true renal carcinomas, and will devote particular attention to the extirpation of the regional lymph-glands—a procedure that is, however, very difficult. The experience of recent years, particularly with regard to carcinoma of the mammary gland, has shown that the early removal of even apparently normal regional lymph-glands has a most important bearing upon the success of radical operations for the extirpation of such new-growths. The intimate association between the tumor-cells and the bloodvessels in hypernephromas renders it advisable to precede the extirpation of the diseased kidney by ligating the bloodvessels, in order that the unavoidable trauma occasioned by the necessary manipulations during removal may not result in the dispersion into the circulatory stream of vital particles of the growth. Unfortunately, however, this is an occurrence that of itself so often ensues so early that at the time of the clinical manifestations of the primary tumor, metastasis has already taken place.

The much greater relative frequency of suprarenal tumors in the kidney, as compared with renal tumors

of that organ, presents, at first sight, some elements of improbability. It certainly appears rather remarkable that "rests," which normally bear no relation whatever to the kidney, should engender the most frequent neoplasms of that organ. It is evidently this apparent inherent improbability that, from time to time, has induced various writers, reverting to certain morphologic characteristics of these tumors, to combat the well-established views of Grawitz and Lubarsch. In addition, there is the circumstance that the relation which certain cases of cystic new-growths bear to suprarenal "rests" is very difficult of elucidation. This fact is well illustrated by some observations mentioned in Ricker's second communication and by Case VIII herein reported. Such cases, considered singly, certainly appear well adapted to obscure again what has already been satisfactorily explained. Although it seems rather preposterous that suprarenal tumors in the kidney should so predominate in number over other growths of the organ, this predominance is not without analogy in what has been hitherto known relative to tumor-formation; nor is its explanation, in reality, attended with particular difficulty. Experience has demonstrated that highly differentiated cell-complexes—those provided with highly specialized physiologic functions, such as are foreign to simple cell-life—are but seldom the seat of primary neoplastic tumor-formation. Ganglioneuromas and adenomas of the liver are rare tumors, as compared with the much more frequent corresponding new-growths developing from the epithelium of the skin and mucous membranes, or from the varying—now luxuriantly proliferating, now regressive—epithelium of the uterus and mammary gland, or as compared with other tumors of the organs of generation, endowed as these are with certain physiologic functions tending to a form of regeneration. Noting, therefore, the analogy that exists between the liver-cells and the highly specialized cells of the renal parenchyma, which are provided with markedly specific functions, we can hardly anticipate an especial frequency of real tumors of the kidney, and we must view their infrequency as in accordance with our experience relative to tumor-formation in other highly specialized parenchymas.

Further, the suprarenal capsule bears, in several particulars, a marked resemblance to the thyroid gland. Both possess functions of which little is in reality understood, though both are probably necessary to life; both are of epithelial origin, and both are unprovided with an excretory duct. The tumors also of both organs, as already indicated, possess marked similarities. Adenoma-like type and metastases by way of the bloodvessels, multiplicity of the histologic structure in the same tumor, marked persistence of certain functions—as the colloid formation in the one, and the fat-formation in the other—are common to both. Finally, it is not the least remarkable that tumors of both "bloodvessel-glands"—as the thyroid and suprarenal

bodies were formerly designated—develop, as it appears, with a certain preference, from abnormally situated portions of tissue, or “rests.” I may recall the development of thyroid strumas from aberrant thyroid nodules in the substernal space, at the base of the tongue, in the trachea, in the connective tissue of the inferior carotid triangle, etc. As regards the adrenal, the kidney is especially the seat of predilection of misplaced “rests,” and consequently of hypernephromas, because of the topographic relations of early periods of embryonic life. Another analogy is presented by the so-called chondro-endothelioma of the parotid. As compared with true tumors of the parotid—those that originate from the glandular parenchyma of the organ and which are very rare, the chondro-endothelioma is very common, and forms the great majority of tumors of the gland. Here also the origin of these new-growths is obviously to be referred to the inclusion of foreign tissues, though the nature of the inclosures and their topographic relationships to the gland are as yet but inadequately understood.

I am not indifferent to the fact that these analogies are absolutely devoid of the ordinary attributes of proof. It has, however, appeared to me not without interest to indicate that the apparent exceptional position of the hypernephromas of the kidney is not unique, and that it is to be explained through the topographic relationships existing between certain cell-complexes, such as occur elsewhere.

In conclusion, I take pleasure in expressing my indebtedness to Dr. Richard Kretz, prosecutor to the Imperial-Royal Emperor Francis Joseph Hospital of Vienna, for many kindnesses, and especially for furnishing me the material upon the study of which this communication is based. In addition, my thanks are due to Professor Richard Paltauf, who had the kindness to examine my preparations; to Dr. Hans Rabl, through whose generosity I was enabled to study his preparations illustrative of the development of the suprarenal body in birds, and to Herr Hans Anderla for the illustrations.

## LITERATURE.

- 1 Grawitz: Die sogenannte Lipome der Niere. *Virchow's Archiv f. path. Anat.*, Bd. 93, S. 23, 1883.
- 2 Virchow: Die krankhaften Geschwülste, Bd. 1, S. 185, 1858.
- 3 Robin: Lipome intra-scapulo-pulmonaire. *Mémoires de la Société de Biologie*, 1854.
- 4 Klebs: Handbuch der pathologischen Anatomie, Bd. 1, Abth. 2, S. 604, 1876.
- 5 Stern: Ueber das Adenom der Niere und über die Bedeutung desselben, zu einigen anderen Neubildungen der Niere. *Archiv für klin. Chirurgie*, Bd. 16, S. 19, 1875.
- 6 Sabourin: Contribution à l'étude de la tumeur rénale. Étude sur quelques variétés de tumeurs du rein. *Arch. de pédiatrie*, No. 1, 1892.
- 7 Grawitz: Die Entstehung von Nierentumoren aus Nebennierengewebe. *Langenbeck's Archiv für klin. Chirurgie*, Bd. 10, S. 824, 1884.
- 8 Weirischelbaum und Greenstein: Das Adenom der Niere. *Wiener med. Jahrbücher*, S. 213, 1883.
- 9 Wiedel: Dissertation. Bonn, 1885.
- 10 Hohen: Festschrift. Greifswald, 1890.
- 11 Ambrosius: Beiträge zur Lehre von den Nierengeschwülsten. Dissertation. Marburg, 1891.
- 12 Chiari: Zur Kenntniss der accessorischen Nebennieren des Menschen. *Zeitschrift für Heilkunde*, Bd. 7, 1884.
- 13 Strubing: Ueber heterologe Nierenstrahlen. *Deutsche Zeitschrift für Chirurgie*, Bd. 43, S. 599, 1888.
- 14 Löwenhardt: *Deutsche Zeitschrift für Chirurgie*, Bd. 28.
- 15 Beneke: Zur Lehre von der Versprengung von Nebennierenkeimen in der Niere, etc. *Ziegler's Beiträge zur path. Anatomie*, Bd. 9, S. 440, 1890.

- 16 H. Beitrag zur Histologie der aus abnormen Nebennierenkeimen entstandenen Nierengeschwülste. *Virchow's Archiv f. path. Anat.*, Bd. 126, S. 191, 1891; und *Deutsche med. Wochenschrift*, S. 925, 1891.
- 17 Marchand: Ueber accessorische Nebennieren im Ligamentum latum. *Virchow's Archiv f. path. Anat.*, Bd. 92, S. 11, 1883; Beiträge zur Kenntniss der normalen und pathologischen Anatomie der Glandula carotica und Nebennieren. Internationale Beiträge zur wissenschaftlichen Medicin—Festschrift für R. Virchow, Bd. 1; also Ambrosius, 11.
- 18 de Paoli: Beitrag zur Kenntniss der primären Angiosarcome der Niere. *Ziegler's Beiträge zur path. Anatomie*, Bd. 8, S. 140, 1890.
- 19 Driessen: Untersuchung über glycogenreiche Endotheliome. *Ziegler's Beiträge zur path. Anatomie*, Bd. 12, S. 65, 1892.
- 20 Sudeck: Ueber die Struktur der Nierenadenoma. *Virchow's Archiv f. path. Anat.*, Bd. 133, S. 405, 1893.
- 21 Sudeck: Beiträge zur Histologie der von Nebennierenkeimen ausgehenden Nierengeschwülste. *Virchow's Archiv f. path. Anat.*, Bd. 135, S. 149, 1894.
- 22 Sudeck: Die kranke Geschwülste der in der Niere eingeschlossenen Nierengewebe. *Virchow's Archiv f. path. Anat.*, Bd. 14, S. 3, 1893.
- 23 Sudeck: Richtigstellung einiger Bemerkungen Dr. Sudeck's: Zur Lehre von den abnormen Nebennierengeschwülsten in der Niere. *Virchow's Archiv f. path. Anat.*, Bd. 136, S. 568, 1894.
- 24 Sudeck: Zur Lehre von den abnormen Nebennierengeschwülsten in der Niere. *Virchow's Archiv f. path. Anat.*, Bd. 136, S. 293, 1894.
- 25 Lubarsch: Ueber die Abstammung gewisser Nierengeschwülste von embryonal abgesprengten Nebennierenkeimen. *Virchow's Archiv f. path. Anat.*, Bd. 137, S. 191, 1894.
- 26 Ulrich: Anatomische Untersuchungen über ganz und partiell verlagerte Nebenniere, etc. *Ziegler's Beiträge zur path. Anatomie*, Bd. 18, S. 589, 1895.
- 27 M. Warren: The origin of the Kidney composed of Suprarenal Tissue. *Public Journal of Medical Sciences*, Vol. 101, p. 365, 1896; *British Medical Journal*, February 8, 1896.
- 28 Lubarsch: Beiträge zur Histologie der Niere. *Festschrift der allg. Pathologie und path. Anatomie*, von Lubarsch und Ostertag, Abth. III, S. 375, 1896.
- 29 Lubarsch: Die hypernephroid Tumoren. *Ergebnisse der allg. Pathologie und path. Anatomie*, von Lubarsch und Ostertag, Jahrg. II (1895), S. 599, 1897; also Jahrg. I, Abth. II, S. 166, 1895; und Abth. III, S. 468, 1896.
- 30 Manasse: Zur Histologie und Histogenese der primären Nierengeschwülste. *Virchow's Archiv f. path. Anat.*, Bd. 142, S. 164, 1895; Bd. 143, S. 273; Bd. 145, S. 112, 1896.
- 31 Gatti: Ueber die von abgesprengten Nebennierenkeimen ausgehenden Nierengeschwülste. *Virchow's Archiv f. path. Anat.*, Bd. 144, S. 467, 1896.
- 32 Lubarsch: Zur Histologie der in der Niere gelegenen Nebennierengewebe. *Centralblatt für allg. Pathologie und path. Anatomie*, Bd. 7, S. 363, 1896; (b) Beiträge zur Lehre von den Geschwülsten in der Niere. *Centralblatt für allg. Pathologie und path. Anatomie*, Bd. 8, S. 417, 1897.
- 33 Hansemann: Ueber Endotheliome. *Deutsche med. Wochenschrift*, S. 52, 1892.
- 34 Hildebrand: Ueber den Bau gewisser Nierentumoren, etc. *Langenbeck's Archiv für klin. Chirurgie*, Bd. 47, Jubil. Heft, S. 225, 1894.
- 35 Manasse: Ueber die Genese der Nebennieren zu den Velen und dem venösen Kreislauf. *Virchow's Archiv f. path. Anat.*, Bd. 135, S. 263, 1894.
- 36 Birch-Hirschfeld: *Lehrbuch der path. Anatomie*, V. Aufl., Bd. 1, S. 262, 1896.
- 37 Pilliet: Contribution à l'étude des adénomes des capsules surrénales. *Bull. de la Société anat. de Paris*, Juillet, 1892.
- 38 Berdez: Contribution à l'étude des tumeurs des capsules surrénales. *Archives de médecine expérimentale*, No. 3, 1892.
- 39 Manasse: Ueber die hypertrophischen Tumoren der Nebennieren. *Virchow's Archiv f. path. Anat.*, Bd. 133, S. 391, 1893.
- 40 Alexander: Untersuchungen über die Nebennieren und ihre Beziehung zum Nervensystem. *Ziegler's Beiträge zur path. Anatomie*, Bd. 11, S. 145, 1892.
- 41 Schmorl: Zur Kenntniss der accessorischen Nebennieren. *Ziegler's Beiträge zur path. Anatomie*, Bd. 9, S. 523, 1891.
- 42 Pilliet: Capsules surrénales dans le plexus solaire. *Bull. de la Société anat.*, p. 267, 1891; Débris de capsules surrénales dans les organes dérivées du corps de Wolff. *Progrès médical*, No. 1, 1890.
- 43 Wahneau: Zur Casuistik des Morbus Addisonii und der accessorischen Nebennieren. *Jahrbücher der Hamburger Staats-Kranken-Anstalten*. Leipzig, 1890. (Cited by Lubarsch—28.)
- 44 May: Beiträge zur path. Anatomie der Nebennieren. *Virchow's Archiv f. path. Anat.*, Bd. 103, S. 446, 1887.
- 45 Kundrat: *Wiener klinische Wochenschrift*, S. 949, 1891.
- 46 Hinterstoisser: Beiträge zur Lehre vom Schilddrüsenkrebs. *Beiträge zur Chirurgie*. Festschrift gew. T. Billroth, Stuttgart und Wien, S. 278, 1892.
- 47 Isert: Metastatisches malignes Struma der Niere. *Deutsche med. Wochenschrift*, S. 479, 1892; Verhandlung der Berliner med. Gesellschaft, Bd. 1, S. 15, 1892.
- 48 Rabl: Die Entwicklung und Struktur der Nebennieren bei Vögeln. *Archiv für mikroskopische Anatomie*, Bd. 78, S. 492, 1891.
- 49 Langhans: Ueber Glycogen in pathologischen Neubildungen und den menschlichen Eihäuten. *Virchow's Archiv f. path. Anat.*, Bd. 120, S. 28, 1890.
- 50 Neumann: Ueber die Entwicklung der Knorpel- und Chorda Zellen. *Archiv für mikroskopische Anatomie*, Bd. 14, S. 54, 1877.
- 51 Weichselbaum: Grundriss der pathologischen Histologie, S. 336, 1892.

MEDICAL EDUCATION ON THE CONTINENT OF EUROPE.<sup>1</sup>

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SOME months ago a physician writing on the subject of “Medical Education in Europe,” and whose paper appeared in the *Boston Medical and Surgical Journal*, made the statement that Zurich was the only German University that admitted women to the study of medi-

<sup>1</sup> Read before the Faculty Club of Tufts College.



cine. I mention this to give an example, and a fair example at that, of how much the average medical practitioner in the United States knows about the study of medicine on the continent, although he may have resided there himself for the purpose of pursuing his studies in either medicine or surgery, for the simple reason that very few ever are matriculated and take the regular course. As Zurich is a Swiss city, and as all the universities of Switzerland admit women, the error is obvious. This same writer also made the sweeping remark that the medical education in the United States was as good as that obtainable in the countries of Europe. Now, if we consider this point for one minute, I would ask in what medical school in the United States three years' dissection is required. In what medical school in the United States is daily attendance required for three years at the obstetric, medical, surgical, and gynecological clinics? In point of fact, there is not one that asks even one-half of this time devoted to the clinical study of disease.

I would ask you first to consider the Continental medical student as he stands on the threshold of his medical studies. In order to be matriculated in a faculty of medicine, be it in Germany, France, or Switzerland, the medical student must have already obtained either the degree of Bachelor of Science, Bachelor of Letters, or his diploma from the Gymnasium. This last diploma requires an examination, whose equivalent would be that required at the end of the junior year in the best of our universities. That is to say, he is examined in Latin, Greek, higher mathematics, French literature, German literature, chemistry, physics, botany, history, geography, natural science, German, French, and English languages. If the candidate has already received the degree of Bachelor of Science from the University, he is exempt from the first examination in the faculty of medicine, of which I shall speak later.

The examinations and studies being the same in all the faculties of medicine throughout a given country, the student who has his degree in letters or science from one University, may enter the faculty of medicine of another University without preliminary examination.

Now let us consider the first part of the course in medicine, and I shall take as example the faculty of medicine of Geneva, where I pursued my studies. This consists of the following branches: Normal anatomy, physiology, inorganic and organic chemistry, comparative anatomy, botany, physiological botany, physics, zoology, histology and embryology. Anatomy is studied as follows: The course of didactic teaching in this branch consists of 6 lectures a week for 2 years, with from 4 to 5 hours of dissection daily. The student during his 2 years' dissection will have probably completely dissected the human body, including the brain, at least twice; sometimes, if he is a rapid worker, he may be able to get through three times.

The course in physiology consists of a lecture daily for 18 months, supplemented with practical experiments and demonstrations in the laboratory of the professor. The course in normal histology consists of lectures 3 times a week for one year, supplemented with 6 months' daily work in the laboratory of the professor. The course in comparative embryology is covered in 6 months by 2 lectures a week and practical demonstrations in the laboratory of the professor. The course in comparative anatomy lasts one year, 5 lectures a week. The course in zoology is of the same length. Physics is taught in a series of lectures lasting one year, 4 hours a week; botany the same. The course in chemistry covers one year at 5 lectures a week, supplemented by 3 months' work in the laboratory.

Thus it is seen that during the first 3 years of the student's career in the faculty of medicine his time is entirely given up to the study of the sciences pertaining to the healing art, and during all this time he does not in any way touch upon the study of medicine or surgery, properly speaking. When he has completed the lectures and laboratory-work described he is ready for his examination. This is divided into two parts. In the first, the student is examined in comparative anatomy, zoology, chemistry, botany and physics. In the second part he is examined in normal anatomy, physiology, histology and embryology. These examinations are all oral, with the exception of that in anatomy and histology, in which, beside the oral questions, the student has to dissect and demonstrate a region and prepare and demonstrate one or more histologic preparations.

I may say in passing that all the examinations are conducted publicly, and that 30 minutes are allowed for answers to all the oral questions. One question is drawn by the student, and he is expected to fill out the time on that one question. For example, when I passed my examination in botany, my question was, "The Intracellular Circulation in Plants." That is a fair example of the average question asked. Beside the oral question in physiology, a written paper is also demanded of the student. The time allowed for writing this paper is an hour and a half.

When the student has passed his examination in the foregoing branches, he then enters upon the study of medicine properly speaking. The following are the subjects on which didactic lectures are given and which are obligatory: The practice of medicine, 18 months, 3 hours a week; the practice of surgery, 18 months, 3 hours a week; pathological anatomy, daily for one year; forensic medicine, an hour and a half twice a week, one year; gynecology, twice a week, for one year; obstetrics, twice a week, for one year; ophthalmology, one hour a week, for one year. So much for the didactic work.

The practical work is divided as follows: Obstetric clinic, one hour daily for 3 years; gynecologic clinic, one hour daily for 3 years; surgical clinic, one hour and

a half daily for 3 years; medical clinic, one hour and a half daily for 3 years; autopsies, twice a week for 18 months; legal medicine at the morgue, twice a week for one year; obstetric and gynecologic operations on the cadaver and manikin, twice a week for 6 months; attendance on confinement-cases at the maternity, as often as called for during the course; each student averages from 10 to 15 cases, which he personally attends during his course; operative surgery on the cadaver, three times a week for 18 months; mental diseases, at the Insane hospital, 6 months.

Now I shall show how all this work is done in a most uniform manner, so that nothing clashes, and all goes smoothly during the studies of the medical student. In the first place the hospitals are all near together. The gynecologic and obstetric clinics are held in the same building, while the medical and surgical clinics are held in another hospital situated close by. The autopsies are carried on in the morgue of the hospital. Consequently all is concentrated in one spot. The morning begins at 8 o'clock with the obstetric clinic. At 9 the student finds himself in the amphitheater for the surgical clinic and there remains until 10.30, at which time he simply goes to the other end of the building to the medical clinic and there remains until 12. At 12 he goes to the gynecologic clinic, and at 1 comes lunch-hour. The afternoon is given up to didactic lectures on medicine and surgery and allied branches, as well as to the autopsies at the morgue and operative surgery. Thus we see that in one day a student is able to take in more than our men can do here in Boston in 3 days, because everything is so arranged that one study follows another without loss of time.

Regarding the manner of instruction, I would say that it radically differs from anything that we have in the United States; and in the first place let me point out the reason why clinical work is superior in Europe to anything that we can have, and that is that the professors occupy permanent appointments to the hospitals. That is to say, they are there year in and year out, they are well salaried, and their practice is a secondary consideration to them. Secondly, their assistants are not nominated merely for a year or 18 months, but they pass a difficult and rigorous competitive examination for the position, and when one is nominated, he serves a term of 4 years in the service to which he is appointed. Consequently from the head of the service down to the assistants, everything is complete, everything is thorough.

The instruction in clinical obstetrics consists in examination by the students, called in turn, and, under the direction of the professor, of the patients who are awaiting confinement, and thus the student soon becomes familiar with palpation and can readily make a diagnosis of the position of the fetus or any of the diseases that so frequently complicate pregnancy. If there are any difficult labors going on at the time of the clinic,

the hour is spent with the professor in witnessing an obstetric operation, or in the demonstration of an abnormal labor. Some bedside-teaching is given in obstetrics, and the students are also obliged to visit normal cases in convalescence, so that they know, when they get through their studies, how to take care of the woman after she has given birth to her child, as well as the care of the infant itself.

The gynecologic clinic is conducted on practically the same principles. One or two patients at the most are shown at each clinic, and one student is called to examine the case, after which he discusses with the professor what he has found, as well as the symptoms, diagnosis and treatment of the case. Besides this practical work, in which the finger of the student soon becomes familiar with the intricate lesions of the female genital apparatus, he also witnesses the major and minor operations in gynecology performed at the clinic.

The surgical clinic is here again conducted in the same manner as the clinics already described. Each student is called upon in turn to examine a patient and discuss the etiology, symptoms, diagnosis, pathology, and treatment of the case before him, after which the patient is operated on before the class by the professor and his assistants. The anesthetic is usually administered by the student who has examined the case, and thus by the end of one term each student has administered ether or chloroform some 6 or 7 times.

The medical clinic is somewhat different from those already described. Although the students are often called upon to examine and diagnosticate cases, the professor gives more of clinical lectures, such as are given in the United States, although on only about 2 days out of the 6 are these clinical lectures given. The other 4 are devoted to examination of the patients by students and discussing the diagnosis, treatment, etc. Attendance is required twice a week for 6 months at the clinic for mental disease, conducted at the State Insane Asylum, and during this course the entire range of mental pathology is demonstrated to the students by means of the patients in the hospital.

The more common forms of mental disease in all their various shades are fully put before the student, so that later on in practice he may not be led into error regarding a case, and may be able to advise the friends of the patient how to act regarding her welfare.

The ophthalmologic clinic lasts for 6 months, two hours a week, and is practically conducted on the same lines as the other clinics.

The practical work in pathologic anatomy consists in autopsies performed at the morgue by each student in turn and under the personal supervision of the professor. During the term the student will probably have performed 6 or 7 autopsies and will have demonstrated the entire pathologic condition of the subject thoroughly. He is thus not only made familiar with the technic of autopsies, but from what he does himself, as well as



seeing what all the other students do, he becomes most familiar with morbid anatomy, as found in the dead-room.

Regarding legal medicine, of the practical part of which only I am here speaking, I would say that this consists of medico-legal autopsies conducted in full rigor by the student, each one being called in turn, under the direction of the professor, and thus during a year he will have seen and practically taken part in most varied and interesting cases of murder, suicide, infanticide and many other cases of most practical value. In describing this practical work I forgot to mention the laboratory of pathologic anatomy, in which the course lasts for one year, three sessions a week for two hours. During this course the students are given material of every description which they are obliged to stain, mount and demonstrate, so that at the end of their year's work in this laboratory, each man will have a beautiful collection, with mounted sections of nearly every pathologic condition to which man is heir, and which in after-years will be most valuable for reference.

As to the didactic lectures, I have little or nothing to say; they last one year and are more or less interesting.

When the student has completed his 3 years' work in the clinics and has followed the required didactic lectures and has passed his examinations in the various branches of medical science, both in the practical and theoretical work he has to write and uphold a thesis before the faculty of medicine before receiving his degree of doctor of medicine. The time required for this work varies from 3 months to a year and a half, all depending upon the subject and to the extent that the research is carried out. Most of the theses presented are valuable contributions to the subject of which they treat and are not usually mere compilations from the literature, representing an amount of original investigation, involving long and serious painstaking work. When the thesis has been upheld, and if it has been found satisfactory, the student simply goes to the secretary of the university and receives his diploma, and is now a doctor of medicine.

What I wish to particularly insist upon is the thoroughness and the relatively short time in which medicine may be acquired, if the Continental system be adopted (and why should it not be adopted) in our medical schools. There is one great drawback to the introduction of the system here, and that is that the various hospitals to which students of medical colleges have access are not under the control of the faculty of medicine. In Europe the universities are controlled by the State, the hospitals are controlled by the State, and consequently the State obliges its hospital-patients to submit to the necessities of the faculty of medicine, and I will say here that the patients in the public institutions of Europe are better treated than the patients in the majority of our large hospitals, and

why? Because the men who are in charge of the principal services in the hospitals are professors in the faculty of medicine, who must be of the first order and of the highest standing, and consequently the work carried on and that is seen by the students is of the highest order and the most scientific kind.

An ideal faculty of medicine, such as exists on the Continent of Europe, could be easily established in an American city, and although it might be on a very small scale, its results would be far superior to those of the majority of the medical schools now existing. The corporation of a faculty of medicine could endow it with its hospital, and when I say this, I do not mean an enormous building, but a building that might have some 60 beds, of which 20 may be medical, 20 surgical and 20 for the gynecologic and obstetric department. Add to this a well-fitted out-patient department, the appointment of professors of the school, surgeons and physicians in charge of the hospital, and students will be more benefited by this manner of proceeding than by any other.

A word now as to the medical school itself. I have seen the Harvard Medical School. I have seen some of the large London schools, and they all impress me with but one idea, and that is a useless multiplication of expense. What have the medical schools in Europe? They have two or three lecture-rooms at the most—except in Berlin or Paris, and the very large ones in which the number of students makes a larger number of lecture-rooms necessary. These lecture-rooms should be large and perfectly plain, and instead of spending a lot of money on the building itself, the laboratories should be fitted up; and in way of laboratories, let me mention all that are essential. Firstly, the laboratory of dissection, the laboratory of normal histology, the laboratory of chemistry, the laboratory of pathologic anatomy. All of these should be large and must accommodate the class of students, consequently containing a sufficient number of tables and chairs to seat each one of the class separately; and lastly laboratories of medium size for the professor of physiology, for the professor of surgery and surgical pathology, for the professor of medicine, and these will be all that are necessary.

A hospital for clinical instruction should be so constructed as to be well supplied with small laboratories for carrying out the various bacteriologic researches.

In closing, I am perfectly willing to admit that didactic lectures and the theory are essential points in the instruction of the medical student, but to make an educated physician, the student must be in daily attendance on the clinics pertaining to the 5 principal branches of medicine, namely surgery, medicine, obstetrics, gynecology, and ophthalmology, and thus after two years of constant contact with the sick and under the direction of capable professors, he will go into practice and know what he is about.

The examinations of senior students should not only be on the theoretic lectures, but each student should have a surgical, medical, gynecologic, ophthalmologic, and, if possible, an obstetric case to examine and to discuss with the respective professor, and thus it would be possible to arrive at the real knowledge that the future physician should have of medicine—the essential point for every man who desires to practise the healing art.

### SOME CAUSES OF NERVOUS PHENOMENA IN CHILDREN.<sup>1</sup>

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Read before the Germantown Hospital.

THE great increase in the number of sufferers from nervousness in its various forms, which it is only too evident has come upon the present generation in all civilized countries, has been ascribed mainly to the rush and worry of the newer business-conditions, and the greater anxiety to obtain wealth and luxuries. Doubtless these are often the immediate causes, but they are merely the summer-heats that mature the grain. The seed was sown in the springtime of childhood, and found its nutrient soil in the customs and methods to which children have been subjected, more and more, since the middle of this century.

With wrong ideas of child-physiology, with no ideas of child-psychology, parents and teachers have unwittingly brought about the state of things that is now deplored. It is important to know these conditions, and, if possible, find a remedy for them.

The nervous equilibrium is much more easily disturbed in children by local and general affections than in adults. All physicians know well how high temperatures, and often violent cerebral symptoms may be brought about in a child by apparently trivial causes. Alarming convulsive seizures may be traced directly to an acute indigestion, to the presence of intestinal entozoa, to phimosis, or even to slight derangement in dentition. In such cases the removal of the cause brings instant relief. The very severity of the nervous disorder—demanding a search for the cause—often directs treatment to defects and lesions that without such serious manifestations would have been thought incapable of producing any effect, and consequently would have been entirely ignored. The convulsion is certainly serious enough, but nature may thereby have saved the child from a more prolonged and more obstinate trouble at some future day, the result of that same causal irritation. The physician often puts aside, as unworthy his attention, many slight abnormalities that may in time give rise to pathologic processes.

There is much that is unhygienic brought into the

child's daily life. The very atmosphere into which the city-baby is born—the air it is forced to breathe—is sufficient, more times than we think, to produce that irritation of the nervous system which in the end leads to nervousness. Then there is the daily rumbling and jarring of vehicles in the street, which never entirely cease throughout the 24 hours. Next follows the host of kind relatives and neighbors, each and all of whom dangle the baby in the air and talk a lot of nursery-jargon in the shrillest possible key—as if the street-noises were not enough, or the baby's inability to reply were due to a lethargy from which it must needs be aroused. Its food, too, is often wanting in proper nourishing qualities. City-mothers are generally anemic—90% of hemoglobin being a rarely high proportion, and 75% being much more common. The milk from such mothers cannot be of best nutrient power, and in many women the supply fails entirely, and must be substituted by cow's milk or one of the artificial foods, which need not be commented upon here except to say that they are not "nature's own."

As the child becomes a little older, say from the end of its second year, it enters upon a new era, overlapped still by that of dangling and bad feeding—for like the geologic ages, these eras overlap one another—one that will soon become very prominent. This we may call the era of threatenings. The child, too young to know the difference between right and wrong, must nevertheless be made to obey, and the methods usually adopted are the time-honored ones of "spanking" and "threatening." All sorts of dire evils are evoked, from a Black Douglass to a policeman, to scare the unlucky malefactor into obedience. The practice is almost universal, especially among the poorer classes and the ordinary hired nurses. Closely connected with this era is that of ghost-stories and fairy-tales, filling the young mind with the most fantastic figures, which the vivid imagination easily conjures up at the most irrelevant time. In a few years follows the school-era—of cramming and of examinations—to the ambitious child a source of worry and mental strain, to the indifferent one a source of ridicule and irksomeness.

Such is, in brief, the life-history of the young of *homo sapiens*. Running thus hastily over these various influences that constantly surround almost every child, we have presented the greater part of the subject of the etiology of nervousness. A closer study will bring conviction that these influences have actual existence, and while they are brought out perhaps into rather bold relief in the foregoing statements, they will be found to be not exaggerated in the least.

Without stopping to consider the somewhat prevalent idea that parents of the present day are less vigorous than those of 50 years ago—which may or may not be a fact—let us take up a little more minutely this whole question of nerve-irritation.

When perfectly healthy an infant should sleep 20 of

<sup>1</sup>Read before the Medical Society of Germantown, November 8, 1897.



the 24 hours; yet how many do we see that do not do this or anything like it. Be the cause what it may, there is an extra strain thrown upon the nerves. This is increased if the wakefulness be accompanied by crying, as it generally is, and the fault—overfeeding or underfeeding, bad food or bad digestion, improperly adjusted clothing, chilliness, thirst—whatever it may be, is bringing harm through the crying as much as through its direct action. Moreover, all such sequences are retroactive.

A reprehensible practice, which is of sufficient importance to deserve mention, is to suddenly arouse a baby from a sound sleep, especially if for the benefit of visitors who wish to talk and play with it. Such an excitation falls directly on the nervous system, and is an important factor in producing nervousness. Then there are the various external irritations—the street-sounds, already mentioned, and unnecessary confusion in the home. Startling noises of all sorts must be avoided—electric bells, alarm-clocks, and other such mechanisms should never be allowed in the nursery. Even a loud-striking time-clock is objectionable. Pure air and cleanliness are even more necessary to the infant than to the adult. It is useless to name more of such instruments for baby-torture that belong to every-day life in this end of the nineteenth century; their name is legion, but each and every one has its effect upon the delicate nervous system, and is ever ready to lay a foundation for some nerve-trouble. And after subjecting the baby to such unhygienic surroundings, to accuse it of having a nervous temperament or inheriting a nervous constitution is simply adding insult to injury.

Passing to the next stage in the growth of the child—the stage that has been designated the era of threatenings—we find the same conditions obtaining in, of course, an advanced form, and, superimposed, an equally great number of new ones. The child may have become so schooled that it can hear the electric bells without being startled; it can be rushed upon by comparative strangers and allow itself to be kissed and teased without crying; it can even master improper food with only occasional attacks of acute indigestion; but the fresh dangers that now come to it are all the more to be dreaded because they find a new and unprepared point for attack. The infant-mind is entirely receptive, it originates nothing, but the mind of a two-year-old child is beginning to form ideas for itself and to join together the units that it has been gradually accumulating. It is still receptive to a marvelous degree, but it is also making eager attempts to construct. There is no time in the life of a human mind that needs so great care and caution as this, and it would seem as if there were no time that receives less. Most parents seem to think that education—schooling—has not yet commenced, and that the sole object to be considered is amusement, or, as they would perhaps say, “anything to keep the child out of mischief.” One thing is cer-

tain, however, that whatever is told to such a child as amusement from our point of view, is never received by it in a similar light. The all-pervading thought of that child-mind is inquiry, experiment, the gaining of knowledge, and every word that comes to it as fable and fiction is received as a true history of that outside world of which it as yet knows nothing. It cannot distinguish between the false and the true, and so it accepts all as true. I would not argue, I do not believe, that a child must never hear fable or fiction; as such knowledge will probably serve a useful purpose later on, but there should be an absolute freedom from all that is sensational, horrible, exciting, or calculated to call forth great sympathy. The child, to be sure, knows nothing of death, and stories that have such a finale, as for instance “Red Riding Hood,” would cause no horror, but those that are made to have a personal application of their dangers and their terrors, should never be allowed to reach the ears of children. While I would not follow the teachings of Figuiet, and banish from the child-library La Fontaine's Fables, or “Whittington,” or “Puss in Boots,” I would adopt his plan to teach the young the simple “Pictures of Nature,” which his many volumes have so admirably presented. The child who goes to bed with thoughts of the structure of a flower or the life-history of an animal filling its active mind, is very much less likely to be roused by horrible dreams or pass the night in sleep-talking, than the one who was entertained by the myths of Typhæus or Hercules, or Saturn eating up his offspring. Exciting, thrilling stories are as often the cause of pavor nocturnus, as is a diet of pork and beans and ice-cream. Fear of darkness, or of being left alone, may generally be traced to this same origin.

Children—even quite young ones—are very sensitive, and dislike being placed in any position that will cause ridicule or chagrin. To taunt or tease a child about some physical defect of which it may be the unfortunate possessor—as hare-lip, strabismus, or lameness—is not only wrong ethically, but is a powerful factor to make such a child morose and irritable.

One thing more may be mentioned as occurring at this period, and producing, directly and indirectly, many nervous symptoms. It is the custom of dressing the little ones in rather scant clothing—with bare legs and arms. It is proper to keep children cool in very hot weather, but our summers have many days that are entirely too cool and damp for such a fashion, and the effects of local chilling are sure to follow.

When the school-age is reached there arises a further series of irritations that will probably be felt by the nervous system, eye-strain from ocular defects and bad light, bad habits of posture, bad ventilation and, at present in this city, overcrowding, the driving methods of teaching, the efforts of emulation and ambition, a totally bad system of education arising from the fact, probably unavoidable, that individual instruction is

lost in class-instruction, and that all sorts of minds and abilities are forced to adapt themselves to a single standard. Little or no chance is given the teacher to understand her pupil as an individual, and it would be merely by an accident that the latter would be led through proper and healthy mental channels. "Mere accident" will, of course, fail to find nine-tenths of the scholars, and these nine-tenths are compelled to obtain their education—the very word becomes a misnomer—by inapplicable methods, which, kept up for years throughout the whole length of school-life, foment a mental discord, a perversion, an aversion, perhaps an open rebellion, not always a misfortune. To remain bound down to false and inharmonious methods becomes intellectual slavery. The girl or boy early recognizes this want of sympathy between the teacher and himself, which is responsible for very many erratic and unevenly balanced minds, becoming more and more evident as the years go on. This is merely an expression of "nervousness"—nothing else.

Children, during school-years, must remain children, and not try to imitate their elders in various social functions. Late hours, evening-parties, theater-going, and the like, are very rarely, practically never, to be indulged in. Theater-going especially—with the usual spectacular trashy plays that are now in vogue—is decidedly injurious, and will lead to hysterical and other nervous manifestations.

To all these conditions that have been enumerated we must add the various latent diseases—rachitic, tuberculous, and the like—which may be present in any child, and which give their quota to the hundreds of other irritants of the immature nervous system.

What is the result of it all, what are we to expect? It would indeed seem, at first glance, as if the infants that could live to grow to be healthy men and women would be few and far between, and medical experience, in a measure, will sustain such a conviction; but all children are not exposed to such conditions all of the time, and therein lies their only safety. How many do not escape we can judge by the numerous cases of chorea, diabetes, urticaria and other skin-affections, the various forms of hysteria and spasmodic troubles, and even some inflammatory diseases—as cerebral meningitis from great fright or overstudy. How many must there be then in which no such obvious lesions occur, but that go on to adult life prepared to break down at any time an extra strain may come upon them. The business worry, the responsibilities and misfortunes of this bustling, struggling city-life, are but the added straw to the camel's load. Where the powder is, a little spark may do great mischief. This may often help to explain why mental strain or shock will pass harmless from one individual while in another it will leave behind it a Parkinson's or a Graves' disease, a dementia paralytica, or any one of a host of lesser evils. So far as I know there are no statistics to show the relation of tem-

perament or previous condition of nervousness to such diseases, though it would be of interest to have some reliable data on the subject. The tertiary manifestations of specific disease are very prone to show themselves in the nervous system, and although the same want of statistics will forbid any positive statement, yet I am convinced that the possessors of irritable nerves would be in a large majority among such patients. We all know how much the prognosis may be influenced in major surgical operations or in violent exhaustive acute affections, by the general nervous habit of the patient.

What can be done—must we see children exposed to such dangers and do nothing? Unfortunately the answer must in most instances be *yes*. We cannot alter or abolish the so-called comforts of civilization; we cannot revolutionize the school-system; and only after many years of warning and instruction can we hope to teach mothers and nurses the principles of psychology. We can, in many cases, bring about an improvement in the clothing and manner of dressing children, and, perhaps, more caution in diet. When the nervousness is once established our only resource is the removal of the patient to quieter, more hygienic surroundings, where he should remain a long time. Drugs, either sedative or nerve-tonic, are useless and often harmful. The great interest now being shown in athletics and general outdoor exercises, is, of course, a long step in the right direction. Whether or not it be enough the future alone can determine, but the prospect is good that the next 20 years will see a considerable diminution in the number of nervous breakdowns. To the adults who are suffering now from the faults of childhood, we have little to offer. The whole nervous mechanism in them has become altered—habituated to the morbid workings—and only a thorough renovation will accomplish anything. That is the reason nervous therapeutics is so lamentably unsatisfactory. It is not so much a need to aid nerve-power as we would aid digestion with a pepsin; not that we need a cerebrin or a neurin to add to nerve-force; but rather that the harmony of nerve-action shall be restored, the nerve-cells re-educated. This probably can be done in many cases, but it is a question of years of treatment. Our care and attention as physicians should be directed to the young girls and boys who are to be the adults of the twentieth century: to warn them and their caretakers of the dangers that surround them. Let us save the growing nerves, train them as they should grow, guard them in their youth, and "nervousness" will no longer be the typical American disease. We must remove the irritants that prey upon the developing nerves; we must "take the foxes, the little foxes, that spoil the vines; for our vines have tender grapes."

**Dr. Otto Schwartz** has been appointed extraordinary professor of ophthalmology at the University of Leipzig.



# TYPHOID FEVER WITHOUT COLD BATHS.<sup>1</sup>

By JOSEPH EICHERBERG, M.D.,

of Cincinnati, Ohio.

Physician to Cincinnati Hospital.

THE advocates of the Brand treatment of typhoid fever are entitled to the thanks of the profession, for they have proved beyond doubt two of the most important points in the management of this too common disease, namely :

1. That constant supervision and nursing are of greater importance to the patient than medication.
2. That the temperature furnishes the most important guide in the symptomatic treatment; and that it must be taken regularly day and night during the entire course of the disease in order that the indication for treatment may be promptly met.

With this we have stated *all* that the Brand treatment is entitled to; there remains a good deal in the way of criticism.

The cold-bath treatment is essentially cruel, barbarous and dangerous, and its cruelty is not lessened to the individual because it has received the indorsement of many eminent men. It has such terrors for some patients, that I have known them to resist the inclination to sleep for fear they should be plunged into the bath while asleep. It is common experience that patients complain piteously while immersed and constantly ask to be removed. The bath produces cyanosis and chilliness in many cases. It necessitates the attendance of several nurses. It entails considerable movement on the part of the patient, and thus increases the possible danger of perforation and hemorrhage. While its regular employment is possible in hospitals, it cannot be regularly carried out in private practice, and it must therefore lose a large share of its value. The percentage of mortality, and of the accidents incidental to the course of the disease is not less than with other plans of treatment, one of which I shall take the opportunity to explain more fully.

It has been said by some clinicians, Osler among others, that any other plan of treatment offering equally good results would be gladly welcomed. They have not been insensible to the appeals of the patients, but have felt that the duty of the physician consisted in giving to the patient the best chances, even at the expense of great physical discomfort and of total destruction of his peace of mind.

The advocates of the Brand treatment have been loud in their denunciations of the coal-tar antipyretics, from the use of which they have witnessed great cardiac depression and threatening symptoms of syncope. They have lost sight of the fact that in no other disease are the factors concerned in the regulation of animal heat so unstable, so easily influenced by slight causes (extrinsic or intrinsic) as they are in typhoid fever. A

trifling emotional disturbance, premature sitting up in bed, or the taking of a minute quantity of improper food reacts upon the economy in a manner apparently out of all proportion to the exciting cause.

It is this exceptional mobility of the temperature that has been overlooked in the use of the coal-tar antipyretics. What is considered to be an ordinary full dose is followed by more than an ordinary therapeutic effect. It is not unusual to find chills as a sequel of a 10-grain dose of antipyrin or phenacetin, or an 8-grain dose of acetanilid. In all cases when chills occur during the use of aniline derivatives, an interval of about 5 hours will elapse from the time of taking the drug to the occurrence of the chill. Chills may occur in cases not treated with coal-tar products; but they most frequently follow the use of the latter when given in doses, ordinarily physiologic, but which in typhoid fever are distinctly and almost uniformly excessive.

The outline of our treatment may be here indicated. With the certainty of the diagnosis of typhoid fever the patient is put to bed, an ice-cap is applied to the head, and the diet is restricted to milk and albumin-water; the patient is encouraged to drink water freely, and as medicine he receives dilute hydrochloric acid, in 15-drop doses, or 2 grains of quinin in a teaspoonful of chlorin-water three times a day. The temperature is taken every three hours, by the mouth, when possible.

Whenever the temperature reaches 103° in the mouth, or 102.5° in the axilla, the patient receives 4 grains of acetanilid, and a tablespoonful of whisky. This dose generally suffices to control the temperature for 6 hours. In some cases it has been found too powerful a depressant, and a dose of 2 grains has been substituted. In other cases, when the effect was inconsiderable, the dose has been cautiously increased, never, however, exceeding 6 grains at a single dose. Patients are kept perfectly quiet in bed and all visits are interdicted. When the evening-temperature has remained normal for one week, the patient is allowed some solid food; after 4 more days of normal evening-temperature he sits up in bed; if no reaction follows, then, at the end of 2 weeks from the first normal evening-temperature, he leaves his bed, for one hour the first day, the time being gradually extended. The bowels, when constipated, are moved daily by a simple enema; when moved oftener than twice in 24 hours the diarrhea is promptly and efficiently controlled by the use of Hope's camphor-mixture. The ice-cap is not removed until the temperature has been normal for 24 hours. Reading is not allowed until the patient is ready to sit up. The body is sponged twice daily to meet the ordinary requirements of cleanliness.

Insomnia, a frequent and commonly disregarded symptom, is treated with 25-grain doses of chloralamid. Sleeplessness is deserving of more prominent mention among serious symptoms than it has generally received.

<sup>1</sup> Read before the Academy of Medicine of Cincinnati, April 11, 1898.

The loss of sleep seems easily to pave the way for comatose or the typhoid state; the profound nervous disturbances grow rarer of late years, and will become even less frequent if, from the outset, provision be made for regular sleep.

The advantages claimed for this treatment, as compared with the cold-bath treatment, are its greater ease of application, with an equally low mortality and much greater comfort to the patient. Complaints do not follow the use of acetanilid in the dosage indicated, and apyrexia is quite as prompt and of longer duration than after the bath. It is claimed for the cold bath that it prevents the supervention of the severe nervous manifestations formerly so conspicuous a feature in the clinical picture of typhoid as seen two-score years ago; but this is not universally true. Delirium and stupor occur often enough in the cases treated by Brand's method; and with the acetanilid-treatment they are, as a rule, either transient or absent altogether. One nurse is physically unable to execute the details of the bath-treatment. A single attendant in the sick-room can easily attend the management of a case on the lines already indicated.

The absolute test of the value of treatment is the total number of recoveries. Figures in typhoid fever may be greatly distorted; the type of the disease varies in different years. My tables, of which the figures to be presented give a summary, comprise a hospital-experience of the past 6 years; during which time cases have been treated at all seasons. The medical service of the Cincinnati Hospital is divided between 6 physicians, serving alternately in sets of 3. I have compared my figures with those of the house as a whole, and have found them somewhat the more favorable. Along with the total number of recoveries, other features of great importance in the estimate placed upon the value of any special treatment remain to be considered. Among these are the total duration of the fever, the liability to relapse, the occurrence of grave complications, and the length of the patient's stay in the wards; all of these (from an economic standpoint) bear upon the cost of maintenance of the hospital-patient. I believe that the results to which I shall call attention will bear comparison in this regard with those of any other routine plan of treatment.

I wish to emphasize one fact in this connection; namely, that in a few instances, the antipyretic will be found without any notable influence upon the fever. Such cases are few; they will, however, occasionally be encountered. The same statement holds good also regarding the cold baths. In a few cases, after failure with acetanilid, I have tried the cold baths with no better result.

The liability to perforation is, I think, greater with the bath-treatment, owing to the necessary manipulations. The exhaustive report on typhoid fever issued by the staff of the Johns Hopkins Hospital shows

36.8% of fatal cases due to perforation, a statement that should give us pause.

It is claimed for the treatment herein advocated that it is in no sense specific, but that it recognizes the two cardinal features that, more than any other, contribute to a favorable issue, namely, constant and intelligent supervision of the patient, and regular and systematic observation of the temperature to serve as a guide for antipyretic treatment. High temperature is dangerous; and the danger increases in geometric progression with the length of the pyrexial period. To keep the patient's temperature constantly below the danger-level is to conserve his strength, and to establish a more speedy convalescence. If such control of the temperature is possible without the refined cruelty of the cold bath, so much the better for both patient and physician.

In reporting a percentage of mortality from the acetanilid-treatment of 6.67, I have overstated the death-rate. It should be 4.5%, as I have included with the fatal cases 3 that were treated by hydrotherapy; one received 46 cold packs in 20 days; another received cold baths after the sixth day, as acetanilid had no effect—death ensuing on the fourteenth day; the third came under my care on the tenth day, and death resulted from intestinal perforation on the thirteenth, after treatment with plunge-baths during the first 9 days.

The recommendations as to treatment are founded upon experience in hospital and private practice. The figures of the latter can hardly be brought into the argument—comparison should be made with other hospital-work.

My own hospital-experience is based on the results obtained in 136 cases treated in the last 5 years. Of this number 103 were in males, 33 in females. Recovery ensued in 127, death in 9 (6.6%); deducting 3, the mortality would be 4.5%. Of white males 79 recovered, and 4 died; of colored males 16 recovered, and 4 died; of white females 26 recovered, and of colored females 6 recovered, and 1 died.

According to ages, the cases are classified as follows:

Under 15 there was none.					
Between 15 and 25 there were 86 cases					
"	25	"	35	"	38
"	35	"	45	"	7
"	45	"	55	"	5

According to season, there occurred:

In Spring.....	23 cases	In Summer.....	27 cases
" Autumn.....	33 "	" Winter.....	53 "

In 124 cases the average duration of the fever in the hospital, including relapses, was 17.879 days.

The average stay in the hospital of the fatal cases was 12.9 days.

The percentage of relapses, including one case in which the patient entered the hospital during a relapse, after having been discharged from another hospital a week previously, was 7.3%. The average duration of the relapse was 18.9 days.



Hemorrhage occurred in only 4 cases of the entire series; one of these proved fatal. In one case hemorrhages occurred on the 15th, 18th, and 31st days; in another a single hemorrhage on the 14th; and in one case the stools were bloody for the first week.

The average daily dose for 60 patients, in whose histories every dose of acetanilid was noted, was 8.26 gr.; the average time during which the drug was given was 6.45 days, so that the total average amount administered to each patient during the entire attack was 53.28 gr. As the usual dose was 4 gr., each patient received daily two doses of acetanilid for about one week. Surely, this means less inconvenience to the attendants and much greater comfort to the patient than could be secured by the bath-treatment.

Lest it be intimated that our results were obtained with cases presenting an unusually mild type of the disease I give the maximal temperatures. There was noted a temperature of

106° or over in 2 cases;  
105° or over in 30 cases;  
104° or over in 51 cases;  
103° or over in 25 cases;  
Below 103° in 18 cases.

In 10 cases the temperature-chart is incomplete. To show the promptness with which the fever-curve became amenable to treatment, it may be added that the highest temperature of the entire attack was recorded during the first 3 days of the stay in the hospital in 88 of 126 cases; and on the first day in 51.

Contrary to the usual experience, it will be remarked that the largest percentage of cases falls in the winter-season—53 of the 130 cases. A study of the morbidity for several years would seem to substantiate the view that the greatest prevalence of typhoid can be found to coincide with a period of the year in which a long drouth is broken by heavy rains. This condition is commonly found in the Ohio valley during the autumn rather than the summer. Prolonged dry weather allows of the accumulation of much dried sewage throughout the watershed. The autumnal rains wash this into the river, then at a low stage, and thus is produced great concentration of organic material in the drinking-water. The typhoid poison, ingested with the drinking-water, passes through its incubatory stage of from 3 to 4 weeks, and at the end of November or early in December the proportion of typhoid cases is suddenly increased. When the autumn rains come early the appearance of typhoid may be expected at a correspondingly earlier period, and conversely.

Of the fatal cases, death occurred in one from meningitis with exudation, in one from intestinal perforation, in one from general emphysema of the connective tissues due to rupture of the air-passages from the violence of the cough, in one from axillary abscess, jaundice, and incessant vomiting (a sort of pyemic condition); in one from hemorrhage, 5 large bloody stools

being passed during the 3 hours preceding death; in 2 from complicating lobar pneumonia, which in one case involved the whole left lung, in the other only the lower lobe.

Reference has been made to the necessity for proper adjustment of the dose of acetanilid. This may be illustrated by the case of a barkeeper, aged 23, who, after the usual dose of 4 grains was found to have regularly recurring chills. The dose was diminished to 3 grains; the chills still followed. Two grains were then given; the fever was controlled by a dose of this size for nine hours, and the chills ceased.

The longest stay in the hospital, 99 days, is recorded in the case of a patient who developed a purulent inflammation of the middle ear. This complication, noted in 4 of our cases, was twice associated with a parotiditis. In each case the suppurative disease of the ear seemed to prolong the febrile period, greatly retarding the convalescence. The other unusual complications noted were nystagmus, which occurred in one case on the eighth and ninth days; a peculiar mild mania, in no sense delirium, developing in another coincident with the afternoon-rise of temperature, lasting about 6 hours, and then wholly disappearing for the next 18 hours; and lastly a post-typhoid mania, with delusions of greatness, in a boy of 17. In one case facial erysipelas developed during convalescence; in only one were bed-sores developed.

During the past 5 years the mortality from typhoid fever in the entire medical service, including my own, has been 10.54%; excluding my service, 12.1%. I adduce these figures as further corroborative evidence that the cases received were not of an unusually mild type.

## MECHANO-THERAPY IN CONNECTION WITH DISEASES OF THE NERVOUS SYSTEM.

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My purpose is to draw the attention of the medical profession to the importance of mechano-therapy in connection with different nervous disorders. First it will be necessary to state what is understood by the term mechano-therapy. It is the mode of treating diseases by movements, and although closely connected with physiology, anatomy and pathology, it is a science in itself, both in theory and in practice.<sup>1</sup>

A careful distinction should be made between *general*, *special*, and *local* treatment by mechano-therapy. Treatment belonging to the first group is called "general massage-treatment," and can be used for a variety of diseases. It acts as a tonic and is a true restorative.

<sup>1</sup> For further definitions and classifications the reader is referred to an article entitled "A Short Review of Mechano-Therapy in Connection with Obstetrics," *New York Medical Journal*, December 5, 1906.

Treatment of the second class is generally called "special treatment," and is used mostly for different organs of the body when diseased. It acts by effecting changes in these organs, and is an alterative. The last variety is simply "local treatment," and is used for local injuries or local manifestations of diseases. It may be called a symptomatic agent. At last, it must be remembered, that mechano-therapy is only a remedial agent to be used as a part of the general treatment of a disease in connection with drugs, electricity, diet, rest, etc.

1. **MASSAGE.**—Regarding the different manipulations of massage we know that percussion, stretching, pressure, vibration, and stroking, are chiefly employed in the treatment of the different diseases of the nerves. Posse has laid down the following general rules:

"To lessen neural activity give pressure or prolonged percussion; to increase it, give brief percussion or vibration. For motor disturbances work from periphery to center; for sensory disturbances from center to periphery."

Further, the same writer says:

"Pressure is entirely local in its effect, percussion somewhat more extended, and vibration is quite general."

Stretching is also a valuable variety of massage in the treatment of certain nervous disorders, especially whenever the nerve is large and superficial, or easily reached, as *e.g.*, the great sciatic, or the anterior crural. Brandt highly recommends stroking, executed slowly and gently, as having the action of a sedative, and often of a soporific. Stroking practised for this purpose should always be done from the center, that is, from the brain to the periphery.

To sum up, the uses of the different manipulations of massage in connection with nervous diseases would be:

*Friction*—Irritation of the cutaneous nerves;

*Kneading*—To lessen sensory irritability;

*Percussion*—A neural tonic;

*Stretching*—A strong sedative in the presence of neuralgic pain;

*Pressure*—A mild sedative in the presence of neuralgic pain;

*Vibration*—A stimulant in the presence of different kinds of paralysis;

*Stroking*—A general sedative and hypnotic.

2. **MEDICAL GYMNASTICS.**—Regarding the utility of medical gymnastics in connection with different kinds of spasm, convulsions, tremors, loss of muscular power, and loss of coordination, all symptoms of cerebral or spinal lesions, we may adopt the following rules:

(a) They will increase the muscular power in the affected extremities.

(b) They will improve coordination by bringing muscular contraction and relaxation under control of the will.

(c) By the scientific use of, first, passive, and then active medical gymnastics, the patient will regain con-

fidence in his power of motion and locomotion, and his physical and mental condition will slowly but gradually improve.

(d) Great patience and skill, and the full confidence of the patient, are three things absolutely necessary for the success of such a treatment.

3. **GENERAL OBSERVATIONS.**—Circumduction of the head will relieve cerebral hyperemia. It is contraindicated in cases of cerebral anemia, hemiplegia, and paraplegia. In cases of insomnia caused by mental overwork, anxiety, alcohol, or mania, a course of mechano-therapy is indicated, and circumduction of the head should always be used in prescriptions for such cases. This movement is also a hypnotic.

Brandt recommends pressure on the jugular veins, with the patient's head in hyperextension in similar cases.

Friction, percussion, and pressure, along the spine will relieve spinal congestion by increasing the cutaneous circulation. Passive and active movements of the lower extremities will also aid the flow of blood from the head. Therefore they should be used in the treatment of insomnia, or of cerebral and spinal hyperemia.

In the treatment of hysteria, hypochondriasis, and neurasthenia, special attention should be paid to the organs of digestion. In cases of neuritis we must commence slowly and by degrees increase the strength and time of each séance.

Norström claims to have observed, and I fully agree with him, that sciatica, be it either of the neuralgic or of the neuritic form, is always accompanied, in greater or less degree, by inflammation of the muscles in the neighborhood of the nerve, and the treatment consists in massage not only of the nerve, but also of the surrounding muscles. It will perhaps also be of some interest to mention that a similar inflammation of muscles of the neck is common. The patient complains of constant headache, dizziness and vertigo, which are greatly increased while occupied in brain-work. Local massage is to be recommended in such cases.

Even in the treatment of localized spasm and paralysis, as writer's cramp, the best result is obtained by combining general massage with local treatment.

**Eight Hundred Cases of Labor.**—H. S. Crossen (*Medical Review*, July 2, 1898) reports that of 863 patients coming under his care at the St. Louis Female Hospital between July, 1895, and April 1, 1898, there was no death from puerperal infection. Of 31 cases of Cesarean section that he has collected in St. Louis, the maternal mortality was 47%, and the infantile mortality 53%. It is believed that a summary of the cases operated on by persons having a large experience in abdominal work would show a much higher percentage of recoveries; but it is stated that the high mortality is probably due not so much to lack of skill or to faulty asepsis as to the poor condition of the patient from long waiting and repeated manipulations within the birth-canal. About 7% of the cases measured had contracted pelvis, less than one-half of these requiring instrumental delivery, however.



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**Complete Removal of the Stomach.**—The *Pacific Record of Medicine and Surgery* has recently given in its editorial columns a brief account of a third successful case of esophago-duodenostomy operated on by Dr. MacDonald of San Francisco. In its summary the *Record* has evidently overlooked the case of Richardson, of Boston, which brings the number of successful cases up to four, the other operators being Schlatter, of Zurich, Switzerland, and Brigham, of San Francisco. If the operation continues to increase in popularity, and the cases in which it is indicated increase in frequency in anything like the ratio that has held since Schlatter's first successful operation, less than a year ago, its performance will soon fail to be noteworthy. We hope, however, that total gastrectomy will not be indiscriminately undertaken; although the results thus far published do not show as great an immediate mortality as would be expected from so extensive an operation, for the patients have survived for several weeks at least in 4 of 9 cases. To these may be added seven other cases of operation so extensive as to be practically total gastrectomies, with recovery in six; one patient surviving the operation for three years and another for six years. The ultimate outcome of these operations will be awaited with much interest. Results in general of operations for carcinoma of organs in the peritoneal cavity are not satisfactory enough to furnish much encouragement that there will be many permanent cures. The successes thus far recorded show, however, that the mortality from operation alone is not greater than the former mortality of pylorotomy and several other operations, and if a few permanent cures can be obtained and life be prolonged and suffering alleviated in other cases the operation seems justified for the relief of an affection otherwise certainly fatal.

**Death from Nostalgia.**—Two deaths from nostalgia, or home-sickness, in the American army at Santiago, have been reported by General Shafter to the War Department. Both of these cases, remarkable to say, occurred in the same regiment, the Second Massachusetts Volunteers. We presume that the diagnosis in these cases was carefully and accurately made by the military surgeons, yet we should like more light on this interesting and important subject. The daily reports show that the troops at Santiago are suffering much from the climate and various infections, especially

typhoid, malarial and yellow fevers; and this fact should remind us that the profound psychoses are not infrequently associated with or caused by some form of infection. Typhoid and malarial poisons especially have been noted in this role, and so true is this that in order to arrive at a strictly scientific diagnosis it would be well to be sure whether any obscure form of either of these diseases is present in such cases.

The fact that two cases occurred in the same regiment points possibly also to the influence of imitation or suggestion. In all the psychoses, especially hysteria and the mild forms of insanity, this factor is now well known to be sometimes active. We need only recall the cases of *folie communiquée* that have been put on record. In these instances a mental disease has been known to be communicated from a patient to another highly susceptible person. In one instance three sisters were involved, the first having imposed her delusions upon the others. Epidemics of hysteria are too well known to need more than mention. The fact, however, that the two cases in the army at Santiago were so rapidly fatal can probably only be explained on the theory that the patients were possibly much reduced physically by exposure and infection. The mere separation from home on what promises to be but a short military expedition hardly seems sufficient in itself to have caused such untoward results. The case is different with the poor emigrant, who feels that all the home-ties are hopelessly severed.

Nostalgia, or home-sickness, is merely a form of melancholia. As in all the insanities, more than one factor usually acts as a cause—hence the necessity for knowing the heredity and antecedents of the patient. The enforced absence from home may simply act as an exciting cause; there may be far deeper-seated causes, such as grave constitutional defects, that act as the real basis for the disease. This is especially true in cases in which the reason is permanently lost or life itself sacrificed. Some races, or peoples, are supposed to be especially liable to this disease; the inhabitants of mountainous countries, for instance, are said to suffer unduly. Hence the Swiss are said to furnish many examples. So also rustics are more prone to suffer than the inhabitants of towns.

The observation of nostalgia among soldiers is by no means new or recent. BARON LARREY, the eminent military surgeon of the Napoleonic wars, wrote on this

subject in his surgical memoirs. In our own country observations were made in the late civil war. CALHOUN wrote on nostalgia as a disease of field-service, and PETERS noted this affection as among the evils of youthful enlistments.

It is a remarkable fact that the somewhat extensive literature of nostalgia is almost entirely French. Many monographs have been written in that language on this subject. The American, English, and even German literature is comparatively meager. This will seem to be a proof to some readers that the French have more of the *mal du pays* than other nations have—just as they are said to have more of the other psychoses. But to our mind it is rather an indication that they have greater literary activity among the curiosities of medicine.

**Epidemic Cerebrospinal Meningitis.**—No State board of health in this country has been actuated by a broader or greater scientific zeal than that of Massachusetts. The researches undertaken under its auspices have secured for the State a most enviable recognition not alone in America but also abroad—a recognition that will only be enhanced by the most recent work of magnitude undertaken by the Board, namely, a study of cerebrospinal meningitis and its relation to other forms of meningitis. The investigation was entrusted to Drs. Councilman, Mallory, and Wright, of Harvard University, and was prompted by a serious epidemic of the disease occurring in Boston and other parts of the State in 1897; but even previously a rather large number of deaths from the disease had been annually reported for a period of about 20 years.

Epidemic cerebrospinal meningitis differs from other forms in the greater degree of involvement of the meninges of the cord, in the extension of the inflammation along the nerves, and in the participation of the tissues of the brain and cord in the process, and further in the fact that there is a general absence of inflammatory lesions of the intima of the arteries that occur in all other forms. The disease is most prevalent in winter and spring, and attacks especially children and young adults. It may and undoubtedly does occur sporadically, and such cases are of extreme importance.

As to the cause, it seems pretty well established, and the present investigation goes to confirm the view, that the diplococcus intracellularis is the etiologic factor. This organism probably gains access to the brain from the nose, and it has been found in a number of cases in the secretion of the nose, together with evidences of slight inflammation. Councilman, Mallory, and Wright were never able to find it except in connection with the lesions of the disease; it does not gain entrance into the blood, liver, spleen, or kidneys. It has only feeble pathogenic power for rabbits and guinea-pigs. Only once, in a goat, was typical meningitis caused by introducing a bouillon-culture

into the spinal canal. In 38 of 55 cases in which lumbar puncture had been performed the organism could be demonstrated on microscopic examination. In making cultures large amounts of the fluid must be used.

The microscopic lesions consist in inflammation with purulent, seropurulent, and fibrinopurulent exudation, and they are especially marked at the base of the brain. In the most acute cases there is very little exudation. The lesions of the tissues of the brain and cord are not readily apparent to the naked eye and may be overlooked. The cranial nerves are affected in nearly all cases, especially the second, fifth, seventh, and eighth. The Gasserian ganglion, too, is generally involved. Microscopically the exudation consists of leukocytes, fibrin, and peculiar large cells, with a large vesicular nucleus. Red corpuscles are rare. There is a perivascular infiltration in the cortex and hyperplasia of the neuroglia, both in the cortex and in the tissue of the ventricles. The lesions of the nervous substance are much less marked in the cord than in the brain.

The condition of the lungs is of interest. Several cases of pneumonia were found, some due to the pneumococcus, others to the special diplococcus. The spleen is generally not much enlarged. The symptoms require no detailed description, as they are recorded in most of the text-books. Herpes was found to be the most common cutaneous eruption, having been noted in 35 of 111 cases. Petechial and larger hemorrhages were found in 11 instances. Ocular complications are frequent and were noted in 67 cases. Leukocytosis of a moderate degree was always present.

The report under consideration is concluded with a brief study of meningitis due to the pneumococcus, the streptococcus, the tubercle-bacillus, and the anthrax-bacillus. Meningitis complicating typhoid fever and influenza is not discussed. The plates accompanying the publication are very beautiful and greatly augment the value of the excellent report, of which the Board of Health of the State of Massachusetts may well be proud.

**Surgeon-General Sternberg and his Critics.**—Sensational criticism is quite a specialty with some portions of the American press, but fortunately an intelligent minority of the American people has learned to discount this criticism at even its par value. In the face of a great public crisis, such as a war always creates, there is usually a tendency with some persons to get rattled and to call names. This is plainly shown now in a disposition to abuse the medical department of the United States army. It is no new thing, however, for medical men to be held accountable for every outbreak and every phase of disease, just as though they held the disposition of epidemics in the palms of their hands.

We do not hesitate to express our opinion that the whole situation at Santiago has been essentially a military one, for which the medical department of the army



is in no way accountable. This situation was created by the demand and need for war—a public demand which would have been content with nothing short of what happened, *i. e.*, a precipitate campaign, reckless of all consequences save victory, in the face not merely of an armed foe, but, far worse, of a pestilential climate and season. It is too late now for the public not to recognize its own responsibility in this matter, or to attempt to claim that the military surgeons could have shouldered successfully the Herculean tasks of sanitation or even of an ideal administration in the given time and circumstances.

Surgeon-General Sternberg has had to face a grave responsibility, such as no physician in his generation has had to meet. He is entitled to the support and encouragement of both his profession and the general public until such time, certainly, as it can be shown more clearly than it has yet been that he and his department have been derelict. He has furnished us with data, which we take pleasure in presenting elsewhere, that go far toward absolving the medical department of the United States army from the blame of failing to appreciate and to meet its responsibilities.

We yield to no one in our sense of solicitude for the welfare of our army in the field. We recognized at the beginning, however, in the face of much foolish optimism, the perils from disease and hardships which that army was bound to meet in the Cuban campaign. Now that these perils have been met we are inclined to feel a sense of relief that so far they have been no worse. While the sick-list of the army has been large the mortality-rate has been astonishingly small, and for this latter fact the medical men are certainly entitled to some credit.

At present writing the situation is improving. The exhausted troops are being shipped to a northern climate as fast, we believe, as is possible, and the Surgeon-General's department is straining every nerve to prepare a proper and inviting hospital-camp for them in the salubrious air of Montauk Point. This cannot be done in a day, and not at all without great effort and possibly a hitch here and there.

If any one lesson is to be learned from the failures of what has been on the whole a brilliantly successful campaign, it is that if the American Republic expects to go to war it must be prepared in times of peace. The general unpreparedness before this war was doubtless shared by the medical department, through no fault of its own, and it has met a great emergency of rapid onset with all commendable promptness.

It is not our province to criticise military men, but a "round robin" in the face of even an enemy that had surrendered, and especially of an epidemic that had not surrendered, was not calculated to promote discipline or to improve the tone of the troops. We believe such a document was not needed, at least as an incentive to the medical department to do its duty.

In conclusion we wish to call attention to two facts: An army of occupation must be left in Cuba, in spite of disease, if this war is to bear its legitimate fruits. Secondly, the importation of yellow fever into the United States with the returning troops must not be permitted, in spite of popular clamor, which would veer around like a weather-vane in another month and fall foul of the medical authorities that permitted such a catastrophe.

**The Distinction Between a Proprietary and a Monopolistic Medicine.**—We are in receipt of a letter from a valued and kind correspondent, from which the following words are excerpted:

"Your position in regard to proprietorship in medicine is not thoroughly understood by the profession. Physicians fail to discriminate between proprietorship in labels, packages, and brand-marks used to distinguish between two or more brands of the same article, and monopolies in medicinal products themselves. In advocating the former, there is danger of the profession misunderstanding your true position in the matter unless you explain what it is. Because one advocates the protection of the iron-manufacturer in his use of a trade-mark to distinguish a brand of iron, it does not follow that he advocates that one manufacturer shall have a monopoly of iron itself. It seems a little unfortunate that so much confusion exists in the minds of the profession on this subject, and a proper discrimination is needed."

We think the lack of clear discrimination upon the part of the profession is exaggerated by our correspondent. The position of our JOURNAL upon the question we thought had at least been made perfectly plain, but at the risk of reiteration we repeat what we think to be the truth of the matter.

The law of our country, and of all civilized countries, encourages discovery and invention by giving a person the monopoly of his discovery so far as relates to manufacture and sale for a limited period. In patenting an article all secrecy whatever, either as to ingredients, nature and method of manufacture, are done away with. With proper care as to granting patents there can be no question of the wisdom and justice of the law. We all believe in and acknowledge this. The law also permits a manufacturer or discoverer to trade-mark his product, and an abuse in medicine has been allowed in permitting the trademarking or brand-marking of things of secret constitution. This we believe wrong and so does every ethical physician. There should be no secrecy as to the essential constituents of articles needed or used by physicians as therapeutic agents. The trademarking of nonsecret articles we cannot object to and is a proper manner of rewarding ingenuity, investment of capital, etc. It is sometimes somewhat difficult to decide as to the exact construction of certain articles, but in most it is not impossible to place them in the one or the other category. Processes of manufacture may also be patented or secret, a fact that may introduce other elements of doubt, but that may also serve as legitimate rewards of enterprise and stimulants of progress.

We repeat that the essential point upon which almost every question hinges is as to secrecy. If the active ingredients of a drug, etc., are known, the system of trademarking will in time correct its own evils. (If not why not limit the duration of a trademark-monopoly the same as of a patent?) It is well even in so simple an article as codliver-oil to have some guarantee of purity and uniformity; this guarantee is the trademark. The proprietorship of a nonsecret article is no evil, and creates no monopoly. Any other manufacturer may make the same preparation under another name, brand, or trademark, and in these days of sharp competition there is no doubt any good nonsecret article will find plenty of rivals to supply the market with the same or essentially the same thing, sold, naturally and rightly, under a different naming. There must be no monopoly in medicines (except the occasional short one of patented articles), and trademarking nonsecret ones does not create monopolies. If so, as we said, we should by law limit the monopoly, as in patented articles, to a few years. The trademarking of secret articles is utterly wrong, a disgrace to the profession, and an injury to the people. In the reaction against nostrums, a sort of blind fury seemed at one time to have confounded things both good and bad under the ban of contempt, and to many people, thoughtless of facts and the meaning of words, the term proprietary remedy became a bugaboo worthy of the uttermost detestation. But sea-water, rain-water, or air may be proprietary articles. Pure drinking-water or pure milk are proprietary articles, and we would all pay the proprietors extra prices for their special brands of these things if we knew they were thoroughly and uniformly pure. The name, brand, or trademark, gives no monopoly of the water, air, or milk of the world, nor does the brand of codliver-oil, or malt, or any other nonsecret therapeutic agent.

**The Trained Nurse in the War.**—When the present war began we watched with interest for some new developments in medical administration in the army and navy, which we felt sure must sooner or later come. The progress and changes in medical and surgical science since our last war made it inevitable, in our opinion, that the conservatism that is supposed to mark the medical service in the army and navy should bend in various directions. If this service was to keep on a level and a footing with the civil practice of medicine and surgery, some inroads must evidently be made into customs and prejudices. Among the problems involved was that of trained nursing. We in civil practice know well enough that thorough scientific work cannot be done without thoroughly trained nurses; and we believe that the rule will hold good in military practice as well. It is inconceivable to us that the best service can be obtained for wounded soldiers without the skill in antisepsis and other de-

tails that can only be had from a trained nurse, or that fever-patients and, above all, fever-hospitals can be kept in a perfect sanitary condition without such aid.

We have recognized all along, however, that there must be many real difficulties in the way of employing women in the army—for by trained nurses we mean women-nurses. In the navy the difficulties may be even greater. The red-tape objections count for little. If women could not be enlisted under existing laws, the laws could easily be changed; the real difficulties are more practical and material, and are such as arise chiefly from the objections to taking women to the immediate scenes of war.

It is satisfactory to note that almost at the beginning of the war there was shown a disposition to favor the trained nurse, and that soon after the outbreak of hostilities she was regularly employed and is now actively at work.

The history of the movement is about as follows: The Daughters of the American Revolution organized a "hospital-corps," and this was accepted by the government as a sort of branch civil-service bureau for the special purpose of examining and passing upon all nurses who applied for appointment. The Daughters of the American Revolution has no official relations whatever with any hospital, training-school or organization of nurses. Its recommendations are accepted by the Surgeon-Generals of the army and navy, who, when they need trained nurses, apply for them to this society. The movement was heartily endorsed by Dr. Sternberg and Dr. Van Reyphen as early as April, or just at the outbreak of the war, although at that time neither of these officials committed himself in his letter to the Daughters of the American Revolution to a statement as to what extent he would employ women-nurses. It was evidently seen by the authorities that it would be absolutely essential to have proper endorsements not only as to training and capacity, but also as to health and character, and that the delicate office of securing these could best be performed by a society of women. The Daughters of the American Revolution, which has an extensive membership and the highest repute, has thus had imposed upon it an unusual and responsible duty.

Dr. Anita Newcomb McGee, the director of this bureau, has recently given us the following interesting information. Over 3,400 applications, mostly from untrained persons, have been received. About 110 nurses had been appointed up to the middle of July. Some of these (about 20) are immunes, and have been ordered to Cuba. Since that time many more have been appointed. Other immunes are serving at Key West, and on the hospital-ship *Relief*. Every general hospital, except one, has some women-nurses in it, and the one exception will soon be supplied. Dr. McGee says that she has most excellent reports of these nurses. No one is accepted who is not endorsed by the superintendent of nurses under whom she studied (or a proper substitute), and also by



some lady of known standing who can speak for the applicant's character. Efforts are made to have the various States fairly represented. After their appointment the nurses are in no way under the control of the Daughters of the American Revolution, and have no official relations with this society. They are officially known as contract-nurses, and the only ones accepted, as already said, are those designated by the society. When a surgeon wants women-nurses he applies to the Surgeon-General, who asks the society to designate the nurses required. There are from 75 to 100 nurses now awaiting orders and ready to be called at any time.

It is thus seen from Dr. McGee's statements that the trained nurses have secured what seems to be a satisfactory footing in the present war. It is something to begin with, and the profession of nurses is to be congratulated that it is officially recognized, and that for the first time in the history of the government the trained nurse has been put into the army and navy hospitals.

**The Ethics of Patenting.**—While profoundly deploring the application of Behring for a patent to create a monopoly in serotherapy, it must be recognized that the grounds of the logical objection are, first, that as a medical man he should be actuated by nobler and more unselfish motives than money-making; and, second, that he has no right to his claim of unique or first discoverer. It is a professional disgrace to have a member of our guild thus proclaim pure selfishness as his motive, and to seek to deprive other discoverers and workers of their just honor. All of which, being clear, should not beget in our minds any foolish notions as to the criminality or even any real inethicality upon the part of nonmedical men in securing patents. Some of the reasons may be easily formulated:

1. The great principle of giving inventors and discoverers a patent or monopoly, for a limited time, for the manufacture and sale of a product, is too well established, conduces too certainly to the progress of civilization, to be questioned. But even then, while the law holds out reward, it recognizes that this reward must be of limited duration, and in some cases when the common good is clearly hindered, it may confiscate the monopoly it permits in general. The law commands selfishness to be just, but it does not command or even commend altruism. That is left for the choice of men—or as the theologians would say, it is a question of "grace." It is this position of altruism and grace that the medical profession has adopted as regards any monopoly pertaining to their art. We are all the better, both as a community and as a guild, that it is left for us to choose the nobler way; if Government should command it, the progress of humanity would be slower and the enforced obedience would be less than is at present obtained by spontaneous preference. In some cases it may be doubted if the monopoly

has been sufficiently absolute and extended,—if, *e. g.*, the trademark-abuse is not the result of a monopoly held to be too short in duration. Certainly, processes and discoveries have been kept secret, not even trademarked, in the hope that profits would be greater than by patenting or trademarking. In general law it is plain that it is absolutely impossible to exclude inventions and discoveries of therapeutic use from the list of patentable articles, and for the following reason:

2. No line can be drawn between things therapeutic, health-promoting, or disease-preventing, and things that have no relation to health. There are a thousand intermediate grades between the simplest invention of no conceivable influence physiologically at the time, and a drug only used by the physician in disease. Food, clothing, etc., for instance, of numberless kinds, are examples that it is wholly out of the question to attempt classification of.

3. There is no patentable article or invention that does not have a possible therapeutic or physiologic application, and that does not in some way influence health or disease.

4. There are thousands of legitimate and excellent patented articles directly devised for the purposes of promoting health or preventing disease, such as water-closets, plumbing, sewage-disposal, water-supply, etc., which have had their influence on the death-rate, extending the average length of life, and the reward of the inventors was the condition of spurring the ingenuity.

5. We, like all human beings, are prone to magnify our office, and not seldom is the claim for the influence of drugs and the function of the physician somewhat exaggerated when viewed in the large daylight of general human progress. Medical Pharisaism is not wholly unknown.

6. Carried to the logical extreme, the professional scorner of patents, as *per se* detestable, should take no professional fees for his services beyond the small amount required for the barest necessities of life. Personal vanity makes it easy for each one to recognize that his own superior ability is in the nature of a monopoly; the patent expiring in 20 or 30 years instead of the 17 allotted by government.

Wherefore, let us be reasonable, unpharisaic, and even modest in our professional egotism.

Even granting, what is not true, that a line of division could be drawn between therapeutic articles and those classifiable as not such, there remain the facts that we can have no appreciable degree of prohibitive influence on laymen in the matter, and that our energy expended in hatred of patents is doubly misdirected. We should, it is true, protect the world from such attempts as this of Behring, because no patent is due him, and if he should succeed in holding his legal claim, and serotherapy finally prove of the great service we believe, then we should for the general welfare legally declare his patent at an end. But we should

above all things abrogate the system, infinitely more detestable than patenting, whereby secrets are copyrighted, thus obtaining what is the same (though really worse) in effect as an endless patent. It is strange that some people who seem to hate patents have little or nothing to say against the more vicious and trebly harmful copyrighting of nostrums. This is the evil we should fight until we conquer and end it. It would be far better if copyrighting secrets were to be wholly replaced by the patenting of nonsecrets.

## Reviews.

**Ear-Records: A Method of Recording Ear-Cases.** Arranged by JOHN C. LESTER, M.D., Fellow of the American Academy of Medicine; Fellow of the American Laryngological, Rhinological and Otolological Societies, etc., and VINCENT GOMEZ, M.D., Ophthalmologist to the Almshouse, Workhouse and Incurable Hospitals; Assistant Surgeon, New York Eye and Ear Infirmary. New York: J. W. & Geo. H. Hahn.

The record-schemes that form this book are based upon that of Rohrer, of Zurich—of which an English form appeared in Philadelphia some years ago—and, elaborating that elaborate form, have increased the advantages that it possesses. Both sides of the quarto page are given to one record, allowing for less contracted chirography; and the explicit enumeration of findings, symptoms, medicaments and other details is fuller and in better accord with American practice. Personal names seem a stumbling-block and Pulitzer, Schrapnell, Willis and Mandle might not recognize themselves; the diagram of the drum-head is possibly more singular than usual; the "alcoholic diathesis," the *malleolar* plexus and similar innovations and the Germanic *kali jodidi* will catch the critical eye; but these are mere typographic over-sights. The watch still heads the tests of hearing and Politzer's important test (of the patency of the Eustachian tubes in swallowing to the vibrations of the tuning-fork at the nostrils) is omitted, as are other matters proper to such an elaborate compendium of examinations. For the zealous student and beginner such schemes are full of suggestion and stimulus, and the more blasé practitioner will do well to use them occasionally; but it is questionable whether any one will himself fill more than one such volume of 150 records before adopting some shorter form as better meeting all his needs.

**A Compend of Diseases of the Skin.** By JAY F. SCHAMBERG, A.M., M.D., Associate in Skin-Diseases, Philadelphia Polyclinic; Dermatologist to the Union Mission Hospital; Quiz-Master in Dermatology, Association of Quiz-Masters, University of Pennsylvania. With 99 illustrations. Philadelphia: P. Blakiston's Son & Co., 1898.

The compilation of this small volume has been done skilfully and intelligently, the author having succeeded to an unusual degree in being at the same time concise and lucid. In the consideration of the subject Duhring's classification is followed, the descriptions of the various maladies being brief but clear and, for the most part, in agreement with the most recent accepted views.

In most books of this class, owing to the necessity for condensation, statements are wont to be made about disputed points with a positiveness scarcely justified by existing knowledge. Thus, the statement that dermatitis seborrhoica is probably transmitted by contagion and is due to a specific microorganism ought, in our opinion, to have been still further qualified, as sufficient proof of the correctness of this view is not yet at hand. No mention is made of the multiplicity of species of the trichophyton concerned in the

production of the various forms of ringworm; and ringworm of the scalp is attributed to the trichophyton alone, although recent research has shown that in a very large proportion of cases the fungus present is the microsporon Audouini, probably not a trichophyton. The illustrations are in large part reproductions of photographs that may be classified as good, bad, and indifferent; and we regret to say that the last two classes are out of proportion to the first partly because an effort has been made to show by photography conditions that, in the present state of the art, cannot be thus successfully depicted.

Upon the whole this compend will be found most useful by the student preparing for his examination, furnishing him with brief but trustworthy information upon the subject of which it treats, especially if, as the author no doubt intends, its use be conjoined with careful reading of the more formal treatises. For the practitioner, however, for whom, according to the author's preface, it is also intended, it is of doubtful value, chiefly because the sections upon treatment are but little more than an enumeration of remedies and methods, without the detailed directions so necessary for their successful application.

**Abdominal Surgery.** By J. GREIG SMITH, M.A., F.R.S.E.; Surgeon to the Bristol Royal Infirmary; Professor of Surgery, University College, Bristol. Sixth Edition. Edited by James Swain, M.S., M.D. Lond., Fellow of the Royal College of Surgeons of England, Professor of Surgery, University College, Bristol; Assistant Surgeon to the Bristol Royal Infirmary. Two vols. Pp. 1171. Philadelphia: P. Blakiston, Son & Co. 1897. Price, \$10.

The necessity for issuing a sixth edition of this well-known work within less than a year of the appearance of the fifth edition is sufficient evidence of its popularity. The death of Prof. Smith before the preparation of this edition was fairly begun left the responsibility for its completion with the editor, Dr. Swain, whose long association with the author well fitted him for the completion of the task. The first volume is divided into six sections; the first two being devoted to the topographic anatomy of the abdomen, the diagnosis of abdominal tumors and general considerations with regard to abdominal operations. The section on operations on the ovaries, oviducts and broad ligaments is particularly full and valuable. In discussing the history of ovariectomy, Ephraim MacDowell is recognized as the first ovariectomist, and throughout the book the achievements of American surgeons are accorded due credit. The various methods of hysteropexy are discussed in the section on operations on the non-gravid uterus, and the choice among the various methods is thought to be about equal. With regard to the operation for uterine myomata it is stated that the exact mode of operating can never be decided upon until the abdomen is opened; for sub-peritoneal, pedunculated myomata, simple myomectomy is advocated; for certain encapsulated tumors, enucleation; whilst partial amputation, supravaginal amputation, and complete extirpation of the uterus are indicated for deeply seated, extensive and multiple myomata, according to the extent of the growth. For ectopic gestation electricity is mentioned as "the best of all minor plans of operation, but it is not quite free from danger, it is not always successful and in its limited application it enters into competition with celiotomy in the same field where celiotomy is most successful in primary results, and has also secondary results which are absolutely perfect." The section devoted to operations on the stomach is far from up to date. We notice no mention of gastrolisis or the various operations for hour-glass contraction of the stomach, which, although their field of usefulness is limited, seem still important enough to deserve mention in a work of this kind. The mortality of operation for acute perforating gastric ulcer is estimated at 70%, whilst investigation has shown it to be about 35% in cases recently reported, and less than 17% if operation is undertaken within the first 12 hours after perforation. It also seems doubtful whether most operators still consider gastrotomy and curetting away carcinomatous growth, as recommended by Bernays, a wise or justifiable procedure, as it is here considered. The operations of gastroenterostomy, gastrorrhaphy, pylorotomy and pyloroplasty are, however, satisfactorily treated. Volume II begins with a long section on operations on the



intestines. All the recognized means of uniting divided bowel are fully discussed in a well-illustrated chapter, although the author personally prefers simple suture. The chapter on intestinal obstruction is disposed of practically and thoroughly. The prime object of the operation is to save the patient's life, and a short operation under local anesthesia, making an artificial anus if the cause of obstruction is not found after brief exploration, is advocated in place of a technically complete operation for most cases. Much space is also devoted to appendicitis, and whilst not an advocate of operation in all cases, Smith expresses his belief in a bolder policy than is usually considered wise by English operators. The sections on surgery of the kidney, liver and gall bladder discuss those subjects somewhat less at length than some other subjects are considered, but at least one reliable method is fully described in connection with each operation. Lithotomy is considered the operation of choice for stone of small size in the bladder, except in the old and in infants, when suprapubic cystotomy is advised. Suture of the bladder is considered justifiable in case the tissues of the bladder-wall are healthy, which is rather seldom the case. The final sections deal with growths and cysts of the omentum, mesentery, peritoneum, and parietes; abdominal injuries and operations for peritonitis and its effects. The book bears the indelible stamp of its writer's individuality, and the subjects are treated in the intensely practical way of a man who has tested and proved his methods by a wide experience. The printing is clear, the paper is excellent, and there are numerous cuts and diagrams, and a good index. The book will no doubt long retain its deserved popularity as the standard text-book on abdominal surgery.

**A Manual of Bacteriology**—Clinical and Applied, with an Appendix on Bacterial Remedies, etc. By RICHARD T. HEWLETT, M.D., M.R.C.P., D.P.H. (Lond.), Assistant in the Bacteriological Department of the British Institute of Preventive Medicine, London. 75 Illustrations. Pp. 439. Philadelphia: P. Blakiston, Son & Co. 1898. Price, \$3, net.

The author states that in the present manual he has endeavored to give some account of those portions of bacteriology that are of especial interest in clinical medicine and hygiene. The opening chapters, dealing with the biologic characteristics of bacteria and with general bacteriologic technic, are concise, though quite satisfactory. The chapter on immunity—antitoxins and antitoxin-treatment—is a short presentation of the essential facts upon which our knowledge of this subject is founded. An interesting chapter on diphtheria concludes with a description of the pseudodiphtheria-bacillus, which the author believes to be a modified form of the true diphtheria-bacillus, differing somewhat from the latter, and very far removed from it in virulence. He believes that the "pseudobacillus is associated with mild anginal conditions, which are free from complications, end in recovery, and are not followed by sequelae." In connection with the discussion of the typhoid bacillus, an account of the Widal (better Gruber-Widal) reaction is given. The chapter dealing with the bacillus of bubonic plague is opportune. In addition to those already mentioned, there are chapters in which are considered the blastomycetes, the hyphomycetes, the protozoa, and diseases of uncertain origin (including scarlet fever, hydrophobia, carcinoma, variola and vaccinia). Then there follows a chapter dealing briefly with a wide range of diseases, among which may be mentioned beriberi, distemper, herpes zoster, foot-and-mouth disease, measles, Malta fever, mumps, noma, ozena, pemphigus, pertussis, rheumatism, rheumatoid arthritis, rhinoscleroma, syphilis, rathoma, typhus fever, and yellow fever. The concluding chapters have reference to the bacteriologic examination of water, air, soil, sewage, milk, and foods, and to antiseptics and disinfectants. An appendix contains a useful chapter on bacterial remedies, giving a concise account of the general principles of antitoxin-treatment and of some of the more commonly employed antitoxins. At the end of sections dealing with pathogenic organisms that attack man, some directions are given for the bacteriologic-clinical diagnosis. There are, in addition, several tables that will be found of service in the differentiation of allied bacteria. The illustrations of the various microorganisms are reproductions of microphoto-

graphs, and resemble many others of a similar nature, in that they are unintelligible to one not acquainted with the subject. Despite this, however, the author's aim in writing the manual has been accomplished, and the volume is a credit alike to himself and to the Institute with which he is connected.

## War Correspondence.

**The Unhygienic Condition of Siboney.—Deficiency of Hospital and Ambulance Service.—Sickness Among the Rough Riders.—Yellow Fever: Modes of Infection—The Attack—Its Treatment.—Convalescent Hospital.**

IN THE CAMP OF THE ROUGH RIDERS,

Before Santiago, July 12, 1898.

THIS letter will probably not reach you for weeks, for, like many of the arrangements for the comfort and convenience of the soldiers promised by the Washington authorities, that semi-weekly mail from and to this country has failed; a great many things come and pretty much every thing goes (especially if any of our allies are about), but not the mail.

Following my last letter, I was given a field-detail and at once proceeded to Colonel Roosevelt's headquarters, and through his kindness I was allowed to join his surgical staff. I touched somewhat briefly in my last letter on the condition of things in what is likely to become a veritable Black Hole of Calcutta, the filthy village of Siboney. Since then matters have gone from bad to worse, and I question whether the burning of the town, just ordered very wisely by General Miles, can stop the epidemic of yellow fever, typhoid, dysentery, etc., which has already begun.

It was perfectly well known long before our troops landed there that this village was a yellow-fever nest, and a filthier place I have never seen except in Turkey or Servia; yet, knowing this, a hospital was established and the houses occupied as places of abode. Why this was allowed, and why in the name of all that is good and beautiful the town was not burned in the first instance, is known only to General Shafter. The officers and others who slept in the houses, with one or two exceptions, are now down with yellow fever. The sufferings of the wounded were terrible, owing to the lack of a good ambulance or hospital corps. After the battle of Friday and Saturday the wounded had to wait hours before receiving any attention, and hundreds of men were compelled to drag their way back as best they could to the division-hospital, there to await their turn to be dressed by the over-worked and exhausted surgeons. It seems strange that in this day an American army should be sent to battle without a properly trained ambulance-corps. This will be met with the statement that there is one in our army. There is a magnificent hospital and ambulance-service on paper; I know this, for I gave a detailed description of it in this JOURNAL only a few weeks ago. What became of it I for one do not know. Perhaps it had an attack of Cuba Libre or Cuban bravery and, like Garcia's army, vanished, to the comfort and tranquillity of the commissary department.

From the division-hospital at General Shafter's headquarters to that at Siboney is about nine miles, over an inconceivably bad road. The wretched men were carried, some in ambulances, of which at first there were but five, but most of them in the horribly rough, springless army-wagons. The sufferings of the poor fellows was pitiable indeed, exposed as

they were in most cases to the blistering sun, for those in authority had not taken the trouble to put up the ordinary cover with which the wagons are fitted. As may be inferred, the wounded and sick arrived at Siboney in a sad condition.

It was at the division-hospital here that most of the operations were performed, and, on the whole, well done, though the surgeons were almost swamped with the hundreds of wounded that poured in from the front. The means of transportation were wretchedly inadequate, and so it was that hundreds of men got no attention other than the early first aid until a week later. The surgery, as such, at the Siboney hospital was very well done. Matters of course improved after the arrival of Dr. Senn and the hospital-ship *Relief*. Up to the time of her arrival the wounded were taken from the shore-hospital to various transports and thrown on board in a shameless fashion. I read in a New York paper that the Surgeon-General had decided to make a rigid investigation to determine the responsibility for this particular performance. I can but wish that Dr. Sternberg could have seen some of the sights at Siboney and at the front in order that the responsibility for the treatment of sick and wounded might be properly placed.

In an earlier letter I gave a description of a magnificently efficient system of division-hospitals that was to place our hospital-service at one bound on a level with that of England, France, Germany, Switzerland or other nations. This system has not yet gotten beyond the descriptive stage. The hospitals at Siboney and at the front were scarcely worthy the name. In thus characterizing the division-hospitals I do not for a moment wish to reflect upon either Dr. Lagarde at Siboney nor upon the surgeons in charge at the outer division-hospital; they did everything that faithful and competent men could have done; they simply did not have the necessary equipment and the properly trained hospital-corps.

It was not possible, of course, to send all the sick from the different regiments to the division-hospital, four miles away; the surgeons of the various regiments at the front were therefore compelled to rig up a hospital-tent and do the best they could with a woful lack of appliances and of proper food or delicacies for the sick. When I arrived here I found some eight or ten men in the hospital that Dr. Thorp had constructed under a bomb-proof. That very day, however, we were ordered to move camp and thereafter our hospital consisted of a large tent, which did not even protect the sick from the weather, who had to lie on the wet ground, with nothing under them but a rubber poncho. I had always supposed that this article of a soldier's outfit was to keep out the rain and wet. The ideal poncho may justify such a superstition; the government article, however, after a few days' service answers its purpose about as well as any ordinary sieve. And it was upon this wretched affair that our sick lay. Knowing that we should be in front of Santiago for some time a desperate effort was made to get some cots, of which there were hundreds on board a certain ship. The cavalry-officer, however, who had charge of the cargo, had been unable to get any cots landed, though the ship had been a week in the harbor.

There had been surprisingly little sickness, Dr. Church told me, up to July 9th, though he himself had been really very sick with intense malarial infection. The assistant surgeon having gone home, his duties had devolved upon Dr. Thorp, of New York City. Dr. Thorp's career in this unique regiment is interesting and deserves more than a passing mention. He is a graduate of Princeton, 1885, and of the College

of Physicians and Surgeons of New York. He enlisted as a private and has just been promoted for bravery to the rank of first lieutenant and assistant surgeon of the regiment. He has been in the thick of every fight. As a soldier he was one of the first to reach the wounded, and many a man has he carried out of danger at risk of his life, tied up his wounds and rushed back to his place in the line. After the fight he devotes night and day to the care of the sick and wounded, going without either food or rest for many hours. He is indeed an honor to his profession.

As I write, the sickness not only among the Rough Riders but among the entire army is increasing with alarming rapidity. The dreadful privations the men have undergone; the want of anything fit to eat (the men of this regiment had nothing but hard tack and hot water after two days' fighting); sleeping on the ground (they were to have had hammocks, at least that is what was told me in Washington) and practically unprotected by the dingy little tents—all this, with the climatic conditions that prevail in this wretched island, has at last brought down even the strongest and will surely cause many a death.

I think that I am within limits when I state that at this writing fully 60% of the men in this regiment have one form or another of malarial fever or diarrhea or a general gastro-enteritis. Their stomachs have revolted against the food, but not before this ruined their digestions for many a day.

There are no cases of yellow fever in this regiment, though there are two cases that to my unpractised eye seem extremely suspicious. This reminds me that there are a number of cases at Siboney, though the facts have been kept from the officers and the soldiers. Though happily delayed, we are absolutely sure to have an outbreak of yellow fever in this army—I mean among the men encamped in the hills overlooking the doomed and infected city of Santiago.

Many of our men are curiously affected. They drop down without any premonitory symptoms and remain in a more or less unconscious condition for from a few minutes to many hours, generally with high fever and severe vomiting. These symptoms have been attributed to heat-prostration. On careful inquiry, however, I found that they were by no means confined to those who in the last days have been exposed to the sun, several of those stricken having had only night-duty of late. The malarial infection presents many varying forms and its treatment is annoyingly ineffective. We are compelled to give quinin by guesswork, on the chance of hitting the right hour. The fever comes on in some in the afternoon, in others in the early morning, and in still others about ten at night. We have been giving 40 grains of quinin a day, with little effect, it seems to me.

I had been led to believe that the American army was the best fed in the world, but it sometimes seems as if the powers that be trusted that the army would be fed like Elijah of old, by the historical raven.

The water-question has been a serious one from the first. It is simply astounding that every one of our men is not down with typhoid or worse. They have been compelled to drink the most disgusting water: for several days, for instance, we drank water from a well out of which finally two dead Spaniards were fished.

The future is indeed gloomy; unless this business before Santiago is soon settled and the troops are got off this disease-laden island we shall lose thousands. It is too late now, but to witness the awful suffering of our men and to see them falling sick by the hundreds is sufficient to make one pause and seriously doubt whether the whole lot of miser-



able Cubans are worth the sacrifice. The Cubans we have encountered are useless as fighters, as servants, and as guards when left to protect property; they steal everything they can lay their fingers upon; they are filthy and diseased, carrying the yellow-fever infection with them and scattering it broadcast. Colonel Roosevelt has given strict orders that they be not allowed to enter the camp. We are told that the decent Cubans are in the northern parts of Cuba. This is conceivably true, but our officers and men are pretty well convinced that the only good Cuban, like the only good Indian, is that member of this noble (?) race who is safely deposited under six feet of the soil of what is destined to be Cuba Libre. I am happy to say that our brave Colonel is well and is a tower of strength and encouragement to officers and men. It may interest friends of Dr. Church to know that he is getting over his severe attack and will soon be about again. He has done noble service and set a high example for bravery and efficiency.

#### DETENTION CAMP, Egmont Key, August 6, 1898.

A complete yellow-fever experience should naturally include a personal attack of this dread disease, and if a certificate signed by three distinguished yellow-fever experts can be proof, then your correspondent is an immune. The question of just what constitutes exposure is an interesting and, in many cases, a perplexing one. In my own case and in that of an officer who had a severe attack, and whom I have had under my constant care during a troublesome convalescence, we have been unable to directly trace the infection. Dr. H. R. Carter divides infection into "concentrated" *i. e.*, house, and "diffused or atmospheric." Dr. H. D. Geddings includes in the former that from articles of "bedding, clothing and furniture." In our own cases there was apparently exposure to neither form of concentrated infection. With reference to atmospheric infection, the means of propagation are numerous and serve to account for many cases such as our own. The virus spreads along ditches and on damp and shaded grounds; it is found about dumping-places for refuse and where the excreta of sufferers has been dropped. The infection is heavy and unquestionably hangs near the ground. It is especially active at night and during damp days. Exposure to cold rains and the wearing of wet clothing greatly increase the individual liability to attack. Dr. Geddings states that while yellow fever is generally communicated in the way indicated, he is reasonably certain that after it has existed in intensity for some time it is propagated by what he calls "epidemic influence." His idea is that an "intoxication" is brought about by the absorption or ingestion of toxins liberated by the yellow-fever organism outside the human body. Dr. Geddings lays special emphasis on the danger of sleeping on the ground, which greatly adds to the risk of infection, because of the chilling likely to follow. Another potent auxiliary to infection is excessive exposure to the direct rays of the sun. With reference to fruits, while there is no proof that they directly produce the disease, it may readily be seen that in a yellow-fever country they serve as vehicles of infection. It was by this means doubtless that many cases were caused among the troops at the front, for despite all the warnings of the surgeons the soldiers would insist upon eating that at best indigestible fruit, the mango, which they bought from dirty and infected Cubans.

A most casual consideration of these facts will show to how many indirect causes of infection the officers and sol-

diers in Cuba were exposed. Many had slept in filthy Siboney, though not in one of the houses. All were constantly exposed to the blistering midday sun and slept on the wet ground (there were no hammocks), for the rubber poncho usually placed under them gave no protection. Rain at night left the men drenched in the morning, the miserable little tents being utterly insufficient to keep the occupant protected not only from rain but even from the heavy dews. Added to these causes the predisposing effect of wretchedly insufficient food, such as it was, being often ruined in the cooking; the impossibility of keeping the body clean owing to lack of water and of proper clothing; and finally, in many cases, utter physical exhaustion; is it any wonder that after the first few days 40% of all cases sent in from the front were yellow fever, fortunately in a mild form, but none the less yellow fever. It is a curious fact that very few of these cases coming in during the first week were correctly diagnosed. Most of the regimental surgeons were not familiar with the disease, and from personal experience I now know that many cases of sickness put down in the field-hospitals as one form or other of malarial infection were in reality yellow fever. In my own case for instance, and in scores of others, it was not until we were seen by Dr. John Guiteras, though plainly very ill and with every mark of the disease in our general appearance, that the diagnosis was made and we were shipped to the isolation-hospital in the hills back of Siboney.

This sick-bay was on the line of the railroad, about 2,500 yards from the village, pleasantly situated on an open, but slightly shaded spot. I found there upwards of 400 companions in misery. There were five physicians under the direction of a well-known Cuban physician, Dr. Echeverria, who was for many years prominent in Havana and has a deservedly high reputation as an expert in the treatment of yellow fever. The brilliant results of his management of this frightful malady at this hospital certainly justified the confidence that led to his selection. We all felt that our recovery was due alone to Dr. Echeverria's masterly handling of the disease. However gently the information is broken, the announcement that one has the yellow fever causes a serious mental shock. In some cases it brought about complete collapse, the patient being literally paralyzed with horror at the thought. Such cases, of course, are much more difficult to treat, and the death-rate among them is high. One's state of mind on arriving at a yellow-fever hospital as a patient is not easily described; I cannot say that I was anxious except to see how a disease that I had in a general sort of a way looked upon as fatal, would be treated. Like many others I was in the beginning of the third day of the fever when I got to the hospital. Everything seemed clear enough at the time, though I am now certain that for perhaps three days I was more or less queer, although I do not remember having had a symptom that seems to be quite characteristic of this stage of the disease, namely an hallucination that one is two distinct personalities.

When I arrived at the hospital my temperature was 102° and my pulse 45. My anxiety was soon reassured, for I saw that I was in the hands of a master in the treatment of yellow fever. As is well known there are many forms of treatment for this disease, which need not be recapitulated here, but that of Dr. Echeverria is so simple, yet so efficient, and withal meets so exceptionally well the pathologic conditions, that it may well bear a careful recital. As soon as a patient comes in Dr. Echeverria's hands he is given 3 grams of sodium sulphate in a half-pint of water. This is pre-

ferred because it acts both as a cholagogue and as a diuretic more effectively than any other salt. The patient is then put to bed and kept reasonably warm. From this moment until the temperature is normal no food whatsoever, liquid or solid, is allowed, the patient being forced to drink quantities of water night and day. The bowels are kept open with small doses of calomel, but this is not given except when absolutely necessary. In typical cases the temperature is normal on the sixth or seventh day, but in many it continues elevated for from 10 to 15 days. It matters not how long it continues however; the liquid (water) diet is religiously persevered with. Curiously enough, in such cases as these, while there is a terrible loss of weight there is no particular complaint of hunger.

During the fever patients frequently complain of sleeplessness, but under no conditions does Dr. Echeverria allow even the simplest sleeping draft. I remember his reply to an officer in our tent who was insistent for some drug for this purpose: "If I give you morphin or sulphonal or what not, with your temperature 104° and your heart-beat 60, you will wake up dead." The officer did not get the drug, but he did get well. On the morning that the temperature is normal and for 2 days thereafter, hot milk is allowed in moderation. On the third and for the fourth day beef-tea is added to the diet and coffee to the milk. On the fifth the patient is allowed to go to the convalescent-tents, where is he kept for 3 days before final dismissal.

During convalescence, and for a period of at least two weeks thereafter, Dr. Echeverria insists upon the simplest possible diet, including no beef and no solid food whatsoever, the food to be taken in small quantities, frequently. Those of us who have followed Dr. Echeverria's directions to the letter have been making a gradual recovery without complications. In every case in which his instructions have been disobeyed there has been more or less gastric and intestinal disturbance, which, in several instances, has led to a relapse and death from black vomit. There were over 400 cases in the hospital when we were discharged, most of which were described as mild. But let no one think that even a mild attack of this frightful disease is a simple matter. There are in our party here 16 who had the fever mildly; that is, though many suffered severe vomiting it did not reach the black-vomit stage. The loss of weight varies in individual cases: in my own, for instance, it was 22 pounds from 138; in that of one of our generals, it was 35 pounds, and in that of a lieutenant in the regular army it was 62 pounds. The terrible weakness that follows continues from day to day until one gets entirely hopeless. In Dr. Echeverria's opinion, the stranger recovering from yellow fever must, to save his life, leave the country (Cuba) at once; unless he does, a fatal malarial complication or typhoid is sure to follow.

In the more severe cases in which severe vomiting sets in, Dr. Echeverria uses large (high) enemata of cold water and rubs down the body with alcohol and water. This treatment served excellently in the cases in which it was used while I was in the fever-camp. A typical (so-called mild) case of this fever runs as follows: It begins with a chill, or more often with general chilly sensations, coming on at about bedtime and followed by high fever. This breaks on the morning of the second day and the patient feels much better, the headache and frightful pains in the back disappearing. The remission lasts until evening, when the untoward symptoms reappear, the temperature running up to 104° or 105° and the pulse down to anywhere from 45 to 70, the pains in the back and muscles and the headache re-

turning in increased intensity. The facies is typical, being likened by Dr. Guiteras to the face of typhus during the first 48 hours, or like that of measles before the eruption appears, but with a pronounced icteroid hue. It is not a distinct jaundice, at least during the first 24 or 48 hours, and it is best observed in the sclerotics. Later, the jaundice becomes more marked, but by this time, say the fourth day, the florid color so characteristic at first is replaced by a more dusky hue. These symptoms, with an albuminuria that appears on the third or fourth day, make the case complete. In uncomplicated cases the temperature becomes normal on the seventh day.

The treatment of yellow fever by Dr. Echeverria is simple, but in the highest degree rational, or perhaps I should rather say physiologic. However much in the dark we may still be as to the bacillus supposed to be the primary cause of the disease, the symptoms and the pathologic changes are clearly defined. The physiologic functions of the stomach and intestines are, to all intents and purposes, suspended. Liver and kidneys are equally disturbed and their power for proper work is gone. Rest, complete and to a great extent long continued, is imperatively demanded, after of course the first cleaning out of the stomach and intestines. Such physiologic rest cannot be obtained either by stimulating or by supposedly soothing drugs, for the suspension of physiologic functions is followed by their serious derangement.

The object, then, of Dr. Echeverria's treatment is (1) rest for all organs; (2) dilution of the blood. He avoids drugs always when he can. When the vomiting is excessive and when collapse is threatened, for instance, recognizing the fact that the vomiting is caused by the extravasation of blood into the stomach and duodenum through the gland-capillaries he uses large enemata and drafts of cold water, and this is plainly the most direct and harmless way of getting rid of the pathologic products and at the same time contracting the dilated tiny vessels. This procedure is usually supplemented by a rubbing with brandy and water. I can testify to the remarkable effect of this part of his treatment.

On the fourth or fifth day, Dr. Guiteras says: "In grave cases the mind is unusually clear and there is a peculiar alertness and watchfulness." In my own experience this is not limited to grave cases, unless my own and several others in our tent were grave; the mind was painfully alive and the senses all on the alert; it seemed to me that I heard every sound, even from a distant part of the camp, with the most annoying distinctness, and sleeping very lightly, the slightest sound caused the men to awake with a start, for the sounds in a yellow-fever camp at night are neither pleasant nor reassuring, particularly the groans of some poor fellow in the later stages of the disease, and the whole surroundings, men calling weakly for water, or talking aloud in their sleep, were exceedingly depressing. It was not the fear of death as such, but the thought that at any moment your disease might take a turn for the worse, as in the case of a man in our tent, who, though convalescent, and apparently in good condition, was taken suddenly ill and died in three hours; not the thought of death, but the thought of dying *there*, in that wretched Cuba and in an infected camp, an infected leper whose very dead body would be an object of loathing and horror. No, the nights at "Camp Hell," as we called it, were not one long eternal joy.

The camp itself was a model—clean, well situated, well planned and excellently conducted, while the attention and the treatment left nothing to be desired. All this was due to



the masterly management of Dr. George McCreery, of the regular army.

The death-rate up to the time of departure had been only about 7%. Dr. Echeverria told me the disease continued mild, but it would surely become more severe as the days went on. I notice that Colonel Roosevelt has characterized the present outbreak as a "fake epidemic." Had he himself suffered an attack of this abominable disease he would have spoken with more respect of this particular outbreak.

After dismissal from the hospital we were placed on one of the transports, and for some unexplainable reason were brought to Tampa instead of being taken to New York. Of course, we were not allowed to land, even on a five days' quarantine, and were put on this island, where a detention-camp had been established. We have been very comfortable, except one night, when a storm blew down our tents, and we were driven thence into a howling gale and rain at four in the morning.

Dr. Geddings has done all that a kindly, efficient and faithful surgeon could do. His patience has been sorely tried, for men convalescent from yellow fever are about the most cantankerous, cross-grained, hard-to-satisfy lot I have ever come across.

FRANK DONALDSON, B.A., M.D.

#### CONVALESCENT-HOSPITAL, at Pablo Beach, Florida.

FOR many days after an attack of typhoid fever a soldier is unable to do the heavy work necessary in time of war. During this period the convalescent is in the way in a division-hospital and yet is unable to live the rough life with his company. To provide a place for such men and to shorten the period of convalescence the Chief Surgeon of the Seventh Army Corps has established this hospital at Pablo Beach. Here, by the sea, 16 miles from Jacksonville, a partly finished hotel was found on one of the finest beaches in the world. This building was rented. Sheds were added to hold the Hunt ovens for cooking, the basins for a washroom and a place for stores. Cots, table, medicine-chests, and an ambulance were sent from the Jacksonville depot of supplies. The Red Cross Society presented barrels of dishes, pans and kettles, malted milk, oatmeal and other foods. Thus, in an incredibly short time a convalescent-hospital was established and I was detailed August 1st to bring the first fifty patients to the sea. The men came, some on litters, others just able to walk leaning on a nurse. All were pale and emaciated from their long fevers. In 24 hours the sea-breeze, the change of surroundings, the cooler air and better diet transformed them all. In the few days that have now passed so much has been gained that the patients could hardly be recognized as the emaciated beings of a week ago. I have never before witnessed such a rapid recovery of strength. In this gain I think the mental effect of changed surroundings has been the main factor.

This hospital is a two-story house built of pine—a mere shell—without partitions. All the patients sleep on the second floor. All the windows and doors are open and the interior is swept by the sea-breeze. Thanks to the Red Cross Society and an Association of ladies of which Mrs. General Lee is the President, hearty meals are served to all the men. Sea-bathing is limited to the morning and evening hours, while ambulance-rides up and down the hard, smooth beach give some exercise to those unable to walk. Lieut.-Colonel Maus, the Chief Surgeon of the Seventh Corps, certainly deserves the gratitude of all these invalids for his thought-

fulness in devising and establishing this delightful place in which to win back one's strength.

J. FRED. CLARKE,  
Major and Surgeon, U. S. V.

## Correspondence.

### THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT EDINBURGH.

[Special Correspondence of the PHILADELPHIA MEDICAL JOURNAL.]

THE sixty-sixth annual meeting of the British Medical Association was opened at Edinburgh on Tuesday, July 26th, under the presidency of Sir Thomas Grainger Stewart, Professor of Medicine in the University of Edinburgh, and came to a conclusion on Saturday, July 30th, after a highly successful session. This was the third occasion on which the Association during its sixty or so years of life has met in Edinburgh, the first being in 1858, and the second in 1875. At each of the four general meetings of the Association an address was delivered to the plenary congress. Sir Thomas Grainger Stewart's presidential address (see p. 203) was an eloquent *résumé* of the progress of medicine since 1875, when the Association last visited Edinburgh. In every direction, he said, especially in those departments of medicine that are covered by the words "State" medicine and "preventive" medicine, the story was one of steady improvement, save only in the matter of vaccination, where, he regretted to say, a distinct lapse had taken place, as evidenced by the proposed abolition of compulsory vaccination. Dr. T. R. Fraser, who delivered the Address in Medicine (see p. 206), also sounded the praises of modern healing, but was not so general in his remarks. He gave a learned dissertation on serum-therapeutics, explaining at length modern theories of the toxic origin of infectious diseases and the production of artificial resistance to disease, and speculating shrewdly on the origin of the protection-producing substances. Prof. Thomas Annandale, who delivered the Address in Surgery (see p. 210), joined in the praise of things as they are. Looking at surgery in its scientific aspect, its practical aspect, and its moral aspect alike, he found that it must be acknowledged by all that "its present position is of the highest." Sir John Batty Tuke, the theme of whose speech at the concluding general meeting was the recent advances in psychologic studies (see p. 213), was in keeping with the general tone of congratulation.

The sectional work of the Congress was divided into sixteen departments: Medicine, Surgery, Obstetrics, State Medicine, Psychology, Neurology, Pathology, Pharmacology, Ophthalmology, Laryngology, in which was included Otolaryngology, Diseases of Children, Dermatology, Anatomy, Physiology, Medicine in relation to Life-assurance, and Tropical Diseases. The two last are new sections in the proceedings of the British Medical Association, and comparatively limited as the scope indicated by their titles is. The rooms given up to these sections were quite well filled. In the Section of Medicine a decidedly interesting debate was opened by Dr. Alexander James, lecturer on medicine at the Edinburgh Medical School, upon the clinical varieties of hepatic cirrhosis. He described four types: (1) The purely atrophic, (2) the purely hypertrophic, (3) the transitional, and (4) the form that resulted from local causes, such as congenital malformations or peritonitic adhesions. Dr. Wm. Osler, of Baltimore, fol-



lowed Dr. James, and urged that the bacterial origin of certain forms of cirrhosis was so far probable that the contingency must not be lost sight of. He then read an exceedingly interesting paper on the bacteriology of cirrhosis of the liver, which was communicated to the section by Professor J. G. Adami, of Montreal. Dr. Rosenstein, of Leyden, Dr. Rosenbach, of Berlin, Dr. Gerhardt, of Berlin, Dr. William Ewart, lecturer on medicine at St. George's Hospital, London, and Professor Bradbury, of Cambridge University, were among those who joined in the discussion, which terminated in no general conclusions excepting that it was allowed that, although several types of cirrhotic liver existed, with well-defined pathologic differences, it was not easy always to trace the clinical distinctions.

In the Section of Surgery a well-attended debate upon Injuries of the Elbow-joint was started by Professor Bennett, Professor of Surgery in Dublin University, who pointed out the frequency with which errors of diagnosis occurred in connection with fractures and dislocations at the joint, and illustrated the causes of these errors by a large number of excellent pathologic specimens, both moist and dry. Dr. J. B. Roberts, of Philadelphia, Professor Chiene, of Edinburgh, Mr. Thomas Bryant, late President of the Royal College of Surgeons of England, and Mr. Jordan Lloyd, of Birmingham, were among the well-known surgeons who explained their methods of diagnosis and of treating the various injuries of the elbow-joint, such as fractures of the lower end of the humerus, of the upper ends of the bones of the forearm, or of the olecranon, dislocations of any of the three bones, separations of the epiphyses, and combinations of any of these mishaps. The Section came to one common conclusion, that so-called "passive" exercise of injured joints was much over-done. Of interesting papers read in this section may be mentioned one by Mr. Thelwall Thomas, of Liverpool, on Esophagotomy for Swallowed Tooth-plates; one by Mr. Mayo Robson, of Leeds, on Partial Hepatectomy for Malignant Disease; one by Sir William Stokes, of Dublin, on Thyroidectomy in Exophthalmic Goiter, and one by Dr. David Newman, of Glasgow, read in connection with a debate on septic infections of the urinary tract, and entitled the Value of Catheterism of the Ureters in the Diagnosis of Diseases of the Kidney, with Cases Illustrating Some Points in the Treatment of Hematuria.

In the Section of State Medicine there was a stirring debate on the Pollution of Rivers, in the course of which Dr. Bruce Low, one of the medical officers of the local government board, said that Parliament ought to interfere to help, and, if need be, compel the local sanitary authorities to make and maintain their rivers clean. It was pointed out by different speakers that although there might be difficulty about keeping small water-courses pure, it was quite possible to purify large rivers, if all the various Public-Health Acts, Gas-Works Acts, Salmon-Fisheries Acts and River-Pollution Acts were set in motion, but the powers of the Acts were so cumbrous and unwieldy that the temptation always was to do nothing. The debate was carried on by responsible and determined men, most of whom were medical officers of health for different districts, and it is possible that their strong remarks may reach quarters where good will ensue. At the present time the condition of many of the English rivers is scandalous.

In the Section of Psychology, Dr. Mercier, the medical superintendent of one of the best-known private homes for mental cases in London, introduced a discussion on the plea of insanity in criminal cases, and stated his opinion that in

order to establish insanity it were necessary to prove either the existence in the mind of the accused of such confusion as to show him incapable of appreciating in their true relations the circumstances (and their consequences) under which his act was committed; or extreme inadequacy of motive; or extreme imprudence; or "non-concurrence in the act of the volitional self." The last heading, which would seem to cover murder done on impulse, has been responsible for the reprieving of several notorious criminals lately, and the feeling of the public is that several murderers have escaped just and well-merited punishment.

In the Section of Tropical Diseases, Dr. Conolly Norman, superintendent of the Richmond Lunatic Asylum, Dublin, read an excellent paper on beriberi in temperate climates, having had the misfortune to gain his experience of this disagreeable disease from epidemics occurring in his own institution. Dr. Conolly Norman said that, contrary to popular belief this disease was met in many other than tropical countries, having been observed in Saghalien Island; in Suffolk, a cold eastern county of England; in two of the northern American States, as well as in Dublin. In every instance the outbreaks have been in establishments for the care of lunatics, a fact that seemed to require explanation.

#### **The Diagnosis of Cerebrospinal Meningitis (Kernig's Sign; Lumbar Puncture.)**—Netter (*Semaine Médicale*, June 29, 1898) considers the condition described by Kernig a valuable diagnostic sign in all forms of meningitis.

Kernig noted in cases of this affection, when the patient was placed in the dorsal decubitus, that there was no contracture of the extremities, that the movements of the joints were perfectly free, and that there was no resistance to extension. In the sitting posture, on the contrary, there was manifest contracture; the legs being flexed upon the thighs and the thighs upon the trunk. In some cases, the forearms were flexed upon the arms. Usually, the contracted members could not be extended beyond an angle of 135°, in some cases not beyond 90°. It was noticed, in a few instances, that the stiffness and arching of the head and neck were more marked in the sitting posture. Netter has found this sign in 23 out of 25 cases examined; 12 of cerebrospinal meningitis, 8 of tuberculous meningitis, and 3 of mixed meningitis (cerebrospinal meningitis with the meningococcus and the tubercle-bacillus). The bacteriologic examination of the nasal discharges does not yield constant results; but bacteriologic examination of the blood and of the urine give more important information. The meningococcus has been cultivated three times in bouillon from blood of the living individual.

Lumbar puncture is considered of the greatest value. In children it should be performed between the third and fourth lumbar vertebræ. The liquid thus obtained should be submitted to bacteriologic investigation. Netter has performed lumbar puncture in 22 cases. Cases of suppurative meningitis frequently yield a clear fluid as the result of lumbar puncture. In all cases of cerebrospinal meningitis the meningococcus was found, its identity being established by transplantation and inoculation. The fluid from cases of tuberculous meningitis frequently remains sterile; in some cases it is contaminated and other organisms will grow. The presence of other organisms, even the meningococcus, does not exclude tuberculous meningitis.

#### **Chronic Hydrarthrosis of the Small Joints.**—

At a recent meeting of the Société Médicale des Hôpitaux Milian (*Semaine Médicale*, June 15, 1898) showed a patient with hydrarthrosis of the interphalangeal articulations and chronic inflammation, with effusion into the sheaths of the extensor tendons and of the abductor tendon of the thumb. There was, also, slight hydrarthrosis of both knees and acute pain in the heel, with some hypertrophy of the calcaneus. These manifestations were of two years' duration and had followed the appearance of a vaginal discharge that contained a micro-organism resembling the gonococcus.



## American News and Notes.

**The Quarantine-station at Mobile Bay** was burned recently, all the fumigating machinery being destroyed.

**Dr. J. B. Hamilton** has been elected to the presidency of the Board of Directors of the Chicago Public Library.

**The American Climatological Association** will meet in Bethlehem, New Hampshire, August 31, and September 1, 1898.

**Dr. Edward S. Peck** has been appointed professor of diseases of the eye at the New York Post-Graduate Medical School and Hospital.

**Dr. C. H. Hughes**, of St. Louis, has recently been elected to membership in the Moscow Society of Neurology and Mental Sciences.

**Obituary.**—**DR. CORNELIA LETTLER**, of Chicago, died of heart-disease on board the steamship *Friederich der Grosse* which arrived in Southampton, August 6th.

**Dr. J. Edson Kelsey**, of Berkeley, Cal., has been appointed professor of chemistry in Cooper Medical College, in place of Dr. W. T. Wenzell, resigned.

**An Irish Hospital.**—The Ancient Order of Hibernians of Brooklyn is planning the erection of a hospital to cost \$100,000, the money to be obtained from members of the United Irish Societies of Kings County.

**Major Victor C. Vaughan**, regimental surgeon, was recently stricken with yellow fever in Cuba and removed to the isolation-hospital. He has been granted leave of absence, and has gone to his home at Ann Arbor.

**The Red Cross Hospital-ship "Bay State,"** sent to Cuba by the Massachusetts Volunteer Aid Association, sailed from Boston August 6th. The vessel is loaded with provisions and many delicacies for the soldiers at the front.

**Major Charles B. Nancrede**, brigade-surgeon, is home from Cuba on a furlough. He was detailed to accompany wounded soldiers from the front to the general hospital at Norfolk, Virginia, and will recuperate in Michigan.

**Dr. Daniel R. Brower** has had the honorary degree of LL.D. conferred upon him by St. Ignatius College of Chicago, and Kenyon College of Ohio. He has also been elected foreign member of the Neurological Society of Moscow, Russia.

**Sales of Morphin.**—A bill regulating the sale of morphin, opium and its preparations, and cocain is being acted upon at the present session of the Louisiana Legislature; it has passed through the third reading and it is very likely that it will go through successfully.

**State Hospital for the Insane at Norristown, Pa.**—A new annex to the hospital was formally opened on August 6th. It contains an operating room and a children's ward. The average number of patients receiving attention at the hospital yearly since its opening in 1891, is 700.

**The Bucks County (Pa.) Medical Society** held its midsummer meeting at Bristol on August 3d. Dr. R. H. Osborne, of Morrisville, read an excellent paper entitled "A Few Thoughts upon the Comprehensiveness of the Medical Vocation." Drs. C. B. Smith and J. A. Crewitt, of Newtown, reported several interesting cases in practice. The society will, in November, celebrate its 50th anniversary.

**An Hawaii Red Cross Society** has been organized to minister to sick American troops passing through Honolulu en route to Manila, or whom it may be necessary to land there on the return trip because of illness. The organization is vested with funds, buildings, and an efficient corps of nurses.

**St. Luke's Hospital, New York**, is to have a soldiers' ward. The trustees lately met at the hospital and approved of the action of the executive committee in setting aside a ward in the institution for the exclusive use during the war of soldiers and sailors who may need medical or surgical aid.

**The District of Columbia Appropriation Bill** provides \$6,000 for the enforcement of the act to prevent the spread of contagious diseases in the District, which was approved March 3, 1897. The sum of \$6,000 for the erection of a nurses' home has been appropriated, and \$1,000 for repairs and furniture for Columbia Hospital.

**The American Association of Genito-Urinary Surgeons** elected the following officers at its recent West Point meeting: President, Dr. James Bell, of Montreal; vice-president, Dr. Samuel Alexander, of New York; secretary and treasurer, Dr. William K. Otis, of New York. The next meeting will be held at Niagara Falls in May, 1899.

**Dr. William W. Keen**, of Philadelphia, **Dr. Henry P. Bowditch**, of Boston, **Dr. William Osler**, of Baltimore, and **Dr. T. G. Roddick**, of Montreal, have received the honorary degree of LL.D. from the University of Edinburgh. The other recipients of the degree include Sir William Broadbent, Drs. Lauder Brunton and Ferrier (London), Doyen (Paris), Forster (Strassburg), Kocher (Berne), Martin (Berlin), Mikulicz (Breslau), and Morselli (Genoa).

**Kentucky School of Medicine and Hospital.**—At a recent meeting of the Board of Regents of the Kentucky School of Medicine the Chairs of Professors C. W. Kelly and Samuel E. Woody were declared vacant and they were declared no longer members of the Faculty. Dr. Samuel Cochran was elected to the Chair of Anatomy, and Dr. Arthur J. Boyd to the Chair of Chemistry. At a recent meeting of the Faculty, Prof. W. H. Wathen was elected dean, and Prof. Henry Orendorf secretary.

**Glass Milk-jars.**—The employment of individual glass-jars for the retention of milk delivered by peddlers has been prohibited by milk-inspectors in several cities on the ground that they are dangerous to public health. The objection is advanced that their sterilization is impossible, as water of requisite temperature to destroy germs would break the jars. Safety is only insured by the use of receptacles that can be subjected to steam heat. The glass jar has been tabooed at the West Point Military Academy, and should be generally abolished, and especially its pasteboard coverlid.

**Montauk Point Camp.**—The work of getting the camp at Montauk Point ready for Major-General Shafter's army is being rushed. Brigadier-General Samuel M. B. Young is at Montauk, with Captain J. K. Patton, Quartermaster of the Volunteers, and Chief Engineer Smith, of the Quartermaster-General's office, superintending the work. It will be made a model with every known means for promoting convalescence and comfort of the sick. Montauk Point, the eastern terminus of Long Island Railroad, is the extreme eastern end of Long Island, and is about 115 miles from New York. The temperature in warm weather is always about 20° lower than that of New York, and the

long, narrow arm reaching out into the sea catches every breath of wind from whatever direction it may come; the supply of pure drinking-water is unlimited, and there are miles of fine beaches.

**The Missouri State Medical Association**, at its meeting held recently in Kansas City, elected the following officers for the ensuing year: G. R. Highsmith, Carrollton, president; W. A. McCandless, St. Louis, first vice-president; W. S. Wainwright, Kansas City, second vice-president; W. S. Allee, Olean, third vice-president; J. D. Brummell, Salisbury, fourth vice-president; W. E. Lucas, Munden, fifth vice-president; A. F. Dressel, Sedalia, secretary; B. C. Hyde, Kansas City, assistant secretary; E. Van Note, Hamilton, corresponding secretary; E. S. Wright, Fayette, treasurer. The next annual meeting will be held at Joplin.

**The Sweet-Water Squadron.**—One of the most important items concerning the sanitary condition of a navy is the supplying of potable water to the crews. Each modern warship is provided with distillers for the conversion of salt-water into fresh, but experiments have shown that sweet water can be produced at less cost on board ships fitted for that special purpose than on cruising vessels. When it was definitely settled that a large fleet would have to be maintained off the coast of Cuba, the government fitted out a steamship called the *Iris* with the latest improved apparatus for distilling water. Twelve evaporators, invented by an American naval engineer, were placed on board, and arrangements made for an output of 60,000 gallons a day. Careful estimates show that the *Iris* can supply 25,000 men with water for all purposes save bathing each 24 hours. The government "sweet-water squadron," as it is called by naval officers, also includes a vessel formerly known as the *Norse King*, and a dozen or more steam lighters, each of which is fitted with tanks for the storage of distilled water.

**The Canadian Medical Association** will hold its Thirty-first Annual Meeting at Quebec, August 17, 18 and 19, 1898. The following papers are announced: On the Duty of the Medical Profession to the Question of the Treatment of Inebriates, by A. M. Rosebrugh, Toronto; Monocular Diplopia, by G. Sterling Ryerson, Toronto; Septic Peritonitis, consecutive to Appendicitis, and its Surgical Treatment, by Hon. D. Marsil, St. Eustache; Goiter, by C. R. Dickson, Toronto; Traumatic Rupture of the Bile-Duct, followed by Operation—Exhibition of Patient, by R. H. Garratt, Kingston; Case of Fracture of Pelvis, with Rupture of Bladder, Operation, Recovery, by R. A. H. Mackeen, Glace Bay; Observations on Septic Peritonitis, by Clarence J. Webster, Montreal; Treatment of Convalescent Club-Foot, by V. P. Gibney, New York; Discussion on Treatment of Accidents under Anesthetics, to be opened by Thomas Walker, St. John; Spinal Caries, by Clarence L. Starr, Toronto; Genito-Urinary Instruments Required by the General Practitioner, by Ferd. C. Valentine, New York; The Pioneers of Medicine in the Province of Quebec—Madeleine Vercheres (a poem), by W. H. Drummond, Montreal; Intestinal Anastomosis by Means of a New Forceps, by Ernest Laplace, Philadelphia; A Case of Bicornuate Uterus, Mistaken for Ectopic Gestation; A Case of Strangulated Umbilical Hernia, by W. J. Gibson, Belleville; Neurasthenia, by D. Campbell Meyers, Toronto; Laryngeal Diphtheria, with Special Reference to Cases Requiring a Choice between Tracheotomy and Intubation, by A. Gandier, Sherbrooke; Foreign Bodies in the Larynx, by Hubert D. Hamilton, Montreal; Discussion on the Surgical Treatment of Empyema, to be opened by J. M. Elder, Mon-

treau; Plastic Induration of the Corpora Cavernosa, by M. J. Ahern, Quebec; Notes on the British Pharmacopeia, by T. D. Reed, Montreal; Infection and Serotherapy, by Edmond Laberge, Montreal.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending August 6, 1898:

SMALLPOX—UNITED STATES.		CASES.	DEATHS.
ALABAMA:			
Huefene Bayou,	July 28 . . . . .	1	
Mobile,	July 30 . . . . .	1	
COLORADO:			
Boulder County,	July 26 . . . . .	1	
Los Animas County,	" . . . . .	1	
GEORGIA:			
Atlanta,	July 27 . . . . .	1	Imported probably from West Point, Ga.)
MISSISSIPPI:			
Laurel,	July 28 . . . . .	2	
Meridian,	" . . . . .	2	
NORTH CAROLINA:			
Asheville,	July 19 . . . . .	1	
Catawba,	" . . . . .	6	In 1 family
Cleveland, Rowan County,	" . . . . .	7	
Durham,	" . . . . .	1	
Elmwood, Iredell County,	" . . . . .	2	
Mooresville, Iredell County,	" . . . . .	1	
Reidsville,	" . . . . .	1	
SOUTH CAROLINA:			
Spartanburg,	July 26 . . . . .	4	
OHIO:			
Goshen, Clermont County,	" . . . . .	15	

SMALLPOX—FOREIGN.			
BELGIUM:			
Ghent,	July 8-16 . . . . .	2	
CHINA:			
Hong Kong,	June 4-11 . . . . .	1	1
INDIA:			
Singapore,	May 1-30 . . . . .	4	
ENGLAND:			
Southampton,	June 18-25 . . . . .	2	3
	(One case removed from S. S. Elbro and one from S. S. Briton.)		
FRANCE:			
Marseilles,	June 1-30 . . . . .	1	
RUSSIA:			
Odessa,	July 2-9 . . . . .	2	
St. Petersburg,	July 2-9 . . . . .	6	3
SWEDEN:			
Christiania,	July 2-9 . . . . .	6	1
	July 9-16 . . . . .	1	

YELLOW FEVER.			
BRAZIL:			
Araguayara,	April 1-May 31 . . . . .	125	57
Discalvado,	May 1-31 . . . . .	2	1
Ribeira Bonito,	April 1-30 . . . . .	6	3
Rio de Janeiro,	June 10-17 . . . . .	28	26
	June 17-24 . . . . .	15	12
Santos,	April 1-30 . . . . .	103	52
MEXICO:			
Tampico,	July 17-24 . . . . .	15	7

PLAGUE.			
CHINA:			
Hong Kong,	June 4-11 . . . . .	22	103
	June 11-18 . . . . .	15	20

#### Surgeon-General Sternberg and His Critics.—

In connection with the inconsiderate and unwarranted attacks upon the Medical Department of the United States Army, we beg to quote a letter addressed to Surgeon-General Sternberg from Tampa Heights, Florida, on July 29th, by Dr. Edward L. Munson, Captain and Assistant Surgeon, U. S. Army:

"In view of the recent charges made affecting the efficiency of the Army Medical Department at Santiago, and especially with reference to the conditions prevailing on the hospital-transports sent north with wounded, I have the honor to submit the following facts, believing that my position as Adjutant to the Chief Surgeon, Fifth Corps, and as the officer in charge of the outfitting of the hospital-transports *Iroquois*,



*Cherokee*, and *Breakwater*, may possibly give value to such report.

"Drugs, medicines, dressings, instruments, hospital-tentage and supplies were loaded on the transports at Tampa in quantities sufficient to meet the needs of the Santiago expedition. These supplies were divided up on the various vessels, each organization having its own equipment. While the bulk of the supplies were with the organized hospitals the regimental equipment was largely in excess of its needs, and was intended to be called in to supplement, if necessary, the equipment of these hospitals.

"The landing on Cuban soil was made as rapidly as possible, each organization accompanied by the medical attendance assigned to it, and troops were pushed forward with no other equipment and supplies than could be carried by the soldiers. Having no means of transportation for even their field-chests the regimental medical officers had absolutely no resources at their command, except such as were provided by the orderly and hospital-corps pouches and the first-aid packets carried by the soldiers. Having once left their ships, the latter were promptly ordered out of the small bays at Siboney and Baiquiri, to permit the unloading of other ships. These partially unloaded ships, in obedience to their orders, then proceeded to sea from five to fifteen miles, where they remained hove to indefinitely. Such orders were given the transports carrying the Reserve and First Divisional Hospitals. The one carrying the Reserve Hospital, in obedience to its orders, proceeded to join the naval blockading squadron off Morro Castle, where it remained five days and nights, the other transport disappearing, if I was correctly informed, for an entire week. During this time the fight at Quasina had occurred and large numbers of sick and wounded were requiring treatment. In the meantime a report of the conditions prevailing on shore was made to the Chief Surgeon, who promptly laid the case before the Commanding General, requesting that a launch be placed under the control of the Medical Department, for the collection of medical supplies from the various transports. It was also requested that a pack-train be organized, in the proportion of one pack mule to each regiment, to transport supplies—especially the field-chests—to the front for proper distribution; and I was suggested by the Chief Surgeon as available for the performance of these duties. The exigency of the situation did not apparently appeal to the Commanding General and for two days the Medical Department was unable to get transportation of any kind to the other ships or to the shore, although there were a large number of naval launches and boats employed on various other duties. On the third day, by order of the Adjutant-General, one rowboat was turned over to the Medical Department for the purpose above named, and at the same time an order was issued for land-transportation to carry medical supplies to the front "not to exceed one six-mule team." On getting into this boat, with supplies from the headquarters' transport, I was directed by sundry staff-officers to take them on various errands. On my refusal to recognize their authority the Commanding General, who had appeared on the scene, personally revoked the previous order and directed, after the landing of the supplies already in the boat, that it should return without delay. Presenting the order for land-transportation to the Quartermaster on shore, I was informed that only pack-mules had as yet been landed, that neither wagons nor harness had been brought ashore, and, finally, that the road was impassable for wagons. After this boat had been taken away the Chief Surgeon was without

any means of communication with the medical officers on shore or still on transports, of finding out their wants or of remedying the many already known to him. This condition of things remained until after the fight at La Quasina, at which time there were absolutely no dressings, hospital-tentage or supplies of any kind on shore within reach of the surgeons already landed. The news of the Quasina fight being reported to the Chief Surgeon he was finally able to get on board the *Olivette* and send her to Siboney, where she received the wounded. Within the following day or so the transports carrying the Reserve and First Divisional Hospitals were found and unloaded of their hospital-contents, the latter hospital finally obtaining limited transportation to the front. After a couple of days' duty on board the *Olivette* I was directed to put the *Iroquois* in condition to receive patients, and to take the full capacity of the ship on board. While doing this I was able to set ashore considerable hospital-tentage and supplies found aboard of her, and, having control of her boats, I was able to visit other transports in the harbor and land medical supplies from them. While subsequently outfitting the *Cherokee* and *Breakwater* this work was continued as well as opportunity and limited facilities permitted, getting supplies from perhaps a third of the transports composing the fleet. Outside of this it is believed that no other regimental medical property was ever unloaded up to the time of my departure with wounded on July 10th. Appealing, on several occasions, for the use of a lighter or small steamer to collect and land medical supplies, I was informed by the Quartermaster's Department that they could render no assistance in that way, and the Medical Department was compelled to rely entirely upon its own energies and improvise its own transportation. I feel justified in saying that at the time of my departure large quantities of medical supplies urgently needed on shore still remained on transports, a number of which were under orders to return to the United States. Had the Medical Department carried along double the amount of supplies, it is difficult to see how, with the totally inadequate land and water transportation provided by the Quartermaster's Department, the lamentable conditions on shore could have been in any way improved.

"The outfitting of transports for the reception of sick and wounded is a duty demanding thought and experience, and should never be entrusted to anyone except a regulation medical officer. It includes the proper policing of the portions of the ship to be used by the wounded, the removal of bunks and partitions to give space and air, the utilization of the ship's blankets, door-mats, rugs and carpets to render the bunks more comfortable, the securing of extra supplies, such as canned soups and fruits, lime-juice and oatmeal, the establishment of a mess and laundry and the assignment of convalescents to specific light duties which materially relieve the overworked hospital corps. Usually it is necessary to overcome passive resistance and opposition on the part of the crews and a tendency on the part of the captain to disregard or modify orders. In several instances in my own experience this action of the crew amounted almost to mutiny and was only to be dealt with by threats, a show of force and, in one instance, by the use of irons. While executive officer at the General Hospital, Fort Monroe, I learned officially that the captain of the S. S. *Seneca* positively refused to obey the orders, emanating from your office, given him by the contract-surgeon in charge, to proceed to New York, he remaining nearly an additional day at Hampton Roads with sick and wounded, and asserting that he would obey no orders given by the Medical Department. A similar experi-

ence of my own at Baiquiri, which had to be settled by force, emphasizes the fact that no one should be placed in charge of such a ship who is not accustomed to command men and enforce obedience.

"With regard to the Red Cross Society it would seem as if the lofty purposes of this organization were, on the Santiago expedition, subverted to individual interests. While at Tampa the Red Cross Ship *State of Texas* was formally placed under the control of the Chief Surgeon, Fifth Corps, by Dr. Egan, the representative of this society, he acting under telegraphic instructions to that effect. Colonel Pope accepted this offer and directed that the *State of Texas* accompany the expedition of Gen. Shafter to its destination. Although this order was fully understood by Dr. Egan, the *State of Texas* did not accompany the expedition, nor did it arrive at Siboney until the forces had been landed, a battle fought, and our hospitals established and in working order. The first offers of aid made by this society dealt largely in generalities and manifested reluctance to subordinate the organization to the Medical Department. Too much praise cannot be given to the individual efforts of Dr. Lesser and the Red Cross nurses. Their work was untiring and unselfish and the assistance rendered by them was of great value.

"In conclusion, it is desired to emphasize the fact that the lamentable conditions prevailing in the army before Santiago were due, (1) to the military necessity which threw troops on shore, and away from the possibility of supply, without medicines, instruments, dressings or hospital-stores of any kind; (2) to the lack of foresight on the part of the Quartermaster's Department in sending out such an expedition without properly anticipating its needs as regards temporary wharfage, lighters, tugs and despatch-boats, and without an adequate number of stevedores to handle property. The Quartermasters personally accompanying this expedition were entirely unable to properly carry out the severe burdens imposed on them in spite of the personal energy displayed by them in making the most of the limited facilities and resources at their command."

From among the more important supplies distributed by the Surgeon-General we select the following:

	In the troops at Tampa before leaving for Santiago.	U. S. S. <i>Reindeer</i> , for troops in the field.	U. S. S. <i>Reindeer</i> , for troops in the field.	U. S. S. <i>Reindeer</i> , for troops in the field.
Ether . . . . .	270,000 lbs.	1,400	40	20
Morphine . . . . .	108,000 bottles	1,480	48	24
Chloroform . . . . .	1,500 "	1,950	96	48
Quinin-tablets . . . . .	1,008,000	1,048,000	1,048,000	1,024,000
Antiseptic tablets . . . . .	200 bottles	100	100	100
Brandy . . . . .	517 "	480	150	100
Whisky . . . . .	481 "	960	120	100
Gauze bandages . . . . .	287,210 ss.	280	48	21
Absorbent cotton . . . . .	300 kilos	200	40	20
First-aid packets . . . . .	24,000	1,000		5,000
Sublimated gauze . . . . .	20,000 packages	10,000	2,000	1,000
Iodoform-gauze . . . . .	5,500 "	500	100	100
Sterilized catgut . . . . .	10,800 "	6,000	1,200	600
Sterilized silk . . . . .	10,800 "	6,000	1,200	600
Medical sets . . . . .	20			
Surgical sets . . . . .	21			
Carbolic acid . . . . .				1,000 bottles

With the steamer *Reindeer*, were sent also, among other things, 5,000 bottles of carbolic acid.

A Conference of State and Provincial Boards of Health of North America was opened at Detroit on August 9th, in connection with the celebration of the 25th anniversary of the Michigan State Board of Health. Addresses of welcome were delivered by Mayor Maybury and

Health-Officer Gibbes, and papers reviewing sanitary progress throughout the world, and particularly in Michigan, were read by Dr. A. N. Bell, of Brooklyn, Dr. A. R. Reynolds, Health Commissioner of Chicago, and Professor R. C. Kedzie, ex-President of the Michigan Board of Health. Professor C. A. Linsley, Dean of the Medical Faculty of Yale College and President of the American Public Health Association, read a paper on Michigan's progress in sanitation. Dr. Benjamin Lee, of Philadelphia, President of the National Conference, gave the assembly much advice on how to conduct sanitary conventions. Dr. C. O. Probst, Secretary of the Ohio State Board of Health, commended the work of the pioneer Michigan Board. In a paper entitled "State Work for the Restriction and Prevention of Disease," Dr. John S. Fulton, Secretary of the Maryland Board of Health, advocated State control over municipal authorities in the event of epidemics of contagious disease. Dr. Ernest Wende, Health-commissioner of Buffalo, advocated several radical practices in his paper entitled "Municipal Restriction of Diseases." Among others were the inspection regularly of all schools by a medical inspector, and the abolition of long-tubed nursing-bottles. Practical isolation of all sufferers from tuberculosis was also advocated.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon JOHN E. BACON, U. S. A., will proceed from Buffalo, New York, to Chickamauga Park, Ga., for duty.

Acting Asst. Surgeon HERMANN B. GESSNER, U. S. A., will proceed at once from New Orleans, La., to Tampa, Fla., and report in person to Lieutenant Colonel ROBERT M. O'REILLY, Chief Surgeon U. S. Volunteers, Chief Surgeon Fourth Army Corps, for duty.

Acting Asst. Surgeon JOHN K. RAINEY, U. S. A., will proceed from St. Augustine to Jacksonville, Fla., and report in person to Lieutenant-Colonel LOUIS M. MAUS, Chief Surgeon U. S. Volunteers, Chief Surgeon Seventh Army Corps, for duty.

Acting Asst. Surgeons RICARDO GASTON, JOSEPH M. PENA, CLARENCE S. PERRY, WILEY L. ATKEY and E. VAN HOOD, U. S. A., now in New York City, N. Y., will report to Major WILLIAM H. ARMITAGE, Chief Surgeon United States Volunteers, for transportation by U. S. transport "Breakwater" to Santiago de Cuba, and, upon arrival there, will report to Major-General William R. Shafter, U. S. Volunteers, for duty.

The following-named officers of the Medical Department will proceed from the places hereinafter designated to Tampa, Fla., and, upon arrival there, will report in person to Major-General William R. Shafter, U. S. Volunteers, commanding troops at that place, for duty: Acting Asst. Surgeons RANDALL R. HUNTER, Fulton, Kan.; G. H. FONDE, Mobile, Ala.; GEO. E. LAWBRSON, Macon, Ga.; FRANK R. MAURA, Pensacola, Fla.; MILTON VAUGHAN, Little Rock, Ark.; C. H. TEBALTT, JR., New Orleans, La.

The following-named officers of the Medical Department will proceed from the places hereinafter designated to New York City, N. Y., to await transportation, by U. S. transport "Breakwater," to Santiago de Cuba, and, upon arrival there, will report in person to Major-General William R. Shafter, U. S. Volunteers, for duty: Acting Asst. Surgeons W. EDSON APPLE, Philadelphia, Pa.; JOHN A. FOWNER, Boston, Mass.

The following-named officers of the Medical Department will proceed from the points hereinafter designated to Chickamauga, Ga., for duty: Acting Asst. Surgeons H. L. GILCHRIST, Cleveland, O.; D. R. DEWEY, North Adams, Mass.

Acting Asst. Surgeons ALEXANDER W. NETTLEROTH and JOHN MASON WILLIAMS, U. S. Army, will proceed from Louisville, Ky., to Chickamauga Park, Ga., for duty.

Leave for two months, on surgeon's certificate, is granted First Lieutenant MARSHALL M. CLOUD, assistant surgeon U. S. Army.

The leave granted Captain FRANCIS A. WINTER, assistant surgeon U. S. Army, is extended 14 days.

The following-named officers of the Medical Department will proceed from the points hereinafter designated to Camp Russell A. Alger, Falls Church, Va., for duty: Acting Asst. Surgeon FRANK W. ROSS, Elmira, N. Y.; Acting Asst. Surgeon FRED. W. PALMER, Washington, D. C.; Acting Asst. Surgeon JOHN C. ORR, Chambersburg, Pa.

Major WILLIAM J. WAKEMAN, brigade-surgeon, U. S. Volunteers, is relieved from duty at Camp George H. Thomas, Chickamauga Park, Ga., and will repair to Fort McPherson, Ga., for duty.

Acting Asst. Surgeon PAUL T. DESSEZ, U. S. Army, will proceed to Tampa, Fla., for duty.



Acting Asst. Surgeon CHARLES I. WERTENBAKER, U. S. Army, will proceed from Danbury, Conn., to Chickamauga Park, Ga., for duty.

Acting Asst. Surgeon GEORGE H. FOX, U. S. Army, will proceed from New York City to Chickamauga Park, Ga., for duty.

Acting Asst. Surgeon HARRY E. GETTIEF, U. S. Army, will proceed from San Francisco, Cal., will, pending further orders, report to Captain ISAAC P. WARE, Asst. Surgeon U. S. Army, as assistant in examining recruits.

Acting Asst. Surgeon FRANK B. ROBINSON, U. S. Army, will proceed to the Presidio of San Francisco, for duty with the First Troop, United Volunteer Cavalry.

Major GUY L. LEE, brigade-surgeon, U. S. Volunteers, will proceed to the command of the Department of the First Division, San Francisco, relieving Major WILLIAM C. CARTER, brigade-surgeon.

Major EUGENE L. SWIFT, brigade-surgeon, U. S. Volunteers, will proceed to the camp near Lithia Springs, Ga., for duty.

Asst. Surgeon J. W. WRIGHT, is detailed Officer in Charge of Post Exchange.

The following-named officers of the Medical Department will proceed from the places hereinafter designated to Tampa, Fla., for duty: Acting Asst. Surgeon JESSE F. CHAMPLIN, New York City, N. Y.; Acting Asst. Surgeon GEORGE H. FOX, Downingtown, Pa.

The following-named members of the Medical Department will proceed from the places hereinafter designated to Chickamauga, Ga., and report to Major EDWARD C. CARTER, brigade-surgeon, U. S. Volunteers, for duty: Acting Asst. Surgeon JAMES FLEMING, Buffalo, N. Y.; Acting Asst. Surgeon THADDEUS WALKER, Detroit, Mich.

The following-named officers of the Medical Department will proceed from the places hereinafter designated to Chickamauga Park, Ga., for duty: Acting Asst. Surgeon HARRY E. GETTIEF, Littlestown, Pa.; Acting Asst. Surgeon CLARK I. WERTENBAKER, Washington, D. C.

Acting Asst. Surgeon ISAAC W. BREWER, U. S. Army, will proceed from Watkins, N. Y., to Camp Russell A. Alger, Falls Church, Va., for duty.

Asst. Surgeon WILL M. GARTON, appointed July 27.  
Asst. Surgeon J. H. PAYNE, Jr., detached from Marine Rendezvous,  
and ordered to the "Marcellus."  
Asst. Surgeon PHILIP S. RIEG, to Marine Rendezvous, Boston.

**British Medical Association.**—The next annual meeting will be held at Portsmouth.

An Institute of Hygiene has been opened in Buenos Ayres, with Dr. Ferruccio Mercanti as director.

**The Fourth French Congress for the Study of Tuberculosis** was held at Paris July 27th to August 2d.

**Dr. Ludwig Kerschner** has been made professor of histology and embryology in the University of Innsbruck.

**Dr. Jolyet**, professor of physiology at the University of Bordeaux, has been made a member of the Legion of Honor.

**Dr. Katharina van Tusschenbroek** has been elected professor of gynecology in the University of Utrecht, Holland.

**A Bureau of Medicine for Alsace and Lorraine,** located at Strassburg, has been established by the Imperial German Government.

**Professor Mosso**, of Turin, has recently been elected corresponding member of the section on medicine and surgery of the Académie de Médecine, Paris.

**The Fifth International Congress for the Study of Drinking and Mineral Waters** will be held at Lüt-tich, Austria, from September 25th to October 3d.

**Illegitimate Births in Paris.**—A French exchange gives the births for 1 week in Paris as follows: Males, legitimate, 396, illegitimate 183; females, legitimate 400, illegitimate 176.

**A Clinical Chair of Syphilology and Cutaneous Medicine** has been established in the school of medicine and pharmacy at Algiers, and Dr. Geny is to take charge of the course during the academic year of 1898-99.

**Professor Mikulicz, LL.D. Edinb.**—The *Vossische Zeitung*, the official organ of the German government, announces that the University of Edinburgh has conferred the degree of LL.D. upon Mikulicz, professor of surgery in the University of Breslau.

**The Berlin Academy of Sciences** will celebrate the two hundredth anniversary of its foundation on July 11, 1900. The committee of arrangements for the celebration consists of the four permanent secretaries, Professors Auwers, Waldeyer, Bahlen, Diels.

**New Polyclinic for Eye-diseases at the Berlin Charité.**—Prof. Dr. Greef has been made director of the department for diseases of the eye at the Charité of Berlin, and a new polyclinic (out-patient department) is to be opened under his supervision.

**Repeating Prescriptions** causes much trouble in many sections of the country. In India few doctors hand the prescription to the patient. The document is sent directly to the druggist, who never thinks of refilling it for a customer unless so ordered by the prescriber.

**Tuberculosis in the French Marine.**—At a recent meeting of the Académie de Médecine Le Roy de Mericourt presented a work by Vincent showing that 46% of the deaths in the French marine are caused by tuberculosis and insisting on the necessity for prophylactic measures.

**A French Association of Anatomists.**—A number of prominent French anatomists held a meeting recently for the purpose of organizing an association for the study of anatomical subjects, to meet yearly in some university center. It was decided to hold the first meeting in Paris at a date to be fixed later.

**The Edinburgh University Court** has appointed to the new professorship of public health and sanitary science at Edinburgh University Dr. Charles Hunter Stewart, who for the past ten years has acted as chief assistant in the bacteriological laboratory connected with the chair of medical jurisprudence and public health in Edinburgh University.

**First Month of the Pasteur Treatment in Berlin.**—The Pasteur method of treatment for rabies was begun in Prof. Koch's Institute for Infectious Diseases at the Charité, Berlin, at the beginning of the second week in July. Up to August 1st 8 patients had undergone or were undergoing the treatment—a sufficient number, it would seem, to show that there was need for the opening of the institution.

**Obituary.**—ALFRED OBALINSKI, Professor of Surgery and Director of the Surgical Clinic at Krakau. He was an original and skilful operator and a well-known contributor to surgical literature.—CARLO GIACOMINI, Professor of Anatomy in the University of Turin.—ROSARIO PUGLIATTI, Professor of Obstetrics and Gynecology in the Medical Faculty of the University of Messina.—M. COUAT, Rector of the Académie de Bordeaux, aged 52 years.—HOFRATH VON DITTEL, the honorary president of the Gesellschaft der Ärzte in Wien.—DR. LOHMANN, for many years president of the Medical Bureau of Hannover.—DR. TARDIF, chief physician of the French Marine.—DR. O. DU MESNIL, Secretary of the Advisory Committee on Hygiene, Paris.—M. CONAT, Rector of the University of Bordeaux.

**Koch and the late Prof. Cohn.**—The recent death of Prof. Cohn, the botanist, of Breslau, recalls the fact that Koch worked for several years in his laboratory at Breslau, after he himself, because of his early discoveries, already occupied a prominent place in bacteriology, though the infant science was scarcely deemed worthy of the dignity of a long Greek name in those days. The foundations of the modern technic of bacteriology were practically laid there.

**The Prince of Wales** maintains his general health. The union of the fractured portions of the patella bids fair to be a good one. The Prince bears the enforced confinement pluckily, and is reported by his medical advisers to be a good patient. On his removal to the Isle of Wight on July 30th he was accompanied in the train by Mr. Downing Fripp, his junior surgeon, who is remaining after the journey in residence and constant attendance upon him.

**Strassman**, professor of legal medicine in the University of Berlin and director of the Berlin Institute for Legal Medicine, has been chosen a corresponding member of the French Society of Legal Medicine of Paris. Prof. Strassman is the author of a *Text-book of Legal Medicine* that is popular in Germany, despite the fact that Hoffman's work is also German. He is, besides, the editor of a quarterly review of legal medicine, *Vierteljahrsschrift für gerichtliche Medizin und öffentliches Sanitätswesen*.

**Tuberculous Osteomalacia of the Cranial Vault.**—At the Institute for Legal Medicine in Berlin, at one of the last lectures of the Semester, Prof. Strassman exhibited a case of this rather rare lesion, tuberculous softening of the vertex. He remarked on the possibility of medico-legal complications in a case like this in the event of the slightest traumatism, or even if there had only been suspicion of violent death, had the body been carelessly handled after death.

**The Fight Against Tuberculosis in Holland.**—The Committee of physicians and professors that took the initiative in this movement in Holland has rapidly increased its numbers by the addition as members of influential men from all circles of society, forming a central committee. It has been decided to erect two people's sanitariums, one on the coast and another in the interior. The money for this purpose is being collected by sub-committees which have already been organized in all the towns. Aid is hoped for from the Government also.

**The Royal College of Physicians of London and Vaccination.**—The college, in view of the changes imminent in the Vaccination-Laws, "think it their duty to reiterate their conviction that vaccination properly performed and duly repeated is the only known preventive of small-pox"—an opinion that they consider to be fully confirmed by the report of the recent Royal Commission on the subject. This pious sentiment of the college is one of the many objections that are being formulated on all sides against the new Vaccination Bill, and well-informed persons think that the Bill may be withdrawn.

**Repression of Tuberculosis in Germany.**—At last year's Congress of German Scientists and Physicians a committee was chosen to consider means for the prevention of tuberculosis in Germany. This committee, consisting of Profs. Hueppe (Prag), Finkler (Bonn), Blasius (Braunschweig) and others, has decided to recommend the formation of a permanent committee, the duty of which it shall be to spread knowledge concerning tuberculosis and to present to



the Congress yearly such matters as seem to deserve their attention. The Congress meets this year at Düsseldorf from September 19th to 24th.

**Dr. Schott of Bad Nauheim**, whose name is connected with a widely known treatment of heart-disease by carbonic-acid baths and resisted muscular movements, has just been made a Professor. The title is often conferred in Germany without there being necessarily any connection with a teaching institution or any pedagogic occupation. Just at present the Austrian Empress is at Bad Nauheim under Prof. Schott's care and a great deal of public attention is being called to the place and the treatment by the detailed reports in the papers of every movement of the Empress. Her presence has doubtless had something to do with the honor being conferred upon Dr. Schott just at the present time.

**Anomalous Hypertrichosis.**—At a recent meeting of the Berlin Anthropological Society, Prof. Bagnisky presented a child 15 months old, completely covered with hair. The case differs from the usual run of such cases, inasmuch as there is certainly no heredity of the condition for 4 generations on either side of the house, while heredity is ordinarily the most important etiologic factor. Contrary to the usual rule, too, the child has not been backward in dentition. The teeth have come at the normal time and in pairs, and the child now possesses the full complement for his age, so that the extraordinary developmental demands made upon certain epithelial structure in this case have not reacted to retard processes in other analogous structures.

**A New German Journal of Criminology.**—It is formally announced that in October Vogel, of Leipzig, will begin the publication of a new medicolegal and criminal anthropological quarterly, the *Vierteljahrsschrift für Kriminal-anthropologie und Kriminalistik*, of which Dr. Hans Gross, a prominent legal light, is to be the editor, with a number of distinguished specialists as collaborators. The new journal is to replace one whose sphere of activity was practically the same, the *Journal of Criminal Anthropology, Prison-affairs, and the Prostitution question*, the collaborators of which were also distinguished specialists in these lines, but whose chief editor turned out to be not a physician, as he claimed, but a swindler well known to the police.

**Two so-called ossified men** were presented at recent meetings of the Berlin Medical Society and the Charité (Berlin) *Ärzte*. Röntgen-ray photographs showed well the deposit of calcified substance in the muscles. Despite the fact that this bone-like structure is most abundant, especially at the beginning, near the insertions of the muscles, Dr. Jacoby of Prof. Gerhardt's clinic, who discussed one of the cases, preferred not to accept Virchow's theory that the condition is due to the exuberant development of exostoses, but that there is a real ossifying process, as a result of chronic inflammation of the connective tissue of the muscle. In both cases the primary painful condition was diagnosticated, and treated for a good while, as muscular rheumatism.

**The Price of Antipyrin Since the Expiration of the Patent.**—The patent on antipyrin expired July 22d. A Basle (Switzerland) chemical manufacturing company offered the drug the next day at 45 marks (\$11) a kilo (2½ lbs.). The price in Germany previously had ranged from 102 to 105 marks per kilo (about \$25). Within the week the Farbwerke at Höchst, to whom the patent had belonged, offered it for 30 marks (\$7) a kilo. It is probable that the Basle company's price represents what antipyrin can be made and

sold for at a reasonable profit. The new Höchst price probably represents what a large firm can sell it for and not lose money. There is a growing suspicion in the public mind that a good deal of money was made on antipyrin.

**A Story of Burke.**—In the diary of Miss Shackelton, recently published in a Scotch paper, occurs the following:

"And then, how does Burke end the day? There is no light more instructive on this extraordinary man than that he ended it by compounding pills for his poorer neighbors who were ill. Talk of cutting blocks with a razor! The man whose eloquence was the delight of his country, whose writings created an impulse over the world such as no political writings perhaps have ever exceeded, sat down to waste his time, as some might have thought it, in compounding rhubarb with other disagreeable adjuncts into remedies for his poorer neighbors. And as he did so he told a story which I think is worthy to be told on such an occasion as this. He said: 'I am like an Irish peer whom I used to know, who was also fond of dealing out remedies to his neighbors. One day that nobleman met a funeral, and asked a poorer neighbor whose funeral it was. 'Oh, my lord,' was the reply, 'that's Lady So-and-So, the man whom your lordship cured three days ago.'"

**Gigantism in a Child of Four Years.**—At the last meeting of the Charité *Ärzte* (physicians and surgeons of the Charité Hospital), Berlin, Slawyk, an assistant of Heubner, presented a child 4 years old, who was nearly twice as tall and twice as heavy as children of his age usually are. He had developed normally until about the age of 1 year, when he had a number of epileptiform attacks for several months. Then he seemed perfectly well for a time, but at about the age of 3 years he developed symptoms of brain-tumor, with vomiting, headache, attacks of vertigo, and optic neuritis. There was a remission in some of these symptoms, but the optic neuritis and some ocular muscle-palsy remained, with an ataxic gait when he began to walk again. His voice is deep and fuller than normal, but he looks perfectly normal, the only symptom of akromegaly being a very large penis and large testicles, even for his size. Prof. Heubner considers the case one of those anomalous forms of akromegaly that develop in children without enlargement of the extremities; but this deformity manifests itself after puberty if the child survives. The cause in this case is believed to be a neoplasm of the hypophysis.

**Polish Scientific Congress Not to be Held at Posen.**—It was recently announced that no Czechish or Russian scientists would be allowed at the Eighth Congress of Polish Physicians and Scientists to be held at Posen, the capital of the Eastern province of Germany of the same name. It had been expected that a number of Slavish scientists, Czechs and Russians from outside of Germany would be in attendance at the Congress, but this was prevented by the express prohibition of the police-authorities of the district, who gave as their reason that while they considered it their duty to do everything in their power to facilitate the holding of scientific congresses, they were bound also to see that such meetings should not be abused for the furtherance of political purposes. It had become clear from a portion of the foreign press that, in view of recent political events, the present meeting was to be largely attended by foreigners especially, partly for the sake of the union that could thus be made closer between the scattered branches of the Slav family, and also because of the impressive influence this demonstration of numbers would have on the Slavs generally. As this was at once calculated to cause disaffection in Posen, where there is a mixed population of Germans and Poles, who, however,

under the watchful eyes of the German police get along well together, the advisability of the present bann on foreign scientists is clear. A protest was made by the Congress officials, but it has had no effect. The executive committee of the Congress now announces that as foreigners will not be allowed to attend its sessions at Posen no meeting will be held this year at all. The next meeting is scheduled for Cracow in 1900, during the celebration of the five hundredth anniversary of the foundation of the Jagellonian University. That event is to be made the occasion of an elaborate demonstration of what Slavs have done and are doing in science and education.

## Philadelphia News and Notes.

**Dr. Thomas J. Yarrow, Jr.**, has been elected pathologist and bacteriologist to the Samaritan Hospital.

**Insolation.**—The unusually hot weather of the past week has been the cause of a large number of sunstrokes. Thirty deaths are reported from this cause.

**Native and Foreign Mortality.**—The proportion of deaths among native Americans, as compared with those among the foreign born in Philadelphia for the week ending August 6th, was 371 to 102.

**Jefferson Medical College.**—The trustees have recently purchased the property at the S. W. corner of Tenth and Sansom streets, which gives the College an unbroken front on Tenth Street between Walnut and Sansom.

**Hospital-Supplies for Santiago.**—The Women's Emergency Relief Association, has donated to the National Relief Commission for Santiago a quantity of surgical and hospital supplies and other necessities to the value of \$500. A similar consignment was made to Porto Rico. Portable bath-tubs and delicacies have also been despatched.

**Vital Statistics.**—The whole number of deaths for the week ending August 6th was 481. This was an increase of 19 over those of the preceding week, and an increase of 72 over the corresponding period of last year. Of the total number of deaths, 217 were among children under five years of age. The deaths from diphtheria, scarlet fever, typhoid fever, and pulmonary tuberculosis, numbered 10, 1, 19 and 40, as compared with 10, 2, 10 and 61 for the preceding week.

**The Pennsylvania Society for the Prevention of Tuberculosis**, in its annual report, just issued, urges in favor of a municipal hospital, that tuberculosis-patients should have better air and general sanitary conditions than are possible in an almshouse-hospital, and that for the sake of the community they should be treated by such methods as will not only tend to cure certain cases, but will also prevent the contagion from spreading. It is also urged that a State sanitarium would save many lives, and that a good city-hospital set apart for tuberculosis-patients would add greatly to the safety of the healthy part of the community. The Board of State Charities recommended an appropriation of \$30,000, provided a like amount should be raised by private subscriptions, but the Legislative Committee on Appropriations reported the bill negatively. The Society proposes, however, to go forward with its plans.

**Formaldehyd as a Disinfectant.**—The conclusions reached as the result of an investigation undertaken in the bacteriological laboratories of the Department of Health of the city of New York, by Park and Guerard, may be sum-

marized as follows: Dwellings may be superficially disinfected by means of formaldehyd-gas, all apertures being tightly closed, when employed in the proportion of not less than 1% by volume strength, the time of exposure to be not less than 2 hours, and the temperature of the apartment not below 52° F. Under these conditions the common non-sporebearing pathogenic bacteria are surely and quickly destroyed when freely exposed to the action of the gas. Spore-bearing bacteria, such as anthrax-bacilli, are not thus destroyed; they require at least twice the volume of gas at the same temperature for their destruction. But these are of such rare occurrence, that in house-disinfection they may practically be disregarded, and if present, special measures can be taken to destroy them. The penetrative power of formaldehyd-gas at ordinary room-temperature, even when used in double the strength necessary for surface-disinfection, is extremely limited. Articles, therefore, such as bedding, carpets, upholstery, clothing, and the like, should be subjected to steam, hot-air, or formaldehyd-disinfection in special apparatus constructed for the purpose. Bedding, carpets, clothing, etc., may be disinfected by means of formaldehyd-gas in the ordinary steam disinfecting chamber, the latter to be provided with a heating and vacuum apparatus and special apparatus for generating and applying the gas. The gas should be used in the proportion of not less than 10% by volume strength, the time of exposure to be not less than 3 hours, and the temperature of the chamber not below 110° F. In order to insure complete sterilization of the articles, they should be so placed as to allow of a free circulation of the gas around them; that is, in the case of bedding, clothing, etc., these should either be spread out on perforated wire shelves or loosely suspended in the chamber. The aid of a partial vacuum greatly facilitates the operation. Upholstered furniture, and other articles requiring much space, should be placed in a large chamber; or, better, a room can be heated to the required temperature. The most delicate colors and fabrics, furs, leather, and other articles that are injured by steam, hot-air at 230° F., or other disinfectants, are unaffected by formaldehyd. Books may be satisfactorily disinfected by means of formaldehyd gas in the ordinary steam-chamber as described, and under the same condition of volume of gas, temperature, and time of exposure. The books should be arranged to stand as widely open as possible upon perforated wire shelves set about 1 or 1½ feet apart in the chamber. A chamber having a capacity of from 200 to 250 cubic feet would thus afford accommodation for about 60 books at a time. Books cannot be satisfactorily disinfected by formaldehyd-gas in houses or libraries, or anywhere, except in special apparatus constructed for the purpose, because the conditions required for their disinfection cannot thus be complied with. The bindings, illustrations and print of books are in no way affected by the action of formaldehyd-gas.

Formaldehyd-gas is superior to sulphur dioxid as a disinfectant for dwellings, because (1) it is more efficient and rapid in its action; (2) it is less injurious in its effects on household goods; (3) it is less toxic to the higher forms of animal life; (4) when supplied from a generator placed outside of the room and watched by an attendant, there is less danger of fire. Apart from the cost of the apparatus and the greater time involved, formaldehyd-gas, generated from commercial formalin, is not more expensive than sulphur dioxid, viz., 7 or 8 cents per 1,000 cubic feet being the cost of the disinfectant in either case. Formaldehyd-gas is the best disinfectant at present known for the disinfection of infected dwellings. It is inferior in penetrative power to steam and dry heat at 230° F.; but for the disinfection of fine wearing apparel, furs, leather, upholstery, books and the like, which are injured by great heat, it is better adapted than any other disinfectant.

### For Rheumatism and Influenza-Neuralgias:

Salicylic acid.....	1½-2 drams.
Oil of turpentine.....	1½-2 fluidrams.
Extract of belladonna.....	3-4 grains.
Vaselin.....	4 drams.
Lanolin.....	4 drams.

A large quantity of the ointment to be well rubbed into the affected part, which is then wrapped in cotton, two or three times daily.

—CAPITAN.



## The Latest Literature.

### British Medical Journal.

July 23, 1898. [No. 1960.]

1. Remarks on the Universal Applicability of the Open Air Treatment of Pulmonary Tuberculosis. R. W. PHILLIP.
2. Perforation of a Typhoid Ulcer; Operation; Recovery. H. HANDFORD and A. R. ANDERSON.
3. Further Experiences of Dangers Connected with Respiration and their Avoidance; with Special Reference to Anesthesia, Hemoptysis, Drowning, Apoplexy, and all Paralyzed and Unconscious Conditions. R. L. BOWLES.
4. The Sins of the Teetotalers. W. A. CARLINE.
5. The Repression of Consumption. WILLIAM ROBINSON.
6. The Serum-Treatment and its Results. W. E. GREEN.
7. The Different Forms of Albuminuria in Diabetes Mellitus. KARL GRUBE.
8. A Case of Recurrent Sarcoma of the Fascia of the Back, Treated by Coley's Fluid. A. MARMADUKE SHEILD. (*Illustrated*.)
9. Excision of the Upper End of the Tibia for Myeloid Sarcoma as a Substitute for Amputation; with a Record of Two Cases. CHARLES A. MORTON. (*Illustrated*.)
10. Coxa Vara or Deflection of the Neck of the Femur. A. H. TURRY. (*Illustrated*.)
11. An Operation for Elevation of the Female Bladder in Prolapse or Cystocele. D. LOWSON. (*Illustrated*.)
12. The Influence of Locality on the Prevalence of Malignant Disease. T. W. BLAKE.
13. The Treatment of Leukocythemia. WM. EWART.
14. On the Use of Carbo-Sapoli in the Disinfection of the Surface of the Body. GEORGE T. BEATSON.
15. The Treatment of Pneumonia by Digitalis. ARTHUR H. W. AYLING.
16. Epileptiform Convulsions During Anesthesia. C. HAMILTON WHITEFORD, J. ASHFORD POTTS, and ALEXANDER WILSON.
17. Strangulated Hernia in Old Age. C. E. LIESCHING.
18. Injection of Alcohol in the Treatment of Guinea-Worm. T. H. FOULKES.
19. Creosote in Tuberculous Diseases. W. W. FARNFIELD.
20. Case of Simple Stricture of the Pylorus in which a Strong Band was Found Extending Between the Liver and the Pylorus; Pyloroplasty; Cure. FREDERICK PAGE.
21. Abdominal Pregnancy; Laporotomy; Recovery. ELIZABETH BIELEY.

1.—Philip describes the system adopted and carried out at the Victoria Hospital for Consumption, Edinburgh. He holds that elevation, temperature, dryness, stillness, and soil, while important factors, are not the essential elements in the **treatment of pulmonary tuberculosis**. The most important factor is the free exposure of the patient to the open air. The treatment should continue with regard for the weather, and the patient should be bathed in fresh air day and night. The more sunshine, of course, the better. The advantage of this method of treatment is that the patient can be cared for at home.

2.—Handford and Anderson report a case of **typhoid fever successfully operated on** 22½ hours after the occurrence of **perforation of the bowel**. When the abdominal cavity was opened, the whole of the small intestine was found to be deeply congested, and covered with patches of lymph, with a perforation three feet from the termination of the ileum. Despite the existence of septic peritonitis the patient made a good recovery, retarded somewhat by an unfortunate renal complication.

3.—Bowles holds that noise in any part of the air-passages is a danger-signal, and it is the business of the physician to discover and remove the cause of the obstruction that causes the **stertorous breathing**. In cases of syncope, the greatest care should be taken to avoid disturbance and pulling about of the body. If there is the least respiratory effort, action should not be too hasty; nature should be given a chance. In cases of hemoptysis, of apoplexy, and of foreign bodies in the air-passages, posture may greatly relieve whatever dyspnea is present, the patient being placed in such a position that the air will have free ingress to and egress from the lungs.

5.—Robinson classifies measures for the **repression of pulmonary tuberculosis** under two heads, (1) those belonging to the realm of general sanitation, which improve the dwelling, the workshop, and the bodily conditions of the people generally; and (2) those that have for their object the destruction of the sputum and the removal of affected patients in the later stages of the disease if they cannot be isolated at home. Notification should be in force, though the sanitary officer should never come between the physician and the patient. After a room has been vacated by a tuberculous patient it should be thoroughly cleansed, disinfected, and papered by the authorities. To stop the spread of the disease by meat and milk, thorough inspection of all that pertains to the abattoir and the dairy is to be insisted upon. In the treatment of pulmonary tuberculosis, the most important elements are fresh air and sunshine. The open-air treatment cures (1) by the tonic influence of fresh air; (2) by preventing the patient from reinhaling his own tuberculous dust; and (3) by the bactericidal action of sunlight and of the ozone in fresh air.

6.—Green has collected the following data relating to the **serum-treatment** of various diseases: 36 cases of tetanus, with 25 recoveries; 40 cases of puerperal fever and allied conditions, with 33 recoveries, and 11 cases of pneumonia, with 9 recoveries. Reference is made also to the beneficial use of serum as a prophylactic measure against typhoid fever, plague, and yellow fever. Haffkine's plague-serum has been used by inoculation in 5,251 patients exposed to plague, with a mortality of 1.75%, while the mortality in 14,830 plague-patients treated without the serum was 20.6%.

7.—Grube discusses the forms of **albuminuria attending diabetes mellitus**. This condition seems to be most frequent between the ages of 50 and 60; it is also frequent in the eighth decade, 43% of cases affected at this period presenting the symptom. Three pathologic conditions are particularly active in causing albuminuria in cases of diabetes; (1) arteriosclerosis, (2) gout, and (3) alcoholism. The albuminuria accompanying diabetes may be classified in five distinct forms: (1) Albuminuria with the severe form of diabetes. In the last stage of severe diabetes and with diabetic coma, albumin is nearly always present in the urine. This albuminuria is never very considerable, but it often increases perceptibly immediately before death. (2) Albuminuria produced by failure or weakness of the heart (*Stauungsalbuminurie*) has been seen in three cases of diabetes. (3) Senile albuminuria is the slight albuminuria met with in people over 70 years of age. It arises from a slight arteriosclerotic degeneration of the small vessels of the kidney. In diabetics this change seems to occur earlier in life; at least, in certain instances in which albuminuria has been noted in diabetics over 50 years of age, and in which no other cause for the manifestation is to be found, the condition may be looked upon as analogous to senile albuminuria. This form of albuminuria is always slight; there are no casts or morphotic elements in the urine; and sometimes the albumin is only present at intervals. This form of albuminuria has no tendency to develop into chronic inflammation of the kidneys, and it may last for years without getting worse. (4) Functional albuminuria is always slight. It is chiefly to be found in diabetics who have been passing a large quantity of sugar for a considerable time. If the amount of sugar excreted is reduced, the albumin very often disappears entirely in a short time. This form of albuminuria is probably due to the irritation of the kidneys that is caused by the excessive flow of urine loaded with sugar. (5) Albuminuria due to chronic disease of the kidney. The constant and excessive flow of sugar-containing urine through the kidneys leads, first, to irritation of the epithelium of the uriniferous tubules, to hyperemia of the kidneys, and to functional albuminuria. If the irritation continues, it leads to inflammation of the parenchyma, and to an increased growth of the interstitial connective tissue. Diabetic nephritis is much more common in men than in women. Functional albuminuria should be treated by attacking the cause. In cases of true chronic nephritis, milk, mineral waters, and warm baths are useful.

8.—Sheild reports a further **unsuccessful case of recurrent sarcoma treated with Coley's fluid**. The original growth, a spindle-cell sarcoma, was situated in the fascia on the right lumbar region; after repeated attempts at removal, which were always followed by rapid recurrence, it was decided to employ the fluid of Coley. The injection was



at first followed by rapid improvement, but after a time the growths again increased, the remedy seeming to have little influence upon them. Shield, though having had little experience with this treatment, is inclined to be skeptical as to its usefulness. He suggests that in cases in which successful results are reported to have been obtained there may have been some possible source of error in the diagnosis, for, as is well known, the microscopic differentiation of sarcoma from inflammatory formations is a matter of unquestionable difficulty. In this particular case, while the fluid seemed to exert a powerful influence upon the tumors, it is believed that the phenomena were largely inflammatory.

9.—As it is a well-recognized fact that the myeloid variety is the least malignant form of sarcoma of bone, excision of the affected portion has now been accepted by most surgeons as the proper method of treatment, for the removal of bone can be carried out so as to leave a useful limb. Morton reports two cases of **myeloid sarcoma of the upper end of the tibia**, both of which were treated by formal excision of the upper ends of the tibia and fibula and the lower end of the femur; sufficient of the tibia was excised in each case to ensure entire removal of the growth. The results in each case were, on the whole, satisfactory; in one instance the patient has a most useful limb, and in the other the patient is beginning to walk without support. The operation was performed in such a way as to save the popliteal artery and the external popliteal nerve from damage.

10.—Tubby reports two cases of **coxa vara**, occurring in children, 9 and 7 years old respectively. In one case the mother had observed a shortening of the right leg from the time the patient was a baby of 18 months, and which gradually increased. On examination the right trochanter was found to be  $\frac{3}{4}$ -inch above Nelaton's line. Motion of the limb was in no way limited, except on abduction. The muscles were somewhat atrophied, and the thigh somewhat everted. A cork sole was prescribed, and after the patient had been running around for 6 months, it was found that the shortening process had stopped, and that the loss of abduction was less. The second patient was first treated for congenital genu varum of the right, and genu valgum of the left leg, and, when these deformities had been rectified, it was discovered that the right trochanter was  $\frac{1}{2}$  inch above Nelaton's line; furthermore, the trochanters seemed to be placed too far backward, indicating an anterior curve in the femoral necks. This patient presented symptoms of rickets, which were not demonstrable in the first case. The treatment recommended for infants is the employment of Hamilton's or Bryant's splints, the patient's leg being abducted as much as possible. In the case of adolescents, it is advisable to insist upon cessation of the habit of long standing, or removal of the necessity of weight-bearing. Rest will relieve the pain and prevent further deflection of the head and neck; if the deformity becomes pronounced, osteotomy of the femur, either through the great trochanter, or below the trochanters, should be recommended. [If osteotomy be performed, it should be above the trochanters, where the deformity exists; if below this point, though the deformity may be corrected, the functional activity of the limb will not be restored.]

11.—Lowson divides **cystoceles** into three classes, on the basis of the anatomic relations between the uterus and the bladder: (1) Prolapse of the bladder without descent of the uterus. Here the connective-tissue attachment of the bladder to the anterior aspect of the cervix uteri is loosened and extended, so that the bladder can come down without bringing the uterus with it. (2) The uterus and bladder are both prolapsed, the uterovesical connection remaining normal. (3) Both viscera are prolapsed, but the uterovesical connection is loosened and elongated as in the first class. Clearly this is due to the fact that one organ has fallen before the other, and in such cases when the uterus is pushed up the bladder still remains down.

12.—Blake refers to a paper, published in 1891, in which he called attention to the fact that, in the chalk-regions of England, **malignant disease** is more common among those who drink water from wells having a subsoil of chalk. In the same districts, those who drink rain-water from ponds are less frequently attacked by malignant disease. It is thought that the water impregnated in this manner with lime-salts bears some relation to the etiology of the disease, and it

is suggested that such water should be boiled before being used.

13.—Ewart administered carbonic acid gas to two cases of **leukocythemia**. Oxygen was administered simultaneously and galvanism was applied to the region of the spleen for 5 minutes before, as well as during, the sitting. In both cases, one in a boy, the other in a young man, there was perceptible diminution in the size of the spleen.

15.—Ayling combines the tincture of ferric chlorid with the tincture of digitalis in the **treatment of pneumonia**.

17.—An old lady, in her 91st year, was operated upon under chloroform-anesthesia for **strangulated femoral hernia** 17 hours after the first protrusion occurred, and despite her extreme age the patient survived.

19.—Laplough's method of administering **creosote** has been used by Farnfield in the treatment of **pulmonary tuberculosis** in children with good results. He has in this way been able to administer more than one dram daily for an average period of 6 weeks.

21.—Bielby records a case of **abdominal pregnancy** in a tertipara, a deformed Hindu woman seen in the Lady Aitchison Hospital for Women at Lahore, in which abdominal section was performed successfully.

### Lancet.

July 23, 1898. [No. 3908.]

1. Intestinal Cancer and Its Treatment. J. GREIG SMITH. (Illustrated.)
2. A Case of Akromegaly. J. BREWARD NEAL and E. JACKSON SMYTH. With a Pathological Note by S. G. SHATTOCK. (Illustrated.)
3. The Treatment of Tuberculosis by Tuberculin R. NATHAN RAW and JOHN HILL ABRAHAM.
4. The Treatment of Fibromyoma of the Uterus. J. INGLIS PARSONS.
5. Piperidin as a Uric-Acid Solvent: a Comparative Study. F. W. TUNNICLIFFE and OTTO ROSENHEIM. (Illustrated.)
6. Notes on a Case of Purulent Cerebral Meningitis of Aural Origin with Peculiar Symptoms. ADOLPH BRONNER.
7. A Case of Primary Suppuration of both Suprarenal Glands. W. JANOWSKI.
8. A Case of Genu Recurvatum with Talipes Varus and Spina Bifida. JOHN B. O. RICHARDS.
9. A Case of Suprapubic Lithotomy. ANTONIUS J. MANASSEH.
10. A Case of Pelvic Cellulitis in the Male. JOHN HUGH REES.
11. Three Cases of Extensive Venous Thrombosis Associated with Severe Rheumatic Carditis; Necropsies. Under the care of W. B. CHEADLE and D. B. LEES. (Illustrated.)

1.—Smith calls attention to two points in the **pathology of intestinal carcinoma**: (1) The heaping up of fatty tissue all around the ordinary carcinoma of the intestine. In the later stages of the disease, when all the intestinal walls are destroyed, the continuity of the canal depending often entirely upon this fatty tissue, which is drawn in from the neighborhood all around the bowel; (2) the position of the glandular or acinous growth outside the fibrous or cicatricial elements; its instability; and its general behavior in the scheme of growth. Associated with the carcinomatous growth in the intestine proper, there is always an indrawing and cicatrizing of the tumor-growth; but for this action, which draws in fresh tissue to the carcinomatous areas, perforation would in most cases take place earlier and more frequently than it does. In the treatment of intestinal carcinoma but four operations need consideration: namely, enterectomy, colostomy, intestinal anastomosis, and enterostomy. The mortality following the operation of enterectomy, according to one or other of the methods now in vogue, is unfortunately very high. Smith has devised a new method of performing the operation, the results of which have in his hands materially lowered this mortality. The operation is performed in two stages, the first step consisting in fixation of the diseased bowel, outside the abdomen, in the parietal incision; the second step in resection of the growth and the necessary amount of bowel, in suturing of the divided ends, and in the return of these within the parietal incision, but not into the general abdominal cavity.



The difficult step in the operation is the separation of the bowel from the parietes, and peeling of the parietal peritoneum from the muscle. The secret of this step is not to destroy the adhesion of the parietal peritoneum to the bowel, while the former is being separated from the muscle sufficiently to permit the knuckle of gut to be pushed inside. The results of an ordinary colostomy are not what they should be. In an ideal colostomy there should be no leaking, no prolapse, no stenosis, no gaping. The opening should remain always of one size, neither dilated nor contracted. This ideal result may be expected if the operation is performed on the lines suggested by Smith. The operation itself consists, after the abdominal wall has been divided by separation of the muscular fibers with the fingers, not with the knife, in pulling a loop of bowel through the separated muscular bundles and fixing it by a skewer passed under it through the mesentery. The muscle grips the gut so closely that sutures are superfluous, and, if the incision be of the proper size, the apposition will be exact. At the end of a week the bowel is divided transversely down to the skewer, and after about a fortnight the bowel settles down to its permanent state. In the performance of intestinal anastomosis the employment of sutures is preferred to the plate, button or bobbin.

2.—Neal and Smyth report the case of a married woman, aged 37 years, who presented symptoms of **akromegaly**. The disease had commenced about 15 years previously, with hemorrhage from the stomach. Shortly after this the patient's hands and feet began to increase in size and she complained of failing vision. There was some deformity of the chest, the lips became larger, the nose more prominent, the eyes protruded, and the face was lengthened. The patient died during an attack of diarrhea and vomiting, accompanied by symptoms of commencing pneumonia. At autopsy, the bones of the skull were found to be thickened. There was a large tumor of the pituitary body, the pituitary fossa was much enlarged, and the anterior clinoid processes were widely separated. The optic tracts were stretched over the tumor. Microscopic examination of the tumor made by Shattock disclosed hypertrophy of the pituitary body, the component cells being similar to those forming the anterior lobe of the normal body. A small parenchymatous goiter also was present.

3.—Raw and Abram have treated 13 cases of **pulmonary tuberculosis with Koch's tuberculin R**. As a result of their trial of this remedy, given in the dose prescribed by Koch and not accompanied by other treatment, they are able to report 4 cases of complete recovery. These were the most favorable for treatment, as the disease was localized and the temperature was not such as to suggest mixed infection. This is little, if any, better than the result of ordinary treatment combined with nourishing diet and good hygiene. In cases of lupus, on the other hand, the remedy proved powerful and useful. In cases of pulmonary tuberculosis it is evident that, even with great care in the regulation of the dosage, reactions occur and the general collapse therefrom may be alarming. It is possible that this is due to the fact that the solutions of tuberculin R are not of uniform strength.

4.—Hemorrhage and pain are, according to Parsons, the most prominent symptoms of **uterine fibromyoma**. The former, beginning as a slight menorrhagia and gradually increasing for one or two years until in some cases it attains to a continued metrorrhagia, is most characteristic of this disease. Intermittent in character, the pains vary with the size and position of the tumors and the pressure exerted on the nerves and structures within the pelvis and abdomen. There are a variety of other symptoms that are more serious and are produced by the pressure of the tumors on important viscera, viz., irritable bladder and retention of urine, difficulty in defecation from pressure on the rectum, edema of the lower extremities from pressure on the iliac veins, and loss of power in the legs from pressure on the sacral plexus. The ureters appear able to adapt themselves and nearly always escape. Hydronephrosis from the pressure of a fibroma is rare. Pelvic peritonitis is not uncommon, with an effusion of lymph fixing the tumor and obscuring its shape.

5.—Tunncliffe and Rosenbeim, as the result of a study of the action of **piperidin as a uric-acid solvent**, based on experiments made from the chemic and the pharmacologic standpoint, conclude: (1) that piperidin tartrate may

safely be given to man in doses of 15 grains (1 gram) three times a day, or oftener, for uric-acid gravel and for gout. (2) Taking all considerations into account, this substance is preferable to any drug so far introduced for the purpose. It has the additional advantage of being cheap enough to be within reach of all. (3) Lysidin, piperazin, and urotropin increase the solvent power of serum for sodium biurate and of urine for uratic deposit, but to a less extent than piperidin. In the course of the experiments it was shown that although these substances reduce the total amount of uric acid excreted they do not reduce that of nitrogen eliminated. They probably exert some influence upon metabolism.

7.—Janowski reports the case of a married woman, aged 25 years, who had been ailing for three weeks. The illness began suddenly with violent attacks of shivering, which were repeated for several days. She also suffered from severe pain in the back under the ribs on the right side. There was swelling over the spine and over the lower part of the right chest. This region was painful on the slightest touch, both between the ribs and above them, so that the patient could not lie on her right side. Subdiaphragmatic abscess was excluded by exploratory puncture. A diagnosis of right perinephric abscess was made and 100 cu. cm. of pus were evacuated by lumbar incision. The patient was pregnant at the time of the operation, in consequence of which she miscarried on the following day and died in an hour. At the postmortem examination no evidence of disease was found except in the suprarenal bodies. Both these organs had suppurated and large capsules full of offensive pus was all that was left of them. In this pus the black remains of adenoid tissue could be detected. It is believed that the destruction of both suprarenal bodies must have caused the patient's death, as life would be impossible without them on account of their important function in connection with the regulation of the blood-pressure. In this patient, the extraordinary weakness of the pulse and of the first sound of the heart was exceptional and might have been caused by the location of the disease in the suprarenal bodies. The dark-brown color of the urine may have been due to the presence of hematoporphyrin, etc. Perhaps the three symptoms, weakness of the pulse and of the first sound of the heart and the color of the urine may in the future enable **suppuration of the suprarenal bodies** to be diagnosed before operation.

11.—Cheadle and Lees report three cases of extensive **venous thrombosis associated with rheumatic carditis**. The first patient was a girl, aged 14, who had suffered from severe rheumatic fever about two months before admission. Just before the patient entered the hospital the left arm suddenly began to swell. There were evidences of severe cardiac disease, and death took place soon after admission. The autopsy showed thrombosis of both internal jugular veins, of both innominate veins, and of the upper portion of the superior vena cava. The second patient was a young woman, aged 21 years. She had suffered from scarlet fever in childhood and had had two attacks of rheumatic fever. On admission to the hospital, the patient presented symptoms of severe cardiac disease and the urine contained albumin, blood, and casts. After admission, she complained of pain in the wrists and in the left forearm. Later, sudden pain was felt in the left loin and more blood appeared in the urine. Death took place, and the necropsy showed thrombosis of the left internal jugular vein. Microscopic examination failed to reveal microorganisms either in the heart-valves or in the clot. The third patient was a girl, aged 9 years. She had recovered from an attack of scarlet fever two years previously, and had since complained of cardiac symptoms. There was a distinct rheumatic ancestry on the father's side, and the mother was addicted to the use of alcohol. The urine contained albumin and blood, but no casts. During treatment for the cardiac condition, the axillary glands became enlarged, both sides of the neck became tense and tender to pressure, and movement of the neck became painful. Death resulting, the postmortem examination disclosed thrombosis of the left inferior thyroid vein, both innominate veins, both internal jugular veins, both external jugular veins, both axillary veins, and both subclavian veins. Microscopic examination failed to reveal microorganisms either in the valves of the heart or in the clots. The clots had begun to undergo organization.



## New York Medical Journal.

August 6, 1898. [Vol. lxviii, No. 6.]

1. The Restoration of a Deflected Nasal Septum. BEAMAN DOUGLASS.
2. Cardio-Pulmonary Murmurs. C. F. HOOVER.
3. Unilateral Loss of the Pupillary Light-Reflex (Reflex Iridoplegia); Its Pathology and Clinical Significance. WILLIAM M. LESZYNSKY.
4. The United States Army Medical Department in the Field. HENRY S. GREENLEAF.
5. The Tuberculosis-Problem: A Critical Suggestion in Reply to Dr. Leland Cofer's "Suggestion to Philanthropists." S. A. KNOPF.

1.—To obtain good results in the treatment of a deflected nasal septum, it is necessary to pay strict attention to other lesions, one or the other of which often accompanies this condition. If enlarged turbinals, exostoses or enchondroses, or other enlargements on the unobstructed side be present, they should be treated before the operation of correction is attempted. One of the most frequent complications of a deviated septum is a separation of the lower border of the septal cartilage from its junction with the ridge formed by the union of the superior maxillary bones. If this condition escapes observation and the dislocation is not reduced, the deflection of the septum will often return, despite the dexterity of the operator. The operation itself consists in first determining the number and direction of the ridges in the septum and then cutting along these ridges of deflection with a specially constructed knife. The next step is the destruction of any elastic bands that may exist in the submucosa, as the result of inflammatory reaction, and the final step is the binding of the septum toward the unobstructed side. The splints should be made of vulcanized rubber, should be flat on the internal surface, and should not be perforated. The splint on the obstructed side should be worn night and day for three weeks and for two weeks longer at night only. The other splint may be removed on the fourth day.

2.—Hoover reviews previous theories in regard to the causation of functional heart-murmurs, and expresses the belief that these are usually cardio-pulmonary in origin. There is no constant relation between the presence of such a murmur and dilatation of the heart, nor between the blood-count and the presence of a murmur. The murmur is heard mostly over the pulmonary area and not over the aortic area, and were it due to the hemic condition, it would occur, in all probability, over the aorta, as the blood is driven more rapidly here, and the change in lumen is greater in the passage from the conus arteriosus sinistrum into the aorta than it is from the right conus into the pulmonary artery. The cardio-pulmonary murmur may be produced by compression of the lung or by aspiration of a portion of the lung when the heart recedes from it. When compression is active in its causation, the murmur is soft, blowing, or vibratory. When due to aspiration, it is soft and blowing. The objection that the passage of air from the bronchi into the infundibula does not occur rapidly enough to produce a sound does not hold here, as local changes in this case take place in the lung much more rapidly and much more forcibly than they do normally. There is often a thrill over the cardio-pulmonary murmur; the murmur is very superficial; it is not transmitted, and it does not gradually fade in intensity. The murmur is largely dependent upon the respiratory phases for its intensity and character, and it may often be made to disappear by having the patient make a forced expiration or a strong inspiratory effort. It is necessary in its production that a certain thickness of lung be present between the heart and the chest-wall. The vibratory character of the murmur is readily explained by contractions of the ventricle in rapid succession. These murmurs may be either presystolic, systolic, telesystolic, diastolic, or telediastolic. The telesystolic murmur occurs directly after the systolic valvular closure, and, in Hoover's conception, is due to the continuance of the ventricular systole after closure of the auriculo ventricular valves. This produces oscillation in the aorta and in the heart-tracings, which are interpreted as records of the papillary-muscle contraction and the outflow remainder waves. During this silent portion of the ventricular systole, a piece of lung is compressed between the chest-

wall and the ventricle, thus producing a faint, superficial sound. In concluding, Hoover insists that it is not necessary for a cardio-pulmonary murmur to be dependent upon the respiratory act. The respiratory act is not the cause of the production of the murmur, but an excursion of the lung is. This, however, is dependent upon compression or aspiration, resulting from a change in the form of the heart. Hoover would not classify all so-called functional murmurs as cardio-pulmonary, though he believes that most of them are.

3.—In continuing his paper Leszynsky reviews the work of others upon the occurrence and etiology of unilateral reflex iridoplegia, and reaches the conclusion that it is a condition that may arise in tabes or in paretic dementia, and may then be confined to one side for an indefinite time, the other pupil, however, subsequently becoming affected. It is also found in cerebral syphilis, and it then may be permanently limited to one eye. It is frequently a remote result of disease of the third nerve or its nucleus. It is always indicative of central nerve-degeneration involving either the oculomotor nucleus or its efferent branches. It is generally syphilitic in origin, and the lesion is situated in the centrifugal portion of the reflex mechanism. This is proved by its occurrence with or in the sequence of oculomotor paralysis; by Siemerling's case, in which the sphincter nucleus and the oculomotor nerves were found degenerated; and by the postmortem evidence of non-involvement of Meynert's fibers in cases in which there was bilateral reflex iridoplegia.

4.—Greenleaf writes in support of the Army Medical Department, and of its work during the present war, contending that it did the best work that was possible under the circumstances, and that there was no incompetency and no remission in care and efforts to make the wounded comfortable.

5.—Knopf writes, in reply to Cofer's suggestion to establish a farm for tuberculous subjects in Southern California, that it is oftentimes improper to send a patient away from home because of the depression that frequently results from removal from his family. It is also difficult to secure employment in California, and patients are, therefore, likely to be in want; and the expense of transportation to California is too great. If properly managed, it is thought, tuberculous patients can be treated quite as well at home.

## Medical Record.

August 6, 1898. [Vol. liv, No. 6.]

1. Yellow Fever of the Tropics. WOLFRED NELSON.
2. A Chemical, Physiological, and Clinical Study of Pancreatic Cyst Fluid. JOHN C. HEMMETER and HARRY ADLER. With a Clinical Report of the Case. L. M. TIFFANY.
3. Observations on Morton's Painful Affection of the Fourth Metatarso-Phalangeal Articulation and Similar Affections of the Metatarsal Region that May be Included with it Under the Term Anterior Metatarsalgia. ROYAL WHITMAN.
4. A Scheme for Determining the Amount of Drug in Each Dose of any Preparation of that Drug. JOHN E. GROFF.

1.—Nelson considers albuminuria to be a pathognomonic symptom of yellow fever. For the purpose of distinguishing between malaria and yellow fever he uses 15 grains of quinin sulphate and 2 drams of sodium sulphate every three hours until three doses have been given. In the treatment of the disease he uses vapor-baths, largely diluted mineral acids, and sinapisms. He prefers the ice-pack to control the temperature.

2.—Hemmeter and Adler have made chemic, physiologic, and clinical studies of the fluid from a pancreatic cyst, obtained from a white male patient, aged 24 years, by occupation a car-conductor, and previously healthy. The illness began suddenly with cramps in the epigastric region, followed by vomiting. These symptoms persisted almost incessantly for four or five days. There were, besides, gastric tenderness, nausea, and vomiting. Later, a tumor was seen in the epigastric region, somewhat to the left of the median line. It did not move with respiration and was undoubtedly cystic. At operation 980 cu. cm. of fluid were removed. Ten days after the sac was opened, a mass of slough, which proved to be



a portion of the pancreas, was removed. The fluid was chocolate-colored, of neutral reaction, with a specific gravity of 1.028, was perfectly sterile, and, on standing, separated into a light-gray deposit and a dark, reddish-gray supernatant liquid. It contained biliary acids, albumin, globulin, and propeptone, blood-pigment; sugar, peptone, and free and latent xanthin-bodies were absent. One cu. cm. of the fluid contained 0.4174 gm. of solid residue. Experiments made with the fluid showed that it digested, on an average, 86.93% of pure fibrin, 83.6% of fluid albumin, and 76.3% of boiled white of egg. The rate of amylolysis may be determined (1) by the time of appearance of the achromic point, and (2) by the amount of maltose formed, using the method of Allihn. One drop of the cyst-fluid was capable of bringing on the achromic point with 10 cu. cm. of a 1% solution of starch in 10 minutes. By Allihn's gravimetric method 20 cu. cm. of cyst-fluid were found to form about 75% of maltose from one gram of starch at a temperature of 38° C. The titration of the cyst-fluid for free fatty acids, using phenolphthalein as an indicator and an alcoholic decinormal solution of potassium hydroxide, showed that from 12 to 14% of free fatty acids had been formed. The spectroscope showed hematin, but no milk-precipitating substance. Microscopically, the sediment contained (1) pavement epithelial cells in large numbers, the large majority of which had undergone fatty degeneration and partial digestion; (2) hematoidin-crystals, arranged in radiating clusters of an orange color; (3) a few cholesterol-crystals; (4) two forms of hyaline, translucent bodies belonging to the class of so called colloid bodies, and (5) an amorphous, granular detritus. Madelung's diagnostic points for pancreatic cysts are quoted: The tumor begins in the superior portion of the abdominal cavity, and is accompanied by colicky pains in the epigastrium or left hypochondrium, various intense dyspeptic symptoms, mellituria, and stearrhea. There is evidence of a cystic tumor in the region of the pancreas, the lower convex edge of which is palpable, and the greatest extent of which from above downward is found in the parasternal or mamillary line. The cyst can be outlined by the absence of tympanitic resonance on percussion. It may show a slight rising pulsation and slight respiratory mobility. Hemmeter believes that the rapid emaciation is due to the imperfect utilization of proteids, fats, and carbohydrates, on account of the absence of the pancreatic secretion from the duodenum.

3.—Opinions differ as to the causation of **Morton's painful affection of the toe** and of that condition known as **anterior metatarsalgia**. Whitman believes that while these two conditions are not identical, they are at least allied, in that they are caused by an abnormal relation of the metatarso-phalangeal joints to one another, as well as by pressure. The subject involves a careful study of the anterior metatarsal arch. While mere depression or weakness of the arch might account for constant pain or discomfort, due to pressure of the metatarsal bones or tissues of the sole, it will not explain the intervals of comfort alternating with paroxysms of pain. It is readily understood, how, when the metatarsal arch is flattened, lateral pressure will predispose to pain and it is reasonable to infer that in the various distinct types of weakened or depressed arch, such as the rigid or non-rigid depression, the symptoms will show a corresponding variation. So, too, when there is apparently no deformity, the mobility of the fifth metatarsal bone allows it to override the fourth, so that the fourth metatarsal joint will be subject to greater depression and therewith to more direct pressure. It is when this condition is present that the symptoms as described by Morton are observed. The pain of anterior metatarsalgia is not necessarily due to nerve-pressure. In fact, more commonly is it due to direct pressure upon the joints, often aggravated by and entirely dependent upon sensitive callus, or a fibroma near the middle of the arch, the point of greatest pressure. If the pain be due to nerve-pressure, it is the dorsal digital and not the plantar nerve that is involved; the pain is located at the fourth joint, not because of the peculiar distribution of the external plantar nerve, as commonly explained, but because the joint offers the most favorable opportunity for pressure under the predisposing causes. "At all events direct pinching of nerves, or neuritis, is of secondary importance, and, in many instances at least, of very doubtful probability." The causes of this affection must be looked for amongst con-

ditions that predispose to weakness of the anterior arch and to increased sensitiveness of the parts. Whitman states that the most common of the general causes predisposing to weakness of the front of the foot, as well as the most direct cause of the symptoms of discomfort in this region, is the improper shoe. The treatment of this condition includes the strengthening of the foot by appropriate exercises; the correction of any existing deformity of the foot; the support of the anterior arch by a mechanical device that will at the same time prevent displacement downward of any one of the heads of the metatarsal bones; and finally the wearing of a proper shoe that will not exert lateral pressure and will afford the mechanism of the foot the opportunity for functional activity.

4.—Groff divides **drugs** commonly used into three classes: those given in doses of from  $\frac{1}{2}$  gr. to 2 gr., including aconite-root, cochineal, cantharides, digitalis, opium, physostigma, and strophanthus. The second class includes those given in doses of from 1 gr. to 3 gr., and the third class all those given in other doses, i.e. from 5 to 30 gr. It is noted also that poisonous liquors have a strength of 1%, and fluid extracts, with one exception, a strength of 100%. Tinctures are placed in classes from 0.4% (paregoric), 2% (nux vomica), 5%, 10%, 15%, 35%, 45%. If it be remembered that the percentage-strength of a solution means that the number of grains indicated by the percentage is contained in every 100 minims of the preparation, it will be known that one minim contains  $\frac{1}{100}$  part of that quantity, and it can be readily calculated from this how much drug is in solution in any number of minims. For instance, if one wishes to give 5 grains of belladonna, and to use the tincture, the quantity of the tincture is determined by remembering that it is a 15% preparation. Therefore, as there are 15 grains in every 100 minims, or about  $\frac{1}{2}$  gr. in one minim, to make 5 gr. will require 30 minims of the drug.

### Medical News.

August 6, 1898. [Vol. lxiii, No. 6.]

1. Hemorrhoids and Their Treatment. JOHN F. ERDMANN.
2. Should Non-Absorbable Ligatures Be Discarded in Gynecological Surgery? R. STANSBURY SUTTON.
3. Syphilis of the Nervous System. CHARLES W. HITCHCOCK.
4. The Morbidity of the Volunteer Forces at Chickamauga Park, Ga. HENRY I. RAYMOND.
5. A Newly Devised Camp Sink, or Latrine, for the Use of Permanent or Semi-permanent Camps. JOHN MCG. WOODBURY.

2.—Sutton states that during the last 15 years, under the banner of antiseptis, **absorbable sutures and ligature-material** have almost driven metallic sutures from the field of surgery. The difficulty attending the introduction and removal of silver wire, especially its removal under all circumstances, is an objectionable feature. Standing midway between metallic sutures and silk, catgut, and kangaroo-tendon, is a substance to be considered. This substance known as "*fil de Florence*," or silkworm-gut, was introduced about twenty years ago. At first it was used unsterilized. It is but slightly absorbent and practically non-absorbable. When successfully sterilized it becomes encysted in the tissues and harmless; when buried completely the loop is kept pliable by absorption of serum; the exposed ends of the suture become hard, and cannot be bent over or twisted, as can the ends of silver wire. In the vagina or rectum it irritates and annoys. Excepting in superficial wounds, Sutton has discarded it. It is a most admirable material for the drainage of wounds. In all operations on the rectum in which suture-material is resorted to, silk and catgut will be found to be the best. For buried sutures properly prepared catgut is all-sufficient. Excepting in the peritoneal cavity it is always superior to silk.

3.—Hitchcock reports the case of a man, 43 years old, who had been paralyzed, and when first seen, looked a little flushed and was hilarious. The patient stated that about an hour before, while attending to a matter of business, his pencil suddenly fell from his right hand. He picked it up, but dropped it again repeatedly, and, in a few minutes, found that he had no use of the right side. The paralysis disappeared in an hour, but finally returned and the next



day was practically complete. The patient had been married 20 years, and had two healthy children. He had had a suspicious venereal lesion at 20 years of age; later, there was falling in of the bridge of the nose, undoubtedly due to syphilis of the nasal bones, and occasional attacks of mental confusion. Aphasia was only partial, while the motor hemiplegia was complete. Rapid improvement followed, but it is to be expected that evidence of the attack will probably always remain. During the treatment, trional was administered in 5-grain doses every four hours through the day. The drug induced symptoms that were much like those caused by alcohol.

4.—Raymond states that all the water at Chickamauga Park is unfit for drinking-purposes in its natural condition and has been condemned. The soldiers were averse to using boiled water, because it was unpalatable, and unsightly, and the unhealthfulness of the natural water was not fully believed in. It is believed that the sick-rate will be greatly reduced for the coming month coincidentally with the introduction and use of the Maignon and Berkefeld water-filters. These have been distributed as follows: One of each make for each division-hospital, for each ambulance-company, and for each division-headquarters and 10 of each make for each regiment. From June 10th to July 10th, 735 men were admitted to division-hospitals out of a total strength of 9,883. The number admitted to the sick-report of course greatly exceeds the number sent to division-hospitals, and in one or two regiments the admissions to the sick-report for the month equalled or perhaps exceeded 100% of the regimental mean strength for the month. The result was that something had to be done to greatly diminish this sick-rate or the regiment or brigade would soon be so reduced by non-effectives that preparations for an active campaign would have to be temporarily suspended. The remedy has been prescribed—means for the purification of the drinking-water—and it remains to be seen how effectively it can be applied. Of the 735 men admitted to the hospital, 450 have been returned to duty, 25 have been sent to the Leiter hospital, and 4 have died (1 of typhoid fever, 2 of cerebrospinal meningitis, and 1 of acute enteritis). Among the more serious cases, including the infectious diseases, affecting those admitted to the hospital are the following: pneumonia, 14 cases; typhoid fever, 83 cases; acute diarrhea, 84 cases; malarial fever, 194 cases; measles, 87 cases; and mumps, 14 cases.

5.—Woodbury found the 73 sinks of the First Division, First Army Corps, in a filthy condition from a lack of proper policing and ignorance of proper construction. He, therefore, designed a new sink which can be built for a battalion for \$5. The policing consists of covering the dejecta of the men to the depth of 4 inches every 4 hours with earth, and, when it can be obtained, an inch of unslaked building lime. As is well known, the common house-fly lays its eggs, and the larvæ are developed, in human feces, as in the dung of horses, so that the transportation of many microorganisms, such as those of enteric disturbances, yellow fever, etc., is possible by means of these pests.

#### Boston Medical and Surgical Journal.

August 4, 1898. [Vol. cxxxix, No. 5.]

1. Some Practical Points in the Anatomy of the Foot. R. W. LOVETT and F. J. COTTON.
2. Epidemic Jaundice. E. H. POMEROY.
3. A Successful Pylorotomy, with Removal of a Portion of the Pancreas, for Cancer of the Pylorus. MAURICE H. RICHARDSON.

1.—Lovett and Cotton have made some interesting observations on the conditions met with in the **pronated foot**, as distinguished from the flat foot. Their investigations were carried on to determine whether pathologic and physiologic pronation are identical as to the site and direction of the movement; to compare the range of movement in the two cases, and to determine whether the functionally imperfect feet showed any bony or other permanent change. The conclusions reached were based upon a number of radiographs and upon observations and measurements upon the living subject, as well as upon anatomic specimens. The results proved that a pronated foot has nothing in common with a flat foot but the pronation, and that this pronation involves

no appreciable change in the bones or ligaments in the majority of cases. The symptoms seem to be due to overstrain of ligaments and muscles, and are apparently the result of a degree of pronation such as to bring the burden of support for the greater part of the day on the ligaments. The treatment of pronated foot includes measures to improve the tone of the muscles involved, such as systematic exercises, voluntary efforts on the part of the patient to correct the deformity by muscular action and, for a time at least, the wearing of some mechanical support. In mild cases a felt pad placed beneath the arch, with or without adhesive strips (applied from the outer side of the foot beneath the sole and up the inner side of the ankle and leg), is all that will be required. If further support is necessary a specially devised apparatus is recommended. This is made of strips of spring steel, riveted together, and molded to a plaster cast of the foot, taken in the corrected position. A pressure-plate of aluminum-bronze is placed beneath the arch. The apparatus is preferable to the commonly employed steel plates, which have many objectionable features; it is light and comfortable, and tends to correct pronation, at the same time permitting the normal muscular action and the rotation of the foot incident to its normal use.

2.—Pomeroy presents some facts in connection with the **epidemic of jaundice**, that occurred in Calumet, Michigan, and vicinity, in the summer and fall of 1897. There were in all about 675 cases, the majority being in children under 8 years of age; about 30 occurred in adults. The mortality was extremely variable in different localities. There were at Martinique 20 deaths among 30 cases, while at Calumet there was no death. The drinking-water was pure, and there was no source from which it could be infected, but the jaundice seemed to be distinctly contagious, and it spread to the neighbors of families affected. The infectious agent seemed to increase in virulence in the rooms of the patients, as members of a family affected late had severe cases. The weather was not unusual in its severity, and there was no other epidemic prevailing at the time. The jaundice was somewhat less than is common with catarrhal hepatitis, and the usual duration was but 3 or 4 days. Sequelæ were infrequent and unimportant. There were, however, in nearly every case in adults after the appearance of the discoloration, attacks of severe pain resembling gall-stone-colic; and those patients that had previously had attacks of cholelithiasis had attacks during this epidemic.

3.—With the improvement of technic and additional experience there is every reason to believe that, provided the patient's strength is good and the disease is not too far advanced, such operations as gastrectomy and pylorotomy will be followed by a much lower mortality than obtains to-day. The number of permanent cures of carcinoma of the breast in consequence of improvement in methods should lead to a hope for many cures of malignant disease of the stomach after early operation and extensive dissection. The operation should not be delayed till the presence of a tumor is confirmed, for then the time for a permanent cure is past; the other symptoms, pain, vomiting, hematemesis, and loss of flesh, of themselves justify exploration. Richardson reports the case of a man, 67 years old, with **carcinoma of the pylorus**, in which **pylorotomy**, with removal of a portion of the pancreas, was successfully performed. The symptoms were of two years' standing. The patient recovered from the operation, but died in nine months of recurrence. Attention is called to the importance of always providing drainage, on account of the extravasation from the stomach-wound that almost constantly attends operations of the character described.

#### Journal of the American Medical Association.

August 6, 1898. [Vol. xxxi, No. 6.]

1. A Consideration of Four Cases of Epilepsy with Reference to Cause. CHARLES S. BOND.
2. On Nature's Cure of Phthisis and an Effort to Imitate it. JAMES T. WHITTAKER.
3. Some Usually Overlooked Physical Signs and Symptoms in Chest Diseases. NORMAN BRIDGE.
4. Aneurysm of the Concavity of the Transverse Arch, Appearing Externally as a Large Tumor in the Region of the Heart. H. W. McLAUTHLIN and W. N. BEGGS.



5. The Pathologic Analogy of Bright's Disease and Syphilis. W. H. WHITEHEAD.
6. Golf from a Neurologic View-point. IRVING C. ROSSE.
7. Medico-Insurance. S. T. McDERMITH.
8. Surgery of the Lung. J. B. MURPHY. (Continued)

1.—See this JOURNAL, Vol. I, p. 1089.

2.—See this JOURNAL, Vol. I, p. 1142.

3.—See this JOURNAL, Vol. I, p. 1141.

4.—See this JOURNAL, Vol. I, p. 1142.

5.—Whitehead's attention was first called to the efficacy of **potassium iodid** and **mercuric chlorid** in the treatment of **albuminuria** by its effects in a case of syphilis that he was treating, and in which there was also albuminuria. Since the time of his success with this first patient he has treated many cases of **nephritis** with these remedies, and in all the albumin has disappeared or diminished in from 30 to 60 days, and after continued treatment the albumin has not recurred after the lapse of years. It is believed that all cases of nephritis are due to syphilitic renal arteriosclerosis.

6.—Rosse believes that the pleasure and moderate exercise in the open air that are combined in **golf-playing** make it the ideal means of exercise in many diseased conditions.

7.—See this JOURNAL, Vol. I, pp. 1094 and 1130.

### Bristol Medico-Chirurgical Journal.

June, 1898. [Vol. xvi, No. 60.]

1. Isolation after Diphtheria. BERTRAM M. H. ROGERS.
2. On Occipital Presentations. J. G. SWAYNE.
3. A Suggestion for the Treatment of Graves' Disease. W. MACPHUN SEMPLE.
4. A Case Resembling in Many Respects the Condition known as Mucous Colitis. E. G. TREVITHICK.
5. Thot: An Exalted Surgeon and Physician. FRANK BUSH-NELL.

1.—Rogers states that it has been the custom recently in the Children's Hospital at Bristol to allow no patient to leave the diphtheria-ward until a negative report as to cultures from the throat has been received. This does not always mean that diphtheria-bacilli have disappeared, but it results in much less infection than occurs when patients are allowed to mix with others as soon as the macroscopic appearances are those of convalescence. In investigating his own cases as to the length of time that the diphtheria-bacilli persisted, Rogers finds that in one case they were present for more than 6 months. In another case they were present for at least 68 days, in a third case for 32 days, and in two further cases noted, they persisted for 28 days and 23 days respectively. In a discussion of this paper, J. O. Symes stated that he had made frequent examinations in 9 cases, and found that the bacillus persisted in these cases on an average of 30 days. Markham Skerritt said that because the disease has not spread from a patient to a person brought in close contact with him, one could not conclude at once that the organisms were no longer in a virulent stage, because many instances have occurred in which both diphtheria and scarlet fever did not extend under circumstances favorable to their dissemination, and the same case under other and later circumstances might exhibit great virulence. Shingleton Smith contended that the presence of an attenuated bacillus did not indicate that the patient must be dangerous to those about him. He did not believe that the degree of danger of infection was proportionate to the presence of the bacilli. In reply Rogers referred to the work of Hewlett and Knight, who claimed to have been able to convert the pseudo-bacillus into the Klebs Loeffler, and to Martin's investigation, which showed that the pseudo-bacillus can give rise to grave general diphtheria if associated with streptococci.

2.—Swayne states that cases of **occipital presentation** are of rare occurrence, and have received but little notice in most works on midwifery. The condition is a cause, or it would be more correct to say, a consequence of difficult labor, and is really owing to a pelvis that is rather below the average capacity than to one that shows signs of special deformity. As to the diagnosis, Chailly remarks that the posterior fontanel occupies the center of the uterine orifice, whilst the anterior fontanel is very difficult to reach if it be

in front, and impossible if behind. The presenting head is also very much flexed. The diameter of this presentation is favorable to the descent of the head; it extends from the lower portion of the occiput to the vertex, and measures  $3\frac{1}{2}$  inches. The diagnosis of the position is made in the same way as the full presentation, but the condition is more difficult of recognition because only one fontanel can be reached. The difficulties of the labor are well described by Spiegelberg, who says: "In the generally and uniformly contracted pelvis the head meets at the brim, *i. e.*, *ab initio*, with an all-round obstruction such as under normal conditions it only encounters at the lower apertures. It therefore enters strongly flexed, with the suboccipito-parietal plane in the brim. The point of the occiput forms the deepest portion of the presenting segment, the nape rests against the ilio-pectineal line, the summit of the vertex and the forehead lie on the opposite side, the face looks toward the fundus uteri, the long diameter of the head lies in the axis of propulsion, and the small fontanel is near the middle of the pelvis (*occipital presentation*)." Frequently the head inclines first to one side, then to the other, as if with no definite object, no controlling pressure being exerted from either side, and continues to do so, until it is firmly fixed by the pains. At last it is driven in very much like a wedge, and flattened in width and depth by the all-round pressure to which it is subjected; it is elongated in a fronto-occipital direction. If it cannot force its passage, if the brim is too contracted for this, or if the contraction increases below, the head remains at last *in situ* as if walled in—impacted. The molding can in these cases only be effected by a compression of the whole head, *i. e.*, by an actual reduction in size. Hence arises the cylindric form, tapering towards the occiput, the flattening of the vertex and of the frontal bones, the prominence of the face, the sliding of one parietal bone over the other, the forcing inwards and even dislocation in that direction of the tabular portion of the occiput, the great diffuse caput succedaneum, and the absence of definite pressure-marks.

3.—Semple used the **Schott baths** and the **rest-cure**, somewhat modified, in the treatment of a case of exophthalmic goiter after the patient had been upon various other treatments, and had not improved. The treatment was begun with sponges, which were changed for the baths when some improvement had set in. This continued until almost entire recovery ensued. The patient had some pigmentation of the skin, resembling that seen in Addison's disease, and Semple calls attention to the fact that both diseases are believed to be due largely to disturbance in the sympathetic system; in the one case, the disease being situated in the cervical ganglia, in the other, in the upper abdominal ganglia. Both diseases have several symptoms in common, such as tachycardia and weakness, so that there seems to be considerable analogy between them.

4.—Trevithick reports the case of a woman, 46 years old, who was at first supposed to have appendicitis. In the midst of good health she became chilly, vomited, and had severe pain in the right side of the abdomen, with much depression and emotional disturbance and slight fever. The bowels had not been moved for nearly 3 weeks. A few days after the first bowel-movement a grayish, semi translucent, hollow, cylindrical cast, 7 in. in length, was passed, together with a little bright blood. Eleven days subsequently, some more-similar material was passed, and, for a third time, five days after this. This material was found to be composed of a structureless matrix, in which were a number of nuclei that stained well. It seemed, therefore, that a large part of it at least must consist of degenerated cells, and they were believed to be either parasitic amebæ or exuded leukocytes. The substance was not at all fibrinous, nor was it composed purely of mucus.

### Münchener medicinische Wochenschrift.

June 14, 1898. [45. Jahrg., No. 24.]

1. What Should be the Physician's Advice to Persons Infected with Gonorrhea who Desire to Marry. E. KROMAYER.
2. The Therapeutic Applications of Methylene-blue and Diaphtherin. F. MAYS.
3. A Case of Hereditary Syphilitic Saddle-nose. M. OETTINGER.
4. Experience in Urinary Investigations and the Progress of Urine-Analysis in 1897. G. BUCHNER.



5. A Contribution to the Knowledge of Secondary Malignant Neoplasia. HABERMANN.
6. Vasogens as Vehicles in the Local Treatment of Cutaneous Affections. K. ULLMANN.

1.—The answer that the physician should give his patient, who has had gonorrhea and is contemplating marriage, brings up for discussion the question as to when the danger of transmitting the infection is passed. Neisser holds that when, after repeated and most careful examination, the absence of gonococci has been positively determined, the secretion from the urethral mucous membrane is not infectious. Kromayer, on the other hand, pronounces this opinion scientifically incorrect. He believes that while during treatment the gonococci have disappeared, if the discharge continue, the gonococci may reappear, after an interval of long or short duration, especially following alcoholic or venereal excesses and over-fatigue. The evils, resulting from pronouncing a patient cured upon the disappearance of the gonococci, are of a serious nature. The patient discontinues treatment before he has actually recovered from his chronic urethritis, and, believing himself to be cured, considers marriage justifiable. It is the duty of the physician, therefore, to strongly urge against marriage until every trace of the pre-existing urethritis has vanished. If, despite this counsel, the patient acts upon his own responsibility, he should observe the following precautions: He should urinate before intercourse; the latter should not be indulged in more than once daily, and in no instance repeated after a short interval; should this precaution be disregarded, his wife should use vaginal douches.

2.—Mays has found that the cases of malaria that are resistant to quinin react promptly to methylene-blue, and the reverse; the quotidian cases being cured by methylene-blue, and the tertian not reacting to it. He gives the clinical histories of a number of cases of malaria that had been treated for some time with quinin, without result, but that subsequently recovered rapidly under methylene-blue. He finds that irritation of the stomach is less common after the use of methylene blue than after the use of quinin. When unpleasant effects follow, they are, he believes, due to impurities.

3.—The so called "saddle-nose" of hereditary syphilis is due usually to gumma of the nasal mucous membrane and bones, and makes its appearance after the patient is a year old, or often as late as puberty. Oettinger records a case in which this condition was present in a child at the early age of 3 months. At this period syphilitic coryza is common, occurring in 58% of cases, but rarely goes on to extensive ulceration and ultimate involvement of the nasal bone and cartilages.

4.—In examining for albumin Buchner uses four tests: the boiling test, Heller's test, the potassium-ferrocyanid test, and the mercuric-chlorid test (Spiegler Jolle's). The first has a delicacy of 0.1 per thousand; the second, of 0.02 per thousand; the third, of 0.008 per thousand; and the fourth, of 0.003 per thousand. If a reaction occurs with the more delicate tests, but not with the less delicate ones, a moderately accurate knowledge is gained of the amount of albumin present. With numerous dilute urines the boiling test yielded negative results, while the others were positive, and the urine undoubtedly contained albumen. This is due to the insufficient amount of salts in such urines; to prevent errors it is necessary to add some sodium-chlorid solution to the urine and repeat the boiling test, before a conclusion can be reached, from the negative evidence, that albumin is absent. Examples are given of a number of irregular results that are possible in using the four tests together, and the substances in the urine are named that may cause such results. For rough work, if the urinary salts, and in especial the chlorids, are about normal, and abnormal substances are either absent or present in known quantity, one may conclude that the urea is equal to one-half the total amount of solids. Examples are given in which results obtained in this way have been compared with those obtained by Liebig's method, and found to vary about 3% only.

5.—Habermann continues with the pathologic report upon the tumors from his case, which showed that they were **neurofibromata**, at first rich in bloodvessels, and later very edematous. These were composed chiefly of connective-tissue, with very few cells, and throughout this connective-

tissue were a large number of nerve-fibers without marked changes either in their character or their number. In this case there were undoubted congenital changes in the skin, which were followed later by the appearance of the tumors. It seems probable that the latter were of congenital origin. There is no doubt that, in this case, the operative procedures acted unfavorably and aided in causing the reappearance of the tumors. The prompt and successful healing of the divided nerves was remarkable. The operation in such cases cannot bring permanent cure, but there is no doubt that the tumors should be removed.

6.—Ullmann reports his results from the use of ichthyol, tar, naphthol, and sulphur in vasogen-ointments. These have yielded uniformly successful results, and they are to be recommended because they are readily removed subsequently by simple washing, and they cause but slight irritation, and various medicaments are readily incorporated with them. The preparations are colorless, odorless, and of a proper consistency for application.

### Deutsche medicinische Wochenschrift.

June 9, 1898. [24. Jahrg., No. 23.]

1. Some Observations Concerning Intermittent Contraction of the Pupils in *Tabes Dorsalis*. H. EICHHORST.
2. Two Cases of Round-Worms in the Biliary Passages. MERTENS.
3. The Diagnosis of Esophago-tracheal Fistula. KOHLENBERGER.
4. Forced Heat-Treatment in Joint Diseases by Means of a Simple Heat-Apparatus. M. WILMS.
5. A Test of Motion and Disturbance of Motion in Lumbar Pain and Sciatica. L. MINOR.
6. Differential Staining in Bacterial Investigations. R. KAUFMANN.
7. A Case of Complete Masculine Pseudohermaphroditism. L. SIEBOURG.
8. Blindness in Spain. J. HIRSCHBERG.

1.—Eichhorst states that although the **Argyll-Robertson pupil** has been long recognized as a symptom of **tabes dorsalis**, the fact that the immobility to light may intermit has not been recognized. He reports a number of cases with indubitable signs of tabes that were observed for several years, and during this time showed a variable condition of the pupils, which were sometimes responsive to light and at other times entirely immobile.

2.—Mertens reports a case in which there was **icterus** accompanied by fever and by attacks of severe **colic**. The patient gave a history of previous attacks of biliary colic, but the diagnosis was somewhat doubtful, as she developed later, in addition marked enlargement of the liver, ascites and edema of the lower extremities—symptoms that rendered the diagnosis of tumor in or behind the liver somewhat probable. After two **roundworms** were passed in the stools, there was a continuous decrease in all the symptoms, the patient recovering entirely. One of the worms showed a constriction at about its middle, and Mertens believes this was undoubtedly due to the pressure of the papilla of Vater. This is the only case he has been able to find recorded in which recovery ensued, excepting one in which an operation was performed for a liver-abscess. He reports also a case with all the symptoms of carcinoma of the stomach and secondary involvement of the liver, in which, after death, in addition to the carcinoma, a roundworm was found in the common bile-duct.

3.—Kohlenberger reports a case in which there had been pain upon swallowing, frequent severe attacks of cough, especially after swallowing liquids, and the patient had at times coughed up wine and other colored liquids that had been previously swallowed. Nothing definite could be determined by physical examination, so that an attempt was made to determine the existence of a fistula between the trachea and the esophagus by introducing a stomach-tube into the esophagus, having the upper lateral opening directed forward, and at the same time holding a lighted candle before the external end of the tube, the patient meanwhile breathing deeply. During the passage of the tube, the candle-flame was drawn inward during inspiration and blown outward during expiration. Suddenly, however, when the point of the tube was 31 cm. from the upper in-



cisor teeth, the light was quickly extinguished. The same thing occurred after repetition of the experiment, thus making the diagnosis of fistula practically certain. The patient subsequently died of pneumonia, and at the level of the bifurcation of the trachea, there was found a carcinomatous ulceration in the esophagus with a perforation into the trachea.

4.—For the application of heat to joints, Wilm has devised the following method: 2 or 3 layers of a plaster of Paris bandage being applied as a protector, the joint is enveloped with coils of thin lead-pipe, either end of which is connected by rubber tubing with two receptacles for water. Under one of these a spirit-lamp is placed, and the water thus heated is carried by siphonage through the coils into the other receptacle. By this means a constant temperature of from 46° to 48° C. is maintained. The local application of heat in this way has been particularly successful in the treatment of gonorrheal arthritis; in tubercular arthritis the results up to the present time are negative. [The method employed in England and the United States of enclosing the limb in cylinders containing air heated to from 140° to 180° C., should be much more efficacious.]

5.—Minor reports 3 cases of traumatic lumbago, in all of which the patients arose from the ground in exactly the same manner as do children suffering from pseudo-hypertrophic muscular paralysis. One of the patients had alternate attacks of typical secondary sciatica. In a fourth case, a man, 40 years old, suffering from right-sided sciatica, rose from the ground in a different manner, which, for a certain class of cases is classic. The movements are as follows: The patient, if sitting upon the ground, usually stretches out his sound leg, and slightly bends the other. If he is then asked to fold his arms and rise, he finds it impossible to do so. If allowed to help himself with his hands, he puts both behind him, pushes the pelvis outward, at the same time bending the knees until finally his feet are beneath him; that is to say, he endeavors to accommodate himself to a center of gravity that is back of him; he then commences to rise slightly from the ground, supporting himself with one hand, and he then balances himself with the other. The two characteristic features are (1) that the patient supports himself upon his hands placed behind him, and (2) that he balances with one hand. There are, therefore, two characteristic methods of rising from the ground: so-called ischiatic dyskinesia, balancing with the center of gravity backward, and lumbar dyskinesia, climbing on the limbs with the center of gravity forward.

6.—Kaufmann has tested the method of Knaak for the differentiation of bacilli from tissue, consisting in staining with methylene-blue, decolorizing in  $\frac{1}{2}\%$  solution of silver nitrate and staining with dilute solution of basic fuchsin. The microorganisms remain blue, while the tissues are stained red. This method is efficient for the recognition of most microorganisms, excepting typhoid and diphtheria bacilli, the bacillus of malignant edema, and some of the thermophilic form, but only if the organisms are obtained directly from the bodies of animals. A modification that is sometimes advantageous consists in the omission of the differentiation in silver, simply allowing the preparation to remain a long time in the fuchsin. This method is not applicable to microorganisms that have been fixed in tissues.

8.—The prevalence of blindness, both among the wealthy and pauper classes of Spain, is surprising. In most cases it has followed inflammatory affections of the eyes in childhood. Of late years the practice of ophthalmology has been taking a retrograde course; there are now in Spain no renowned eye-specialists, no eye-hospitals, either public or private, no professors of diseases of the eye, and no society of ophthalmologists.

### Wiener klinische Wochenschrift.

June 16, 1898. [11. Jahrg., No. 24.]

1. A Pulse-Phenomenon in Neurasthenia. S. ERBEN.
2. A Further Contribution to the Biology of the Gonococcus, and the Pathologic Anatomy of Gonorrheal Processes. A. GHON and F. SCHLAGENHAUFER.
3. Partial Rhinoplasty. J. PREINDLSBERGER.

1.—In examining a large number of patients suffering from neurasthenia, Erben has noticed that the customary

increase in the rapidity of the pulse that follows the movements of the body in these cases does not occur if the patients bend far forward. After continuing its previous rhythm for from 4 to 15 beats, there is a sudden retardation of the pulse, which continues for about 6 beats. After this, the pulse gradually reaches its former rapidity. Ortnier also pointed out to him that the same result ensues if the patients bend their head backward. Erben does not believe that the explanation of this phenomenon can be found in simple increase of blood-pressure, as he has been unable to decrease the pulse-rate by pressure on arteries, and he explains it through the venous congestion of the vagus-center, giving rise to slight irritation of that center.

2.—According to Ghon but 4 authentic cases of gonorrheal endocarditis have been recorded; and to these he adds a fifth. This agrees in both its bacteriologic and its pathologic relations with the case reported by Ghon and Finger in 1895, in both cases the nature of the endocarditis being settled beyond a doubt by obtaining a pure culture of gonococci. The case was complicated with gangrene of the foot and leg following embolism of the femoral artery, but, strangely enough, there was no involvement of the joints. The only other pathogenic coccus that comes into consideration in the differential diagnosis is the diplococcus intercellularis meningitidis, the resemblance of which to the gonococcus has been pointed out recently by Kiefer and others. A further proof of the identity of the gonococcus lay in the fact that an attack of specific urethritis was excited by infecting the male urethra with a culture obtained from the cardiac valves.

3.—The method of performing partial rhinoplasty, as described by Hacker, was carried out with great success in a case of Preindlsberger's. Essentially, the method consists in dissecting a flap from the cheek and everting it, so that its cutaneous surface lines the nasal cavity. This flap is covered by a second, taken from the other side of the nose. The latter step may be omitted and the defects be treated with skin-grafts.

### Centralblatt für Gynäkologie.

June 4, 1898. [22. Jahrg., No. 22.]

1. Axial Torsion of the Uterus by Tumors. FROMMEL.
2. Hysteroscopy. OSCAR BEUTTNER.
3. Vaporization and Vapocauterization. LUDWIG PINCUS.

1.—Frommel reports two interesting cases of axial rotation of the uterus due to the growth of tumors. The first patient was a multipara, 40 years of age, who had passed the menopause a year before. For 11 years she had noticed a tumor in the abdomen, which had, however, been of rapid growth only for a year. Owing to inability to perform her duties, the patient requested an operation. Examination disclosed the presence of an immense, distinctly fluctuating tumor. Vaginal exploration revealed a small vaginal portio and a small uterine body pushed well forward. A diagnosis was made of right-sided ovarian tumor. The operation showed the omentum covering the entire anterior surface of the tumor, requiring division between ligatures. On drawing the tumor and uterus up through the wound it was found that there was no ovarian tumor present, but a myoma the size of a head springing from the fundus of the uterus, and containing an enormous cyst at about its middle. Both ovaries were normal, the left lying in front of and the right behind the uterus. The myoma was extirpated according to Schroeder's method, the greater portion of the uterus and both ovaries being saved. The torsion of the uterus was the result of the rapid growth of the tumor. The second patient was also a multipara, 32 years of age, who had had an abdominal growth of 2 years' standing. The tumor was round in shape and filled the small pelvis, rising nearly to the level of the umbilicus. Combined examination showed a slightly enlarged uterus, from the fundus of which the tumor sprang, with a pedicle as thick as the finger. The operation disclosed the presence of a considerable quantity of ascitic fluid, and a myomatous tumor springing from the left side of the fundus of the uterus. The uterus was so twisted that the left ovary lay to the right posteriorly and the right to the left anteriorly. The tumor was extirpated by Schroeder's method.

2.—Beuttner has devised a hysteroscope for the purpose



of examining visually into the condition of the uterine mucosa. It is a modification of the Nitze-Winter cystoscope. After thorough disinfection of the vagina with 1:1000 mercuric-chlorid solution, a Sims speculum is introduced, the cervix is drawn down and the instrument is passed into the uterine cavity and the canal is inspected.

3.—Pincus regards treatment by **vaporization** and its modifications (vapocauterization) as of great practical worth, especially in the abundant hemorrhages of the climacteric, and the beginning infectious processes in puerperal endometritis.

June 11, 1898. [22. Jahrg., No. 23.]

1. The Question of Syncytium and of Deciduoma Malignum. J. PFANNENSTIEL.
2. The Technic of Intraperitoneal Operations on the Uterus. N. N. FENOMENOV.
3. A Word about Vaporization of the Endometrium. EMANUEL KAHN.

1.—Pfannenstiel regards **malignant deciduoma** as an endothelioma springing from maternal tissues. He believes that the syncytium is not fetal ectoderm, but maternal endothelium, the endothelium of the superficial blood-capillaries of the decidua. The endothelioma is, according to this theory, only an anatomic variety of sarcoma. Pfannenstiel does not agree that malignant deciduoma can have its origin from the uterus prior to pregnancy, but he feels positive that clinical experience proves that it can originate only in a pregnancy, and is a pathologic product thereof. It is the cause of abortion, mole-formation, and the like, and not the result of these conditions.

2.—Fenomenov has modified the technic of **intraperitoneal operations upon the uterus** in some degree. In order to avoid infection of the peritoneal cavity after amputation of the uterus, he disinfects the canal of the uterine cervix by a process of vaporization after dilatation. He has also used this method quite frequently to disinfect the uterus in cases of putrid endometritis (post-abortion), with most satisfactory results. Chronic fistulae not infrequently can be sterilized by the same process. The technic of vaporization is simple and easy of accomplishment. An ordinary atomizer will generate the spray that is carried through a simple thick rubber tube attached to a uterine sound with multiple perforations on its side. After disinfection of the vagina, the patient lying in the dorsal position, a speculum is introduced and the cervix is fixed with volsellum-forceps. The sound is then introduced and the vapor is allowed to enter. The cavity is then washed out with a strong stream of cold water passed through the usual irrigator. The other modifications consist in attempts to operate with the slightest possible loss of blood, and to render as accessible as possible the deep-lying field of operation. The latter is accomplished by drawing the uterus well up out of the pelvic cavity by means of a strong pair of forceps that grasps the uterine fundus. The arteries are then caught in arterial forceps, divided and ligated. If the uterus is low down in the vagina it may be elevated considerably by the use of colpeurynters.

3.—Kahn cautions against the direct introduction of the catheter against the uterine fundus, as the energetic contraction of the uterine walls resulting from the violent irritation produced by the vapor might bring the fundus forcibly in contact with the point of the instrument and cause a perforation.

### Revue de Chirurgie.

June 10, 1898. [18. Ann., No. 6.]

1. Resection of Renal Tissue Practised for Diagnostic Purposes. OSCAR BLOCH.
2. A New Procedure in Intra-condyloid Osteoplastic Amputation of the Thigh. ALEXANDRE JACOBSON.
3. Horny Tumors of the Superior Extremity. MAURICE PÉRAIRE and A. PILLIET.
4. Direct Subcutaneous Rupture of the Large Arteries and Consecutive Gangrene. FELIX LEJARS.

1.—In consideration of the element of uncertainty attending the diagnosis of a number of **renal affections**, Bloch is strongly in favor of **resecting a portion of the renal tissue** at an exploratory operation purely for diagnostic purposes. Experience shows that even after one is able to inspect, palpate, and carefully examine the kidney during

the performance of an ordinary nephrotomy, occasions arise when the diagnosis is still in doubt. For this reason the practice of excising a piece of tissue for careful histologic and bacteriologic examination should meet with favor. As to the technic of the operation, the oblique lumbar incision is to be preferred, and the wound may be closed either with catgut sutures or by tamponing. The piece of renal tissue, excised with the aid of sterile instruments, is placed immediately in a sterile towel or in a physiologic salt solution. A series of observations are recorded in which the diagnosis not only before the operation, but after the kidney was exposed, was made only to be corrected by the subsequent report of the pathologist.

2.—Jacobson has devised a modification of Ssabanajeff's **osteoplastic amputation of the thigh**, which he considers preferable to either disarticulation of the knee joint, or Larrey's amputation at the upper portion of the leg. The steps in the operation consist first in making the incision and then in ligating the popliteal vessel; after the soft parts and articular structures are divided and the knee disarticulated, the lower portion of the femur and a section of the bone from the tibia are sawed off in the manner described by Ssabanajeff. The final step in the operation consists in suturing the structures together, layer by layer. The characteristic features of the operation are these: the preliminary ligation of the popliteal artery, which excludes the necessity for the employment of an Esmarch bandage; the preservation of the insertion of the tendinous attachments to the tibia and the femur, and the application of the sutures so that the divided ends of the muscles on the anterior surface of the limbs are united to those on the posterior surface.

3.—Pénaire and Pilliet describe the clinical characteristics of the **horny tumors of the upper extremity**. As a rule, tumors of this description appear in the aged, although there are exceptions. They occur more commonly in females, and often they can be traced to some local irritation, not infrequently following a preexisting lesion of the skin. They are usually conical in shape and may be single or multiple. They are of a brown, yellowish or grayish color, and of variable length and consistency. As a rule, when once they have developed, they rarely disappear spontaneously; occasionally, however, they may undergo some form of degeneration, eventually becoming malignant, for which reason the prognosis must be reserved. The diagnosis is based upon the physical characteristics of the growths, and in addition to the peculiar odor that is emitted when a portion is burned in the flame. But one form of treatment is worthy of mention, namely, complete extirpation. Any other mode at removal should be looked upon as merely palliative, as recurrence is sure to follow.

4.—**Subcutaneous rupture of arteries**, with subsequent occlusion of their lumen, is usually followed by gangrene of varying degree. At times, however, such lesions are not attended with any grave accidents whatsoever. In support of the latter statement several cases are cited in which obliteration of the brachial artery, following severe contusion, was unattended with any severe complications. If gangrene does occur it manifests itself in one of two ways, either as gangrene *en masse*, usually of the moist variety, or as a peripheral or circumscribed gangrene of the dry variety, developing slowly and appearing at a greater or less interval after the accident. The resulting thrombus is, as a rule, extensive; in case of injury of the femoral artery it may extend through the popliteal to the anterior and posterior tibials. Another phenomenon attending this injury, and one that plays a part in the ultimate result, is the sanguineous effusion around the artery that oftentimes exercises compression upon the accompanying vein and upon the adjacent venous and arterial tributaries. The prognosis must in each case be reserved, bearing in mind the variety of ways in which the lesion may terminate. If the traumatism has been severe and is followed by a profuse extravasation of blood and by circulatory disturbances, the diagnosis is not difficult. In other cases systematic examination of the pulse and the appearance of gangrene will determine the nature of the case. In treatment, amputation should be reserved until the presence of gangrene demands it. By thorough evacuation of the clot, with ligation of the ruptured artery and such measures as will assist in preserving the vitality of the limb, the necessity for amputation will in many cases be avoided.



## Original Articles.

SOME POINTS IN THE TREATMENT OF DISEASES OF THE STOMACH.<sup>1</sup>

By C. A. EWALD, M.D.,

of Berlin, Germany.

As IN everything else, so in the treatment of gastric diseases, a rational, successful therapy is impossible without an exact diagnosis. It is, therefore, absolutely necessary that I should premise a few observations on the present position of the diagnosis of diseases of the stomach. It is well known that the advance that has been made in our knowledge of gastric diseases during the last 10 or 15 years is due in no small degree to the serious study of the chemism of the stomach; that is, of the secretory functions of the gastric mucous membrane and their relations to the various changes in gastric activity. It is even, perhaps, not too much to say, that in this matter here and there the pendulum has swung a little too far, and practical medicine has been lost sight of in the midst of useless details and petty, though, perhaps, scientific trifling.

I have always been a little surprised that these diagnostic methods, and the specialism that has resulted from them, have been comparatively little cultivated in England. A look through the literature of the subject shows that most of the work in the newer specialty of stomach-diseases has been done in Germany, and comparatively little in England. The specialists for diseases of the stomach and the intestines are products of German and American soil. Your Anglo-Saxon brothers across the water have recently, indeed, founded an American Gastro-Enterological Association. I may say at once, however, that in my opinion, the special difficulties of the diagnostic and therapeutic methods necessary for diseases of the stomach and intestines are not such as require that special scientific knowledge or technic that would justify their being separated from internal medicine. I have always considered the English position in the matter a very sensible one, and have attributed their conservatism in this matter to their broad, sound, clinical common sense, their thorough medical training and broad views.

As a matter of fact, when we look to see which of the almost unbroken series of diagnostic methods for stomach-diseases that have been published in recent years are practical enough to retain a place in clinical work, we find that their number is limited to a few chemic reactions and mechanical methods, which serve to tell us the condition of the stomach at the moment of the examination. What we find by such an examination, however, is never in any sense pathognomonic; and quite as much now as ever *the decisive factor in the*

*diagnosis consists in properly weighing and combining all the elements that the clinical course of the disease furnishes.* So long ago as 1883 I expressly insisted on this.

We must not exaggerate the importance of our modern methods of examination, but we must also be careful not to undervalue them. Such clearer insight into diseases of the stomach as we have now than 20 years ago we owe to the newer methods of investigation. I beg to claim for myself the modest merit of having, by the introduction of the soft stomach-tube, made possible the wider application of this clinical work. Our diagnostic methods are limited at present to the following procedures, which are the simplest and most practically useful and which are usually carried out with the test-breakfast suggested by me some 15 years ago: The total acidity is expressed by titration with  $\frac{1}{10}$  normal sodium-solution and phenolphthalein as an indicator. The qualitative test for the presence of free hydrochloric acid by means of Günzburg's reagent or Congo-paper; also for combined hydrochloric acid (Sjöquist), and for lactic acid, as also the fatty acids (Uffelmann). Then the quantitative determination of these substances by titration, especially of the total amount of free and combined hydrochloric acid present (Töpfer's method with dimethylamidoazobenzol and alizarin [alizarin sodium monosulphate] and for a deficiency of hydrochloric acid—Mintz). Next, the microscopic examination of the stomach-contents, of the blood, etc., and the institution of a fermentation-test. Hayem's procedure has proved too difficult and too liable to error in practice, and so has not been available for practical diagnosis. Attempts, by means of radioscopy or the gastroscope, to obtain a view of the interior of the stomach have led to no useful results. I know of a number of instances, on the contrary, in which Röntgen photographs have led to absolutely false diagnoses. On the other hand, the transillumination of the stomach by means of the gastrodiaaphane may under certain circumstances be of distinct value. It may, however, be replaced nearly always by simple distention of the stomach with gas; not to be neglected, finally, are the old long-tried methods of physical examination by means of palpation, percussion, auscultation and inspection of the stomach and its neighborhood.

How by means of the results thus obtained and their combination with the data furnished by the patient's history we are able to differentiate the various types of stomach-disease, and so to arrive at the diagnosis of catarrh or ulcer, or carcinoma or a neurosis or its consequences, or conclude as to the existence of dilatation of the stomach, of excessive gastric secretion, or malposition of the stomach, I cannot enter upon here. Of special importance is the fact that in pathologic processes that are in their etiology and nosology quite distinct, the chemic reactions may be identical, so

<sup>1</sup> Read in the Section of Pharmacology and Therapeutics at the Sixty-sixth Annual Meeting of the British Medical Association at Edinburgh, July 26-29, 1898.

that it is impossible to give a specific or pathognomonic significance to them. Total absence of hydrochloric acid, for instance, may be found with the catarrh of the stomach, with carcinoma or with certain gastric neuroses.

The question then arises, Shall we under such circumstances take the indications thus given by the chemic investigation of the stomach as the guide for our treatment, considering them as the expression of functional disorders, or shall we, in the good old-fashioned clinical way, base our treatment on the whole condition of the affection? Seemingly nothing is easier, or more convenient, or better founded than to do the first. When hydrochloric acid is diminished we supply it; when it is increased we neutralize the excessive acidity by alkalies, or excite increased salivary secretion by giving the patient something to chew upon. Pathologic fermentations, for example the lactic-acid fermentation, may be stopped by antiseptics, or the culture-medium in which they take place may be removed by lavage of the stomach. The same thing holds good for pathologic secretion of mucus and other catarrhal products. We remove them partly by drafts of alkaline or saline solutions, or by directly washing out or douching the stomach. Perhaps the time will come too when we shall use Turck's gyromele, the revolving brush, for this purpose, but the instrument seems thus far, owing to certain risks attendant upon its use, to have found very little employment except by its inventor. In a word, we may say that a complete symptomatic treatment may be employed that is founded practically on the results of the chemic investigation of the stomach. As a matter of fact the therapeusis of stomach-diseases was mainly carried out from this point of view for a long time, and it cannot be denied that under favorable conditions good results may be achieved thereby. One may invert the well-known phrase "remove the cause and the effect ceases" (*oblata causa cessit effectus*), and say "remove the effect and the cause ceases" (*oblata effectus cessit causa*), inasmuch as under careful treatment of the stomach that removes all abuses of function, the causal factors that set up the disturbance of gastric chemism, and through this led to progressive aggravation of the pathologic conditions already present, would gradually undergo involution and disappear.

It was soon evident, however, that these measures were not sufficient, that there was another important factor at work: *motor insufficiency, the loss of the motor function of the stomach.*

The fact that the intestine is able to act vicariously for the defective gastric functions has long been known. Long ago Ogata showed in Ludwig's laboratory that the stomach could be completely switched off from the digestive tract, and yet the animals on which the operation had been performed could be kept in a good state of nutrition. I called attention myself later to

the fact that patients in whom there was no demonstrable trace of gastric secretion might still show no sign of disturbance of nutrition and lose nothing in weight. Such patients may remain for a long time perfectly healthy and keep up their nitrogenous equilibrium. Under these circumstances the digestion and assimilation of food-stuffs must take place exclusively in the intestine.

What holds for these extreme cases must also be true for slighter disturbances of gastric digestion, so long as the motor power of the stomach is sufficient to lead to a prompt delivery of the stomach-contents into the intestine. Everything depends on the fact, then, that gastric peristalsis is present in sufficient amount. If this is the case, then the severest organic affections of the stomach may run their course for a long time absolutely without symptoms. A carcinoma, for instance, of the greater curvature, may reach considerable size and the process be entirely latent. Should atony of the gastric muscularis supervene, which may from a slight beginning go on to complete relaxation of the stomach-wall, then the compensation I have spoken of becomes impossible. It is, besides, clear that when the atony occurs as a primary condition, then all those mechanical and chemic symptoms will be noted, which the too long retention of food in the stomach inevitably brings with it.

The recognition of this fact must necessarily lead to a greater consideration of the motility of the stomach as opposed to a one-sided supervaluation of gastric chemism. As to the process of the emptying of the stomach and gastric peristalsis, the experiments of von Mering, of Schüle, Moritz, Einhorn, and Meltzer have been most instructive.

For the diagnosis of gastric atony we make use of examination by means of the stomach-tube and Ewald's salol-test. The dilatation or displacement of the stomach that naturally goes hand in hand with the atony can be diagnosticated best by distention of the stomach with gas, by the outline of dulness after successive small swallows of water, or by the gastrodia-phane. This last serves especially for the differential diagnosis between dilatation of the stomach and gastroptosis. In the first case the picture of the stomach, as projected on the abdominal wall, moves synchronously with the diaphragm during respiration, as the fundus is immediately under the diaphragm. In gastroptosis the projected stomach-picture remains immovable, as the diaphragm and stomach are no longer in contact.

The only internal remedy for motor conditions at our command is strychnin. We can do something mechanically for the food-stagnation in the stomach and for the muscular atony by lavage, stomach-douches, and massage and electricity. When these remedies fail, nothing is left but gastroenterostomy, switching, so to say, the stomach out of the digestive tract to a great extent. I



should especially warn, under these circumstances, against the too long continuance and too frequent employment of washing out of the stomach. When lavage does good, it does so very soon; when it does no good, patients easily suffer in their general nutrition, and the continued removal of a certain amount of the material intended for nutrition may give rise to symptoms of inanition.

The last group of conditions that we have to consider, indeed, is the *neuroses of the stomach*, those dyspeptic, colic-like symptoms in the region of the stomach, which are caused by disorder of the nervous apparatus, of either local or central character, and that only secondarily proceed from an affection of the glandular or muscular mechanism. This last is often of so slight a character that it completely escapes our diagnostic methods. Here may be classed nervous dyspepsia, nervous hyperemia of the stomach, the anomalies of secretion that rest on a nervous basis (hyperchlorhydria and hypochlorhydria), nervous vomiting and nervous crises (crises gastriques). The last, however, are mostly, though *not always*, caused by an affection of the central nervous system, tabes. Under these conditions the treatment of the gastric disorder, in so far as it is not purely symptomatic, consists in the treatment of the central nervous system. In neurotic cases the affection of the nervous system must relieve in general tonic and constitutional treatment. Only after this comes the question of treating the dyspeptic symptoms, though they seem to stand out so prominently. Here, indeed, it is often necessary after you have convinced yourself of the good condition of the gastric functions, to prescribe a comparatively hearty and plenteous diet, despite the patient's objections to it. An example of this method of treatment is the "rest-cure" as introduced by Weir Mitchell. It is, however, not sufficient in many cases. I have often had patients in whom I succeeded in a short time in bringing about considerable addition to their weight, while the dyspeptic symptoms remained unchanged. For such cases the gain in weight is not due to increase of muscle-substance, but to a deposit of fat and to retention of water in the tissues. Only after such patients have had a thorough course of roborant treatment in the mountains, or on the seacoast, or in a well-situated sanatorium for dietetic and hydrotherapeutic treatment, did real improvement set in.

So much for the general principles that must be borne in mind in the treatment of diseases of the stomach, though I must not omit to call your attention especially to the multifarious relations that exist between the stomach and diseases of the rest of the digestive tube, from the mouth to the anus, and between it and affections of other important organs, especially those of the abdominal cavity.

Permit me, then, as it would be impossible to properly treat this subject fully, to at least select certain

special features of the treatment of such conditions. One of the most satisfactory affections to treat is *ulcer of the stomach*, provided, of course, that it be not too old, and that the depth of the ulcerative process has not already given rise to cicatricial contractions and adhesions. Way back in the thirties the treatment of ulcer of the stomach recommended by certain English authorities was the withdrawal, as far as possible, of all food by the mouth. Recently this so-called rest-cure has become identified with the name of Leube. As we have found that the nutrition of the organism, even though only for a limited time, may be carried on by nutritive enemata, we have been able to go a step farther with this treatment. I treat patients in whom I suspect or feel sure that an ulcer of the stomach exists, as follows:

The patient is confined absolutely to bed for the first 5 or 6 days, and receives as nourishment only nutritive enemata, which are given in the usual way, 3 or 4 times a day. Thirst is combated by small pellets of ice, the feeling of hunger by a few drops of a solution of cocain. It is remarkable, however, how slight these sensations are, as a rule. If the pain continues at the beginning, a small injection of morphin in the region of the stomach yields the best results. As a rule this is not necessary, as the pain ceases spontaneously as soon as the mechanical irritation of the ulcer stops. This pain constitutes an excellent differential diagnostic symptom for nervous cardialgia and biliary colic, which often are deceitfully like ulcer of the stomach in their symptoms. Nervous gastric pain will be influenced not at all or only for the moment, by the withdrawal of food, *i. e.*, so long as the suggestive effect of the novelty of the treatment continues.

After no food has been given by the stomach for from 3 to 5 days, according to the subjective symptoms of the patient and the general condition, a few teaspoonfuls of some easily absorbable material are given. The simplest is a thin milk-gruel of some meal or other, wheat or oats, or mondamine, or one of the many artificial preparations, Kemmerich's peptone, or somatose, or nutrose, or eucasin. If this causes no pain the next day, more is given. After 3 or 4 days other easily digestible substances are added, but at first in more or less liquid form. Then the consistency of the food-stuffs is increased and the nutritive enemata become fewer in number.

Should pain occur, however, after the first trial, then exclusive feeding by the rectum must be resumed, and I have in some cases kept it up for from 10 to 14 days. You cannot hope in such cases, however, to retain your patient's nutritional equilibrium for so long a time. A considerable loss of weight ensues, and I have found by careful observations of organic metabolism that the body loses a considerable amount of nitrogen. This loss is, however, of little importance and is soon made good. The original body-weight is far outstripped

when the patient is able to eat plentifully without pain.

This method of treatment should be carried out whenever it is possible. It gives such excellent and such certain results, that one can say that when it fails, complications must be present, *e. g.* old cicatrices, especially at the pylorus, perigastric adhesions, or else that some other affection, whose seat is perhaps not in the stomach at all, must be the cause of the pain.

Of the other methods of treatment, with bismuth, silver nitrate, iodine, potassium iodide, I shall say nothing, but I shall mention a remedy that has been highly recommended recently for the pains. Orthoform, in doses of from  $\frac{1}{2}$  to 1 gm. (from  $7\frac{1}{2}$  to 15 grains) several times a day, is said to relieve the pains of gastric ulcer, though it has no effect on pains of nervous origin. I have had but little experience with this drug, however, and so can say nothing definite about it.

The good results of the method described occur, it is true, only in recent cases. Older cases, with deeply burrowing ulcers, with prominent thickening of their edges, with stenosis of the pylorus, or other contractions, the hour-glass form and the like, can only be permanently relieved by operative measures, though placing the stomach at rest causes passing relief from pain. I have just had a patient who presented the symptoms of a recent ulcer of the stomach. After 5 days of exclusive rectal feeding he was absolutely free from pain. A night later he died suddenly with all the symptoms of perforation. The section disclosed an ulcer of the pylorus, one part of which had eaten a deep hole into the substance of the liver, while another part had caused a perforation of the diameter of a cherry into the peritoneal cavity.

As to what we may look for from surgical measures, I will speak later. It is, of course, understood that the conditions must be favorable, *i. e.*, that the ulcer must be situated where the surgeon can get at it and treat any sequelæ that may result from its excision. As to the indications for surgical interference, they were discussed at the last Surgical Congress in Berlin. My own experience justifies me in accepting Leube's indications in this matter. These are as follows:

I. In gastric hemorrhage if the bleeding continues or occurs repeatedly and resists treatment.

II. When internal medication fails to relieve severe pain, and persistent vomiting and inanition are setting in.

III. In perigastritis and abscess in the neighborhood of the stomach (subphrenic abscess).

IV. In perforation into the abdominal cavity, as soon as the patient is able to stand the operation. There are a series of successful operations for perforated gastric ulcer in the literature; in these cases gastroenterostomy was performed. Of 6 cases operated on by my advice for ulcer of the stomach and its consequences (stenosis of the pylorus, hour-glass stomach, repeated

bleeding, perigastritis), death occurred in only one, a mortality of 16.6%. In 7 cases of gastrectomy for ulcer there was also but one death, a mortality of 14.3%.

In the meantime it must not be forgotten that any operation upon the stomach is a serious one, and that a number of favorable circumstances must cooperate in order to ensure successful results. Especially in the presence of bleeding from the stomach is the question of operative interference and the selection of the time for it difficult to decide. On the one hand, even severe hemorrhage may cease suddenly, while the finding of the bleeding vessel in the stomach is often extremely difficult and requires especially favorable conditions. In desperate cases of gastric hemorrhage, in which ordinary internal remedies, such as ergot, morphine, ferric chloride, etc., do no good, I have often seen *prompt cessation of the bleeding after lavage of the stomach with ice-water*. This not only removes the decomposing, irritant blood-clots that have formed, but it has a direct contractile effect upon the blood-vessels and favors thrombus-formation. It is best to carry out the lavage after previous cocaineization, or after a small injection of morphine, so as to forestall any tendency to vomit.

Out of the large chapter of *neuroses of the stomach* I select but one group, *nervous gastrosuccorhea*, nervous gastric hypersecretion. This has nothing to do with the hyperchlorhydria of gastric ulcer, or with the stagnation of superacid stomach-contents in atonic processes, or in stenoses of the pylorus, though it is often confused with these. We have here to deal with a stomach not increased in size, at a time when digestion is not in progress, especially during the night, secreting an excessive amount of gastric juice, which may be normal, or contain too much hydrochloric acid, but is always, and this is what is characteristic of it, free from stagnation-products, *i. e.*, from more or less remains of preceding meals. There is found in such cases in the stomach of fasting patients a clear or but slightly cloudy fluid, of considerable amount, which has all the properties of normal gastric juice. This fluid irritates the gastric mucous membrane and causes severe pain, which at times awakens the patient from sleep. These pains diminish or disappear if the patient takes food, and so neutralizes the acidity of the secretion. After a while these pains recur, and they have thus a certain similarity with the pains of ulcer of the stomach, from which, however, they may be differentiated by the fact that they occur at a time when the stomach is normally empty. Patients get the idea that the affection may be cured by a rigid dietary. They eat little, they sleep badly, other nervous symptoms set in, and they run down in health. Should the diagnosis of ulcer of the stomach be made, the treatment I have described will, of course, be unsuccessful. The diagnosis can be made with assurance from the finding of a large amount of normal gastric juice in a fasting stomach, when at the



same time all symptoms that point to stenosis or dilatation of the stomach or to gastric ulcer are absent.

The treatment of this condition is like that of all neuroses, twofold: First, by tonic and hygienic regulations for the general condition, hydrotherapy and climatotherapy. I shall not speak of these at length. Secondly, symptomatic treatment of the stomach. The ordinary so-called sedatives, the bromids, zinc, belladonna, iodin, morphin, hyoscyamus, are all of no use, as I have found from personal experience. My best results have come from regular evacuation of the fasting stomach and a spraying immediately afterward of the gastric mucuous membrane with a  $\frac{1}{2}\%$  solution of silver nitrate. Whether you accomplish this spraying by simply allowing the solution to flow in, or by means of the stomach-douche, or Einhorn's stomach-spray, is a matter of indifference. During the day the patient may have every 2 hours a teaspoonful of a 5% solution of potassium iodid or sodium bicarbonate, and only rectal alimentation is allowed in order to avoid all irritation of the gastric mucous membrane. Even this method is not always successful and it does not carry with it any assurance against relapses, but it is the most efficient in my experience.

One of the most serious neuroses is *hysterical vomiting*. Cases occur in which for weeks every attempt to nourish the patient fails. Every bit of solid or liquid food will be immediately vomited, and rectal enemata, despite the addition of opium, will be at once ejected, or if retained they do not serve in the least to make the stomach more tolerant of food. The patients get worse and worse; they emaciate to skeletons and are unable to hold themselves upright. The condition seems to depend on a spasm of the pylorus and nothing remains but to perform gastroenterostomy. I have had the operation done in one case recently. The stomach seemed in external appearance perfectly normal. The success of the operation was excellent and the vomiting ceased immediately afterward and the patient, a girl of 23, gained 5 pounds in weight in the following 3 weeks.

But the diagnosis is not always so easy, nor the success so assured, as in this case. In a similar case of vomiting and pain, in the practice of a colleague, the diagnosis was, because of a falsely construed Röntgen photograph, set down as carcinoma, with which, however, I disagreed. There was no tumor palpable, no carcinomatous cachexia, no glandular enlargements to be found, while there was an excess of free hydrochloric acid. I preferred to think that the 40-year old female patient was suffering from an old ulcer, with adhesions. As the pain was severe and strength was rapidly being exhausted, the patient begged to be operated upon. Celiotomy showed nothing abnormal in the stomach, and the organ was not opened; there were no pathologic changes around it. After the operation the patient was for a time free from all symptoms, but after

a while these recurred and permitted us now to make with assurance the diagnosis of a neurosis, especially as in the meantime certain unmistakable hysterical stigmata had developed.

In conclusion allow me to say a word as regards the success of *surgery of the stomach* in the matter of malignant disease of that organ.

The surgery of the stomach was taken up very hopefully, because of the confidence inspired by the improvement in surgical technic. It was hoped that, if the operation would be undertaken early, the chances of success would be greatly increased. Much stress was laid on such diagnostic methods as it was thought would make very early operation possible. It seemed for a time, according to Boas' investigations, that the presence of lactic acid would furnish the desired criterion, but the hopes thus raised were rudely shattered. Lactic acid is as little specifically characteristic of carcinoma as the absence of hydrochloric acid. That in many cases of gastric carcinoma lactic acid was to be found in the contents of the stomach was known to myself and others long before Boas' publication, but we were more conservative in drawing our conclusions. In fact, the formation of lactic acid is a chemic process that takes places whenever defective secretion of hydrochloric acid and stagnation of the gastric contents occur. This is frequently the case with gastric carcinoma, but it may occur also with other affections.

Lactic acid occurs only in cases of carcinoma of the stomach after serious alterations of digestion have set in, and usually a palpable tumor is present. At present then, quite as much as ever before, *the demonstration of a tumor of the stomach, its position, its size and its mobility, are the indications for operation*. If we operate more often and earlier now than before, it is, as I showed last year at the International Medical Congress at Moscow, not because our methods of diagnosis are more refined and allow of earlier recognition, but, because of confidence in our technic, we make up our minds for operation much earlier than before.

At Moscow I gave the statistics of cases operated on in my hospital during  $2\frac{1}{2}$  years, from 1894 to 1897. There were 25 gastroenterostomies, with 16 deaths (64%), 12 resections, with 9 deaths (75%), 22 gastrotomies, with 12 deaths (54.5%). In the last year there have been 20 more cases, 11 gastroenterostomies, 5 resections, and 4 gastrotomies, with a mortality respectively of 64.7%, 62% and 50%.

In 6 cases after the opening of the abdomen the operation was abandoned because of extensive carcinomatous degeneration of the stomach and its neighborhood, although only such cases are referred to the surgeon as after careful investigation promise to present favorable conditions and yield good results.

On the whole the results were better in women than in men, and carcinomas that had developed from ulcers were found more favorable for operation than others. One

reason for this, certainly with us in Germany at least, is that among women there is very seldom an abuse of spirituous liquors, and a second reason is that carcinoma developed on the basis of an ulcer does not give rise so soon to the carcinomatous cachexia as idiopathic carcinoma.

*In other words there is a possibility of radical cure in about from 25 to almost 30% of successful palliative measures in about 50% of the cases that after careful investigation the physician considers suitable for operation.*

This not very encouraging state of affairs is due to the nature of the affection and cannot be laid at the surgeon's door.

In my opinion surgical technic has at present practically reached its limit and its marvelous success in the treatment of non-malignant neoplasms is the best proof of this.

That we have no better results to report is due to the nature of things. The impossibility of diagnosing carcinoma early enough, its tendency at times to diffuse involvement of a large amount of tissue, the insidious toxic effects of its metabolism upon the organism, by which the patient's resistant vitality for operative procedure is notably lessened,—all these combine to set limits to the supremest surgical skill.

Despite all this we can find just cause for congratulation in the progress that has been made in the last few years in the treatment of diseases of the stomach.

In the achievement of this progress all nations have labored, and the success of physicians has proved a great boon to mankind everywhere without regard to race or nation.

## THE TREATMENT OF ACUTE URETHRITIS IN THE MALE.<sup>1</sup>

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If a justification is required for a paper on the treatment of urethritis, I hope that it is to be found in the great diversity of ideas and practice advocated by different authorities, and in the consequent certain degree of confusion that exists quite universally as to what constitutes the proper or best method of treating this very common and serious disease. The source of the great diversity would seem to be the number of really useful drugs we have at our disposal in considering the treatment of these cases; the confusion arises because, none of these drugs being a specific in any sense, new preparations are put forward and new methods evolved with overwhelming rapidity. Expressed in homely but graphic words: "We cannot see the woods for the trees."

<sup>1</sup> Read before the New York Medico-Surgical Society, April 4, 1898.

In my opinion there cannot be one fixed plan or rule for the treatment of urethritis, whether it be gonorrheal or due to some other form of infection. To canvass the many ideas and methods practised would not be possible in a brief paper, nor is this pertinent to my object, which is to endeavor to bring some of the best-known methods down to a common basis of general principles, the application of which will direct our choice, and lead us to a rational use of the various means at our disposal. We must keep before us the pathology of urethritis. It is a specific purulent inflammation of a mucous membrane, attended with more or less damage to one or more of the layers composing that membrane. In the treatment of the disease, therefore, three indications are to be met: (1) The eradication of the etiologic microorganism; (2) the termination of the inflammatory process; (3) the repair of the damaged mucous membrane.

1. *The Eradication of the Etiologic Microorganism.*—In the treatment of gonorrheal urethritis, argonin in solution, the justly vaunted agent for nearly two years past, is being superseded by its analog and homolog—protargol. Each is defined as "a silver-proteid compound, solutions of which are characterized by not being precipitated by sodium chlorid or by albuminous fluids." Argonin contains 4.2% of silver; it is a fine, white powder, readily soluble in water on gently warming, forming a murky solution. Protargol contains 8.3% of silver; it is a yellowish powder readily soluble in cold as well as hot water, forming a much clearer solution. Argonin decomposes if exposed to too much heat in preparing the solutions, which thus become very irritating. Moreover, solutions of argonin do not keep well, even in dark-glass bottles. Protargol is free from both of these difficulties. My experience with it, based upon the close similarity of the two compounds and upon Neisser's well-balanced recommendation of it as superior to argonin, though necessarily comparatively limited as yet, leads me to expect that what has been proved true of argonin will be found equally true of protargol.

The following conclusions as to argonin, quoted from an abstract of the article by Jadassohn, who used only 2% solutions, will furnish a summary of the clinical properties of both these drugs:

(1) Both experimental and clinical investigations have shown that argonin kills the gonococci in a short time, notwithstanding its lack of albumin-coagulating power. (2) Even in stronger solutions it has hardly any tendency to set up inflammation, and it has no caustic properties. It is, therefore, particularly suitable for the treatment of acute gonorrhea, whether affecting the penile or the deep urethra in men, and the urethra or uterus in women. (3) It seems devoid of astringent properties, and on this account purely anti-catarrhal treatment should accompany its use.

Another clinician<sup>2</sup> condenses his experience thus:

(1) Argot, in from 1 to 10% solutions, is absolutely non-irritating [we should add—when freshly made]. (2) In

<sup>2</sup> H. M. Christian.



the great majority of cases the discharge rapidly lessens. (3) The gonococci disappear after a short period. (4) This disappearance is not always permanent—in quite a large proportion of cases there is a tendency to relapse. (5) It is of little value in the mucous stage, or decline. (6) Of no value in chronic anterior urethritis.

Protargol, in comparison, may be summarized as more potent—requiring solutions of only  $\frac{1}{4}$  to 1% ; as forming a cleaner and more stable solution ; as much less likely to irritate ; as more rapidly bactericidal. The last-named property is the one that concerns us most in this connection. That protargol excels argonin, and that both excel the hitherto favorite silver nitrate in correspondingly permissible solutions, would seem to be beyond dispute. Under the administration of a 1% solution of protargol instituted with the first sign of a discharge, I have seen the gonococci disappear from the pus in 2 days. For 48 hours the discharge increased, then began to subside ; by the sixth day there was only the morning-drop. In another case, seen 9 days after the discharge had begun, the gonococci disappeared after 4 days, and the free discharge ceased almost at the same time. This desirable condition, however, is not permanent at this early date, according to my experience. If, taking too much for granted, we discontinue the protargol at this time, a highly purulent, gonococci-laden discharge will recur after a few days. Similar relapses were well-known features under the older methods of treatment, and were sources of much dismay to the patient and of vexation to the physician if it so happened that he did not know the explanation—the coming to the surface, so to speak, of the gonococci from the deeper layers of the mucous membrane, to which they had penetrated during the period of incubation. Because of the ever-present tendency to a relapse at this stage, Neisser continues the injections of protargol for 3 or 4 weeks, of course with diminishing frequency. I find it satisfactory, however, to continue them steadily for a few days after the discharge has apparently ceased, and then to gradually discontinue them tentatively until the gonococci cease reappearing.

Like argonin, protargol may be of equal value for urethritis due to a mixed infection, *i. e.*, due to the gonococcus and some one of the commoner pyogenic microorganisms. Possibly the same may hold true of it for urethritis due to the latter organisms alone, but this remains to be proved. However this may be, it is in this variety of urethritis that our second bactericidal agents, namely, solutions of mercuric chlorid and of potassium permanganate, both in the form of irrigations, seem especially efficacious.

The edema of the urethral mucous membrane and the general turgescence of the penis so common with this variety of the disease, offer the best possible field for the established effects of hot solutions, indeed of plain hot water, applied by irrigation continued for some minutes. This so-called irrigation-method has

been used so extensively by some, and with such wonderful results, according to their reports, as to lead one to suspect the reporters of having a "fad."

From a specially conducted experience with potassium-permanganate irrigations I would conclude that, while the duration of the discharge is thereby limited, and the evidences of the inflammation are rapidly reduced, the ultimate recovery of the mucous membrane is not only not hastened, but its course is not spared the usual disappointing relapse. With this understanding I employ irrigation in the cases designated, and in cases of mixed infection I employ them as auxiliary to the protargol hand-injections.

2. *The Termination of the Inflammatory Process.*—In the average case of gonorrheal urethritis in which protargol has been employed in the manner indicated, a hand-injection of a solution of any one or two of the astringents—mineral or vegetable—usually suffices. The injection recommended consists of zinc iodid and zinc chlorid, each  $\frac{1}{4}$  gr. to 1 fluidounce of distilled water. This injection may be used cold, and it usually is ; preferably it should be warmed. When much inflammatory swelling of the mucous membrane persists, as shown by the pouting of the lips of the meatus, the injection should be used as hot as the urethra will comfortably bear it. In the urethritis due to a mixed infection, the anticitarrhal injection should certainly be used hot.

3. *The Repair of the Damaged Mucous Membrane.*—In all forms and degrees of urethritis, silver nitrate in solution is by far the best agent for this purpose, because the safest and most efficient. It is brought into contact with the mucous membrane either by means of the Ultzmann syringe, or (better still) by the Bangs syringe-sound, or by means of cotton swabs through the endoscope. One to 1000 ( $\frac{1}{2}$  gr. to 1 fluidounce) is the commencing strength for instillation with the syringe-sound ; this is gradually increased to 2 or 3 grains to the fluidounce. A solution of 5 gr. to 1 fluidounce is the first for application through the endoscope. Stronger than 10 gr. to 1 fluidounce is not advised.

Such, then, are the best proved means we have for meeting the three indications mentioned. In applying them we must not lose sight of the patient's general condition. We note whether he is anemic, for example ; whether disposed to oxaluria or the uric-acid diathesis, and we prescribe accordingly. There are also routine general directions to be given every case. These include : cessation of all sexual relations, active or passive ; reduction of—if possible, entire abstinence from—alcohol and tobacco, especially the former ; restriction to one cup of coffee a day—at breakfast ; regulation of the diet ; directions to drink freely of either plain water or an alkaline water *between* meals ; avoidance of constipation ; advice as to the use of a suspensory bandage, or a "gonorrhea-bag," as to the dressing of the penis, and as to the danger of infecting the eyes.

To illustrate now as far as possible the usual method of employing the means specified in outline given, let us suppose a case of urethritis in the very first stage—the discharge a thin serous or mucoid fluid. On finding gonococci in a smear of this fluid, the patient would be directed to provide himself with a  $\frac{1}{4}$ -ounce blunt-pointed syringe, and 4 fluidounces of a 1% solution of protargol would be written for, one syringeful of the warmed solution to be injected 3 or 4 times a day, and retained in the urethra for 5 minutes. (As success depends to a considerable extent upon attention to details, it is always well to make sure that the patient knows how to use a hand-injection. I refer especially to the manner of grasping the glans and to the necessity of then putting the penis moderately on the stretch before injecting.) If asked by the patient whether it is not necessary to make pressure with a finger on the urethra in the region of the perineum or scrotum to prevent the fluid injected from going back into the bladder, I answer no. On the contrary, I often direct him to strip the urethra backward with the fingers of the right hand while holding the meatus closed with the left, in order to distend the bulbous portion with the fluid.

The patient should be warned that after the first two or three injections he will experience more or less smarting in the urethra for half an hour or so, and that the discharge is likely to be increased in quantity during the first 24 or 48 hours. The degree of burning experienced, of course, depends, to some extent, upon the acuteness of the urethral sensibility in the given case; but anything like severe burning, if a solution of argonin is used, points to a chemic change in the solution, as already mentioned.

After 4 or 5 days the patient reports and an examination for gonococci is made again. Protargol having been used, either no gonococci will be found or at most a few isolated pairs, while the discharge will already have become less purulent and less profuse. As soon as the gonococci have entirely disappeared, the protargol injection is reduced in frequency to twice a day and the simple astringent is begun—once a day.

After another interval of 4 or 5 days the use of protargol is still further reduced, and so on, until the simple astringent injection has entirely superseded it. This the patient employs just as he did the former, retaining it in the urethra only one minute, however, instead of five. Whether he be directed to inject three times a day, twice a day, or only once, depends upon the amount and character of the discharge now remaining. Usually there is nothing but the morning-drop at this stage, in which case one injection a day, preferably on retiring, is sufficient.

As soon as all signs of acute inflammation have gone, the instillations and applications of silver nitrate to the penile urethra are begun. This may be at once upon stopping the protargol, or not until after the as-

tringent hand-injection has been in use for several days.

Usually the instillations by means of the Bangs syringe-sound come first; later on the applications through the endoscope to isolated spots or zones of damaged mucous membrane. To avoid overstimulating the urethra it is important not to repeat this form of local treatment oftener than once in 5 days—in some cases only once in 7 days. The introduction of any instrument into the urethra at this stage excites a reaction, as evidenced by an increase in the catarrhal discharge and possibly by some scalding on urination during the next 24 or 48 hours; we must wait for this reaction to subside and the tonic effect of the treatment to have been obtained before again subjecting the urethra to this unavoidable excitation.

It goes without saying that it is well to inform the patient in advance that his urethral symptoms will be worse for a day or two. Later on the symptoms are not so affected.

We now have to determine when the astringent hand-injection may be discontinued; our aim is to dispense with it as soon as possible. We test the question by reducing its use from once a day to once every other day, then stopping it altogether to note the result. If the catarrhal discharge increases to more than the morning-drop and persists thus for 3 days, we have the patient resume the astringent. After an interval of a few days we again apply the test.

In much the same way we begin now to taper off the silver-nitrate instillations and applications that have been steadily continued meanwhile. When the morning-drop has entirely disappeared and the urine shows only a transparent mucous thread suspended near the surface, or at most 1 or 2 light shreds or flakes settling toward the bottom, all treatment is discontinued and the patient is told to report in ten days for inspection. When finally dismissed the patient is cautioned that in from 4 to 6 weeks he will be liable to a return of the catarrhal discharge if he disobey any of the general directions given him at the outset.

The duration, that is the time under treatment, of such an ideal case—an initial, uncomplicated, anterior urethritis seen early in its development—is from 4 to 6 weeks, exceptionally 3 weeks, in accordance with the severity of the infection, the degree of resisting power inherent in the patient's tissues, and his ability to faithfully and intelligently carry out instructions.

Usually, however, the cases present with the discharge, well established and full of gonococci, considerable edema, some ardor urinæ and a history of one or more previous attacks of the disease. The method pursued in this class of cases is essentially that already outlined but supplemented in various ways. For example, if there is much swelling and redness of the mucous membrane, we have the patient irrigate the urethra, as it were, by repeated injections of a hot, half-strength



solution of boric acid immediately before injecting the protargol-solution; if ardor urinæ is complained of, we prescribe an alkali in addition to the customary diluent, and the patient is directed to urinate with the penis hanging into a vessel of water as hot as he can bear.

The duration of a gonorrheal urethritis of this description will be from 6 to 12 weeks, depending upon the factors already enumerated, and, in addition, upon the thoroughness of the cure obtained in the previous attacks and the absence of consequent complication.

For the cases requiring the irrigation-treatment at the hands of the physician we may use a soft-rubber catheter, a recurrent irrigator or the Janet syringe to irrigate from the meatus.

Many patients can be taught to irrigate the anterior urethra for themselves on the last-named plan—from the meatus. The ordinary blunt-pointed  $\frac{1}{4}$ -oz. syringe and tablets of mercuric chlorid (one of which dissolved in 10 fluidounces of warm water will make a solution of 1 to 30,000), are all that is necessary. At the same time, in accordance with the etiologic factors in the case, the patient injects either the protargol or the astringent solution twice or three times a day, immediately after his "irrigation."

For the sake of clearness I have confined myself thus far to acute *anterior* urethritis; the management of acute *posterior* urethritis can now be quickly summed up. The remedial agents chiefly relied upon in the treatment of the latter are silver nitrate (by instillation, application or irrigation) and solutions of potassium permanganate by irrigation. I prefer silver nitrate. Irrigations with mercuric chlorid would appear to be rarely used; argonin can be used, and has been with fair results; protargol ( $\frac{1}{4}$  of 1% solution) is recommended by Neisser. It is understood that the treatment of the posterior urethra is entirely in the hands of the physician, as it should be. It is carried out concurrently with that of the third stage of anterior urethritis, with this exception: When the invasion of the posterior urethra is attended with *marked* frequency and urgency of urination with tenesmus, we at once instil from 15 to 20 minims of a 1 to 1000 solution of silver nitrate into the deep urethra, disregarding all other conditions. If the patient can be confined to bed under our control, a few minims of a much stronger solution, up to 5 gr. to 1 fluidounce, may be used. The relief that, after a few hours, follows the temporary aggravation of the symptoms is surprising. The sensibility of the urethra in the given case will determine the use of either a smooth soft-rubber catheter, an Ultzmann syringe, or a Bangs syringe-sound, of 20 or 22 F., for the purpose of this instillation. The penile urethra may have to be anesthetized before the introduction of any instrument is possible. It is permissible to repeat this treatment every second or third day if the indications return. Fortunately, the onset of the posterior ure-

thritis is marked in the majority of cases by a day or two of very slight frequency and urgency of micturition only, which call for no heroic measures at the moment.

It will be admitted, I think, that the majority of cases of gonorrheal urethritis come to us with the posterior urethra already involved, and that it is this fact which determines—much more proportionately than does anterior urethritis—the length of time required to effect a cure; hence the durations previously stated, in spite of the potency I claim for such an agent as protargol. As Neisser says: "It is not the rapidity but the *certainly* of the cure that is sought."

To go into the prolonging effects of redundant prepuce, phimosis, narrow meatus, stricture, infected follicles, prostatitis and seminal vesiculitis—all of them complications capable of converting an acute into a chronic urethritis—would carry me beyond the limits of this paper.

What then are the advantages of protargol, will be asked. The first one to be noted is: the greater comfort of the patient during the course of the disease; he is soon rid of the free discharge. The second advantage comprises several—more remote, however: The avoidance of periurethral abscess, of posterior urethritis provided the case be seen early, and thus of possible epididymitis, prostatitis, seminal vesiculitis and gonorrheal arthritis. It is obvious that the more promptly the gonococcus is eradicated, or even inhibited while being eradicated, the fewer the complications and the better the prognosis, not only for the present attack, but also for subsequent ones.

In conclusion I wish to plead for the utmost gentleness in all instrumentation of the urethra. It is a living, highly sensitized member. To cure it of the effects of inflammation we are compelled, unfortunately enough, to pass instruments into it. If to the necessary stimulation caused thereby is added the unnecessary traumatism of a coarse manipulation, we certainly militate against the success of our best efforts.

#### NOTES ON THE PROGRESS OF LEGAL MEDICINE:— THE MEDICOLEGAL STUDY OF INJURIES.

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FEW medicolegal textbooks deal at all thoroughly with wounds and injuries except with a view to the diagnosis of crime. We find that while relatively full consideration is given to wounds proper, this is by no means the case with other injuries, and only such accidents receive attention as are liable to be connected or confused with homicide or suicide. The one exception to this rule is made in the case of traumatic neurones.

Thus, the criminal aspects of legal medicine tend to overshadow the civil ones in our textbooks, although

the civil courts have to deal with ten medicolegal matters for one that comes before a criminal court. The civil cases, too, are more likely to devolve upon the practising physician than upon the medicolegal specialist. It is very desirable that the writers of some of our textbooks and works of reference should deal with the subject-matter in its non-criminal aspect.

Our journals, too, do not give much prominence to this line of work, such articles as appear being generally given not as original communications but merely as news-items, usually meager in detail and insufficiently vouched for from a scientific point of view. Even in special journals, such as the *Railway Surgeon* and the *Medico-Legal Journal*, the aim is rather to record forensic precedents than the scientific aspects of the question, and to be of assistance more to lawyers or executive officers than to physicians. Owing to the scarcity of detailed case-reports, new casuistic work and compilation of the scattered observation are especially needed as a basis for further progress, and one would prefer to see the careful study of cases take the place of the well-worn platitudes and ex-cathedra statements in which the addresses and communications made before medicolegal societies so abound. Of recent American literature on this subject, the excellent monograph by C. Phelps on *Gunshot Injuries of the Brain*,<sup>1</sup> that by Pearce Bailey on *Accident and Injury in Relation to the Nervous System*,<sup>2</sup> and the important clinical study by W. B. Coley of *The Relation Between Injury and Sarcoma*,<sup>3</sup> are examples of the highest type of literature upon the subject, and it is work of this kind that is most needed at present.

The barrenness of our own literature makes it necessary to be familiar with foreign sources of information. One is struck by the fact that the literature in this branch of legal medicine is almost exclusively German. Besides several periodicals<sup>4</sup> devoted exclusively to it, numerous articles appear in the general medical journals as well as the medicolegal ones, such as *Friedreich's Blätter*, and the *Vierteljahresschrift f. gerichtliche Medicin*. In the last-named journal an important series of monographs have recently appeared, dealing with the medicolegal relation of injury of the various internal organs and cavities, and especially with such remote and indirect aspects of trauma as tuberculosis, tumors, etc. A special department for "Unfallheilkunde" has been included for the past years in the *Virchow-Hirsch Jahresbericht*, while a number of useful larger works, handbooks, monographs, and collections of case-reports and important decisions have also been published. Of these I would specially mention Constantin Kaufmann's *Handbuch der Unfallverletzung*, 2d Ed., 1897; L. Beeker, *Lehrbuch der Sachverständigen*, 1895; E. Golebiewski,

*Handbuch der Unfallsversicherung*, 2d Ed., 1897; P. Blasius, *Unfallversicherungsgesetz und Arzt*, 1892. Very full official reports, with details of cases and decisions, are also published by the German Imperial Accident Insurance Bureau, and collections of illustrative cases have been issued by R. Kaan, F. Ritter, and others. R. Stern's monograph on *Traumatische Entstehung innerer Krankheiten*, as well as his article *Trauma als Krankheitsursache*, in Lubarsch and Ostertag's *Ergebnisse*, deserve special mention; as does also the recent article by Thoinet, *La Pneumonie Traumatique* in *Annales d'Hygiène publique*, July, 1898.

Much of the best German scientific work in this department is by men who are proprietors of private sanitariums, hospitals, institutions for mechanical therapy, massage, etc. The leaven of science does not appear to work to the same extent upon the proprietors of our own numerous institutions and sanitariums, for, with certain noteworthy exceptions, of which that at Saranac Lake is the best known, the publications from our "institutes" suggest other motives than the mere advancement of science. On studying the matter, it appears that the cause of such conspicuously rapid and satisfactory progress in Germany may be summarized as follows:

1. The fact of a large proportion of the population being in Government employ has led to State-control of accident-insurance and benefit-societies, so that accident-insurance loses in large part the character of a private business-enterprise, and the medical men employed in it become placed in a position where they can view matters with more independence than if employed by private corporations.

2. The Government regulations are to a certain extent to be followed in preparing reports of examinations, but these are not mere schedules of questions and answers.

3. In case of lawsuits for damages being made, the district government-physician practically acts as a judge in the medical aspects of the case. In the event of appeal, the medical questions are referred to an official committee of physicians; and if again appealed, to a higher court (super-arbitrium) of physicians having jurisdiction over the whole State. In each case a full report has to be made in writing, reasons being given for the views adopted. In this way an appeal exists from medical as well as legal opinion as regards the question whether the scientific facts in the evidence have been properly interpreted. Errors are investigated and often publicly criticised. The fact that every report is sharply scrutinized and annotated by higher medical authority leads to more careful preparation than would otherwise be the case, and in this way the progress in this branch of medical work has been directed and controlled by the highest medical talent in the country. We find reports by men of such standing as Virchow, and Bergmann, and others, dealing jointly with such minor

<sup>1</sup> D. Appleton & Co., 1897.

<sup>2</sup> D. Appleton & Co., 1888.

<sup>3</sup> J. S. G. & Co., March, 1888.

<sup>4</sup> *Monatsschrift für Unfallheilkunde*, *Zeitschrift für Unfallheilkunde*, *Zeitschrift für Unfallheilkunde*, *Zeitschrift für Unfallheilkunde*.



matters as to whether a box on the ear of a schoolboy was really the cause of unusual and distressing symptoms that followed.

4. The medicolegal questions in civil as well as in criminal matters are referred to official physicians, and those in civil matters permit of a more refined analysis and delicately balanced judgment than in criminal. When the prisoner must have the benefit of any doubt the reasoning must be on very broad lines in order to be safe. Another factor of importance is that, in Germany, all such work is done by government-officials, who, before responsible duties are entrusted to them, must pass the *Physicats Examen*, a most severe test of efficiency in the requirements for sanitary and medicolegal work. The conditions that have so favored the study of the medicolegal relations of traumatism in Germany do not exist with us at present, and it does not seem likely that a general system of medical officialism could be practicable in the absence of a strongly centralized government. Better opportunities for the medicolegal and clinical study of traumatism exist in connection with the smaller benefit and accident-insurance societies, where matters are left to the decision of the physician, than in the very large insurance-corporations whose wholesale business-methods of settlement do not conduce to the scientific consideration of the medicolegal points involved in individual cases. Unfortunately the medical officers of our benefit-societies do not realize the scientific potentialities of their position and regard the opportunities afforded them for scientific medicolegal study with anything but enthusiasm.

In France no special examination exists, but by a regulation no one can act as expert before the courts unless five years have elapsed since receiving his diploma.

In England and America it is customary to entrust a large proportion of this work to recently graduated hospital-internes, who naturally regard it more as a perquisite by which they are kept supplied with a certain amount of pocket-money than as a subject worthy of thorough scientific study.

Recently the London County Council recommended to the Home Office that medicolegal expert duties should be assigned as far as possible to the pathologists of the public hospitals, though, so far, no official regulations to that effect have been issued.

In England and America there is no system of practical medicolegal instruction compulsory in any of the universities. A very full account of the provisions for practical medicolegal instruction in European countries is given in the article by Dr. P. Loye.<sup>5</sup>

When we consider that in almost every medicolegal case the essential problem as to whether a certain effect is due to a given cause, is in the majority of cases one in pathologic etiology, it is remarkable how compara-

tively little sound pathology one finds in the records of medicolegal cases and how very little the subject of pathology has been enriched from medicolegal sources. From reading a large number of records it would seem as if accurate work in this direction were greatly needed at present.

Careful examination into the facts will convince most persons that when the entire medicolegal material furnished by almost any of the general hospitals in our large cities can be placed at the disposal of some member of the staff, specially interested in this special line of work, it would enable instruction in legal medicine to be given the same thorough clinical and practical attention as is now the case with the other subjects of the curriculum.

A provisional arrangement of this kind was recently made at my request by the staff of the Montreal General Hospital. It is yet too early to say in how far we will be successful in placing the teaching of the subject on a practical clinical basis. At the outset I have met with a certain coyness on the part of the surgical staff in allowing their cases to be studied, which tended to limit the amount of available material, whereas the cordial and thorough cooperation of the staff of a hospital is necessary for the full success of the plan. I must mention that Dr. F. W. Draper, of Boston, has already followed for some years the system of having occasional clinics on living medicolegal cases given by one of his assistants.

It seemed advisable to explain in a general way the extent and character of the literature available before going into the details of the subject and to leave these for consideration in subsequent reviews.

#### A PRELIMINARY NOTE ON THE TREATMENT OF HAY-FEVER WITH SUPRARENAL SUBSTANCE: WITH A REPORT OF PERSONAL EXPERIENCE.

By SOLOMON SOLIS-COHEN, M.D.,

of Philadelphia.

Professor of Medicine and Therapeutics in the Philadelphia University.

THE success attending, in my hands, the treatment of exophthalmic goiter and other forms of vasomotor ataxia with suprarenal substance, led me to a further trial of the power of this agent in controlling neurovascular disorder. The experiment was made *in corpore vile*—myself. For twenty years I have annually sneezed through the greater part of the months of June and July, even while keeping in the city, and should duty call me into the country, the eyes would become involved, the eyelids would itch intolerably, there would be profuse coryza, itching of the palate, and even, of recent years, slight dyspnea. At the seashore, on the ocean, and in certain mountain-regions the symptoms would remain entirely in abeyance. The worst attack I can recall was precipitated, however, two weeks ahead of time, by an incautious excursion after wild-

<sup>5</sup> *Annals of Hygiene*, 1899, 1899.

flowers upon the borders of a little stream in what may be termed the landward portion of a seaside-resort—Point Pleasant, N. J. On the authority of Prof. J. Solis-Cohen, I have no disease or structural abnormality of the nasal chambers or pharynx. I have passed several examinations for life-insurance and my urine is reported “typically normal” by a competent observer. These facts are stated in justification of my belief that, in my own case at least, the paroxysms are excited by a special pollen (or by special pollens) found in the atmosphere of Eastern Pennsylvania and of New Jersey (and, doubtless, elsewhere), from about the last week in May until about the first week in August. Two physicians of my acquaintance suffer at the same time and in the same manner as I do, unless they avoid exposure by a mountain-trip.

That others equally exposed do not similarly suffer, indicates a peculiar susceptibility (idiosyncrasy) on the part of the patients. I am sure it is not hysteric or hypnotic. I think it is due to congenital weakness of the vasomotor control; perhaps aggravated by a somewhat studious life. It is not a lithemic manifestation, because I avoid the ordinary excitants of lithemia, take a sufficient amount of open-air exercise, drink water freely, and eat even less meat during the hot weather than in the winter. Nor has anti-lithemic medication proved of any avail in preventing the attack or relieving the distress.

I have of late years been able to keep myself fairly comfortable, while remaining in the city, through the use of dark glasses when driving in the sun, and by taking atropin sulphate internally in doses of from gr.  $\frac{1}{400}$  to gr.  $\frac{1}{200}$ , from time to time, as indicated by the tendency to coryza. After the aggravation of symptoms produced by unavoidable visits to the country, relief has usually followed the cleansing of the nose with an alkaline spray or with the “nebulized vapor” of an oily solution of menthol, and the application of ice to the eyelids, followed by the anointing of their edges with an ointment of yellow mercuric oxid (one grain to the dram). On rare occasions it has been necessary to use cocain in the eyes or nose. The latter expedient, however, I use or advise with great caution, not only because of the danger of inducing a cocain-habit, which in many cases is *nil*, but because frequent or excessive use of the drug in the nose is followed by a reaction, probably due to local paresis of the vessels, and which is much more disagreeable than the original symptoms.

After a week or two of this plan, during June, 1898, with less relief than usual, I instituted treatment with suprarenal substance, and for the purpose of observation abandoned all other measures. I soon found it necessary to resume the wearing of dark glasses on my morning (rather midday) rounds. With that exception, the treatment was entirely successful in controlling symptoms. After some ten days of ease, I became careless in taking medicine, and the third day after stop-

ping it (through forgetfulness of its necessity) the symptoms returned in full force. I then experimented as to the effect of taking or omitting the medicine, and found that after taking it I was comfortable for a certain number of hours, and that intermitting for longer periods, or omitting it altogether for a day, would cause a return of greater or less distress. There is of course a possibility of auto-suggestion in this experience, but I do not believe that the effect is in any degree to be so attributed.

At first I used a glycerin extract freshly prepared by Mr. F. E. Morgan from carefully selected adrenals of the sheep. In a vehicle of simple elixir, 15 minims to the teaspoonful, this is not unpleasant. This dose 3 times daily was at first sufficient; later it became necessary to increase either the dose or the frequency. A larger dose caused a suspicion of nausea. I therefore substituted the tabloids prepared by Messrs. Burroughs & Welcome, which could readily be carried in the pocket and used as necessary. One tabloid, representing 5 grains of suprarenal substance, was allowed to dissolve in the mouth (the effect seeming to be slightly better thus, probably owing to direct absorption) every second, third or fourth hour, according to effect. The average was 5 tabloids daily, the last one being taken at bedtime and ensuring a sneezeless, coryzaless night. Sometimes, as while on a country-visit, a single tabloid was not sufficient and 2 would be taken at a dose—that is, within a few minutes. If coryza or sneezing had begun, it would cease within 15 minutes after taking the tabloid, and it then became a sort of sensual luxury to inhale deeply through the dry and unobstructed nasal passages.

I have been thus minute in relating details in order to enable the case-report to be criticised thoroughly, as its subjective character necessarily invites criticism. I have no objective observation to report. Two patients were advised to use suprarenal extract for hay-fever (June cold) symptoms, but in one the necessity for medication was averted by a sojourn at the seashore, and the other has failed to report. Dr. J. Solis-Cohen used the agent, at my request, in one case, without success. But I believe that the dose in that case (15 minims of Morgan's extract, thrice daily) was too small. I shall be glad to be informed of the results in any cases of August hay-fever (rag-weed coryza) in which the readers of this paper may try the effect of suprarenal substance. The action of the suprarenal preparations is to raise blood-pressure by increasing the vascular tone; and this action may be local as well as general. To this effect, in bringing about contraction of the vessels of the nasal mucous membrane, I attribute the relief experienced. Atropin, as already stated, has a similar, good effect, but it has unpleasant effects upon vision and taste when pushed too far, and it is often hard to get just the right dose. If too little be taken, the nose keeps running; if too much be taken, the



mouth becomes dry and the pupils dilated. No bad effect was noted from the suprarenal substance, except that one particular lot of tabloids, probably too old and somewhat decomposed, gave a very unpleasant odor to the feces. I was conscious of no change in the heart's action while taking the medicine.

### THE EMPLOYMENT OF SOLUTIONS OF TOLUIDIN-BLUE AS COLLYRIA. AND AS A STAIN FOR CORNEAL ABRASIONS AND ULCERS.

By CLARENCE A. VEASEY, A.M., M.D.,

of Philadelphia

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TOLUIDIN-BLUE is a member of the aniline group closely related chemically to methylene-blue. It appears as a bluish, crystalline powder, readily soluble in water or alcohol, and makes with either of these a dark-blue solution. So far as I have been able to ascertain it has never before been employed clinically, and the only information I have obtained concerning its manufacture and composition is that furnished me by Merck & Co., of New York. According to them it "is prepared by oxidizing a mixture of thiosulphonic acid and orthotoluidin with a chromate to an insoluble sulphonic-acid green, then boiling the latter with a zinc-chlorid solution and subsequently oxidizing the leuko-compound. While considered a zinc-chlorid double salt of dimethyltoluthionin, its composition shows it to be a hydrochlorate."

My attention was first directed to the compound by my friend Dr. H. F. Harris, who had been using it for staining the amœba coli, and who has more recently found it of service in staining the axis-cylinders of nerves in the fresh state. It had been observed that it was quickly destructive to low forms of animal life and it was thought possible that it might be of use as a collyrium in some of the various inflammatory conditions of the eye.

It has now been employed for the past six months as a collyrium in most of the inflammatory cases that have presented themselves at the eye-dispensary of Jefferson Medical College Hospital, in the service of Prof. G. E. de Schweinitz. The strength of the solutions employed varied from 1 in 10,000 to 1 in 50. No irritation or stinging was observed when the stronger solutions were used, but the solution of the strength 1 in 1,000 seemed to be fully as efficient, and did not stain the surrounding skin so deeply, as any of the stronger. When I first began to use the solutions the conjunctival culdesacs were thoroughly and repeatedly irrigated as is usually done with the boric-acid lotions; but of late it has been my custom first to flood out the conjunctival culdesacs with the boric lotion or with

normal saline solution, the idea being to employ some force with the flushing to get rid of the accumulated secretions, and to follow this by a thorough flooding with a solution of toluidin-blue. This has seemed to be the more satisfactory method and less toluidin-blue is required. The frequency of use is regulated by the severity of the disease, my method having been to employ it just as frequently as other collyria would be employed under similar circumstances.

The stain has seemed to hasten materially the healing of sluggish corneal ulcers and to cause marked diminution of the discharge in conjunctivitis, especially in the acute contagious and the pneumococcal varieties in which the discharge is usually so abundant. It has also been employed with benefit in purulent dacryocystitis, the formation of pus soon ceasing under its use, provided there be no necrosed bone present. The discoloration of the surrounding skin and upon the fingers is readily wiped away with a moist pledget of absorbent cotton.

An action of toluidin-blue that makes it of considerable value is its power of staining corneal abrasions. It is a well-known fact that if the epithelium of the cornea be abraded and a drop or two of a solution of fluorescein be placed upon it, the abraded portion will at once be stained a light green. A similar action takes place when a solution of toluidin-blue comes in contact with an abraded cornea, or with a corneal ulcer. The part is at once stained a dark blue and can be readily observed by contrast fully as well as when fluorescein is employed, if not better. No other portion is stained. This staining quality is also of advantage in cleansing the conjunctival culdesacs in eyes in which considerable discharge is present, as in acute contagious conjunctivitis, for every small roll of mucus is stained a deep blue and its presence and position are at once located.

To determine whether other members of the aniline group would stain corneal abrasions as well as fluorescein and toluidin-blue, solutions of about twenty of them were tried upon animals' eyes and it was found that those which stained the abraded cornea also stained deeply other portions of the cornea and conjunctiva and were irritating, methylene-blue being less so than any of the others.

From the observations made in studying the action of toluidin-blue during the past six months, the following conclusions have been formed:

(1) Solutions of toluidin-blue can be employed with benefit in all inflammatory conditions of the eye in which a collyrium is indicated.

(2) Solutions of the strength 1 in 1000 have thus far seemed to be as effective as any that were stronger.

(3) Whether or not there is considerable discharge it is just as effective to cleanse the eye with some colorless collyrium first and to follow this with the use of the solution of toluidin-blue.

(4) In the presence of purulent disease, the formation of pus seems to be materially and quickly lessened.

(5) Abrasions and ulcers of the cornea are stained a deep blue, no other portion being affected. The solution therefore enables observation from time to time of the size of an ulcer, while at the same time the reparative process is being promoted by its use.

(6) The stain upon the skin is readily removed by washing with water.

### A CASE OF RAPIDLY FATAL ACUTE OSTEO-MYELITIS.

By GEORGE S. BROWN, M.D.,

of Birmingham, Ala.

E. O., a girl, 6 years old, was brought to the hospital at 8 P.M., June 7th, screaming with pain whenever she was moved, and particularly when her right arm was touched. The history elicited at this time was that she had received a blow on the right shoulder on June 3d, and that on June 4th the pain and fever began. She was in a semiconscious condition, with pupils minutely contracted, conditions thought to be dependent on the opiates that had been given. Chloroform was administered and the painful arm, which was slightly swollen, was examined for fracture; nothing was found and the child was ordered to bed, with cold applications to the arm and morphin to be given as required. At 4 A.M. I was called and found her with a temperature of 102.8° and still crying with pain. The report was that she had had four hypodermics of morphin (two of gr.  $\frac{1}{2}$  and two of gr.  $\frac{1}{4}$ ), but except for a very short time after each, she had not ceased to cry, emitting a bird-like cry of intense agony with every expiration. The mental condition was now clearly seen to be due to the profound sepsis, and the diagnosis of acute osteomyelitis was made. At 9 A.M. an incision was made over and parallel with the fibers of the deltoid muscle and about half an ounce of pus was let out from under the periosteum. The child slept quietly for 4 hours after this, but the temperature and pulse were not improved in the slightest degree. At 1 P.M. she was again screaming with pain in the same monotonous voice with every expiration, but was in every other way apparently unconscious. At 1.30 P.M. the dressing was removed. A hole was drilled in the shaft of the bone an inch below the epiphysis. As pus came from this also, a free opening was made in the shaft. The wound was next enlarged upward and downward and the periosteum was found to be fast separating from the bone. Hot, wet dressings were kept constantly applied, but the temperature and pulse kept steadily up, though the temperature could be brought down 1° or 2° by a cold bath. The mental condition and the screaming remained the same. At 2 A.M., on June 9th, the wound was dressed and then drained much better, so that the temperature was then somewhat lower (between 102° and 103°) for the next 10 hours. All day the wound drained well and there were some periods of rest of an hour or so, but otherwise the symptoms of most malignant sepsis were unchanged. All these gradually grew worse again. After another very bad night, and in the presence of a condition just about hopeless, on the morning of June 10th, I again explored the wound. Following the disease I found the periosteum entirely separated from the bone. My incision now extended from the upper to the lower epiphysis on the back of the arm, bridging over the musculo-spiral nerve. The upper and lower epiphyses were cut through with bone-forceps and the loose shaft slipped out from under the musculo-spiral nerve. Much to my surprise, after I had done this, I found the shoulder-joint and elbow-joint full of pus. Examining further I found the wrist and ankle of the same side also inflamed. Touching the ankle would cause pain even when the child was so much under the influence of chloroform as not to feel the operation on the arm.

This pyemic invasion of the joints was something I had not heard of before in connection with osteomyelitis, and for that reason I overlooked it. I have no doubt now the last accession of the symptoms was caused by metastasis to the joints more than to the trouble in the arm, which was freely draining. The child died 6 hours later.

Cultures and cover-slip preparations from the pus evacuated at the first operation from under the periosteum, as well as that coming from the drill-hole in the bone, gave pure cultures of a staphylococcus that in the culture-tube proved to be the pyogenes aureus.

The brain-symptoms were so pronounced that for a while it seemed that a meningitis was present also. Although no autopsy was allowed, and notwithstanding the metastasis to the joints, I am inclined to believe that the brain-condition was due entirely to the toxemia.

Children often become unconscious under very mild septic conditions, and this case was one of a severity rarely met with. It is the only case of sepsis that I have seen out of about 40 treated similarly in which large subcutaneous infusions of salt-solution (400, 500, and 600 cu. cm. in this case) had no effect whatever on the pulse, temperature, or other symptoms. It is very probable, however, had an autopsy been performed that we would have found infection of all the fluids of the body.

I find that the text-books mention such cases as this as being rare. I publish this for that reason and because it may assist some one to recognize such a condition in time to do something for it. Operation on the first or second day might have saved this child; though even then, in the hands of one who had not had such an experience before, the chances are that it would not have been radical enough.

**Glanders in Man.**—L. A. W. Beck and G. G. Eyre (*South African Med. Jour.*, June, 1898) give an account of a case of glanders occurring in a stableman 30 years, old who had had charge of several horses with a discharge from the nose. One of the animals had been shot by a veterinary surgeon, the disease being pronounced farcy. When first seen, the man was suffering from intense headache, pain over the liver, and marked prostration. The liver was enlarged and tender, the tongue thickly furred, the pulse full and rapid, and the temperature 103° F. The patient grew gradually worse, and on the tenth day a rash appeared on the face and legs, consisting of nodules half the size of a split pea. These rapidly developed into vesicles, the fluid becoming seropurulent. Simultaneously there was bleeding from the nose, which was considerably swollen. Some of the fluid from the vesicles was taken in capillary tubes and sent to the Rinderpest Experimental Station, where, on microscopic examination, the bacillus mallei was discovered. Inoculation of guinea-pigs, likewise, showed in a few days the swellings typical of glanders in these animals.

**Röntgen Rays and Encapsulated Trichinae.**—According to a recent report from Würzburg (Prof. Röntgen's home, by the way) it is possible to demonstrate by means of the Röntgen rays encapsulated trichinae in the muscles of the cadaver. The hope is expressed that another field for diagnosis by the Röntgen rays is thus opened.



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**Ignorant Fanaticism vs. Knowledge.**—There is no more convincing proof of the renunciation of leaders to lead, which is the inevitable result of practical democracy, than the subservience of the English Government to the popular craze of antivaccination. It is a very disheartening fact. Here were hundreds of intelligent members of Parliament, not one of whom did not recognize the beneficence of the measure—Balfour has repeatedly shown his keen appreciation of the science and nobility of the medical profession—and yet who in obedience to popular prejudice voted against their conscience and against compulsory vaccination. Votes bought by such bribery are dearly bought. It is a sad and apparently a never-learned lesson, which democracy somehow must get into its perception, that expert opinion is truer than prejudice yoked with ignorance. The punishment will of course soon teach the lesson with the emphasis of suffering and death, and, if it must be, we hope it will soon come. It would appear as if the recent epidemics should have hammered the thought with fatal logic into the dull brain of even the fanatic. The consolation is that, knowing as we do the law, we may be assured that facts will finally educate the voter so that his false aristocratic leader will see how guilty he was in turning demagog. But the pity of it!

**What is Literature and What Journalism?**—In a nonmedical sense literature is that printed record which secures immortality by its form rather than by its matter. However valuable the matter may be (except subordinately and partially in historic work), it will surely in time acquire new modifications and relations, and be incorporated in other literary monuments, so that, purely as material, the particular work will lose its interest and value. The world's greatest historian, after a hundred years, still lives for us, not so much by what he actually told us of Rome's decline and fall, as by the manner in which he did it. Journalism is a proof of the fact. It is the history of the world's day told without a thought of form or artistic effect, and, we were about to say, without a thought of truth. Perhaps that were a little too harsh. At any rate, its life is but for the day, and it is dead when the to-morrow's child is born. Medical writing differs from all this in several ways. Form is almost wholly ignored, and yet medical literary work is literature in the sense

that it is of permanent use. No printed record of medical thought and labor is without possible use to the profession. Hence the pitiable neglect of our medical libraries. Most precious things are daily going to waste. Every member of the profession should arouse every other to put an end to the incomprehensible neglect.

**Suggestions to Writers: No. 8. References.**—One who has bibliographic work to do soon stumbles upon the fact that references to journals, books, etc., are all too infrequently incorrect or incomplete. The student relying upon these references is often compelled to hunt for hours or days for the original of a statement or article when some careless footnote has sent him on a fool's chase. "Bibliographies" are often the veriest shams, appended to give a show of erudition, and their indefiniteness and imperfections are self-confessions of the fact. When possible, every reference should be verified by one who transcribes it. If this cannot be done a reference to the former transcriber of the reference should be given. Much of this kind of error is occasioned by the different methods authors and publishers have of designating volumes, numbers, etc., and by the varieties of the kinds, editions, and times of publications. It is therefore advisable to give both the number and volume, as well as the full dates of a reference. In some cases also the publisher and place of publication may be advisable. References should always be given in the original language in which the article or title was written. The full title of an article is necessary instead of none at all, or of one or two words in it, in order to give help in index-hunting. Another great aid and saver of time would be the addition of the page-number to a reference. In a word, there are three good rules as to references: 1. Accuracy; 2. Accuracy; 3. Accuracy!

**A Relation of Medicine to Morality.**—Every profession brings peculiar ethical problems and relations into existence between its members and the community, but in none are these more intimate than in medicine. For example, we have before us a circular setting forth the advantages offered by a lying-in sanitarium. It is addressed to the "Dear Doctor," but is plainly meant for lay-circulation. The circular states that the insti-

tution is not advertised by circulars, nor in the papers, because not only everybody connected with the mail-service would know its character, "*but everybody about town.*" "Not even a doctor sign is in evidence" emphasizes the profound assurance of secrecy. Denial of the use of circulars in a circular, and the claim of the desire for secrecy while boldly hunting publicity, are also matched by portraits of nameless women, and by testimonials from others signed in full, while in the letter withholding the name from the public is directed. "The patronage of physicians *are* especially requested," and "Dr. J. W. Bite, M.D.," in testifying is doubly sure as regards his title and the treatment at the Sanitarium being "kind and efficient." The circular is not equivocal as to the reason for the secrecy so much guaranteed. The hospital is for "those unfortunate girls who have made a misstep and circumstances do not permit them to marry." "Hundreds have been fortunate" in going to this home "before their condition was publicly known," and "have gone forth untarnished, etc.," "and to-day are wives in happy homes, etc." The baby is "also" taken care of, a home found, and all that, "so that the young lady may leave without a burden of any kind, finer form and better-looking than before." The grammar, ethics, and physiology of this last touch are all quite delightful. In a separate slip physicians are assured that they will be paid "15% of all moneys received through patients as a retainer, etc." "Mrs. Dr. — & Co.," sign the slip.

Now what shall be said about this, what done, and what is the proper professional attitude toward the great social fact of which it is an indication? The subject is thorny and extensive. There is also a strictly legal standpoint to be taken and made clear.

**The New Vaccination-bill for England** continues to wobble on its unfortunate way. As we have already reported, the House of Commons, *after* receiving the bill from the Grand Committee as a measure more or less of compulsory vaccination, took the extraordinary step of introducing a conscience-clause whereby any one was allowed to deprive his children of the benefits of vaccination by declaring on oath his objection to the proceeding. The Commons passed this amendment, which entirely altered the character of the bill, and then sent the bill to the House of Lords for approval. The Lords approved the bill substantially—except the new amendment, which they struck out after an animated debate. Lord Lister, from whom the medical and lay public alike expected a powerful speech in favor of compulsion, took the side of the latest House of Commons majority, and thought that as compulsion clearly did no good, the bill had better pass with the conscience-clause inserted. Lord Salisbury was of the same way of thinking, but the peers finally decided by a majority of two to refer the bill back to the Commons for deletion of the offending

amendment. The position now is comical. Every one admits that new vaccination-laws are required, as under the existent ones the proceeding has fallen into contempt. A Conservative majority have said "This is the new law we propose to bring in, and we will do away with compulsion." A large section of the Conservative party are in revolt against their leaders, saying that unless the compulsory clause is struck out they will give trouble. The Liberal party is also divided into two camps: one, a party that, following the broad trend of liberal politics, is against compulsion and therefore prepared to vote with the Government for the amended bill; and one a party that considers it the duty of Liberals to harass Conservatives, and who, therefore, desire to wreck the Government measure, whatever it may be. It is said that some compromise will be come to whereby compulsion will be done away with, although facilities for revaccination will be provided; but the whole situation is a melancholy, even if laughable, commentary upon legislation in matters of public health as carried out by party politicians.

**Contributory Negligence.**—The doctrine of contributory negligence is a fearful and wonderful thing. The judicial mind can sometimes see it under circumstances that puzzle the ordinary intelligence to find it out. Some years ago a man, riding in a sleeping-car in a neighboring State, rose from his berth in the early morning to go to the water-closet, which was situated at one end of the car not far from the "vestibule." The morning was still dark and that end of the car was unlighted. In groping about for the closet-door the passenger, with true contributory negligence, got hold of the wrong door, which happened to be that of exit from the vestibule, and opening this, instead of stepping into a closet he walked off the rapidly moving train and was precipitated to the track alongside. He was thoughtful enough not to carry his contributory negligence to the point of killing himself, but merely contributed negligently to the breaking of one of his legs. He, of course, brought suit. He, moreover, gained his case in the lower courts, but the highest court in the State in which the accident occurred has just reversed the judgment of the court below in an opinion based upon the doctrine of contributory negligence. The judge who rendered the opinion said that the accident happened, not from defects of construction, but simply because the plaintiff did not regard the darkness. He was heedless, and the company could not foresee and guard against such heedlessness. For, asks the judge, can a man in the full possession of his senses, traveling upon a railroad-train and finding himself plunged into darkness, at a moment when he is groping about in the car, proceed with the same confidence as in the light and be regarded as a prudent man? To which question we should answer that he certainly cannot proceed with the same confidence, but,



nevertheless, if he is in urgent need of a water-closet he is not an imprudent man if he gropes for one in an unlighted sleeping-car. He is, on the contrary, doing his duty; and the only contributory negligence that we can see in the case is on the part of the railroad company which did not keep its car lighted and left the vestibule-door unbolted contrary to the rules. Was this a Daniel come to judgment—or only a Dogberry?

**Endemic Tetanus.**—The establishment of the U. S. hospital-camp at Montauk Point has called to mind the fact that the eastern end of Long Island has had a bad reputation for years as a breeding-ground for tetanus. Dr. Cyrus Edson is just reported as saying that the disease is endemic there, and that this fact will prevent the reception at Camp Wikoff of any soldier suffering with wounds.

We do not know how well deserved this bad fame of Long Island may be, but we can recall that this reputation has clung to the place for years. Even a popular prejudice of this sort is likely to have some reason for it, and, therefore, accurate statistics on the subject, and especially some scientific bacteriologic work, would be most desirable. As for the bacillus of tetanus being endemic in any particular place, it may be said that the evidence goes to show that this microbe is telluric and is very widely disseminated over the earth's surface. That it may be more active and prolific, however, in one locality than in another is highly probable, although the reasons for this may not be clear. Epidemics of tetanus have undoubtedly occurred. In India the disease prevails in this manner and is especially rife among women who have just been confined. WARING called attention many years ago to this epidemic-frequency of puerperal tetanus in Bombay, in which city several hundred cases occurred in a few years. HUTCHINSON has recorded a most curious epidemic of tetanus among his own flock of sheep, the disease appearing only in the ewes that had recently lambed. About 30 suffered, and 8 or 9 died. Among soldiers, traumatic tetanus has occasionally been so prevalent that it could have been appropriately called epidemic.

While all these facts may be so, it is not necessary to express alarmist opinions about dangers from tetanus at Montauk Point. With the usual antiseptic precautions the germ will probably be as well under control there as elsewhere. This germ is apparently anaerobic, and yields to antiseptic fluids in wounds that are properly drained. It is most effectually killed, however, by boiling the water in which it may exist. Even if it is unusually virulent in the soil of Long Island, this virulence would not especially jeopardize wounds received elsewhere, unless such wounds were allowed to come in contact with infected soil and water. But this is scarcely conceivable in such a well-regulated camp as the Government proposes to have at Montauk Point.

**Thrombosis of the Mesenteric Bloodvessels.**—Thrombosis of the mesenteric vessels is a very uncommon condition, judging from the meager literature on the subject. The fact that 5 cases have been reported within 6 months, however, makes it seem probable that many cases may have been overlooked in the past owing to the general lack of information concerning the disorder. Of the 15 cases that have been reported, 4 have occurred in the practice of Kœster (*Deutsche medicin. Wochenschr.*, May 26, 1898), who studied carefully the cases reported up to the time of the publication of his article. The causes of thrombosis have been variously sought in ulceration of the intestine, slowing of the portal circulation from the presence of carcinoma or cirrhosis of the liver, and sclerosis of the vessels from syphilitic arteritis. The only case in which the etiology has been determined with any certainty is that reported by Sigurd Lund (*Hospitalstidende*, March 23, 1898), in which there was a history of syphilis, evidences of which were found at the necropsy, with signs of sclerosis of the vessels on histologic examination.

A study of the cases reported makes it possible to draw quite a clear picture of the disease. The onset may be sudden, during perfect health, or it may occur during recovery from some severe illness. Invariable symptoms are intense abdominal pain, extreme tenderness and vomiting. There is often obstruction of the bowels and collapse, and if the patient survives the shock, abdominal distention occurs. In a few cases bloody diarrhea is mentioned. Death usually follows soon, possibly within a few hours, but in one case it was delayed for three days. The findings at necropsy have also been quite uniform. An accumulation of bloody fluid occurs in the peritoneal cavity in a short time and the walls of the mesentery and intestine are infiltrated with blood, or they later become gangrenous.

The differential diagnosis of the condition would take into consideration: perforative peritonitis, acute intestinal obstruction, volvulus, and possibly appendicitis and intussusception. Probably the absolute diagnosis would be impossible, but in any case the symptoms are such as to indicate immediate celiotomy. All the cases thus far reported have terminated fatally except one reported by T. E. Gordon (*British Medical Journal*, June 4, 1898), in which a loop of intestine two feet long was successfully excised. Arterial thrombosis in syphilitic vessels is mentioned in this case as not improbably the cause of the condition, and the symptoms and appearance of the intestine agree so closely with the descriptions of the other cases that have been reported as to make the diagnosis practically certain. This recovery furnishes positive proof that such cases are not inevitably fatal if the area of intestine affected is not too extensive, and if operative interference be not delayed too long.

### The Military Quarantine Against Yellow Fever.

—The risk of importing yellow fever with the returning troops must not be minimized, and this is evidently the view taken by the Government. The War and Treasury Departments have both adopted stringent rules for controlling the transportation of the soldiers from Cuba to the United States. The Secretary of War has requested the Secretary of the Treasury that the medical officers of the Marine-Hospital Service be assigned to duty as sanitary inspectors at Cuban and Porto Rican ports and on board the transports. Each transport is to carry one such inspector, who is to be responsible for the sanitary condition of the vessel and the health of the crew. The military surgeons will only have control of the troops on board. Detention-vessels will be established at the various ports for persons seeking to return home. The effect of having a medical officer of the Marine-Hospital Corps as a sanitary inspector on each transport will be, according to Surgeon-General Wyman, to avoid the necessity for disinfection on the vessel's arrival in this country, provided no yellow fever has broken out on board during the voyage. The Secretary of the Treasury has given necessary orders to the Marine-Hospital Corps for securing these provisions.

Surgeon-General Wyman has accordingly issued a circular to the medical officers of his corps containing full instructions for their guidance. Their duties are to keep the transports from becoming infected. They have full authority, and as they are trained experts they will doubtless leave no duty undone or precaution neglected. They can prevent the crew going on shore and have control of full disinfecting outfits, such as steam-chambers, boilers, sulphur-furnaces, formaldehyde-generators, and a large quantity of disinfecting material. Each medical officer is instructed to carry out the spirit of the rules, if not the exact letter, whenever it may be impossible to enforce them exactly, and thus he is given leave to use his discretion, unhampered by red tape, should unforeseen emergencies arise.

In addition to these rules governing transports, strictest quarantine-regulations will evidently be carried out at the hospital-camp at Montauk Point. The medical department of the army has had all too short a time to prepare this camp, but we have faith in both the executive skill and devotion to duty that will further and control this great military enterprise. According to reports, this camp will be the largest of the kind ever established in this country north of Gettysburg. When it is considered that it is to be not only a camp but a great hospital, the vastness of the scheme, and the responsibility involved, will readily be appreciated.

The prompt and intelligent action of the War and Treasury Departments, as here outlined, shows clearly how keenly alive the Government is to the needs of the occasion. That it may succeed in every detail is sincerely to be hoped, and to this end its hands should be supported by all good men.

One of Those Little Things that have a world of significance is the following testimonial now published in the *Literary Digest* and numerous other journals:—

MISS CLARA BARTON'S LETTER.

CONSTANTINOPLE, February 21, 1896.

*Dear Sir*—When in London the other day I received two packets from the United States Embassy, each containing an Electropoise; today I received your kind letter. Please allow me to thank you heartily and gratefully for the splendid little machines. As you remember, I am not an entire stranger to the virtues of the Electropoise, and I will take great pleasure in passing your offering to afflicted humanity. . . . Very sincerely yours,

CLARA BARTON.

President Red Cross Armenian Relief Expedition.

A year or two ago the writer had a correspondence with the editors of the *Literary Digest*, in which the ethics and the religion of D.D.'s and instructors of the public were considered, in case these leaders should exploit an instrument "enabling the body to take on all the oxygen it needed for purification and health." Even yet testimonials pour in from reverend gentlemen as to the "miraculous effects" of Electropoise in the cure of "rheumatism, paralysis, and other diseases of the blood and muscles;" that "drugs destroy the lining of the stomach," and all the rest we know so well. Miss Barton should make presents to two persons of the "splendid little machines,"—first is her nurse who acts as reporter (or the reporter who passes as nurse) and sends the highly sensational reports of medical infancy to a New York daily paper; and second, to the contemptuary who shows such avidity to believe this reporter's yarns, and to charge the Surgeon-General of the army and his medical brethren with such horrible things. The *Christian Nation's* editor testifies that the "incalculable blessing" has "power to put a person quickly and naturally to sleep and *keep him asleep* (italics not ours) until satisfied Nature awakes refreshed." We would also suggest that such a device would prove invaluable in the yellow-fever camps, and that the surgeon-general should supply one to every soldier when he takes the oath. Perhaps the Red Cross might do it and spare the government the expense. In this case, why, indeed, should not the government be relieved of its whole inefficient and good-for-nothing medical departments? Even the Red Cross would not then find it necessary to appear like the fairy-tale hero or god-mother just in the nick of time to save the poor army from the awful ruin begotten of the culpable neglect of official medical men.

From the book of a learned traveler we extract the following sentence that seems apropos:—

"On a signal being given, all the Blue-bottle Flies began to buzz at once in a sumptuous and sonorous manner, the melodious and mucklaginous sounds echoing all over the waters, and resounding across the tumultuous tops of the transitory titmice, upon the intervening and verdant mountains, with a serene and sickly suavity only known to the truly virtuous. The moon was shining slobaciously from the star-bespangled sky, etc."



## Reviews.

### **The Mental Affections of Children, Idiocy, Imbecility and Insanity.** By WILLIAM W. IRELAND, M.D. 8vo, pp. 412. London: J. & A. Churchill, 1898.

This is an excellent work, the perusal of which affords not only instruction but entertainment as well. Sitting down to review, we became so engrossed in the accounts of cases described that mere reviewing grew difficult. The author has utilized his own extensive experience, and has, as he states in his preface, endeavored to "bring together the widely scattered studies of able observers on the subject of idiocy and imbecility." The book contains a large amount of useful information. Illustrative cases are fully detailed, gathered from the experience of many observers. Many widely celebrated instances of various types of mental deficiency are quoted. There are numerous illustrations employed to show the appearance of patients with different forms of idiocy. These are of great assistance, and it is safe to say that the average reader, after finishing the book, will have a much clearer comprehension of the subject than he had before.

Greater uniformity in the nomenclature of mental disorders as used by different writers is much to be desired. Dr. Ireland adopts that which regards imbecility as a lesser grade of idiocy, and feeble-mindedness as the least degree; and he limits the terms, in contradistinction to insanity, strictly to forms of mental defect dependent upon disease of the nervous centers that occurred before birth or before the evolution of the mental faculties in childhood. This arrangement is probably the more correct and scientific, although a simpler one could be desired. Yet like all classifications it is capable of causing some confusion. There is, for instance, nothing said of the "developmental idiocy" of Dr. Langdon Down, and the inference is that the author would possibly place it among the forms of insanity. Nearly all of the book is occupied by the consideration of idiocy. Of this the author makes many subdivisions, such as genotoxic, eclamptic, epileptic, microcephalic, paralytic, etc., following a classification that he proposed a number of years ago. Perhaps so many subdivisions render the subject a little more complicated. Yet for the purpose of classification based, as here, upon the causes, it is a distinct aid; and that it is a good arrangement is shown by its having been adopted by other writers. Only one chapter is given to the subject of insanity in childhood. This portion could well be extended to make it in keeping with the rest of the volume. One feels that he has not read all he would like to read from Dr. Ireland's pen regarding these later-developing mental affections.

### **Manual of the Diseases of Children.** By JOHN MADISON TAYLOR, A.M., M.D., and WILLIAM H. WELLS, M.D. 8vo, pp. 743. Philadelphia: P. Blakiston, Son & Co., 1898.

As announced, the aim of the authors of the work before us has been to make it a brief guide for students and practitioners. It opens with a satisfactory section upon the physiology of childhood. The chapter upon hygiene is rather too short, and we are sorry to see that it contains nothing about clothing. The chapters on diet are very good, and contain within a small space most of what a medical student needs to know. Then follows the discussion of the various diseases, classified for the most part in the usual groups. The text is condensed, unnecessary matter has been omitted, the needs of the student have been kept in mind, and the work has not been burdened with many references to medical literature. The presswork is good, and the illustrations are well executed. There are a number of faults, however, that seem worthy of mention. It is a pity that the authors, having spent so much commendable labor, and brought forth a book praiseworthy in many particulars, should not have given more time and greater care to its preparation. There is much lack of that clearness of arrangement and of diction that alone makes a work useful to the medical student or practitioner. There is far too much quotation at length from but a few modern text-books, without reference to the fountain-heads from which the writers of these have drawn their information. There are almost too few illustrations, and those used are not well

distributed and not always instructive. For instance, two very pretty plates of the "model nursery" show a chair with projecting rockers, over which a child or nurse could easily fall, and in the middle of the room a low table with an oil lamp on it. There are some inaccuracies of statement, and portions of the book are not quite up to date. Thus, a long section is devoted to "mucous disease," a term scarcely used by writers of the last ten years. The geographical tongue is described as a "rare condition," while experience teaches that it is rather common. The etiology of pernicious anemia is discussed in six lines only. The statement is made that Winckel's disease was first described by Winckel, although this is known not to be the case. Sclerema neonatorum is put under "septic infections," not the recognized place for it, while Winckel's disease and Buhl's disease are not placed here as they should be. All that is said about pasteurization, sterilization, and modification of milk is, curiously, included in the chapter on the "Breed of Cows." There is nothing to indicate but that cirrhosis of the liver is a common affection of childhood. Retropharyngeal abscess is described more or less fully in two different parts of the book. Aphthous vulvitis is said to follow "such systemic affections as roseola," but we are unable to find anywhere the description of such a systemic disease. Finally, "Subacute Milk-infection" is the heading of a section, with "enterocolitis" used as a synonym, while immediately following is an article on "ileo-colitis." We have tried in vain to understand just what it is intended to describe, and we feel sure that the confusion cannot but be exceedingly puzzling to a medical student. Our criticisms have not been made in a carping spirit. In spite of its faults the book is good in many respects. There is no American work on diseases of children quite well adapted for the use of undergraduates, with their limited time for reading; and with the faults of this one corrected—as we hope they may be in a later edition—it should answer the purpose admirably.

### **Beiträge zur Pathologie und pathologischen Anatomie des Centralnervensystems, mit Bemerkungen zur normalen Anatomie desselben.** Von ARNOLD PICK, o. ö. Professor an der deutschen Universität Prag. Mit 205 Abbildungen. 8vo, pp. viii, 324. Berlin: S. Karger, 1898. Price 12 Marks.

This volume of *Contributions to the Pathology and Pathologic Anatomy of the Central Nervous System, with Remarks upon its Normal Anatomy*, consists of 21 papers detailing reports of observations and investigations, some of which are now published for the first time and others of which have appeared in various journals. The studies are principally of a clinical nature, and are rendered complete, so far as possible, by a recital of the further course of cases reported, as well as the postmortem findings and the results of histologic study. The volume is issued in celebration of the 550th anniversary of the establishment of the German Karl Ferdinand University of Prague, and it is dedicated to the memory of Otto Kahler. This tribute is both touching and appropriate, as the names of Kahler and Pick are indissolubly associated in the literature of the physiology and pathology of the nervous system. It will be impossible within the limits of a brief review to do more than to give the titles of the numerous subjects that are here so thoroughly considered and so generously illustrated. The work is worthy the reputation of the living as of the memory of the dead. The following subjects are discussed seriatim: Disorders of identification (asymboly, apraxy, agnosia); the comprehension of speech; word-blindness in left-handed persons; the symptomatology of bilateral lesions of the temporal lobes—so-called subcortical sensory aphasia; a case of sensory aphasia—a contribution to the localizing significance of quadrant-hemianopsia; subcortical sensory aphasia; the relations of word-blindness to agraphia; partial disorders of the acoustic word-center and their relations to transcortical sensory aphasia; agrammatism as a result of focal disease of the brain—a contribution to the relation between word-deafness and deafness; so-called conduction-aphasia (Wernicke); word-deafness as a complication of pseudo-bulbar paralysis; the symptomatology of old lesions in the speech-area of the left central hemisphere; general failure of memory as a direct result of focal disease of the brain; disturbances of localization of depth in consequence of central focal disease; the symptomatology of callosal

the cases of partial disease of the olivary intermediate column with marks upon the anterior intermediate columns of the system (even Boettcher's "Olivary bundle," "Hornig's triangular tract," "commenced generation" of the posterior columns of the spinal cord; return of previously absent knee-jerks in old cases of gray degeneration of the posterior columns; varieties of tabes in childhood; defects and deformities of the human spinal cord (teratoma, myelocyst, intermediate fasciculus, with remarks on the anterior marginal fasciculus; resemblance between the spinal cord of animals and that of man; heterotopia of the gray substance. This mere outline of the contents of the work will, we think, sufficiently indicate its value and commend it to the careful consideration of all interested especially in clinical neurology.

**Operative Gynecology.** By HOWARD A. KELLY, A.B., M.D., Fellow of the American Gynecologic Society; Professor of Gynecology and Obstetrics in the Johns Hopkins Hospital, Baltimore; etc., etc. Vol. I. With 24 plates and over five hundred and fifty original illustrations. 563 pages. New York: D. Appleton & Co. 1898. Price, \$7.50.

This magnificent work is described by the author as "a convenient summary of the various gynecologic operations" he has found best in his own practice. It is essentially a practical book in every sense of the word, and makes no pretension to being a digest of the literature of gynecology. A superficial view of the book would at once suggest as the most original feature the superb system of illustrations, all of which are new and beautiful and eminently instructive, and many of them appropriately colored. It would be unfair, however, to stop with this, for a perusal of the subject-matter reveals the broad scope of the writer and the original and taking manner of presentation. Aside from its value as a work of science the book is, from a literary point of view, most entertaining. Especially to be commended is the clear and systematic course adopted throughout the work. Each section is preceded by a synopsis of the subject-matter, and in the body of the work are incorporated tables of the prominent symptoms of the diseases and the successive steps of the various operations, so that one may at a glance secure a comprehensive idea of the salient features. Space will not permit a detailed review of each portion of the work, but attention should be called to some of the more important features. Sepsis, asepsis, and antisepsis in hospitals and in private practice, bacteriology, topographic anatomy; the gynecologic examination, gynecologic instruments and dressings, anesthesia, and the general principles involved in plastic operations, embrace the more general subjects treated of; while the diseases of the external genitals, rupture of the rectovaginal septum, relaxed vaginal outlet, operations on the vagina, affections of the urethra, bladder, and ureters, operations upon the cervix uteri and uterine prolapse, are comprised within the minor gynecologic technic, with vaginal hysterectomy, uterine inversion, the uterus as a retention-cyst, and vaginal extirpation of submucous myomata and polypi as the major operative portion of the work. Especially interesting and valuable is the section on the genitourinary tract, upon which Kelly in this country ranks with Pawlik, Winckel and Fritsch abroad. This is essentially the new realm of pelvic surgery, as Kelly aptly remarks that "previous to the latter half of the century just closing but little was known about diseases of the urinary apparatus in women." Aside from the improved methods of urinalysis a wide field has been opened up by the introduction of the direct method of vesical inspection through the cystoscope and the method of ureteral catheterization. As would naturally be expected these delicate processes are described minutely and clearly, and are profusely illustrated by photographic wood-cuts. The cystoscopic plates of the bladder and urethra merit special mention. The difficult operation of vaginal hysterectomy, as performed by Martin, of Berlin, is fully described, and each step is shown in a clearly defined wood-cut, which really makes the operation appear much easier of performance than it actually is. We are surprised to find that the interesting condition known as Breisky's disease, or better, kraurosis vulvæ, has been entirely ignored. This is also true of cervical erosion and congenital cervical fissuring, but as the book does not pretend to be other than

an exposition of operative gynecology, these omissions may be discounted. It is needless to say that the work is of prime importance and stamps the author as foremost in the ranks of abdominal surgeons, a position that has been almost universally accorded him.

## War Correspondence.

### RECEPTION AND CARE OF SICK AND CONVALESCENT.

DETENTION-CAMP, Egmont Key, August 9th.

SINCE my last writing we have heard of a letter in the *New York Times*, from its correspondent here, in which strictures are made upon the direction of this camp and indirectly upon Dr. H. D. Geddings. The mere suspicion of any criticism of Dr. Geddings excited the liveliest indignation among the officers who have been detained here. The facts in the matter are briefly as follows: On the arrival of the steamship *Santiago* at quarantine on July 29th, we were told we would be put on this Key for detention. It was found upon inquiry that Dr. Geddings was not at the camp, having taken a sick steward that very morning to Port Tampa. He did not expect any sick to be landed here, but on the contrary had received positive instructions that this camp was not to be used for any such purpose; so there was no reason why he should not have been temporarily absent. He did not receive our urgent telegram until 9 P.M. on Friday. After that late hour he made arrangements for stores and many necessary things, which the sudden call for provision for 186 men (mostly sick) demanded, and he had also to obtain formal permission from Washington to allow us to land and occupy the camp. He was on hand early next morning. We were landed quickly without exposure or fatigue, and in an hour or two at most the sick, convalescent and well were comfortably tented and given an abundance of good food. Dr. Geddings made constant rounds among the sick and well and saw that everything possible was done for them. In an incredibly short time he had a sufficient number of hospital-stewards at work, and things were running smoothly.

From the first the food has been plentiful and well cooked, and many delicacies have been provided for both officers and men and dispensed with liberal hand. The camp has been kept wonderfully clean, and every little detail has been looked after by Dr. Geddings himself. After the storm he took the officers (it so happened that the tents they occupied had suffered most) and some soldiers into his own place and tenderly cared for all. During the night of the storm the chief steward, Mr. Peck, was out the entire night attending the sick, and the Doctor himself was up very late.

Both officers and men have improved greatly under Dr. Geddings' care, and all are most thankful to him for his courteous and unremitting attention. I have shown this statement to the officers, including General Duffield, Major D. B. Wilson, Capt. C. D. W. Wilcox, Lieut. Mark L. Hersey, Major Thornton, Major Wessels, Lieut. J. C. Reeves, and others, who heartily endorse what I write.

FRANK DONALDSON, B.A., M.D.

### THE MEDICAL DEPARTMENT OF THE ARMY.

WAR DEPARTMENT, Surgeon-General's Office,  
Washington, August 16, 1898.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

My time is too much occupied with important official duties to justify me in paying any attention to my numerous



non-professional critics. But I will take time for a brief reply to some editorials in medical journals which intimate that I owe an explanation to the profession with reference to my management of the Medical Department of the Army.

I will say, first, that every Army Corps and every camp has a Chief Surgeon, who is responsible for the administration of medical matters upon the spot and whose duty it is to see that timely requisition is made for medical supplies and necessary assistance. I have made every effort to comply with all demands of this kind and to anticipate so far as possible the wants of our soldiers in camp and in active service. Ample supplies were sent to Tampa for use of the Fifth Army Corps, and I am not responsible for the fact that these supplies were not landed at Siboney. Nor am I responsible for the condition of the transports leaving that place with sick and convalescents. Government transports are under the orders of the Quartermaster's Department; but when they are to carry sick soldiers it is no doubt the duty of the Medical Department to see that they are properly supplied with medicines, medical attendance and competent nurses. Circumstances may, however, make it impossible to accomplish this manifest duty. Whether such conditions existed in front of Santiago at the time the *Seneca* and the *Concho* sailed is a question which every one who has read the newspapers may decide for himself. But certainly I could not have had supervision over these transports from my office in Washington. At the time they sailed General Shafter's Chief Surgeon had broken down in health. In a letter recently received from Lieut. Col. Pope he says:

"As I told you, I was relieved from duty as Chief Surgeon on July 24 because of continued illness. General Shafter was good enough to do this, and since then I have been resting in camp, hoping to get into condition again, if possible. My collapse seems to have been the result of a partial sunstroke, which left my brain entirely unable to think or plan or recollect and of course, unequal to the heavy responsibilities of my position."

Very truly yours,

GEO. M. STERNBERG,  
Surgeon-General, U. S. Army.

## Correspondence.

### VERATRUM VIRIDE IN ECLAMPSIA.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

I wish to supplement the eclampsia statistics given by Dr. E. W. Pressly in an instructive review of 500 cases of labor. Two patients I have seen recently, one in consultation, the other alone, one antepartum, the other postpartum, one of whom died and the other lived, serve to confirm the value of veratrum viride as a remedy for the control of the convulsions. In the fatal case, death occurred nine days after the cessation of the convulsions. Veratrum is the best remedy under these conditions, and if given hypodermically and in sufficient quantity to reduce the pulse-rate to about sixty it can be depended upon. I give morphin simultaneously; moreover, I am unable to see any contraindication to the combination. Mixing the two, however, in the same solution develops in some way an incompatibility; so that I give them separately. I administer 20 drops of veratrum with  $\frac{1}{2}$  gr. morphin at the first dose. I believe this is preferable to using smaller doses and repeating them at shorter intervals, for the reason that the convulsions are controlled sooner by the former plan.

Respectfully,

Columbia, Ala.

F. S. TWITTY.

### DR. LEOPOLD SCHENK'S THEORY OF SEX.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

It is of more than ordinary interest to me to learn on examining my obstetric case-book that I have had two marked cases of diabetes in childbearing women, the condition being detected in one several years before she was married; and in the other after she had married and borne one child. The former of these cases has since married and borne four children, all boys. The latter had borne one child, a boy, before the diabetic symptoms became sufficiently prominent to warrant medical care, and thus detection, and she has subsequently borne two, both of which are males. In mentioning these two cases, I do not in any way desire to place myself in the position of opposing the hypothesis advanced by Dr. Schenk, as they might readily furnish the exception to the rule. I may add, however, that there is probably no class of people who eat more saccharine foodstuffs than the negroes in the cane-fields in the South, where the proportion of males to females is about the same as in the lying-in institutions of Philadelphia. The theory can at least furnish the superstitious with material upon which an expectant mother may base hopes of securing her preference.

Respectfully

Philadelphia.

L. J. HAMMOND, M.D.

### SEPTICEMIA WITH REMARKABLE HYPERPYREXIA AND RECOVERY.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

THERE occurred recently in my practice a case so very unusual, in few phases, though mainly with regard to the temperature—that many of my professional associates to whom I have detailed the story assumed a countenance very suggestive of disbelief. Others, being more outspoken, declared there must be a mistake somewhere, very likely in the thermometer; while a few, who became acquainted with the facts at second-hand, and without mention of the names of the physicians, branded the story as an exaggeration, as they had never experienced such a temperature, save in sunstroke and just before death.

The patient was a married woman, 27 years old, and the mother of two children aged 9 and 6 years respectively. I saw her for the first time about 11.30 o'clock in the evening, and was told that she was two months pregnant, and that during the day, while pursuing her household duties, she discharged a small quantity of blood from the vagina. She looked anemic and weak, though her pulse was not rapid, but strong and regular, while her temperature was but one degree above normal. I made a vaginal examination and found the os just a trifle dilated, but nothing protruding from the canal and no history of anything having escaped therefrom but the blood mentioned. I advised the woman to remain in bed and prescribed the usual medicinal remedies for threatened abortion. The next morning found her more cheerful, with a temperature and pulse nearly normal, and anxious to eat regular diet and leave bed. She remained comfortable throughout the day and until 1 o'clock the following morning, when I was called, and found her in a most precarious condition—a well-developed case of septicemia—with a temperature of 108° and a pulse so rapid and weak that I could scarcely count it, while her countenance was very suggestive of the approach of death. She was near the close of a chill that had lasted for fully an hour and was so violent that, as she subsequently remarked, several of her

people attempted to hold her still, but failed. Her skin was dry and hot and remained so, until I suggested that her spiritual adviser be sent for and I told her that she was very ill, when a profuse perspiration broke out all over the body. I gave her strychnin sulphate, gr.  $\frac{1}{30}$ , hypodermically and ordered that her skin be dried and sponged with a solution of ice-water and alcohol. This brought her temperature down to 106°. In 30 minutes I advised another sponging, which banished two more degrees of fever. I then gave a second hypodermic of strychnin sulphate, gr.  $\frac{1}{30}$ , and soon afterwards, having meanwhile sent for my friend, Dr. Francis J. Kelly, to assist me, I had her etherized and cureted the womb thoroughly, washing out afterward with a 1 to 3,000 solution of mercuric-chlorid. I found in the uterus a large quantity of pus and some tissue-fragments. After concluding the operation I gave another hypodermic of strychnin, this time gr.  $\frac{1}{15}$ . I ordered whisky and quinin in rather liberal doses, and next morning on returning, my patient was in good spirits and comfortable, barring slight abdominal tenderness, and she had a temperature of 99.5° and a pulse of 120. I irrigated her uterus twice a day for six days with a solution of creolin and at the end of nine days she was up and about the house, her temperature having then been normal for four days, and the discharge from the womb having ceased. At no time after the cureting did her temperature rise above 100.5° and it reached that point but once.

I employed the same thermometer that I have been using for a number of months, and used it all through this woman's illness, and the fact that it has always given satisfaction and its behavior after the cold baths, marking two degrees less after each sponging, dispel from my mind all thoughts that the recording of the thermometer might have been incorrect.

Respectfully,

EDWARD HORGAN, M.D.

Philadelphia.

## THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AT EDINBURGH.

SPECIAL CORRESPONDENCE OF THE PHILADELPHIA MEDICAL JOURNAL.

THE sixty-sixth annual meeting of the British Medical Association came to a termination on Saturday, July 30th. Many circumstances combined to render this meeting, from every point of view, one of the most successful that the Association has ever held. Edinburgh is a great medical center and the traditions of its school are some of the proudest in Europe, so that it was a certainty that the level of the discussion would be a high one, and that no one would speak lightly or from insufficient knowledge in a place every stone of which is associated with accurate scientific work, and with powerful struggles after progress and truth.

The division of the work into sixteen sections was, however, hardly wise. This sacrifice to specialism led to many debates of a most interesting character being held, with no audience at all, or with an audience of three or four, who strolled in and strolled out again, depressed by the sight of the empty benches. It is doubtful whether such subjects as the relation of medicine to life-assurance, tropical diseases, or psychology really offer sufficient points of interest to the general practitioner to make it politic to devote particular sections to their discussion at what is after all an annual congress of British practitioners and not a meeting of expert delegates. The value to the medical man of clear pro-

nouncements upon such topics is not to be gainsaid, but such pronouncements could better be made in the form of communications to the proceedings of some of the more comprehensive sections, where they would attract larger audiences than in the form of speeches to bare walls.

The various addresses by the presidents of the sections, and by the chosen orators in medicine, in surgery, and in psychology, certainly marked a higher level of oratory than is usual at these meetings; but Sir John Batty Tuke's address in the last-named subject was the best of them all, if only because of the practical good sense with which it was inspired. Too many addresses at meetings of medical associations, whether American, British or International, take the form of a learned *résumé* of recent progress. This is not the sort of thing that a medical audience requires. It makes an admirable article in a lay magazine as a proof to leaders of thought in other departments that medicine is not lagging behind; but to medical men such summaries are of no particular value, consisting as they do largely of what is as well known to hearers as to speakers. What a medical audience desires to hear from the leader of scientific thought is a personal expression of opinion, something distinctive, something that no other man than the speaker could say better, because no other man has had the same unique opportunities of learning. This note of personal knowledge was loudly and clearly struck by Sir John Batty Tuke in his wise remarks upon the legal hindrances that now prevail in England to the proper treatment of the insane. The perennial farce as played in England of the inspection of lunatics and lunatic asylums under the direct jurisdiction of the Lord Chancellor, by barristers, who, however skilled they may be in the interpretation of the lunacy-laws, certainly do not know the physical signs or symptoms of lunacy, came in for properly severe handling in an excellent address.

Among the more important papers read on the last days of the meeting may be mentioned one by Professor Wright, the occupant of the Chair of Pathology in the Army Medical School at Netley; one by Professor Doyen, of Paris, on the Surgery of the Brain; one by Dr. F. T. Bond on Vaccination with Special Reference to Prospective Legislation; one by Mr. F. W. H. Myers, the honorary secretary of the Society for Psychical Research, on Hypnotism; one by Mr. John M. McCandlish, a manager of the Scottish Union and National Assurance Company, on the Difficulties of Medical Advisers to Assurance Companies; and one by Dr. W. J. R. Simpson, late Medical Officer of Health for Calcutta, on the Recent Epidemic of Plague in India.

The summer graduation ceremony of the University of Edinburgh, which took place on Saturday, July 30th, formed a graceful closing episode to the session, inasmuch as the majority of the honorary doctorates were given to prominent members of the British Medical Association present in Edinburgh on the Association's business. The following gentlemen received the honorary LL.D. of Edinburgh: Dr. H. Pickering Bowditch, Professor of Physiology in Harvard University; Sir William Broadbent, M.D., F.R.S., physician to St. Mary's Hospital, London; Dr. Lauder Brunton, F.R.S., physician to St. Bartholomew's Hospital, London; Dr. Eugene Doyen, late Professor of Surgery at Rheims; Dr. David Ferrier, F.R.S.; Dr. Joseph Förster, Professor of Hygiene and Bacteriology in the University of Strassburg; the Comte de Franqueville, a well-known French political economist; Dr. Carl Gerhardt, Professor of Medicine in the University of Berlin; Mr. R. B. Haldane, Q.C., M.P., a philosophic writer with a large legal business; Mr. Jonathan



Hutchinson, F.R.S., an ex-president of the Royal College of Surgeons of England; Dr. Theodor Kocher, Professor of Surgery in the University of Berne; Dr. August Martin, Professor of Gynecology in the University of Berlin; Dr. Johann Mikulicz, Professor of Surgery in the University of Breslau; Dr. Morisani, Professor of Midwifery in the University of Naples; Dr. William Osler, F.R.S., Professor of Medicine in the Johns Hopkins University, Baltimore; Dr. William S. Playfair, Professor of Obstetric Medicine at King's College, London; Dr. Thomas Roddick, Professor of Surgery in the McGill University of Montreal, ex-President of the British Medical Association; Dr. Siegmund Rosenstein, Professor of Clinical Medicine in the University of Leyden; Dr. Herman Snellen, Professor of Ophthalmology in the University of Utrecht; and Sir Richard Thorne Thorne, F.R.S., Principal Medical Officer to the Local Government Board.

The meeting must in every respect be regarded as a highly successful one, while the famed hospitality of the Scotch was never more clearly demonstrated than in their treatment of their distinguished guests. The work of the organizing secretaries was admirably executed.

## American News and Notes.

**Dr. S. C. Ayres** has been elected professor of ophthalmology in the Medical College of Ohio.

**The Mississippi Valley Medical Association** will meet at Nashville, Tenn., October 11th-14th.

**The Southwestern Iowa Medical Association** met at Council Bluffs, Ia., August 18th.

**The Medical Society of the Missouri Valley** meets at Council Bluffs, Ia., September 14th and 15th.

**Cleveland City Hospital.**—Drs. C. J. Aldrich and H. L. Spence have been elected consulting neurologists.

**Dr. J. M. Mathews** has resigned from the Board of Regents and Faculty of the Kentucky School of Medicine.

**College of Physicians and Surgeons, San Francisco.**—Dr. Steven Crowe and Dr. E. S. Pillsbury have been elected lecturers in bacteriology.

**Rush Medical College, Chicago.**—Dr. F. C. Hotz has been elected to the chair of ophthalmology and otology, made vacant by the resignation of Dr. E. L. Holmes.

**The Tidewater Medical Association of Virginia and North Carolina** met at Virginia Beach, July 14th and 15th. There was a good attendance and a number of interesting papers were read and discussed.

**The Health of the City of Denver.**—In the official monthly report of the Denver Bureau of Health for July the comparative mortality for 12 years is given. The death-rate per 100,000 of population in 1888, 1889, and 1890 was 198, 175 and 193, respectively, as compared with 16, 48, and 52 for the years 1895, 1896, and 1897.

**The San Francisco County Medical Society.**—At the August meeting the subject of carcinoma of the stomach was discussed. Dr. Philip King Brown dealt with the pathology, Dr. Wm. Fitch Cheney with the diagnosis, and Dr. Emmet Rixford with the treatment. The papers were extensively discussed and much interest was manifested in the subject.

**A new hospital at Chickamauga** has been fitted up with accommodations for 1,200, and was ready for occupation August 17th. The men will be moved from the overcrowded division-hospitals to the new hospital as soon as possible. Red Cross nurses are in attendance and the hospital is the best fitted up of any in the camp.

**Heredity in the Color of the Eyes.**—E. Storen states that in over 74% of several hundred persons he has examined, the color of the eyes can be traced to inheritance from the grandparent of the same sex on the side of the parent of the opposite sex; boys from their mother's father and girls from their father's mother.—[*Ophthalmic Record*.]

**Making Santiago Healthy.**—General Leonard Wood, Military Governor of Santiago, and a Board of Inspecting Physicians have completed a house-to-house inspection of the city. Considerable sickness, mostly malaria and dysentery, was found, but no authentic case of yellow fever was discovered. The sanitary precautions taken since the occupation of Santiago by the United States forces has had the effect of reducing the average daily death-rate from 103 to 37, a decrease of 64%.

**Chicago as a Medical Center.**—According to the latest statistics, Chicago ranks first in order as a medical center, with over 2,500 medical students; Philadelphia second, with upwards of 2,300 students; New York shows a decrease in attendance from 1889 of almost 200, giving her the third place, with 1,900 students; St. Louis ranks fourth, having passed Baltimore, Cincinnati and Louisville, with about 1,400 students; Baltimore has 1,300 students, and occupies the sixth place.—[*Albionist and Neurologist*.]

**The Western Surgical and Gynecological Association** will meet at Omaha on December 28th and 29th. It includes in its membership surgeons and gynecologists living north of Mason and Dixon's line, west of the Allegheny Mountains and east of the western border of the Philippine Islands. The officers for the present year are: Dr. D. S. Fairchild, Clinton, Ia., president; Dr. Chas. Byron Nichols, Denver, Colo., first vice-president; Dr. H. D. Niles, Salt Lake City, Utah, second vice-president; Dr. George H. Simmons, Lincoln, Neb., secretary and treasurer.

**Obituary.**—DR. HENRY E. WERNER, of Le Claire, Ia., July 16th.—DR. JOSEPH M. KLEEFUS, of Detroit, Mich., July 30th, aged 40.—DR. R. O. MOFFAT, a physician of Toronto, Canada, died July 18th, from chloroform while in a dentist's chair.—DR. A. R. KNOTT, the oldest practising physician of Harvey County, Kan., died August 4th, in Newton, aged 76 years.—DR. T. E. MURRELL, professor of ophthalmology in Barnes Medical College of St. Louis, Mo., died June 26th, at Denver, Col., aged 48 years.—DR. R. M. SWEARINGEN, State Health-officer of Texas, at Austin, Tex., August 7th.—DR. GARDNER L. COLTON, of New York, at Rotterdam, Holland, August 11th, aged 84.—DR. HENRY REUSS, of Mansfield, Ohio, died July 21st.

**University of the State of California.**—The Board of Regents, at their last meeting, decided to assume full control of the Medical Department of the University, taking the management entirely out of the hands of the Faculty of the Medical Department. This action was the result of a conference with the Faculty of the Medical Department, and was deemed advisable by all concerned. It is quite probable that the Medical Department will in a short time be operated on the same plan as the other departments of the University, and no fees required. It is also probable that there will be

some changes in the faculty and teaching staff, and that the positions will be salaried. The move is generally regarded as a decidedly favorable one, and it is the opinion of most men connected with the Medical Department that the College will flourish very materially under the new plan.

**Yellow Fever at Montauk.** The transport *U. S. S. Duchess* arrived at Long Island August 15th, with, it is reported, 25 yellow-fever patients aboard. The vessel sailed from Santiago on August 9th, having on board six companies of the Seventy-first New York Volunteers and a detachment of the Sixteenth United States Infantry, including 1,143 troops in all. The fever-cases developed suddenly, and soon reached an acute stage. Little fear of an epidemic is entertained by the surgeons in charge. The troops were landed at once from the infected ship and the sick were taken to the detention-hospital.

**Typhoid Fever in the Camps.**—The following circular (No. 5) has been issued by the Surgeon-General of the United States Army, August 8, 1898: The attention of medical officers is invited to Circular No. 1 from this office, dated Washington, April 25, 1898. (See this JOURNAL, Vol. I, p. 753.) The extensive prevalence of typhoid fever in camps of instruction indicates that the sanitary recommendations made in this circular have not been carried out. If medical officers have failed to make the proper recommendations as indicated, the responsibility rests with them. If the recommendations have been made and not acted upon by those having authority in the various camps, the responsibility is not with the Medical Department, but these recommendations should be repeated and commanding officers urged to move their camps at frequent intervals and to maintain a strict sanitary police.

**Osteopaths in Kentucky.**—The osteopaths are making a last grand effort to break into Kentucky with their idiotic fad. Harry Nelson, a "graduate" of the "American School of Osteopathy, of Kirksville, Mo.," has brought suit against the State Board of Health to compel that body to recognize the "school" from which he obtained a diploma, so that he may be able to practise his "profession" in the State. He also asks that the board be enjoined from prosecuting him, or setting on foot any criminal proceedings against him or in any way molesting him in the practice of his profession. At the last session of the legislature it was decided that the osteopaths must pass an examination before they can be permitted to practise, and, of course, this debars them, for any one who knows enough to pass an examination before a State board of health knows too much to believe in the absurdities of osteopathy.—[*Western Medical Review.*]

**Report on Camp Alger's Condition.**—Dr. S. S. Koser, Col. F. E. Embick and Councilman Hyman A. Slate, the committee that went to Camp Alger, have lately investigated the cause of the typhoid epidemic among the soldiers of the Twelfth Pennsylvania Regiment. During their visit to camp, Col. Coryell ordered regimental inspection, which showed 212 men absent out of the total number of 872, on sick leave or furlough. Eight members of the regiment have died of typhoid fever during the past three weeks, and at present there are 14 men of the regiment sick in the hospital and 4 more at their homes. The rest of the sick men are at Fort Myer. Of their investigation, Dr. Koser, Chairman of the committee, said: "The present camp at Dunn Loring has full-width streets. The water is obtained from a driven well 80 feet deep, but as an extra precaution is boiled. The

sinks are located well down the hill, so that the water-shed is from the well and toward the sinks. We visited the old camp site at Falls Church, where the men who are now sick contracted the disease. The water there was unquestionably infected from the sinks, producing typhoid. The location of the old camp ground was not a case of mismanagement; it was a positive crime on the part of those responsible for its location."

**Kentucky School of Medicine.**—The following statement has been issued by Dr. Samuel E. Woody: At a recent meeting of the Board of Regents of the Kentucky School of Medicine, a majority of that Board, contrary to the plain letter of the statute that expressly forbids the removal of any professor unless recommended by a majority of the Faculty, assumed the right to declare vacant the chairs of Drs. Kelly and Woody. This was done at the instance of Dr. Wathen, who himself secured in 1886 the very statute which protects the tenure of office of the various professors. On the faith of that statute the professors invested very largely in property and fitted it up for teaching. Legal advice has been taken upon the action of the Board, and the opinion expressed that without doubt the action of the Board was wholly illegal and void.

After this Dr. Wathen was elected Dean, and Dr. Orendorf, Secretary, although Dr. Woody had previously been elected Dean for a year by the whole Faculty, and Dr. Marvin had been elected Secretary for the year by the whole Faculty.

**The American Microscopical Society** will hold its 21st annual meeting in the new and commodious building of the Syracuse University Medical College at Syracuse, N. Y., August 30, 31, and September 1, 1898. In addition to the annual address by the acting president, Prof. V. A. Moore, of Cornell University, and demonstrations of the projection-microscope and of laboratory-apparatus, papers will be read as follows: Experiments in Feeding Some Insects with Cultures of Comma, or Cholera, Bacilli, by Dr. R. L. Maddox; A Method of Preparing Nucleated Blood in Bulk for Class-Demonstrations, by Dr. E. T. Oertel; Some Laboratory-Apparatus for Histology, by Prof. S. H. Gage; Special Structure-Features in the Air-Sacs of Birds, by Mary J. Ross; Histology of the Toad Tadpole's Tail, by B. F. Kingsbury; Biographies of Prof. Wm. A. Rogers and Prof. Henry C. Coon, by Prof. S. H. Gage; The Use of Picro-carmin and Alum-carmin, by B. D. Myers; A Rapid Staining and Washing Apparatus, by C. M. Mix; Questions in Regard to the Diphtheria-Bacillus, by Dr. M. A. Veeder; Means and Methods for Giving Instruction in Bacteriology, by Raymond C. Reed; What Shall be Taught in a Short Course in Bacteriology? by Prof. Veranus A. Moore; The Resistance of Certain Species of Bacteria in the Milk-Ducts of Cows, by A. W. Ward; The Teaching of Correct and Definite Methods in the Use of the Substage Condenser (Demonstration), by Dr. A. Clifford Mercer; A Report of the Student's Work in the Micrometry of the Blood-Corpuscles of Individuals of Different Nationality, by Prof. Moses C. White; Photomicrography with Opaque Objects, by Wm. H. Walmsley; The Electric Projection Microscope in Histology, with a New Departure in Objectives (Demonstration), by Prof. Moses C. White; The Comparative Value of Different Methods of Plankton Measurements, by Prof. Henry B. Ward; Work Done on Lacustrine Biology, 1896-1898, by Prof. Henry B. Ward; Recent Discoveries in Blood-Pathology (Demonstration), by Dr. Geo. B. Broad; Diphtheria-Bacilli Testing for a City Board of Health (Demonstration), by Dr. Wm. H. May; Johnston-Widal Test for Typhoid Fever (Demonstration), by Dr. Wm. H. May; New



Simple Form of Serum-Inspissator (Demonstration), by Dr. Wm. H. May; Red Blood Corpuscles of Necturus (?) Karyokinetic Figures (Demonstration), by Dr. I. Harris Levy; The New Minot Microtome (Demonstration), by Dr. I. Harris Levy; Demonstration of Specimens, by Dr. Theodore J. Kieffer; Microtome Sectioning, by Dr. Theodore J. Kieffer; Suspension of Photomicrographic Apparatus to Avoid Vibration (Demonstration), by Dr. A. Clifford Mercer.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending August 13, 1898:

## SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
ALABAMA:			
Butler County	Jan. 1-Aug. 6 . . . .	300	
Forest Home, Butler Co.,	(during June)		1
Gordonville,	Aug. 6 . . . .		3
Haynesville,	" . . . .		2
Lowndes County,	" . . . .	25	
Morganville,	" . . . .		1
MICHIGAN:			
Seneca Township,	Present, but number of cases not reported.		
NEW MEXICO:			
	Prevalent to a great extent, notably along line of Santa Fe R. R.		
TENNESSEE:			
Cleveland	during July	12	
Memphis and Suburbs		3	

## SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp,	July 16-23 . . . .	1	
Ghent,	July 23-30 . . . .	1	
COLOMBIA:			
Valencia,	July 21 . . . .	1000	
INDIA:			
Bombay,	July 5-12 . . . .	1	
Calcutta,	June 25-July 2 . . . .	1	
Madras,	June 25-July 1 . . . .	1	
	July 2-July 8 . . . .	1	
JAPAN:			
Osaka and Hiogo	June 25-July 2 . . . .	1	
	July 2-8 . . . .	4	
RUSSIA:			
Moscow,	June 25-July 2 . . . .	6	
	July 2-8 . . . .	15	
Odessa,	July 9-16 . . . .	4	
St. Petersburg,	July 9-16 . . . .	2	2
SWEDEN:			
Christiania,	July 16-23 . . . .	2	
URUGUAY:			
Montevideo,	June 19-26 . . . .	1	

## YELLOW FEVER.

BRAZIL:			
Rio Claro	April 26 . . . .	17	
Rio de Janeiro,	June 24-July 1 . . . .	33	21
Taboicabal,	April . . . .	106	42
Tahur,	May . . . .	3	1
COLOMBIA:			
Carthagena,	July 8-16 . . . .		2
MEXICO:			
Tampico,	July 26-31 . . . .		9

## CHOLERA.

INDIA:			
Bombay,	July 5-12 . . . .	3	
Calcutta,	June 25-July 2 . . . .	9	
JAPAN:			
Osaka and Hiogo,	July 2-9 . . . .	1	

## PLAGUE.

INDIA:			
Bombay,	July 5-12 . . . .	53	
Calcutta,	June 25-July 2 . . . .	20	

The New York State Medical Association will hold its regular annual meeting at 64 Madison Avenue, New York City, on October 18, 19, and 20, 1898. The following is the preliminary program:

"A Practical Demonstration in the Reduction of Infantile Mortality," by Dr. E. F. Brush, of Mount Vernon; "The Pneumogastric Nerve in the Production of Stomach-Dis-

ease," by Dr. Julius Pohlman, of Buffalo; "The Coccyx," by Dr. J. E. Walker, of Hornellsville; "Drugs versus Cardiac Insufficiency," by Dr. O. T. Osborne, of New Haven; "The Passing of Alcohol," by Dr. J. M. Farrington, of Binghamton; "A New Method of Amputation at the Knee-Joint Applicable in Cases of Senile Gangrene of the Foot," by Dr. Stephen Smith, of New York; "Anthropological Rambles in the Orient, especially in the Island of Java," profusely illustrated with stereopticon views, by Dr. H. Ernst Schmid, of White Plains; "Dental Pathology in its Relationship to General Health," by Dr. Dwight L. Hubbard, of New York; "Subnormal Temperature," by Dr. Leroy J. Brooks, of Norwich; "Ancient and Modern Animal Products Used as Medicines," by Dr. T. J. Acker, of Croton-on-the-Hudson; "The Treatment of Cases of Pulmonary Tuberculosis that Cannot go Away From Home," by Dr. Delancey Rochester, of Buffalo; "Some Observations of General Interest Regarding the Course and Management of Cataract," by Dr. J. H. Woodward, of New York; "Technic and Use of Saline Infusion," by Dr. Thomas F. Reilly, of New York; "What to do to be Saved," being the conclusion of the inquiry into the abuse of medical charity, by Dr. Thomas J. Hillis, of New York; "True and False Medical and Other Charities," by Dr. Wickes Washburn, of New York; a paper by Dr. Charles Phelps, of New York, title not yet announced; "Genital Neuralgia and the Genito-reflex Pains," by Dr. F. P. Hammond, of New York; "Lantern Slide Exhibition," by Dr. S. Alexander, of New York; "A Case of Attempted Obliteration of the Deformity in Pott's Disease," by Dr. Charles Alling Tuttle, of New Haven; "Notes on Neuralgic Affections of the Head," by Dr. Gustavus Eliot, of New Haven; "The Use of Catgut-Sutures in Ventrofixation of the Uterus," by Dr. J. E. Janvrin, of New York; "Traumatic Tetanus—Report of a Case Following an Attempted Operation, Treatment, etc.," by Dr. Z. J. Lusk, of Warsaw; "Some Thoughts on the Rational Treatment of Disease," by Dr. Chauncy P. Biggs, of Ithaca; "Senility," by Dr. F. W. Higgins, of Cortland; "A Case of Extrauterine Pregnancy Operated Upon at Term," by Dr. Eli van de Warker, of Syracuse; "Memoranda," by Dr. H. D. Didama, of Syracuse; "Diagnosis and Surgical Treatment of Renal Calculus," by Dr. N. Jacobson, of Syracuse; "Eye-lesions in Some Diseases of the Kidney," by Dr. H. S. Oppenheimer, of New York; "Insanity Following Surgical Operations," by Dr. W. D. Granger, of Bronxville; "Dermoid Cysts of the Ovary," by Dr. C. E. Fritts, of Hudson; "The Operative Cure of Inguinal Hernia in Men," by Dr. E. D. Ferguson, of Troy; "Urethral Stricture," by Dr. J. W. S. Gouley, of New York; A Discussion on Intestinal Obstruction, comprising the following papers: "Introduction," by Dr. Parker Syms, of New York; "The Causes of Acute Intestinal Obstruction, with a Description of their Mechanism," by Dr. E. D. Ferguson; "The Causes of Chronic Intestinal Obstruction, with a Description of their Mechanism," by Dr. J. D. Bryant, of New York; "Intestinal Obstruction Due to Impaction of Feces, Gallstones, Foreign Bodies," by Dr. J. W. S. Gouley; "The Diagnosis and Indications for the Treatment of Acute Intestinal Obstruction," by Dr. J. D. Rushmore, of Brooklyn; "The Diagnosis and Indications for the Treatment of Chronic Intestinal Obstruction," by Dr. Leroy J. Brooks; "Intestinal Obstruction Due to Intussusception and Volvulus," by Dr. John F. Erdmann, of New York, and "The Technic of Operative Treatment of Intestinal Obstruction," by Dr. Frederick Holme Wiggin, of New York.

**Sanitary Inspection of Military Camps.**—The following note has been addressed to the Adjutant-General of the United States Army by Surgeon-General Sternberg.

"SIR: I have the honor to request that a board of sanitary experts may be constituted for the purpose of visiting the various camps within the limits of the United States and making a searching investigation with reference to the cause of the extensive prevalence of typhoid fever in many of these camps; the board to receive detailed instructions from the Surgeon-General of the Army and to make a full report as soon as practicable after the completion of their investigations. I would also recommend that this board be directed, while pursuing their investigations, to call the attention of the proper authorities to any unsanitary conditions existing at the camps visited by them and to make recommendations with a view to their prompt correction. I recommend the detail of the following medical officers for this duty: Major Walter Reed, Surgeon, U. S. Army; Major Victor C. Vaughan, Division-Surgeon, U. S. Volunteers; Major Edward O. Shakespeare, Brigade-Surgeon, U. S. Volunteers.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Major GUY L. LOR, brigade surgeon, leaving duty assigned to other duties, par. 11, S. O. 12, this office, his head-quarters is revoked.

Acting Asst. Surgeon H. B. EMERSON is assigned to duty with the detachment of the Fourth Cavalry, on the ship "Leconte," and will proceed to Manila with it.

Acting Asst. Surgeon T. A. McCORMICK will proceed to the Presidio for duty with that portion of the First Troop Utah Volunteer Cavalry which will proceed to the Sequoia National Park.

Acting Asst. Surgeon S. J. FREYER will proceed to the Presidio, reporting to the commanding officer of the Division Field Hospital for duty.

Asst. Surgeon LUNEST PRING will proceed to the Presidio, reporting to the commanding officer of the Division Field Hospital for duty at that hospital.

Major WILLIAM R. HAVEL, surgeon, is relieved from further duty in charge of the U. S. General Hospital at Key West, Fla., and will proceed to Fort Thomas at Tampa in charge of the U. S. General Hospital at that place, relieving Lieutenant-Colonel WILLIAM H. GARDNER, D. S. G.

Major CHARLES B. NANCY, Chief Surgeon, is relieved from duty as Chief Surgeon, First Division, Second Army Corps, and will, upon the expiration of his present leave, proceed to Montauk Point, Long Island, N. Y., for assignment for duty at the U. S. General Hospital.

Acting Asst. Surgeon HENRY H. BRIDLEY will proceed from Buffalo, N. Y., to Tampa, Fla., to await transportation by first transport to Santiago de Cuba.

Lieutenant-Colonel ALFRED A. WOODHULL, D. S. G., will proceed to Fort Monroe and assume charge of the new pavilion hospital now being established in that vicinity.

Captain HENRY A. SHAW, A. S., is relieved from duty at Key West Barracks and will report for duty at U. S. General Hospital at Key West, Fla.

First Lieutenant DEAN C. HOWARD, A. S., will proceed on the steamer "Yale," sailing from New York City on the 9th inst., to Santiago de Cuba, in charge of medical supplies, and will return on the same steamer to his proper station, Fort Columbus.

Acting Asst. Surgeon LEWIS B. CHILDS will proceed from Detroit, Mich., to this city, and report to the Surgeon-General of the Army.

Acting Asst. Surgeon LEWIS B. CHILDS, will proceed to Tampa, Fla., to await transportation by the first transport to Santiago de Cuba, for assignment to duty.

Acting Asst. Surgeon O. C. HEISS will proceed from Nebraska City, Neb., to Chickamauga Park, for assignment to duty.

Acting Asst. Surgeon A. H. MANN is relieved from duty at the U. S. General Hospital, Key West, Fla., and will report for duty at Key West Barracks.

Acting Asst. Surgeon GEORGE G. MORRIS will proceed to Chickamauga Park for assignment to duty.

Par. 11, S. O. 178, July 30th, this office, relating to Acting Asst. Surgeon J. R. SHANNON, is revoked. He will proceed from Philadelphia to Washington Barracks, for duty at the U. S. General Hospital.

Acting Asst. Surgeon B. R. SHURLY will proceed to Chickamauga, Ga., for duty at the Leiter U. S. General Hospital.

Major ELMER E. HEG, brigade surgeon, will proceed to Fort Meyer for duty in the U. S. General Hospital.

Acting Asst. Surgeon WILLIAM G. ASHBY will proceed from Alexandria, Va., to Washington Barracks for duty at the U. S. General Hospital.

Acting Asst. Surgeon WILLIAM B. SUMMERALL will proceed from Atlanta, Ga., to Camp Alger for duty.

Acting Asst. Surgeon F. A. E. DISNEY is relieved from duty at St. Louis, Mo., and will proceed to Camp Eagle Pass, Tex., for duty.

Acting Asst. Surgeon ERNEST F. ROBINSON will proceed to Fort Hamilton, N. Y., for duty.

Major JAMES L. FLETCHER, surgeon, is relieved from duty with the First Army Corps, and will report to Major-General James F. Wadsworth, at Fort Sill, Okla., for duty as Chief Surgeon of the post.

Acting Asst. Surgeon THOMAS K. BAILEY will proceed from Evergreen, Col., to this city, and report to the Surgeon-General of the Army.

Acting Asst. Surgeon HAROLD W. COWPER will proceed from Buffalo, N. Y., to Fort Meyer, U. S. General Hospital.

Acting Asst. Surgeon FRANK L. CROZIER will proceed from Lebanon, Ohio, to Chickamauga Park, for assignment to duty.

Acting Asst. Surgeon ALFRED E. GILES will proceed from Baltimore, Md., to Camp Alger, Va., for duty.

Acting Asst. Surgeon D. T. MCKINNEY will proceed from New Brighton, Pa., to Camp Alger, Va., for duty.

Acting Asst. Surgeon JAMES C. ROSS will proceed from Salt Lake City, Utah, to Fort McPherson for duty.

The following named assistant surgeons will proceed from the places designated to Chickamauga, Ga., for duty: WM. C. BERLIN, Cleveland, Ohio; JOHN B. ALCOCK, Athens, Ohio.

The following named assistant surgeons will proceed from the places designated to Chickamauga Park, Ga., for duty: ROBERT L. BARRETT, New York City; GEORGE H. CALKINS, Tonawanda, N. Y.; HENRY B. STOLLER, Cleveland, Ohio.

Major CALVIN DE WITT, surgeon, will report to the Secretary of War for consideration on official business.

Par. 25, S. O. 181, Aug. 1, this Reg., relating to Major WILLIAM J. WHELMAN, Chief Surgeon, is revoked.

Leave on account of sickness granted Captain ASHON B. HEYL, A. S., July 11, this office, is extended one month on surgeon's certificate of disability.

Acting Asst. Surgeon THOMAS C. AVARY will proceed to Tampa, Fla., for assignment to duty.

Acting Asst. Surgeon ERNEST W. FOWLER will proceed to Chickamauga Park for assignment to duty.

The following named assistant surgeons will proceed from the places designated to Montauk Point, Long Island, N. Y., for duty at the U. S. General Hospital: FRANK G. JONES, Cleveland, Ohio; HARRY C. MORE, New York City.

Acting Asst. Surgeon ELBERT E. PERSONS will proceed from Chicago, Ill., to this city and report to the Surgeon-General of the Army.

Acting Asst. Surgeon ELBERT E. PERSONS will proceed to Tampa, Fla., for assignment to duty.

Acting Asst. Surgeon VICTOR E. WATKINS will proceed to Chickamauga Park for assignment to duty.

Leave for four months from date is granted Lieutenant-Colonel WILLIAM H. GARDNER, D. S. G.

Major WILLIAM H. ARTHUR, Chief Surgeon, is assigned to the command of the U. S. Hospital-ship "Missouri."

Captain FRANCIS A. WINTER, assistant surgeon, now on leave, is relieved from temporary duty at the U. S. General Hospital, Fort Monroe, and will report to the Surgeon-General of the Army for orders.

Acting Asst. Surgeon ROBERT C. RIND will proceed from Towson, Md., to Chickamauga Park for assignment to duty.

Major CHARLES L. HEIZMAN, surgeon, Fort Adams, will report at Montauk Point, Long Island, N. Y., for temporary duty.

Captain HENRY A. SHAW, A. S., Key West Barracks, will proceed to Tampa, Fla., for duty on the U. S. hospital-train. Captain SHAW is detailed as acting assistant quartermaster in matters relating to the service of the train.

Acting Asst. Surgeon A. R. BOOTH will proceed to Montauk Point, Long Island, N. Y., for duty at the U. S. General Hospital.

Acting Asst. Surgeon JOHN N. COLLIER will proceed from Buffalo, N. Y., to Fort Monroe, to await transportation, by the U. S. steamer "Obdam," to Ponce, Porto Rico, for duty.

#### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 days ended August 11, 1898:

Surgeon GEORGE PURVANCE to rejoin station at Baltimore, Md.—August 2, 1898.

Surgeon JOHN GODFREY to rejoin station at Detroit, Mich.—August 2, 1898.

Surgeon H. R. CARTER to report at bureau for special temporary duty, July 20, 1898.—To proceed to Galveston, Tex. for special temporary duty, July 20, 1898.—To proceed to New Orleans, La., preparatory to assignment to duty at Santiago, Cuba.—August 3, 1898.—To proceed to Santiago, Cuba, for special duty.—August 6, 1898.

Surgeon W. A. WHEELER.—Upon the return of Surgeon D. A. Carmichael, to rejoin station at Cincinnati, Ohio.—August 2, 1898.

Surgeon D. A. CARMICHAEL, to rejoin station at Cleveland, Ohio.—August 2, 1898.—Upon being relieved from duty at Cleveland, Ohio, to proceed to Honolulu, Hawaii, for special duty.—August 11, 1898.

Passed Asst. Surgeon EUGENE WADSWORTH to proceed to Santiago, Cuba, for special duty.—August 6, 1898.

Passed Asst. Surgeon J. H. WHITE granted leave of absence for one month from August 1, 1898, on account of sickness.—July 30, 1898.



Passed Asst. Surgeon G. M. MAYNARD to proceed to Montauk Point, N. Y., for special temporary duty.—August 8, 1898.  
 Passed Asst. Surgeon J. L. KENYON to proceed to Montauk Point, N. Y., for special temporary duty.—August 8, 1898.  
 Passed Asst. Surgeon G. M. GRUBBS to assume command of Receiving Detention Camp, Key West, Fla., in addition to his duties.—August 8, 1898.  
 Passed Asst. Surgeon B. W. BROWN to proceed to Cape Fear Quarantine Station, S. O. P. N. C., and assign duty on board of ship.—August 8, 1898.  
 Asst. Surgeon A. R. THOMAS to proceed to Fort Monroe, Va., for temporary duty on U. S. transport "Olinde."—August 8, 1898.  
 Asst. Surgeon H. W. WILSON to proceed to Montauk Point, N. Y., for duty on U. S. transport "Olinde."—August 8, 1898.  
 Asst. Surgeon S. R. TANN to proceed to Louisville, Ky., and report for duty on U. S. transport "Manitoba."—August 8, 1898.  
 Asst. Surgeon S. R. TANN to proceed to Montauk Point, N. Y., for special temporary duty.—August 11, 1898.  
 Asst. Surgeon HILL HASTINGS relieved from duty as representative of the service at the Trans-Mississippi Exposition, Omaha, Neb., and directed to report at Washington, D. C., for instructions.—August 2, 1898.—To proceed to Montauk Point, N. Y., for special temporary duty.—August 8, 1898.  
 Asst. Surgeon C. H. LAVENDER to proceed to Newport News, Va., and report for duty on U. S. transport "Manitoba."—August 2, 1898.  
 Asst. Surgeon S. B. GRUBBS to proceed to Brooklyn, N. Y., and report for duty on U. S. transport "Olinde."—August 2, 1898.  
 Asst. Surgeon M. H. FOSTER to proceed to Egmont Key Detention Camp, Port Tampa, Fla., for special temporary duty.—August 1, 1898.  
 Asst. Surgeon L. L. THOMAS to proceed to Reelfoot Island Quarantine, Port Tampa, Fla., for duty as assistant medical officer.—August 1, 1898.  
 Asst. Surgeon J. F. ANDERSON to proceed to Egmont Key Detention Camp, Port Tampa, Fla., for special temporary duty.—August 9, 1898.  
 Asst. Surgeon MARK J. WHITE to report at Immigration Depot, New York, N. Y., for temporary duty.—August 2, 1898.—To proceed to Montauk Point, N. Y., for special temporary duty.—August 11, 1898.  
 Asst. Surgeon L. D. FRICKS to report at Detroit, Mich., for duty and assignment to quarters.—August 3, 1898.  
 Asst. Surgeon V. G. HEISER to report at Boston, Mass., for duty and assignment to quarters.—August 4, 1898.  
 Asst. Surg. W. R. McADAM to report at Louisville, Ky., for duty and assignment to quarters.—August 6, 1898.  
 Asst. Surgeon M. H. GWYN to report at New York, N. Y., for duty and assignment to quarters.—August 6, 1898.  
 Asst. Surgeon W. C. HOBBS to proceed to Cape Charles Quarantine, Fort Monroe, Va., for duty and assignment to quarters.—August 9, 1898.

### PROMOTIONS.

Passed Assistant Surgeons to be Surgeons: CYRUS T. PECKHAM, August 10, 1898; ARTHUR H. GLENNAN, August 10, 1898; EUGENE WARDIN, August 10, 1898; STEPHEN D. BROOKS, August 10, 1898; JOSEPH H. WHITE, August 10, 1898.

### APPOINTMENTS.

To be Assistant Surgeons: MARK JOHNSTON WHITE, July 29, 1898; LEONARD L. BARNES, July 29, 1898; VICTOR GEORGE HEISER, August 3, 1898; WILLIAM RALPH McADAM, August 3, 1898; MATTHEW KEMP GWYN, August 3, 1898; WILLIAM COTT HOBBS, August 3, 1898.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon S. R. EVANS, detached from hospital, New York, N. Y., and to wait orders.

Passed Asst. Surgeon M. F. GATES, detached from the "Wabash" and ordered to the New York Navy Yard immediately.

Asst. Surgeon J. S. CHAFFEE, detached from the "Vermont" and ordered to the naval hospital, New York, N. Y., immediately.

Asst. Surgeon W. M. GARTON, ordered to the "Vermont" immediately.

Passed Asst. Surgeon S. G. EVANS ordered to the "Katahdin."

Asst. Surgeon T. L. RHODES, detached from the marine barracks, Washington, D. C., and ordered to continue duties at the naval hospital, Washington, D. C.

Asst. Surgeon A. C. GRUNWELL, detached from the Naval Proving Ground, and ordered to the marine barracks, Washington, D. C.

### Foreign News and Notes.

**Dr. Lefour** has been made clinical professor of obstetrics at the University of Bordeaux.

**Professor v. Leyden** has been chosen Dean of the Medical Faculty of the University of Berlin.

**Dr. K. Boas** has been made extraordinary professor of ophthalmology in the University of Heidelberg.

**Dr. M. Peschel** has been appointed extraordinary professor of ophthalmology in the University of Turin.

**Professor von Bruns**, of Tübingen, has been elected a corresponding member of the Paris Surgical Society.

**Dr. Charmeil** has been made clinical professor of cutaneous diseases and syphilis in the medical faculty of Lille.

**Dr. Francisco Millán y Guillén** has been appointed to the chair of anatomy and embryology in the University of Barcelona.

**Professor Dr. L. Bellarmino**ff has been appointed ordinary professor in the Military Medical Academy at St. Petersburg.

A monument to Wilhelm Meyer, the discoverer of postnasal vegetations, is to be unveiled in Copenhagen in the latter part of October.

**Professor Heffter**, member of the royal health-commission at Berlin, has been called to the chair of pharmacology at the University of Berne.

**Waldeyer**, professor of anatomy, and director of the first Anatomic Institute of Berlin, has been made rector of the University for the year 1898-99.

**Medical School at Cairo.**—Dr. S. G. Toller has been made professor of medicine and Drs. F. C. Madden and F. R. S. Milton professors of surgery.

**Medical Faculty of Grenada.**—Dr. Antonio Armory Rico has been elected professor of general pathology, and Dr. José de Paso y Fernández Calvo professor of hygiene.

**Sir Charles Cameron**, the head of the Public Health Department of the City of Dublin, was made an honorary fellow of the Royal College of Physicians, Ireland, on July 23d.

**The death-rate in Stettin** is reported to be greater than in any German city of over 40,000 inhabitants. It is 40.1 per 1,000 for one year; the smallest is at Schöneberg, with 7.8 per 1,000.

**The Prince of Wales'** progress toward recovery has been uninterrupted. The sojourn on board his yacht has kept him in perfect general health, and no further formal bulletins will be issued.

**An Epidemic of Cholera in Madras.** -Between Monday morning, August 8th, and Friday night there were 55 deaths from cholera in Madras, the fatalities prior to Monday having been 117.

**The Italian Association of Legal Medicine** will hold its first meeting at Turin early in October at the same time as the meetings of the Congresses on Surgery, Medicine, Ophthalmology and Hygiene.

**British Medical Association Golf Match.**—A number of the members formed teams and enjoyed matches during the recent meeting in Edinburgh, the results being entirely in favor of the team made up of resident Scotch members.

**Taxing Professors of Medicine.**—Herr von Miquel, Prussian Minister of Finance, has proposed a plan for taxing professors of medicine who also practise. His plan would result in paying no salary to professors who have a practice of the value of \$5,000.

**The German Red Cross Society.**—Both the German Empress and the Empress Frederick have sent handsome contributions to the collection which is being raised by the German Red Cross Society for aid to the sick and wounded in the Spanish-American War.

**Mr. John Usher** has offered a large sum for building a separate addition to the University of Edinburgh, in order that the occupant of the chair of Public Health may have adequate laboratories, etc. This is additional to Mr. Usher's generous contribution toward founding the chair.

**Investigation of the Causes of Malaria.**—The Royal Society has appointed a committee which it is expected will cooperate with a committee appointed by the British Colonial Office in investigating the causes of malaria, more especially the relation of the mosquito to the malarial parasite. It is expected that grants of money will be made by the Royal Society and the Colonial Office for the purpose of sending a commission to India and Africa.

**Madame Péan**, in fulfilment of the wishes of her distinguished husband, has presented to the Hôpital Saint-Louis his collection of 614 anatomic and pathologic casts. The molds of each cast were destroyed after the cast had been exhibited and reported; hence the collection is of high value.

**Artificial Albumin.**—It is stated that Dr. Leo Lilienfeld, of Vienna, has demonstrated to the Chemical Congress, in session there, the discovery of a method of producing artificial albumin, identical with natural albumin, which hitherto, it has been believed, could only be produced by organic means.

**Leprosy in Russia.**—A commission recently sent by the Prussian Government to report on leprosy in Eastern Russia reports the number of cases to be about 5,000. The disease has been prevalent for about 100 years and seems to be confined mainly to the southern and eastern parts of the country. The treatment of the disease in isolation-hospitals has proved most successful.

**Obituary.**—Surgeon-General WILLIAM JOHNSTON, late Madras Army, at Cheltenham, Eng., July 24th, aged 81 years.—Surgeon-General JOHN FULLARTON BEATSON, at London, Eng., July 29th, aged 81.—DR. CAIRD, Principal of Glasgow University, at Greenock, July 30, aged 78.—Surgeon-General JOHN MURRAY, at Cloughbane, Sheringham, Eng., July 27th, aged 88.—Surgeon-Colonel J. WILLIAMSON of the British Army at Lucknow, India.—DR. FRANCESCO TROMBETTA, professor of clinical surgery at the Faculty of Medicine of Messina.

## Philadelphia News and Notes.

**Obituary.**—DR. W. F. BARR, August 10th, of tuberculosis.

**Dr. Victor G. Heiser**, a graduate of Jefferson Medical College and Resident Physician in the German Hospital, has received an appointment in the U. S. Marine-Hospital Service, and has been assigned to duty in Boston.

**Ptomain-Poisoning.**—Members of two families were made seriously ill recently by eating boiled ham, probably cooked insufficiently, which they bought at a grocery-store. Those who did not partake of the ham remained in good health.

**The Steamship "Iris,"** of Boston, has been secured by the Associate Society of the Red Cross of Philadelphia, to carry a cargo of supplies to Cuba and Porto Rico. The *Iris* is 165 feet long, and has a capacity of 300 tons. She will probably sail on August 22d.

**Ice-Machine for the Army.**—The Woman's Army and Navy Relief Association, of the Twenty-second ward, has sent an ice-plant, with a daily capacity of 500 pounds, to the soldiers in Porto Rico. With the plant were sent many surgical supplies, necessities, and delicacies.

**Dr. E. O. Shakespeare** has been commissioned by the War Department as Brigade-Surgeon, with the rank of Major, and has been assigned to duty as a member of the General Board of Sanitation, whose duty it shall be to inspect the various army-camps as to their sanitary condition, so as promptly to remedy any sanitary defects found to exist. Dr. Shakespeare will retain his connection with the National Relief Commission, in which he is a member of the Executive Committee; he has resigned as Chairman of the Committee on Sanitation.

### Vital Statistics for the week ending August 13th:—

Disease.	Cases.	Deaths.
Diphtheria .....	29	10
Scarlet fever.....	17	1
Typhoid fever.....	59	19
Pulmonary tuberculosis..		52
Total number of deaths		443

**Red Cross Exhibition.**—The Society has secured permission to hold in Fairmount Park an exhibition of the work of the organization in the field. The exhibition will, in many respects, resemble a division-hospital and will consist of six thoroughly appointed Red Cross ambulances, as many army-wagons and twenty-four tents.

After the exhibition the ambulances and hospital-tents will be sent to Santiago. There will be a daily exhibition of the work of the Society in the field, illustrations of bone-setting, bandaging and practical nursing.

**Hospital-Train for Philadelphia's Soldiers.**—In response to a telegram from Col. Good of the First Regiment Infantry, Pennsylvania Volunteers, stating that a considerable number of his sick men would be benefited by being taken home, arrangements have been completed by Councils' committee having in charge the care of the Philadelphia troops and the relief of destitute families at the front, to send a special train South to bring to this city all soldiers ill with fever whose condition could be benefited by treatment in the hospitals of this city.

On the hospital-train will be a staff of trained nurses and physicians. Each car will be equipped with every convenience that will add to the comfort of the home-coming patients and prevent the journey having an ill effect upon them. It is said that on their arrival in this city the patients will be taken to the German and St. Agnes' Hospitals. The train was expected to leave Philadelphia August 18th.

**Incomplete Descent of the Testicle.**—N. Senn (*New Orleans Med. and Surg. Journ.*, Aug., 1898) states that in the examination of 9,815 recruits for the U. S. Volunteer service, incomplete descent of the testicle was found in 59 cases. The condition affected the left side in 36 cases, the right side in 22, was bilateral in 1 case and was complicated with a small hernia in two cases.



## The Latest Literature.

### British Medical Journal.

July 30, 1898. [No. 1961.]

1. The Reciprocal Duties of our Profession to the Community, and of the Community to the Profession. T. GRAINGER STEWART.
2. The Toxic Origin of Disease. THOMAS RICHARD FRASER.
3. The Present Position of Surgery. THOMAS ANNANDALE.
4. Personal Experience of an Almost Forgotten Episode in Medical History. GEORGE W. BALFOUR.
5. Modern Operating Theaters. JOHN DUNCAN.
6. The Teaching of Obstetrics. A. R. SIMPSON.
7. The Neuroses and Psychoses of Decadence. T. S. CLOUSTON.
8. The Progress of Therapeutics. J. O. AFFLECK.
9. The Progress of Ophthalmology. D. ARGYLL ROBERTSON.

1.—See this JOURNAL for July 30th, p. 203.

2. " " " " " " p. 206.

3. " " " " " " p. 210.

4. " " " " " " Aug. 6th, p. 262.

5. " " " " " " p. 263.

6.—In a consideration of general obstetric and obstetric teaching according to the latest improved methods, Simpson urges the giving of more attention to obstetrics in the college-curriculum.

7.—See this JOURNAL for August 6th, p. 264.

8.—Affleck refers to the **therapeutic advancement** made possible by the introduction of the products of organic chemistry, lavage, antiseptics, massage, electricity, regulated exercise, baths, open-air methods, antitoxin, nursing, and suggestion. He points out that there are no disorders more frequently brought to the notice of the practitioner and calling for his interference than those of the digestive organs. Until quite recently, the treatment of this large and varied class of maladies was far from satisfactory, owing, chiefly, to the difficulty of associating the symptoms present with any definite morbid process. The more accurate knowledge of the chemistry of digestion in all its stages and the means for diagnosing its faults by the methods of collecting and testing the gastric contents have done much to rescue the treatment of disorders of the stomach from the sphere of empiricism and to place it on a rational foundation. The treatment of chronic disease of the kidneys is a subject of scarcely less importance. The comparative powerlessness of remedial measures to influence serious structural changes in the kidney, or to stay the progress of the resulting nutritional disorders, which affect a wide range of tissue throughout the body, and which are full of disastrous possibilities, combine to render the therapeutics of chronic renal disease a somewhat disheartening topic. Nevertheless, it is certain that, by a well-directed line of treatment, many of the symptoms attendant upon this morbid state may be ameliorated, dangers averted, and comparative health and comfort secured. The importance of the synthetic analgesics cannot be questioned. They possess undoubted value, but they have their dangers; and it will serve a useful purpose if a discussion embracing both pharmacologic and therapeutic considerations can bring out more clearly their true and safe position as medicinal agents.

9.—Robertson suggests that improvements may be effected by well-directed experiments and investigations in the treatment of septic inflammations by intraocular medication, in the prophylaxis of sympathetic ophthalmia, in the operation of transplantation of the cornea, and in the treatment of detachment of the retinal cells.

### Lancet.

July 30, 1898. [No. 3909.]

1. Medical Progress in the Past Quarter of a Century. THOMAS RICHARD FRASER.
2. Present Position of Surgery. THOMAS ANNANDALE.
3. An Anomalous Case of Continued Fever with Perforations of the Intestine. SIDNEY HERBERT SNELL. With Note by WILLIAM BROADBENT, Postmortem Report by

HUGH R. SMITH, and Pathological Report by E. D. W. GRIFFITH.

4. Fatal Case of Acute Poisoning by Lead contained in Diachylon, which was Taken in the Form of Pills for the Purpose of Bringing on a Miscarriage. GEORGE F. CROOKE.
5. The Measurement of Sunshine at our Health-Resorts. W. BLACK JONES.
6. The Prevention of Tuberculosis. F. RUFENACHT WALTERS.
7. Two Interesting Cases of Ovariectomy. H. MACNAUGHTON-JONES.
8. A Case of Death under Chloroform, with Remarks. ALEXANDER WILSON.
9. A Case of Abscess of the Liver; Operation; Recovery. (Under the care of FRANK ARNOLD.)
10. A Case of Intussusception of the Cecum; Reduction after Laparotomy; Recovery. (Under the care of F. G. PENROSE and T. H. KELLOCK.)

1.—See this JOURNAL for July 30th, p. 206.

2.—See this JOURNAL for July 30th, p. 210.

3.—Snell reports the case of a brewer, 45 years old, who had always lived a temperate life, and who was seized, after a period of indisposition covering some weeks, with a sharp attack of diarrhea. The temperature rose rapidly to 103.6°, then fell to normal, and subsequently rose again to about 101°. Vidal's test yielded negative results. The urine contained albumin. The patient presented a febrile reaction for about 28 days, the general condition remaining good; but at the end of this period the pulse increased in frequency from 80 to 100, and it subsequently continued to increase in frequency until death, when it was 140 per minute. During this time a thrombosed hemorrhoid sloughed away. Later, tenderness developed in the right iliac fossa, mental symptoms supervened, and death occurred amid typhoid symptoms. Neither Snell nor Broadbent, who had been called in consultation, considered the case to be one of typhoid fever. At autopsy, general purulent peritonitis was found, in consequence of 3 **perforations in the small intestine**. The mucous membrane in the region of the perforations was ulcerated, and in the lower 3 feet of the small gut the entire wall of the bowel was swollen, soft, and almost necrotic. There were 10 ulcers in the small intestine; but these lesions were not confined to the agminated follicles. On bacteriologic examination pure cultures of the bacillus coli communis were obtained from the spleen and from the peritoneal cavity, the organism proving virulent for guinea-pigs.

4.—Crooke reports the case of a married woman, aged 23 years, presenting maniacal delirium when first seen. She had been taking pieces of emplastrum plumbi for several weeks, in order to induce a miscarriage, and, as a result, had produced **acute lead-poisoning**. Before death, the ophthalmoscope showed bilateral optic neuritis. At the necropsy, there were found, among other lesions, thrombosis of the pial vessels, fatty degeneration of the endothelium of the walls of the capillaries of the pia and of the muscle-cells of the walls of the arterioles, irregularity of the lumen and aneurysmal dilatations of the small cerebral vessels, pigmentary and fatty degeneration of the fusiform and pyramidal nerve-cells, as well as of the neuroglia, and endarteritis of the vessels of the kidney.

5.—As the result of comparative estimations of the **actinic value of the sunlight** in London and at Llangammarch, a health-resort in Central Wales, Jones has found that the maximum actinic effect occurs between one and two o'clock, on days when the sun is shining brightly and continuously. When the sun is completely clouded, on the other hand, the actinic activity is only about one-half as great at the same time of day. The sunlight in London, even on bright days, has less than one-half the actinic value of the sunlight at Llangammarch. The transparency of the air is the most important factor in bringing about this difference. The London fogs absorb practically all the actinic rays from the sun, although light is allowed to penetrate. The experiments show that the actinic value of the sunlight in Wales is as great as it is at the high altitudes of Switzerland. The process by which the actinic value of the sun's rays is determined depends upon the fact that sunlight liberates iodine from an acidulated solution of potassium iodide. A



solution of potassium iodid, containing 20 gm. to the liter, one of sulphuric acid, containing 11.9 gm. to the liter, and one containing 0.39 gm. of pure powdered arsenous acid and 1.5 gm. of potassium bicarbonate to the liter, are prepared; 10 cu. cm. of the potassium-iodid solution, together with 10 cu. cm. of the dilute sulphuric acid, are placed in a stoppered bottle of 50 cu. cm. capacity and exposed to the light on a white porcelain plate. At the end of an hour enough sodium bicarbonate is added to neutralize the free acid present. Then, the arsenic solution is run in from a buret until the color of the iodine is entirely discharged. [The calculation necessary to determine the amount of iodine set free is not stated. As this is an essential part of the process the omission is to be regretted.]

6.—Waters makes a plea for public education in hygiene for the **prevention of pulmonary tuberculosis** and for the establishment of country sanatoria for its treatment.

7.—Jones records two cases of **ovariotomy**, the first for a large malignant ovarian tumor and a smaller anomalous ovarian tumor, removed from a patient supposed to be pregnant. The growth proved to be a scirrhus carcinoma. The second case was one of semi-solid ovarian tumor with ascites. The operation was performed after general peritonitis, which was followed by universal adhesions. Both patients recovered.

8.—Wilson reports a **fatal case of chloroform-anesthesia** in which the respiration continued after cessation of the pulse. The patient was a boy, aged 15 years, who was being anesthetized for a minor operation. During the state of excitement, in which there was some struggling and holding of the breath, the patient suddenly began to breathe deeply, and became pale; the pupils were widely dilated and no pulse could be felt. For some time after this the patient took deep gasping respirations at intervals of 4 or 5 seconds, but never again could the pulse be felt. Despite the fact that color returned to the lips and cheeks, and the pupils contracted, and that every means of resuscitation were employed, the child could not be revived. The lesson to be learned from this accident is the futility of trusting to any one isolated sign in estimating the effect of an anesthetic. In this case there was no sign whatever of respiratory paralysis in the ordinary acceptance of the term. The primary disturbance was no doubt a paralysis of the vasomotor center, the first warning of danger from which consists in a change in the circulation, with pallor or lividity of the face, and alteration in the pulse.

9.—Arnold reports a case of **hepatic abscess** in which the cause could be easily traced to an attack of **dysentery**, through which the patient had just passed. When the presence of the abscess was confirmed by the physical signs and by the exploring needle, transpleural hepatotomy was performed in one stage, the patient's condition not allowing of the operation being divided into two stages. The abscess was situated in the eighth intercostal space near the mid axillary line, about  $\frac{1}{2}$  inch from the surface of the liver. The patient left the hospital 5 $\frac{1}{2}$  weeks after the operation, in good health and free from any local trouble.

10.—Penrose and Kellock report a case of **intussusception in a child 16 months of age** in which the cecum was the seat of the disease. Despite the fact that the intussusception was of 3 weeks' duration, there was but little difficulty in reducing it, even without bringing the bulk of the tumor outside the abdomen. In this way the shock that would necessarily accompany an operation on a child was in a measure minimized, and a favorable termination was rendered possible. The case is further confirmatory of the advisability of performing celiotomy as soon as the patient comes under observation, for it cannot be doubted that in a short time the interference with the circulation would have increased, and it would have been impossible to release the bowel.

#### New York Medical Journal.

August 13, 1898. [Vol. lxviii, No. 7.]

1. On Amyloid, Colloid, Hyaloid, and Granular Bodies in the Central Nervous System. WILLIAM G. SPILLER.
2. Fissura Calcarina Hypertrophy and Atrophy. Two Cases. W. A. W. A.

3. Radical Cure of Femoral Hernia, with Personal Experience of the Inguinal Method. HENRY MANN SILVER.

4. The Treatment of Diarrhea. G. C. H. MEIER.

5. Functional or Inorganic Heart-Murmurs. HENRY H. SCHROEDER.

6. The Nonmalignant Neoplasm or So-called Polypus of the Rectum and Anus: Its Origin, Formation, Etiology, Pathology, Diagnosis, and Treatment. WILLIAM BODENHAMER.

7. Medical Examination for Life-Insurance in the Field. C. E. SKINNER.

1.—Spiller has discovered in the central nervous system of a patient who had amyotrophic lateral sclerosis bodies that, while similar to the amyloid bodies, presented certain differences from them. They were larger and, when deeply stained, appeared of homogeneous structure. They did not take a special stain with gentian-violet, but took a deep purple with thionin. When feebly stained, they had a pale central core; about this a deeply colored circle; and about this a thicker circle like the central core. They were most numerous in the medulla. In a case of tumor of the brain with symptoms resembling those of akromegaly, bodies were found that resembled colloid bodies. They were of irregular size and shape, and took a pink color with eosin, purple with thionin, a deep purple with Delafield's hematoxylin, purple with a tinge of pink with gentian-violet, and deep, reddish-brown with van Gieson's stain. Boiling water, acids, and alkalis had no influence upon them. Their edges were often more deeply stained and there was a surrounding space much like a perivascular space. They formed large irregular masses in the ependyma. They often presented an elongated appearance like bloodvessels, and they are believed to be the remnants of degenerated bloodvessels.

2.—Wood records the external appearance of the brain of M. Pequoit, a Parisian man of letters, and of that of a blind French woman. The first showed hypertrophy of the over-occiput, and a crowding and dwarfing of the under-occiput, while the second showed high full growth of the under-occiput, and atrophy of the over-occiput on both the inner and outer surfaces.

3.—Silver endorses the following mode of operation for **radical cure of femoral hernia**. The principle of this operation, which he has carried out in 4 cases, is similar to that recommended by Macewen for inguinal hernia, namely, forming a pad of the sac and suturing it against the abdominal aspect of the femoral ring. The operation is performed as follows: After the sac is rolled up like a scroll, a suture of catgut is passed through its folds and tied in order to prevent the scroll from unrolling; 3 sutures of chromic catgut are then passed through Poupart's ligament above, and Cooper's ligament below, then through the rolled sack; when these sutures were tightened the mass is drawn down over the internal femoral ring, no attempt being made to close the tendinous structures of the ring. Of the 4 cases operated upon, in 3 there has been no recurrence in 20 months, 15 months, and 1 year respectively; the fourth case has been lost to observation.

4.—Meier recommends especially the use of tannopin, particularly in the **diarrheas of infancy**. In dysenteric diarrhea he employs it in a castor-oil emulsion. The dose of tannopin for children is from 3 to 8 grains 3 or 4 times daily. Another remedy that he has found very useful is the copper arsenite, of which one grain is placed in a tumblerful of water, and a teaspoonful is given every 15 minutes, to arrest the diarrhea and to check the vomiting. Cases presenting choleraic symptoms should be treated by being placed before an open window in the hottest part of the day, and being wrapped in towels wrung from ice-water.

5.—In a general consideration of **functional heart-murmurs** Schroeder insists upon the importance of the presence of a venous hum with functional murmurs, and upon the fact that if hypertrophy exists with anemia it is usually general, while with aortic obstruction (which would also give rise to a systolic murmur) it is attended with enlargement of the left ventricle alone in the early stages. Cardio-respiratory murmurs are recognized by their usually entire dependence upon the respiratory act. If the murmur vanish entirely during respiration, it must be considered functional.



Dynamic murmurs usually disappear when the violent heart-action that occasions them becomes less severe.

6.—Bodenhamer states that the symptoms of **polyp of the rectum** begin with a slight exudation of mucus and blood that soil the patient's linen. This is followed by dull pain and a sense of fulness in the rectum, often associated with tenesmus and difficult evacuations. As to the etiology, it is believed that many polyps are caused by the irritation from fissures, rectal catarrh, or hemorrhoidal tumors. The growths may be divided into the adenomatous, the fibromatous and the papillomatous forms, and since the last is likely to be of villous shape, it is preferable to call it a villoma. (The paper is to be concluded.)

7.—Skinner points out the essential features for which a **life-insurance examiner** should look in applicants in order to have suggested to himself the possibility of various incipient or latent diseases. Excessive use of tobacco, for instance, causes a pale, cold skin with clammy hands, irritable heart and muscular tremors, often slight conjunctivitis and irritable cough. The habitual appearance of the alcoholic and of the morphin-habitué are too well known to require intimate description, but in the latter subjects, there is usually some flush of the face, with contracted pupils, the articulation is slightly hoarse and somewhat uncertain, and the movements and manner are uncertain and uneasy. Arcus senilis should always be looked for as an important sign of arterial degeneration, and skin-affections should be especially searched for in view of their connection with syphilis and diabetes. The eyes are the most important organs for study in a search for obscure and otherwise perhaps unrecognized diseases, as they may indicate organic nervous affections by nystagmus or paralyses, exophthalmic goiter by protrusion; as well as jaundice, nephritis, pressure from an aneurysm and the like. An old iritis should always be excluded, however, before strongly suspecting nervous diseases because of inequality of the pupils. The speech should be observed, considering the possibility of nervous affection; twitching of the lips should be looked for; and all deformities or scars should be noted on the report, whether they seem of immediate importance or not.

### Medical Record.

August 13, 1898. [Vol. liv, No. 7.]

1. The Results Obtained by the Operation of Partial Thyroidectomy in Eight Cases of Graves' Disease. J. ARTHUR BOOTH.
2. Movable Kidney and its Treatment. MAX EINHORN.
3. Venereal Diseases—Their Relation to the Public Health, to Society, and to the Physician. J. W. HAUXHURST.
4. Yellow Fever of the Tropics. WOLFRED NELSON.
5. The Röntgen Rays in Spina Bifida. CARL BECK.

1.—Booth records 8 cases of **exophthalmic goiter** that have been subjected to partial **thyroidectomy** with cure in 5; one patient died, probably of uremia; in one no change occurred, and in the last improvement has been continuous during the 6 months succeeding the operation. The order of improvement in this series corresponds with that observed by others. First, the goiter diminishes; next the nervous symptoms disappear; then the pulse-rate and the vasomotor phenomena improve; and the exophthalmos last of all. Basing his opinion on his own results and those obtained by others, Booth concludes that, while cases of exophthalmic goiter may be entirely cured by operative measures, this form of treatment cannot be justly recommended as a routine plan, as the ultimate cause of the disease of the gland is still a matter of speculation, and as the mortality of this operation is estimated at 7%. The occurrence of sudden death in the course of, or soon after, the operation, while an undoubted complication, has not as yet received a satisfactory explanation. Pathologic and clinical evidence is in support of the view that the disease is the expression of a primary neurosis, aggravated by a secondary glandular intoxication.

2.—Einhorn, after referring to the history of **movable kidney**, adds the result of his personal experience with the condition. He adopts Glénard's classification of the degree of mobility. In 1,315 patients, 772 men and 543 women, he found 126 movable kidneys; 14, or 1.81%, among the male patients, and 112, or 20.6%, among the female patients. Of

the 112 instances of the lesion observed in women, 107 were on the right side, 4 were bilateral, and one was on the left side. All the movable organs in men were on the right side. About one-third of the cases presented ptosis of one or more of the abdominal organs. Cases of gastropotosis and of enteropotosis may occur, however, without accompanying movable kidney. Einhorn believes in the occurrence of an individually varying predisposition as a causative factor in the production not only of movable kidney, but also of displacement of other abdominal organs. Six symptoms, either singly or in combination, quite frequently attend movable kidney: (1) A feeling of traction and of weight in the abdomen; (2) quite violent palpitation in the epigastrium; (3) the disturbances just referred to are usually more pronounced when standing or walking, and disappear on lying down; (4) frequent urination, occasionally attended with slight burning; (5) pains in the sacral region after slight exertion; (6) in women, the discomfort is usually increased at the time of menstruation, and considerable improvement manifests itself during pregnancy. The abdominal bandage is considered a most valuable resource in the treatment of movable kidney, and medical are to be preferred to surgical measures for three reasons: (1) The results of internal dietetic-mechanical treatment are highly favorable, if the gastric and intestinal symptoms are treated according to modern methods and if attention is paid to promoting nutrition; (2) as is generally known, very many cases of movable kidney are unaccompanied by symptoms. A large percentage of digestive disturbances are found in patients affected with floating kidney, because these ailments afford the opportunity of examining the patient. Examination of all healthy persons would show that digestive disturbances do not occur much more frequently in the subjects of floating kidney than in those whose kidneys are in a normal position; (3) the results of nephrorrhaphy are in no respect better than those of rational medical treatment.

3.—As a means of **checking the increase of venereal diseases** Hauxhurst urgently advances the plan of including gonorrhea and syphilis in the list of those contagious diseases that must be reported to Health-Boards. The subjection of prostitution to police-surveillance would be no doubt of some assistance in controlling the dissemination of venereal diseases, but public prostitutes constitute such a small proportion of all those men and women alike, who are directly responsible, that the necessity for some more far-reaching and more stringent scheme is evident. Though legislation in the directions pointed out would meet with great opposition on the part of the public, it would in time secure the desired results.

4.—According to Nelson, priority in the original investigation of the bacteriology of **yellow fever in the tropics** belongs to Dr. Domingos Freire. This observer washed the earth obtained from over the bodies of yellow-fever victims, buried in a cemetery in Rio de Janeiro, and obtained a culture that proved fatal to guinea-pigs. Similar results were obtained when cultures were made from the blood of yellow-fever patients. Attenuated cultures were then inoculated into animals and prevented death after subsequent inoculation with strong cultures. Nelson believes that Freire has found a fluid that will cause a mild type of yellow fever in man and that will confer immunity.

5.—The **Röntgen-rays** may be of service in furnishing evidence to the **differential diagnosis of the various forms of spina bifida**. Inasmuch as the course of treatment will depend upon the existence of a meningocele, a myelomeningocele, or a myelocystocele, any positive information prior to the operation would be of great service to the surgeon. Beck states that skiagrams not only show whether there is an opening in the bone, but they also tell of the presence, and sometimes even of the distribution, of nerve-substance in the sac; in other more rare cases they will reveal the presence of a lipoma, or a fibromyoma.

### Medical News.

August 13, 1898. [Vol. lxxiii, No. 7.]

1. What the People of Iowa Eat. J. FRED. CLARKE.
2. Tumors of the Breast. FOUÇHE WARREN SAMUEL.
3. The Obstetric Forceps as a Cause of Mental and Nervous Disease; a Protest. V. M. REICHARD.



1. Leiter General Hospital—Soldiers' Aid Committee—Hospital Train—Discharges for Disability. HENRY L. RAYMOND.
5. Sick and Wounded Soldiers from the Battle-fields of Santiago, Cuba, and Vicinity at the United States Marine Hospital, Stapleton, Staten Island. GEORGE W. STONER.

1.—Clarke reviews the **diet** of the inhabitants of Jefferson County, Ia., and gives sample daily menus from the farmer-class, the banker-class, and the unskilled laborer-class of the population. He shows that 40% of the 599 deaths, occurring between 1890 and 1895, were due to non-malignant diseases of the stomach and intestines, diseases of the kidneys, diseases of the bladder, diseases of the liver, diseases of the heart, apoplexy, and rheumatism; all of which may have had their origin in the improper use of food. The morbidity, as well as the mortality of this section shows the influence of improper diet. The general dietetic causes of poor health in his neighborhood are considered to be due to: (1) Too little fluid ingested, (2) poor cookery, and (3) overeating of carbohydrates.

2.—Samuel publishes his limited experience in **amputations of the breast** in support of the **radical operation** as carried out by Halsted. In 4 cases, in which the incomplete method was adopted, recurrence took place in 3, 6, 6, and 10 months respectively, while in 2 cases, treated by the radical method, 3 years and 1 year and 5 months respectively have elapsed, and in neither has local or regional recurrence been discovered. Since the pectoral fascia and muscles are frequently involved before decided lymphatic involvement is palpable, the wisdom of the radical method is apparent.

3.—Reichard enters a positive protest against the trend of opinion that **forceps-delivery** necessarily entails great risk to the future usefulness of the child. He claims that the cerebral membranes and tissues are in far more danger from prolonged and unassisted labor than from any pressure that may be applied to the head by the proper use of the forceps. If there be any physiologic reason why the bones of the fetal head should be so freely movable it is that they and *pari passu* the cranial contents may allow of such change in relative position as the exigencies of delivery demand.

4.—The **mortality amongst the typhoid-fever patients**, treated by the **Brand method** in the **Leiter Hospital**, Chickamauga Park, has been from 6.25 to 5.11%.

5.—Of the 100 sick and wounded soldiers transported from Cuba to the United States Marine Hospital, Staten Island, 49% were wounded in the upper extremities, 29% in the lower extremities, 10% in the head and neck, 5% in the chest, 2% in the back, and 1% in the abdomen. The wounds were, in the majority of cases, in good condition, and required little attention. Those produced by the Mauser bullet were, in many cases, not unlike a large needle-wound, the wounds of entrance and exit being about the same as to size and freedom from laceration. Most of the wounds were perforating.

### Boston Medical and Surgical Journal.

August 11, 1898. [Vol. cxxxix, No. 6.]

1. Hospital-Ships. The "Bay State." C. A. SIEGFRIED.
2. Sir Astley Cooper, Bart. An Estimate of His Character and Career. JAMES G. MCMFORD.
3. Orbital Injury from Contre-coup. FREDERICK E. CHENEY.
4. A Case of Intermittent Hydronephrosis Cured by a Ureteroplastic Operation. JOHN W. ELLIOT.
5. A Case of Perforating Gastric Ulcer. Operation at End of 24 Hours. Recovery. A. T. CABOT.
6. A Case of Actinomycosis. E. A. CODMAN.

3.—Cheney describes a number of cases of **orbital injury from contre-coup**. This term may be applied to injuries of the orbital, as well as those of the cranial, cavity. Certain injuries of the orbit resulting from blows on the orbital margin, while producing comparatively little effect at the point of impact, may be followed by deep intraorbital lesions of more or less serious nature, such as hemorrhage, abscess, or fracture of the bony wall, producing paralysis of various muscles from nerve-pressure.

4.—Elliott reports the case of a patient who for 2 years prior to coming under observation had at various intervals had attacks attended with pain in the back and right lumbar region, accompanied by nausea and vomiting, with the appearance and disappearance of a tumor. A diagnosis of **intermittent hydronephrosis** was made and operative measures were decided upon. When the kidney was exposed, by a lumbar incision, it was found to be nearly twice its normal size, the pelvis lying in folds and showing such an increase in size that the distance from the ureter to the calices was five inches. Upon opening the pelvis of the kidney a fibrous ring,  $\frac{1}{4}$  in. in diameter and consisting of fibrous tissue, was found surrounding the ureteral opening, and acting apparently as a sort of dam. On the inner side of this ring the pelvis was much dilated. Believing the obstruction of urine to be due to a valve-like action of the pelvis, a plastic operation was carried out somewhat on the plan of a pyloroplasty. The mouth of the ureter was laid open by an incision through the raised ring and extending  $\frac{1}{2}$  in. downward; the sides of this longitudinal incision were pulled apart until the ends could be united in the middle, thus changing the line to a horizontal one. During convalescence pyelitis developed, but this gradually subsided and the patient was soon dismissed, entirely well.

5.—Cabot reports a case of **gastric ulcer** in which **celiotomy** was performed 24 hours after the onset of symptoms of **perforation**. Between the stomach and the liver there was a fibrinous exudate, and on the lesser curvature a yellow sloughing area,  $\frac{1}{2}$  inch in diameter, was exposed. In the center of this area was the seat of perforation, which was closed by folding the stomach-wall together over it with Lembert stitches in two rows. The patient made a steady and uninterrupted recovery. In this case the point of greatest diagnostic value was the absolute disappearance of the liver-dulness in consequence of the great amount of gas in the peritoneal cavity.

### Journal of the American Medical Association.

August 13, 1898. [Vol. xxxi, No. 7.]

1. The Diagnosis and Surgical Treatment of Malignant Obstruction of the Pylorus. J. W. MAYO.
2. Intestinal Anastomosis by a new Method. WILLIAM F. METCALF.
3. The Advantages of a Permanent Abdominal Anus and of Total Closure of the Sacral End of the Rectum, in Operations for Cancer of the Rectum. W. W. KEEN.
4. The Medical Aspects of Appendicitis. H. A. HARE.
5. The Early Treatment and Indications for Operation in Appendicitis. WILLIAM M. HARSHA.
6. Penetrating Wounds of the Popliteal Artery. GEORGE W. MIEL.
7. Aneurysm of the Aortic Arch. B. MERRILL RICKETTS.
8. Removal of the Epitheliomatous Tonsil, by the External Route (Pharyngotomy), with a Report of Two Successful Cases. A. F. JONAS.
9. The Wax-Paraffin Dressing. SAMUEL H. FRIEND.
10. Wet Dressings in Surgery. THOMAS OSMOND SUMMERS.
11. Surgery of the Lung. J. B. MURPHY. (Concluded.)

1.—See this JOURNAL, Vol. I, p. 1084.  
 2.—See this JOURNAL, Vol. I, p. 1084.  
 3.—See this JOURNAL, Vol. I, p. 1090.  
 4.—See this JOURNAL, Vol. I, p. 1091.  
 5.—See this JOURNAL, Vol. I, p. 1091.  
 6.—See this JOURNAL, Vol. I, p. 1089.  
 7.—See this JOURNAL, Vol. I, p. 1084.  
 8.—Jonas reports 2 cases of **epithelioma of the tonsil removed by pharyngotomy**. The first occurred in a man, 40 years old, who had had recurrent attacks of tonsillitis for 5 or 6 years. For a year after his last attack he had had increased tenderness and sensitiveness in the region of the right tonsil, with occasional expectoration of blood. Deglutition became difficult and painful; the diet had to be mostly fluid; and there was loss in weight. On palpation the tonsil was found hard, irregular, and slightly movable. Beneath and slightly posterior to the lower jaw was found an enlargement the size of a hickory-nut, which was painful and tender on pressure. It was thought that from the size of the growth it could not be removed through the mouth, and pharyngotomy was decided upon. A triangular



flap was reflected, the incision beginning at the middle of the lower jaw, extending to the mastoid process and thence down the anterior border of the sterno-mastoid muscle to the level of the cricoid cartilage. The enlarged glands in the submaxillary triangle were removed and the tissues were separated by blunt dissection. The tonsil was pressed outward by a finger in the mouth and gradually separated from the surrounding tissues. The pillars of the fauces were drawn together with catgut-sutures and the external wound was closed with deep silk sutures, without drainage. Healing was uneventful; the patient was nourished through a glass tube for 2 weeks, after which deglutition was improved. The patient is living without recurrence 4 years after the operation. The second patient, a man of 56, had suffered from chronic pharyngitis, for many years. About a year before operation he was seized with symptoms similar to those of the first patient. Believing the trouble to be an hypertrophied tonsil, his physician excised the formation with a tonsillotome, but within a short time the symptoms and growth returned. On operation the enlarged glands were found adherent to the internal jugular vein and carotid artery, and after removing the growth it was impossible to bring the tissues in apposition as in the former case. Drainage was made use of and the wound healed slowly by granulation. The patient gradually improved, but died 3 months after the operation from catarrhal pneumonia.

9.—Friend recommends highly as a dressing for wounds, a mixture of equal parts by weight, of yellow, unpurified beeswax and hard paraffin, melted together and spread directly on wounded surfaces or on dressings of absorbent cotton or gauze.

10.—See this JOURNAL Vol. I, pp. 1094 and 1130.

### Journal of Nervous and Mental Disease.

June, 1898. [Vol. 25, No. 6.]

1. On Landry's Paralysis, with the Report of a Case. CHAS. K. MILLS and WM. G. SPILLER.
2. Cases of Trigeminal Spasm Resection—Probable Presence of Sensory Fibers in the Seventh Nerve. JOHN K. MITCHELL.
3. Hypertrophic Nodular Gliosis. JOSEPH SAILER.
4. A Case of Serous (Alcoholic) Meningitis Simulating Brain-Tumor. THEODORE DILLER.
5. New Paths in Psychiatry. FREDERICK PETERSON.
6. A Case of Universal Muscular Atrophy. H. A. HARE.
7. A Case of Functional (Hysterical) Ophthalmoplegia. B. SACHS.
8. Case of Incomplete Partial Ophthalmoplegia, Probably Due to Embolism. ALFRED WIENER.
9. A Case of Myxedema Treated with Thyroid Extract and with Thyrocolloid. R. H. CUNNINGHAM.
10. On Multiple Sclerosis, with Especial Reference to its Clinical Symptoms, its Etiology and Pathology. B. SACHS.

1.—Mills and Spiller report the case of a man, 35 years old, whose illness began with numbness and weakness in the feet, which progressed rapidly. Within 5 days after the first serious symptoms, he became almost completely paralyzed in the legs and in the arms to a somewhat less degree. The tendon-reflexes were lost in the legs; sensation was normal; and there were no vesical or rectal symptoms. The man was extremely anemic. Death resulted 7 days after the appearance of the first grave symptoms, and the post-mortem examination revealed no gross lesion either in the cord or in the brain. Some of the peripheral nerves of the legs and feet were examined and showed swelling of the medullary sheaths, and the myelin broken into balls. Some of the axis-cylinders were swollen. The cells of the anterior horns of the cord were tumefied and rounded. They contained scattered granules, which stained purple with thionin; the nucleus was displaced to the periphery. At the periphery, the chromophilic elements were still preserved and the dendrites were intact. It was notable that the cells in the sacral region were quite as much affected as those elsewhere in the cord, although vesical and rectal symptoms were absent. The medullary sheaths in the anterior and posterior group stained black by Marchi's method, and there was some cel-

lular infiltration. In the thoracic region, the posterior roots showed swollen axis-cylinders, which were present also, though to lesser extent, in the anterior roots. After a review of the literature and a study of their own case, Mills and Spiller conclude that there is a form of ascending flaccid paralysis, with little disturbance of sensation, with normal electric reactions, and without involvement of the sphincters, which is of rapid course, and usually terminates in death; but that other cases may occur, differing somewhat in symptomatology; and there are transitional forms that make difficult the diagnosis between Landry's paralysis, polyneuritis and myelitis. In some cases no lesions have been found, though the methods of examination were imperfect at the time the cases were reported. Landry's paralysis may be due to myelitis alone or polyneuritis may be present, though under the latter condition changes in the cells of the anterior horns will be usually found if Nissl's stain be used, and it is difficult to say whether the cellular changes are primary or secondary. It is probable that, in some cases at least, the entire peripheral motor neuron is attacked at the same time by the poison of the disease.

2.—Mitchell records a case of **neuralgia** of the supra-orbital region in which portions of the supraorbital and supratrochlear nerves were removed. Subsequently, there was found an oval area, about as large as a silver dollar, on the temple at the outer canthus, which was insensitive to touch, but over which distinct painful sensations were recognized and the slight anesthesia almost disappeared before the patient was dismissed. In another case with neuralgia of the supraorbital and superior maxillary nerves  $\frac{1}{2}$  inch of the supraorbital nerve was resected, and the infraorbital nerve was cut. On recovery, it was noted that the patient had even less disturbance of sensation than did the previous case. There can be no doubt that the nerves mentioned were removed in these cases and after excluding the probability of injury of other nerves, Mitchell states his belief that these 2 cases strengthen the view that the 7th nerve contains sensory fibers. The examination of the nerves from the second case showed fatty degeneration and fragmentation of the sheaths of the nerves, with round-cell infiltration and amyloid bodies.

3.—Sailer reports the case of a low-grade idiot and epileptic, of poor muscular development, with a spacecephalic head, good hearing, myopic eyes, and normal cutaneous reflexes, while the cremasteric and patellar reflexes were increased. Sensibility was seemingly normal. The patient was subject to merycism; his epileptic attacks began with a fall and spasmodic movements on the right side of the face and tonic contraction of the left side, while the whole left side remained spastic for some time after the spasm. His last illness commenced with a constant succession of spasms, which were general, but usually more severe on the right. The head was turned to the right, the left side of the body remaining rigid. The right arm was rigid and elevated, and the right leg rigid, while the left arm was flexed. The hands were flexed at the wrist. After death there were found in the cortex of the cerebral hemispheres a number of sharply circumscribed areas of much denser consistence than normal, pale, and slightly protuberant brain-tissue, and a number of small nodules upon the floor of the lateral ventricles. The whole brain appeared large. There were nodules in the duodenum, and the right kidney contained a large tumor-like mass, with numerous small nodules that were found to be adenosarcomata. The tumors of the cortex extended a few millimeters into the white substance, and on microscopic examination were found to contain neuroglia composed of coarse fibers either in a mesh or in bands, while the neuroglia-cells were small, irregular and somewhat increased. The vessels in the neighborhood of the sclerosis were much increased in number, excepting beneath the pia, where there was less than the normal vascularity. The perivascular spaces were so distended as in some places to exceed the diameter of the vessels, which yielded a red color with Rosen's and Van Gieson's stains. The nerve-cells showed no degeneration, but were irregularly placed. Peculiar bodies were found in the cortex, nearly circular in shape and somewhat concentric in arrangement, which yielded reactions resembling those of hyaline material. The ependyma appeared somewhat papillomatous. In the cerebellum, quantitative changes were very evident, the cells of Purkinje being irregularly



arranged, and the medullated fibers few. No definite changes were found in the spinal cord. Sailer gives abstracts of 30 cases collected from literature, all of which are, he believes, instances of hypertrophic nodular gliosis, though some of them were not reported as such. A number of others have been described that are of doubtful nature. After a study of these cases, the important characteristics of the process are set down as hyperplasia of the neuroglia-cells and fibers, leading to gradual atrophy of the nerve-fibers and the ganglion-cells, associated with marked perivascular changes of doubtful nature. The first manifestation occurs within a few weeks after birth, and anomalies or congenital tumors are sometimes found in the same cases. In Sailer's series of cases, tumors of the kidney were noted in eight instances. All occurred in epileptics, and many in idiots. The cause is unknown, but the disease probably commences before birth after the seventh month of fetal existence, and is of the same nature as gliomatosis.

4.—Diller reports a case occurring in an alcoholic who had been losing health for 6 months. He had headache, frequent vomiting, failing vision due to optic neuritis, an ataxic gait, and absence of knee-jerks, with tenderness in the legs, burning in the feet, and toward the end general convulsions, followed by marked mental changes. It was evident that the man had alcoholic neuritis, but the other symptoms led to a diagnosis of a coincident brain-tumor. After death great dilatation of the pial vessels was found, with an excess of clear fluid beneath the membrane. No brain-tumor could be found.

5.—See Vol. I of this JOURNAL, p. 1114.

6.—Hare reports the case of a woman, 45 years old, who, previous to the birth of her last child, had a great deal of pain with edema in the lower extremities. These symptoms disappeared for 4 years, when they reappeared, and the knees and feet in especial became very painful. This condition persisted, and the woman took to her bed; the other joints became implicated and were, at the time of report, much deformed and contracted. The hands had the "seal-fin" appearance. The woman was weak and emaciated, and there was universal muscular wasting. Her visual fields were limited, and she seemed hysterical. The diagnosis was believed to be **rheumatoid arthritis**, with secondary muscular wasting, and complicated with hysterical contractions.

7.—Sachs reports the case of a man whose wife had had ocular palsy, and has, after a shock, himself exhibited double ptosis, some convergence of the axes, imperfect conjugate deviation, and a limited and jerky movement of both eyes when rotated either upward or downward. There were no fundus-changes and the visual fields were contracted. There was complete left hemianalgesia. Hypnotic suggestion caused great improvement, and the diagnosis was believed to be hysteria.

8.—Wiener reports the case of a boy, whose heart was hypertrophied and irregular in action, and in whom there developed suddenly partial paralysis with slight aphasia and contracture of the face toward the left side. There was ptosis of both lids, more marked on the left, and diplopia. The muscles affected in each eye were as follows—on the left, the external, internal, and inferior rectus slightly, the superior rectus more markedly; on the right—the anterior, the superior, the external rectus were slightly affected. The disc and retina were normal on each side, as was the pupil, the field of vision and the color-sense. As the intrinsic muscles of both eyes were unaffected, and the lesion was bilateral, and as it did not affect nerves close to the third nerve, neuritis was excluded. It was therefore believed to be nuclear in origin, but its rapid onset, and the absence of progression in the symptoms led to the diagnosis of an acute nuclear palsy, probably of embolic origin, because of the condition of the boy's heart and the irregular involvement of the nuclei on both sides.

9.—Cunningham reports the case of a man, 34 years old, who presented well-marked **myxedema**, which began with pains in the back and arms, increasing baldness, general weakness, and the characteristic myxedematous skin and subcutaneous tissue. The treatment consisted first in thyroid extract, upon which he improved greatly. It was subsequently changed to thyrocolloid, and although the patient took enormous doses of the colloid prepared after one hour's maceration (sometimes equal to 24 grams of raw thyroid)

there were no symptoms of thyroid intoxication; but after doses of a colloid prepared after 18 hours' maceration, there were immediate symptoms of mild intoxication. This is believed to substantiate the previously expressed belief that the symptoms of induced thyroidism are manifestations of intoxication resulting from ingestion of thyroid material that has undergone more or less chemic alteration in some one or more of its compounds. The man improved greatly under both forms of treatment employed.

10.—Sachs continues the consideration of the etiology of **multiple sclerosis**. Cold, undoubtedly, has an occasional influence, as does also emotion. The disease is certainly rare in children, but it shows no distinct preference for either sex. The theory of its infectious origin has some basis in fact, but not a strong one. Syphilis is not important in the etiology. Heredity, neurasthenia, and other functional affections are undoubtedly of importance. As to the pathologic anatomy, it is agreed that the bloodvessel-changes are important in the early stages. The medullary sheath suffers more than the axis-cylinder. The bloodvessels may not be the starting-point, and in some cases the disease may begin in the parenchyma. Secondary degeneration does not occur, because the axis-cylinder is long preserved. The changes in the neuroglia are at present of especial interest, because of Strümpell's view that the disease is practically a multiple gliosis. The patches may be found anywhere, but they are most common in the dorsal half of the pons and of the medulla oblongata, in the white strands near the periphery of the cord, and in the gray matter near the central canal. There is no satisfactory theory as to the pathogenesis, but there seems some truth in the various theories of different writers. There are a number of cases that cannot be explained on the supposition of inflammatory, toxic, or traumatic origin; these would seem to depend upon functional changes that make the central nervous system an easier prey for any subsequent changes.

#### American Journal of the Medical Sciences.

July, 1898. [Vol. cxvi, No. 1.]

1. On the Significance of Jaundice in Typhoid Fever, and on the Hepatic Complications without Jaundice. J. M. DA COSTA.
2. The Significance of Albumosuria in Medical Practice. REGINALD H. FITZ.
3. Infectious Multiple Gangrene of the Skin. M. B. HARTZELL.
4. The Clinical Significance of Reduplication of the Heart-Sounds. HENRY SEWALL.
5. A Case of Tuberculosis of the Breast. CHARLES L. SCUDDER.

1.—Da Costa reports 5 cases of **jaundice complicating typhoid fever**, from a study of which, as well as of other cases, it appears that the jaundice does not usually set in until the middle or latter part of the fever, though it may appear earlier. In one of the cases here reported it appeared about 2 weeks before the beginning of the typhoid stadium, and vanished at about the time the fever began. When this complication is present, the disease is usually severe. There is often delirium, and the temperature is commonly high. Chills are rather common, as is pulmonary congestion, and vomiting is frequent. The urine contains bile and usually albumin and casts. The stools are rarely clay-colored, but usually like dark typhoid stools. Epistaxis is frequent and is distinctly related to the intensity of the jaundice. The jaundice is believed to be of hematogenous origin, because of the character of the stools and of the fact that the liver commonly shows granular or fatty degeneration, and that pylephlebitis is sometimes found, although at other times obstruction is present. Of 52 cases collected by Da Costa death occurred in 32. In 28 of the total number there were evidences of parenchymatous degeneration of the liver. The method of treatment does not seem to have had any influence in the production of jaundice, which has occurred at every age, excepting early childhood. In studying other affections of the liver complicating typhoid fever, Da Costa has found 22 cases of abscess associated with this disease. The most important diagnostic points of this complication are prolonged and repeated chills, great variations in temperature, profuse sweating, and pain in the region of the



liver. Jaundice is likely to be absent. A sense of fluctuation is a valuable diagnostic point when present. Pyelophlebitis resembles this picture closely, but differs principally in the presence of enlargement of the subcutaneous abdominal veins and ascites. The commonest causes of hepatic abscess in the course of typhoid fever are metastasis, pyelophlebitis, or typhoid ulceration in the biliary passages, with secondary suppuration. Da Costa is inclined to believe that there may be a biliary typhoid without intestinal lesions, as a result of the direct action of the microorganisms or their products on the liver. Complications due to affections of the gall-bladder are common in the course of typhoid fever, but they are sometimes obscure. Cholecystitis is a grave complication, 39 deaths having occurred among 58 cases collected by Da Costa. Pain is the most constant symptom, and is often referred directly to the gall-bladder. Tumor is of great importance, but is not a constant symptom. Jaundice occurs in less than one-third of the cases. Nausea and vomiting are common, while chills are conspicuously absent. The condition is most likely to be confounded with appendicitis, the pain being, however, commonly higher, though its situation is variable.

2.—Fitz records the case of a woman, 53 years of age, whose illness began with loss of flesh, and strength and color, and griping pain in the back of the neck and between the shoulders, with some stiffness of the joints. The eyelids swelled, and the secretion of saliva became excessive. Superficial swelling about the neck and jaw, with hypertrophy of the tongue, appeared, and later indurations in the legs and arms showed themselves. The swelling made the face look expressionless, and was dense and resistant to the touch. The hands and feet were cold. The skin was coarse and wrinkled. The blood-count showed 5,030,000 red corpuscles, 11,600 leukocytes, and 35% of hemoglobin. The differential count of leukocytes showed no marked deviation from the normal. The examination of the urine showed an occasional cast with albumose varying in amount from  $\frac{1}{8}$  to  $\frac{1}{4}$ %. After instituting thyroid treatment, the myxedema improved, but the woman's weight and debility increased. After stopping the thyroid, her general condition improved. The drug was then given in smaller doses, but the patient became weaker and succumbed. Fitz also gives brief notes of a case in which the patient died while using thyroid extract, apparently from sudden syncope. But one other instance of albumosuria attending myxedema seems to be recorded. Fitz considers that albumosuria, as a diagnostic point, is chiefly valuable in the recognition of latent tumors of the trunk, and he mentions a case under Shattuck's care in which the discovery of albumose in the urine led to the use of the Roentgen-rays, with the discovery of changes in the structure of the bone, that confirmed this opinion.

3.—Hartzell reports a case of **infectious multiple gangrene of the skin**, in a woman 46 years old. The lesions began either as papules or vesicles, growing rapidly and attaining the size of a large pea within 24 hours; the central eschar that formed became depressed as it enlarged, and at the end of 2 or 3 days the lesions resembled vaccination-vesicles 6 days old. Unless excised they continued to enlarge eccentrically, the borders being firm, while the center was occupied by a constantly growing, dry gangrenous mass, which was in time loosened by suppuration. Differing from most of the hitherto reported cases, there was no general constitutional disturbance, although the patient was subject to occasional attacks of diarrhea and chills. An interesting feature of the case was the discovery of great numbers of bacilli in the lowest layers of the rete and in the papillary and subpapillary portions of the corium, the bacilli resembling morphologically the bacillus tuberculosis. The staphylococcus pyogenes aureus also was present in large numbers. The fact that the lesions were limited to those parts of the body accessible to the patient's fingers led to the assumption that the disease was auto-inoculable. The only treatment that proved capable of checking the process was complete excision of each lesion.

4.—Sewall, in continuing his article, states that from personal observations and experiments, he has concluded that **reduplication of the first sound of the heart** is frequent and of all degrees, from mere prolongation of the sound to distinct doubling. It is especially common in pathologic conditions, but it may have various causes, and he groups it under the two heads of real and simulated. The first division includes those instances in which there is asyn-

chronism in the contraction of the ventricles, although it is suspected that reduplication may also have its origin in a double systolic effort of the ventricles. Simulated reduplication of the first sound is probably caused frequently by lack of synchronism between the contraction of the ventricle and the production of the tension-sound of the corresponding auriculo-ventricular valve. A post-systolic blow of the pulmonary artery against the chest-wall may simulate reduplication, and a simulated reduplication of the first sound may be caused by irregularity of the auriculo-ventricular contraction. The prominent influence in causing reduplication of the first sound is a difference of tension in the two ventricles. As a rule that ventricle contracts first in which the blood-pressure is relatively increased. Reduplication of the first sound in normal subjects indicates a lack of cardiac coordination. Reduplication of the second sound is a normal phenomenon, the aortic valve-tension preceding the pulmonary at the end of expiration. True reduplication of the second sound is produced by asynchronism in tension of the two sets of semilunar valves, when the first sound is single. The character of the second sound, as regards reduplication, depends upon the ratio of pulmonic to systemic arterial blood-pressure. When the pulmonary vessels are congested or resistant, or the flow from them is decreased, reduplication of the second sound is diminished or absent. Sewall believes that the study of the second sound of the heart affords an opportunity of estimating, to an extent that can be done in no other way, the tension of the blood in the pulmonary artery and of knowing the activity of the circulation in the lungs. The view that the reduplication of the second sound is due to the non-synchronous closure of the aortic and pulmonary valves is supported by experiments made on two dogs. In the first animal closure of the aortic valve was prevented by inserting a spiral wire between the leaflets. There was no reduplication when the wire was in place, but when it was removed the reduplication reappeared. In the second experiment an abdominal incision was made and the aorta compressed, with the development of marked reduplication of the second sound.

5.—In the literature of **tuberculosis of the breast** will be found the records of but 57 positive cases, including the one here reported. The mode of infection in cases of primary tuberculosis is the entrance of the tubercle-bacillus through the milk ducts or through an open wound of the nipple or skin over the breast. Infection may occur by metastasis or by extension of the disease through contiguous structures. From a review of the complete list of recorded cases the following observations were made: Heredity seemed to play a part in 10 of the 57 cases, the majority being 35 years old or younger. In many instances the patients were plainly tuberculous, as evidenced by additional tuberculous foci either in the lymphatic glands, bones of the elbow-joint or sternum, lungs, epididymis, pleura, or peritoneum. In more than 50% the breasts had been functionally active, and in 10 there had been at one time or another mastitis. Pain was the predominant and almost constant symptom. The local manifestations were extremely variable; sometimes an examination revealed small single or multiple nodules seated in the periphery, sometimes a hard, irregular, lumpy mass, in the center of the breast. The progress of the disease was in each instance a slow one, involving months and even years. The axillary glands became enlarged sooner or later, and the growth in the breast broke down in some instances, forming ulcers and fistulous tracts. The prognosis, as regards local recurrence, is good only in healthy subjects, when the disease is positively primary. From a perusal of all the clinical and experimental evidence it is safe to assert that the purely primary tuberculosis of the breast is of the rarest occurrence.

#### Annals of Surgery.

July, 1898. [Vol. xxviii, No. 1.]

1. A Case of Subclavian Aneurysm Treated by Excision of the Sac, with Remarks on the Ligation of the Innominate Artery and on the Treatment of Aneurysm. BENJAMIN G. A. MANNING.
2. Curvature of the Neck of the Femur, Sometimes Called "Coxa Vara." CHARLES H. FRAZIER.
3. The Question of Operative Interference in Recent, Simple Fractures of the Patella. CHARLES A. POWERS.



## 4. The Use of Rubber Gloves in Operative Surgery.

CHARLES MCBURNEY.

## 5. Osteotomoclasia: A Preliminary Note on a Modified Operation to Correct Curved Tibia. W. BARTON HOPKINS.

1.—This case of **subclavian aneurysm** presents many interesting features; the mode of exposing the artery, the mode of treating the aneurysm by excision, the perfect operative recovery, the formation of a second aneurysm on the 59th day on the proximal side of the primary one, its treatment, by ligation of the innominate and common carotid artery, are all points worthy of consideration. In the first operation the artery was exposed by excising a large section of the clavicle, which with the attached subclavian muscle were displaced backward by means of a silk retractor. The manner in which this section of bone was removed is claimed as original: "The clavicle being cleared on its anterior surface four holes were now drilled through it, two about  $\frac{1}{2}$  inch apart, at a distance of  $1\frac{1}{2}$  inches from the sternoclavicular articulation, and two, the same distance apart, at the junction of the middle and outer thirds of the bone. Between the inner and outer two the bone was sawn through with Hey's saw." In the second operation, that of ligation of the innominate and common carotid arteries, the vessels were exposed by excising the inner end of the clavicle and a section of the sternum in a way similar to that described. A review of the history of spontaneous aneurysm of the third portion of the subclavian discloses but 58 cases, but 8 of which recovered. Of these 58 cases 43 were treated by proximal ligation (with 3 recoveries), 6 by distal ligation (with 1 recovery), 6 by amputation at the shoulder-joint (with 2 recoveries), 2 by opening the sac and 1 by excision, the latter procedures with 1 recovery each. In selecting a method of treatment one must either choose distal ligation, or excision of the sac; comparing these two methods from the standpoint of the mortality, of the probability of the recurrence, or of gangrene, and of the "quality" of recovery, the balance weighs in favor of excision, for after this operation there is a far greater chance of recovery, there is absolutely no risk of recurrence, there is far less risk of gangrene, and finally there is less likelihood of there being any of those sequelæ due to nerve-interference.

2.—This article on **curvature of the neck of the femur or coxa vara** covers the literature on this subject since Hofmeister's exhaustive article appeared in 1894. To the 40 cases that have been recorded in this interval, Frazier adds two that have lately come under his personal observation, one of which is splendidly illustrated by a skiagraph, the first one to be published depicting this deformity. Especial pains are taken to determine the etiology in those cases in which there was no demonstrable sign of rickets. Excluding from consideration the infantile cases, a group in the etiology of which rickets is generally recognized, there was only 1 of 26 cases, or 3.8%, in which rickets manifested itself. The pathologic records show that too few specimens have been examined to be of any service in a study of the etiology of non-rachitic cases. In view of the observations of Humphrey on the normal angle of the neck of the femur, at different periods of life and under various circumstances, which proved that the angle of the neck is constantly changing during the period of growth and that this change is due chiefly, if not altogether, to the superimposed weight of the trunk. Frazier believes it not unreasonable to assume, that a disproportion between the body-weight and the size of the bones may be the chief etiologic factor in this particular class. After a review of the pathologic reports of all specimens hitherto removed, the contention is made: "That there are numerous diseases of the bone that could cause this deformity—osteomyelitis, rickets, osteomalacia, chronic osteitis, etc.—is undoubted, but up to the present time the evidence does not admit of the acceptance of any one of these as the pathogenic factor in the majority of cases." The article concludes with brief histories of the cases reported since 1894.

3.—Upon the basis of the opinions of 71 surgeons, and the facts furnished by 711 operative cases, 474 of which were derived through personal communications, and the remainder gathered from literature. Powers formulates the views as to the advisability of **operative interference for simple fractures of the patella**. The operation has gained a permanent foothold in the field of surgery. It should only be performed by experienced hands and con-

finied to healthy individuals of suitable age; it should be further limited to fractures presenting a diastasis of over  $\frac{1}{2}$  inch, or with extensive lateral tears of the capsule, and it should be supplemented by early massage and mobilization of the joints. The preferable form of operation is open arthrotomy. For such cases as are not suitable for operation, the Dutch massage-method promises the best results.

4.—Of the **use of rubber gloves in operative surgery**, McBurney says that he had never been able to achieve such results as he has since he introduced into his technic the wearing of rubber gloves, both by himself as well as by all of his assistants.

5.—In cases for whose correction osteotomoclasia is contra-indicated, Hopkins suggests the adoption of a procedure that he designates **osteotomoclasia**, a combination of osteotomy and osteomoclasia. The operation is carried out in this wise: Partial osteotomy is first performed and nothing further is done till union of the wound of the soft parts has taken place; the osteoclast is then applied and the curvature is fully corrected. The advantages of this method over osteotomy pure and simple are, that in place of a compound, only a simple fracture is produced; osteotomy produces a complete, osteotomoclasia an incomplete fracture; should suppuration occur after the first step in osteotomoclasia, it would involve only a bone-cut, not a bone-section, and it would be surgically far less serious than if accompanied by loss of continuity.

## Münchener medicinische Wochenschrift.

June 21, 1898. [45. Jahrg., No. 25.]

1. A Further Contribution Concerning the Effects of Röntgen Rays on Bacteria, as well as upon the Human Skin. H. RIEDER.
2. The Question of Tumors. RIBBERT.
3. The Relation of Weight to the Healing of Pulmonary Tuberculosis. F. WOLFF-IMMERMANN.
4. A Case of Congenital Deformity of the Legs. F. DAFFNER.
5. The Therapeutic Application of Methylene-blue and of Diaphtherin. F. MAYS.
6. Experience in Urine-investigations and a Report Concerning the Advances in Urine-analyses in the year 1897. G. BUCHNER.

1.—Rieder has exposed plates containing cultures of various forms of **bacteria** to the action of the **Röntgen rays**, and found that there was a distinct inhibition of growth. This, however, has been ascribed by other observers to the direct action of the electric current, or to the radiation of rays of heat or even to a chemic action upon the culture-media. In order to exclude the possibility of direct electric action a plate of stanniol was placed between the culture and the vacuum-tube and then connected with the earth by means of a wire communicating with a gas-pipe, tests showing that no electricity passed beyond it. The destruction, or inhibition of the growth, of the bacteria was not in the least affected. Similar methods were used for the purpose of excluding the possibility of the action of the rays of heat or light, including in the latter the fluorescent rays. The cultures were made by spreading upon agar-plates a small number of cholera-vibrios or diphtheria-bacilli suspended in bouillon. Controls were obtained by exposing only a small portion of the plate to the Röntgen rays and counting the colonies that developed upon this part and comparing them with the number in the other portion. Similar experiments showed that the dermatitis, so frequently occurring in the course of prolonged exposure to the Röntgen rays, was due to the rays themselves and not to any complicating condition; and it was found that the introduction of a red plate or a solution of quinin did not prevent the inflammation of the skin. The Röntgen rays appear to act favorably upon certain forms of parasitic skin-disease, particularly favus, psoriasis, lupus and chronic eczema.

2.—Ribbert recurs again to the discussion of the mode of **origin of tumors**. The generally accepted opinion at present is that they are the result of some external irritation, probably in the form of a destructive agent, following which the tissues undergo proliferation, which continues after the destroyed tissue has been replaced. This hypothesis Ribbert



holds to be without foundation and unnecessary, for anything that interferes with the normal tension of the tissues should act in the same manner, as, for example, the dilatation of the lymph-spaces. Proliferation of the epithelium, with mitosis, will occur in any duct that is obstructed and beyond the point of obstruction permitted to remain dilated for two days, as, for example, in the ureters after ligation. This is not due to the irritation of the stagnated urine, for the same changes may be found in the capsules of the kidney. Ribbert believes that every cell has a tendency to grow and reproduce, and that normal inhibitory influences compel it to remain of a certain distinct size. If these are released, growth and proliferation will take place. Such release is brought about by the separation of certain cells and cell-complexes from their normal surroundings, and at the same time through their removal from influences of the organism, so that they can grow independently. These cells behave exactly as parasites and live at the expense of their host. In tumors that consist of a variety of elements, it must be assumed, therefore, that the germ is complex. This applies particularly to the epithelial tumors, which, according to most authorities, are the result of proliferation of the epithelium in the connective tissue. Metamorphosis of these cells only occurs in fully developed tumors, and it cannot be accepted that the primary cause is an alteration in the structure of the cell. Unusual manifestations in nature should be regarded as probably dependent upon deviations from ordinary processes, and it is not necessary to assume *a priori* the activity of external agencies. Thus, it is incredible that as a result of frequently repeated irritation, successive generations of dogs should attain more and more closely the ability to fly, till finally a descendant should possess this power, and it is equally unreasonable to suppose that generations of epithelial cells gradually acquire the ability to proliferate in the connective tissue, and there produce tumors. A proof that this neoplastic tendency cannot be conferred upon cells as a result of external agencies is to be found in the growth of tumors themselves, which always reproduce from their own cells and do not convert those of the surrounding tissues into tumor-elements. Even in the carcinoma proliferation of the connective as well as of the epithelial tissues is found from the very beginning. Epithelium seems to be very sensitive to separation from the basement-membrane, and Ribbert has never been able to obtain growth in transplanted fragments, unless the latter structure was preserved, and he believes, therefore, that the most important element in the pathogenesis of carcinoma is a separation of the epithelium from the influence of the organism as a result of proliferation of the connective tissue.

3.—Wolff-Immermann laments the absence of adequate data concerning the **weight** of human beings, and in particular of those suffering from **tuberculosis**. Observations of the weight of patients are generally made very carelessly. The measurement is either done by the patient or his attendant, and there is little or no consideration of the time of day, or the apparel, or the period that has elapsed after taking food or excretion. The scales are often, if not inaccurate, at least insufficiently delicate to permit the recognition of differences of 50 or 100 grams. The amount of food ingested by a healthy person often amounts to 3,000 grams per day. In regard to tuberculosis, it is important that the weight should be recorded at least once a week, perhaps oftener, and always as nearly as possible under the same conditions. Mere increase in weight is no real sign of improvement, provided it is due to forced diet, or other abnormal conditions. If the conditions be normal the alteration in weight becomes a very delicate measure of the state of the individual. Immermann then discusses the weight of a young physician suffering from a slight lesion of the lungs and marked hypochondriasis. The curve shows extreme irregularity, slight deviations from the regimen, such as excessive indulgence in wine or other amusements, being followed within 24 hours by considerable decrease in weight. This, however, was invariably followed by a reaction that carried the weight beyond the previous height, so that a slight amount of distraction is not to be regarded as injurious. Similar observations were made upon a woman suffering from homesickness, who increased 2½ kg. in 3 weeks after a visit from her husband. The effect of a milk-diet is variable. Usually it is attended with a considerable increase in weight, which ordi-

narily disappears when the diet is discontinued, but other methods of treatment will also bring about a similar result, *c.g.*, the treatment of cases of obstinate bronchitis with potassium iodid, or the waters of the Armenius Spring, of a case of old syphilis, with mercury, or of chlorosis with iron. Change of place also appears to have the same influence. Most patients improve when they come to a mountainous region, and perhaps at any new place, showing an increase in weight for the first few weeks.

4.—Daffner describes a mulatto, 24 years of age, and 112 cm. high, in whom was reproduced a peculiar deformity from which her mother had suffered. This consisted essentially in a shortening of the forearms and legs. The arm was 32 cm., the forearm 7.5 cm., and the hand 14 cm. long. The radii were thickened and irregular and, with the ulnae, were dislocated forward and inward. The thumbs were parallel with the other fingers, which were slightly flexed. The tibia and fibula were so atrophied that the feet articulated directly with the condyles of the humerus. There was double pes planus, and the patient had a gait that resembled closely that of a bear. In other respects she was normal.

5.—Mays details his experience with **diaphtherin**, a substance that is no longer manufactured commercially, whose bactericidal action various observers have already noticed. He reports a number of cases in which solutions of diaphtherin were effective in healing suppurative wounds and particularly suppurating inflammations of the mucous membranes. One patient, suffering from gonorrheal endometritis, was cured in about 4 days. A second, a man, suffering from cystitis of 6 years' duration, was treated with daily irrigations of 0.5% solution, with immediate improvement and ultimately permanent cure. A third patient suffered from endometritis and mania. The former condition was cured after 5 injections of a 0.5% solution. A fourth patient suffered from otorrhea, and the fifth was Mays himself, who suffered from a similar condition; both were cured by washing with a 0.5% solution. In addition 2 cases are reported in which the patients suffered from crushes of the fingers and the terminal phalanx was saved by putting on a wet dressing of diaphtherin. Both wounds were exceedingly dirty when treatment was instituted. The only objection to the substance is that it has a tendency to make the hands and instruments black.

6.—Buchner continues his review of the literature of **urine-analysis**. The present section deals with various modifications of old methods, or new methods for the detection of indican, phenol, phenyl, urobilin, hemoglobin, methemoglobin, hematoporphyrin. Urobilin is particularly increased at the beginning or end of icterus, when it replaces bilirubin. A spectroscopic examination is particularly valuable for the detection of the last three pigments, and may also be used for urobilin. Uropotacid has been isolated by Cloetta. A new method for recognizing peptone is given, with a discussion of the various methods for the determination of the xanthin-bases. Comparison of the various methods for estimating sugar shows variability in the results. Acetone and diacetic acid were quite frequently found in urine containing glucose. Levulose is rather rare. Among the new methods suggested for the quantitative determination of glucose in urine is that of Goff, who uses methylene-blue, and that of Carpené, who uses barium hydroxid. Riegler estimates the amount of gas liberated from the unreduced copper sulphate, by means of phenylhydrazin hydrochlorate. Certain secret cures for diabetes have been shown to consist in nothing but common garden-herbs, the resulting improvement depending upon the strictness of the diet. Attention is called to the importance of studying the nitrogenous balance in cases of diabetes. Unusual elements in the sediment are pseudo-cylinders formed of epithelial detritus, muscular and connective-tissue fibers. When the urine is viscid and contains sediments, Michel suggests shaking it with ether, which will take up the sediment. The presence of fragments of smegma indicates balanitis. Amyloid bodies are exceedingly rare. Certain poisons have been isolated from the urine of persons suffering from carcinoma. The presence of a pyridin-base in the urine is an unfavorable indication in cases of extensive burns. The degree of alkalinity of the blood is more or less closely indicated by the proportion of the total phosphates to the phosphoric acid, combined in disodium phosphates. Of poisons that have been isolated, may be mentioned salophen, atropin, hyoscy-



min, urotropin, and santolin. The best method for preserving the urine consists in the addition of thymol or chloroform.

June 28, 1898. [45. Jahrg., No. 26.]

1. The Fold of the Vestibule and the Dilatation of the Nasal Alae. GUYE.
2. Exudative Laryngitis. SCHECH.
3. Infection of the Larynx in Pulmonary Tuberculosis. GUSTAV BESOLD.
4. Recent Views Concerning the Significance of Autointoxication in Epilepsy. L. W. WEBER.
5. The Relation of Weight to the Cure of Pulmonary Tuberculosis. F. WOLFF-IMMERMANN.

1.—Among the causes of **obstructed nasal breathing** should be included the sucking in with inspiration of the nasal alae. To overcome this Guye directs for his patients a rubber ring, with a diameter of from 10 to 14 mm., a lumen of from 6 to 8 mm., and a thickness of from 2 to 6 mm.

2.—It is now well known that **eruptions** may appear on **mucous membranes**, especially that of the **larynx**, similar to those on the cutaneous surface. Schech describes the clinical characteristics of the following lesions as they appear in the larynx: Miliaria, herpes, varicella and variola, pemphigus, urticaria, impetigo herpetiformis, erythema nodosum and multiforme, and lichen ruber planus.

3.—Besold opposes the widespread idea that **tuberculosis of the larynx** is incurable or nearly so. This belief is, he believes, due to the fact that cases presenting this disorder are put down as hopeless, and not treated, or to the fact that a large number of cases are never examined with the laryngoscope, and consequently an existing tuberculosis of the larynx is not discovered. He gives the results of a study of 346 cases of tuberculosis, of which 69 had characteristic ulcers or tumors, and 41 a suspicious condition of the larynx, such as swelling and erosion. When laryngeal tuberculosis is discovered, there should be instituted at once local treatment, which should go even as far as operative measures. The larynx should, in the first place, be kept as absolutely quiet as possible. All unnecessary speaking should be prohibited, and the patients should cough as little as possible. Cough can often be controlled a good deal by treating the disease of the pharynx and nose that frequently coexists, and food that is not too finely masticated or that is not entirely fluid will oftentimes cause less irritation than fluids. Food should also not be strongly spiced, and if necessary, an application of cocaine, or menthol or orthoform should be made to the larynx before eating; the last being especially recommended. In rare cases, it might be wise even to perform tracheotomy, in order to ensure rest for the larynx. Such treatment by rest and proper nourishment will oftentimes suffice in simple cases, but if ulceration is present, disinfectants and healing applications must be used, such as powders, which should be blown in in only very small amounts, and directly at the point to be treated; or fluids may be used, of which solutions of menthol have proved most valuable. Then one may advance to applications of lactic acid, to cauterization or to scraping with a sharp curet. Besold has observed no distinctly valuable results from TR. Among 69 cases of certain tuberculosis of the larynx, there was recovery in about 32% and improvement in 37%, while only 30% have been unimproved, and of the last more than half were already gravely ill when admitted, and were soon transferred to the institution for incurables and rapidly succumbed. Of the 31 cases that showed a lesser degree of disease, 17 were cured. These results seem to be at variance with those of other laryngologists, but Besold only claims that he more constantly makes laryngeal examinations and treats the discovered disease more persistently and conscientiously when he finds it.

4.—Weber reviews the work that has been done to show an excess of metabolic products, particularly intermediary products, in epilepsy. Certain accompanying clinical symptoms also lead to a suspicion of intoxication, and examination of the brains from cases of epilepsy has often disclosed minute extravasations of blood. In 14 cases in which death resulted in status epilepticus, there were evident extravasations either macroscopic or microscopic, and there were in a number of these cases evidences of fatty degeneration of the heart, the liver, and the kidneys, and besides these lesions traces of recent or old inflammation in the vessels of the

brain. Weber inclines to the belief that the disease occurs in persons predisposed by heredity or acquired factors, but that it is due to a poison, that the treatment should be directed to the elimination of this poison, and that bromids and similar drugs should be used only when other measures have proved insufficient.

5.—In continuing his communication Wolff-Immermann relates that in the cases under observation there was a general increase in weight averaging 1855 gm. during the period of acclimatization, the increase during this period seeming, from a study of results elsewhere, to be largely proportionate to the elevation of the institution where the treatment is undertaken. A too long-continued course of forced nourishment and rest, is, however, to be warned against. A study of changes in weight will oftentimes give the first indication of the existence of fever or of an increasing chlorosis. Disturbance of the digestive tract and other complications are often indicated first by changes in weight. The convalescent who has no fever should constantly increase in weight until he has reached his former weight, unless that had been influenced by abnormal factors. The greatest increase in weight is reached earlier in men than in women, owing to the frequent existence of chlorosis in the latter. Emotional disturbances, hydrotherapeutic measures, and the like, cause only temporary increase in weight, while digestive disturbances, psychic depression, loss of appetite, and night-sweats cause decrease in weight, which is often the earliest sign pointing to any such unfavorable complications. The regular determination of the weight of the patient must be looked upon as one of the most important matters in the treatment of pulmonary tuberculosis.

#### Deutsche medicinische Wochenschrift.

June 16, 1898. [24. Jahrg., No. 24.]

1. A Contribution to the Knowledge of Natural Immunity to Poisons. L. LEWIN.
2. Microorganisms that are Related to the Tubercle-Bacillus and Cause Miliary Tuberculous Disease in Animals. A. MOELLER.
3. The Technic of Reducing Deformity and Applying Bandages According to Calot's Method. O. VULPIUS.
4. Remarks Concerning Calot's Operation. A. SCHANZ.
5. Concerning a Test for Motility and Disturbances of Motility in Conjunction with Sciatica and Lumbar Pain. L. MINOR.
6. Practical Communications Concerning Cystitis. O. WIRZ.

1.—Lewin has studied the alleged **immunity** possessed by the **porcupine** against **cantharides**. The solution of this problem must be obtained by bringing the active poison in direct contact with tissues that in other animals show an inflammatory reaction, and it must be administered in sufficient quantity and in such a manner as to favor absorption. If a solution of cantharidin-crystals in oil is rubbed into the conjunctiva and the mucous membrane of the rectum distinct symptoms of inflammation appear in the course of 6 hours. Hypodermic injection produced an abscess in one case, but this result could not be obtained upon repetition of the experiment. It follows, therefore, that complete immunity of the tissues to cantharides does not exist, but their resisting power is higher than that of similar tissues in other animals. Feeding porcupines with cantharides appears to produce no result, excepting a slight tendency to refuse food, with moderate emaciation and increase in the quantity of urine. Four explanations of this immunity to cantharides are possible: (1) not enough of the poison is absorbed through the alimentary mucous membranes; (2) the organs possess abnormal resistance; (3) absorption is so slow that no accumulation of pathologic substances can occur; (4) an antitoxin is developed in the blood of the animals. In order to determine which of these is the correct one, Lewin injected animals subcutaneously with large doses of the poison. The first animal received first 2 gm. and then, 8 days later, 1 gm. of cantharidated oil. It soon lost its appetite, refused to eat, and emaciated in a remarkable manner. Microscopically no change could be found excepting a fatty exudate upon the pleura and pericardium. The second animal received 12 gm. of the oil and the results were the same. During its life



traces of albumin were found in the urine. The third animal received repeated injections of cantharidic acid, altogether amounting to 44 mg.; it died on the 18th day. In the case of this animal there was slight hyperemia of the kidneys, particularly noticeable in the glomeruli. The mucous membrane of the intestines was reddened. Experiments made to detect the presence of an antitoxin in the blood of the animals by injecting their blood serum into guinea-pigs, before and after injections of doses of cantharides, were absolutely negative. Lewin is therefore inclined to believe that the tissues of the porcupine possess an increased resisting power that is manifest not only toward cantharides, but also, in a less degree, toward opium and, perhaps, also hydrocyanic acid.

2.—Moeller has obtained **microorganisms** from timothy grass and manure that **resemble** very closely the **tubercle-bacillus**. Cultures can be obtained directly from timothy grass, if it is placed in distilled water and kept at a temperature of 37° C. The bacillus has the following peculiarities: Upon glycerin-agar the colonies are at first white, and then gray, and finally yellowish. Bouillon remains clear; at first there is a sediment at the bottom, and then a thin pellicle forms upon the surface. Upon potatoes a thick, yellowish membrane is formed. Upon serum-agar, stab-cultures are completely developed at the end of 5 days, and form an irregular, dry, reddish-yellow membrane. Upon ascites-agar, the colonies, at the end of 13 days, resemble those of the tubercle-bacillus. This bacillus stains exactly as the tubercle-bacillus, resisting the decolorizing influence of acids and alcohol. The microorganism obtained from manure forms gray and then yellow colonies, which upon very moist media develop in the course of 24 hours. It grows very well upon ordinary agar and still better upon glycerin-agar. Upon serum it forms, at 20° C., a yellowish membrane, being arranged in bundles. Bouillon becomes slightly turbid. The microorganism is short, straight and thick, forming chains, and it is sometimes arranged in growths resembling the letter Y. It may be distinguished from the tubercle-bacillus by the rapidity of its growth; from the bacillus of Petri by the peculiarities of its colonies; from the smegma-bacillus and the lepra-bacillus by its growth upon various culture-media, and from the lepra-bacillus of Czaplewski by its non-pathogenicity. Injected into animals, particularly guinea-pigs, it gives rise to the following symptoms: In the course of a short time the animal becomes sick, refuses to eat, and the temperature rises slightly; emaciation sets in and death finally occurs, sometimes in the course of a day or two. At the point of inoculation there is usually considerable infiltration, which has undergone cheesy degeneration. The lymphatic glands are enlarged. The spleen is swollen, and there are numerous grayish-white nodules in the spleen and liver. All the lesions contain the bacillus. Sometimes the lungs contain some tubercles; in other cases larger abscess-like masses or cavities. A peculiar fact is that the microorganisms obtained from these cavities only develop after an interval of 6 or 8 days upon glycerin-agar, and their colonies bear a close resemblance to those of the tubercle-bacillus. Microscopically the lesions resemble closely those due to the tubercle-bacillus, even to the presence of giant-cells, although the typical peripheral position of the nuclei has not been observed.

3.—The Calot method of **forcible reduction of spinal curvatures** has at least one objection, namely, that so many assistants are required as to exclude its employment except in the larger hospitals. To overcome this, Vulpius has devised an apparatus that suspends the patient in the horizontal position and at the same time makes traction from either end, while the reduction is in progress. The vertical position, *i. e.*, suspension by the heels, has many indisputable advantages and should be the one selected for the application of the fixed dressing. The inclusion of the head in the fixation-dressing is thoroughly approved of, if for no other reason than because it prevents the formation of pressure-sores over the prominent vertebrae.

4.—In the experience of Schanz, which has been limited, **Calot's operation** makes greater demands upon the surgeon's courage than upon his skill. Furthermore, the final results of this method are at present not determined, as several years must elapse before the permanency of the cure can be established. In but 1 of the 3 cases in Schanz's expe-

rience was a satisfactory result obtained; in another the child perspired so profusely that the dressing became saturated and had to be removed; in a third the operation was attended with the rapid disappearance of a previously existing psoas-abscess, and with the appearance of abscesses at the seat of the deformity and at the back of the head, which were followed by permanent fistulae; and later on, when the patient resumed the erect posture, the psoas-abscess again made its appearance.

5.—Minor continues his article upon the peculiar co-ordinate movements used to rise from the ground in cases of lumbago and sciatica. In 3 cases of sciatica secondary to lumbago the patients arose by leaning backward, balancing with the hands. A fourth case is particularly interesting because the patient, while suffering from lumbago, arose by leaning forward and climbing on his legs, and later, when sciatica developed, he exhibited the other type. These movements appear to depend upon the localization of the pain. If this is in the back, particularly above the gluteal fold, there is present the type of movement common with lumbago, and if the pain is below this level, the movement is that peculiar to sciatica. Both methods of rising may be observed in normal persons, but usually the series of movements is neither typical nor complete. The lumbago-type occurs even if the pain is limited to only one side. The symptom is of importance, because it enables the physician to distinguish between simulation and disease.

6.—Strict attention to general hygiene and the selection of a suitable diet are necessary factors in the successful **treatment of cystitis**. Wines, beer, and liquors, and highly seasoned dishes should be excluded from the diet, the ingestion of large quantities of liquids should be forbidden. Every effort should be made to improve the patient's general condition; to this end, active exercise in the open air, avoidance of occupations that confine the patient to the house or require him to stand continually, daily sponging of the body with lukewarm water, are to be prescribed. To prevent the patient "catching cold" abdominal binders should be worn and cold Sitz baths, followed by vigorous friction, indulged in. Internally camphoric acid, uva ursi, and drugs that will improve the condition of the blood, such as hematogen, will be found efficient.

June 23, 1898. [24. Jahrg., No. 25.]

1. Toxemic Delirium in Cardiac Disease. H. EICHHORST.
2. Comparative Investigations with Regard to the Effectiveness of Certain Gastric and Intestinal Antiseptics. R. RIEGNER.
3. Diffuse Hypertrophy of Both Mammæ. E. FRENKEL.
4. Extraction of a Splinter of Iron from the Eye by Means of an Electromagnet. VÜLLERS.
5. A Rare Case of Esophagotomy for the Extraction of a Foreign Body. K. S. GÓRSKI.
6. A Further Study of Immunity in Rinderpest. W. KOLLE.

1.—Eichhorst has observed a peculiar condition occurring in cases of uncompensated valvular disease of the heart in connection with a rapid increase in the amount of urine excreted under the influence of digitalis and diuretin. This appears first as drowsiness, which may be so deep that it is almost impossible to rouse the patient. Then there are disturbances of consciousness, the patient failing to recognize his situation or his friends. Later, delirium appears, and it may be violent in nature, or consist only in inarticulate murmuring. The patient may tear his bedclothing, and throw his body about. The pupils are usually small; frequently, there is disturbance of respiration, inspirations being deep, and the frequency being increased as if there were some obstruction in the respiratory passages, although this can never be found. The condition described continues for several days, and it disappears as soon as the edema of the extremities has disappeared, and the polyuria has ceased. It is not due to the drugs, and it is not necessary to discontinue their use, as all cases end in recovery. In none was there any albumin in the urine, and Eichhorst does not believe that uremia can have anything to do with the symptoms. He is, therefore, inclined to the opinion that a toxic body, present in the dropsical fluid, is absorbed, giving rise to the symptoms of general intoxication, and is then excreted by the kidneys.

2.—Riegner has investigated the value of the various



antiseptics employed to prevent or lessen fermentation in the contents of the **stomach or intestines**. The substances tested were menthol, thymol, chinolol, chloral hydrate, actol, soluble silver (Credé), steriform, ichthyol, and sodium salicylate. It was found that sodium salicylate, menthol and thymol, in proportions of from 0.5% to 2%, almost completely prevented fermentation of the stomach-contents, while chinolol, chloral hydrate, silver and ichthyol partially interfered with fermentation, and steriform had very slight effect. Chinolol and thymol prevented intestinal fermentation entirely; actol, soluble silver, and menthol had a less pronounced, although still considerable effect, while resorcin, chloral hydrate and silver nitrate were distinctly less valuable. The requirements of the ideal antiseptic are efficiency, non-toxicity, and slowness of solution. Menthol appears to fulfil these better than any other, as it is less soluble than the salicylate, and less irritating than thymol. The addition of sodium salicylate to nutrient clysmata prevents the unpleasant acid fermentation that would otherwise often occur. Sodium salicylate is perhaps the most valuable for lavage of the stomach.

3.—Fränkel reports the case of a woman, 30 years old, who began to menstruate at the age of 17 and up to her 22d year menstruated regularly. From that time on for 6 years she suffered from amenorrhea, but in the following year her menses returned, and with their reappearance there developed **diffuse hypertrophy of both breasts**. Further examination of the patient, a virgin, disclosed that in addition to the enormously enlarged breasts, she was suffering from chlorosis, and its associated symptoms, and that she had atrophy and retroversion of the uterus. Tablets of mammary extract were given empirically, but no diminution in the size of the breasts resulted, although the patient's general condition improved. The history of this case differs somewhat from that of those described by Billroth, in which the first signs of hypertrophy appeared simultaneously with the advent of menstruation, and the subsequent development was rapid, the breasts attaining their greatest dimensions within a few months. In the case here recorded the breasts have continued for the past three years to increase in size, and the hypertrophic process is still active. The case is of further interest as an instance of the influence of mammary hypertrophy upon the development of the genitalia.

4.—Vüllers reports 4 cases in which **splinters of steel** were extracted from the **eyeball** by means of the **electromagnet**. He attributes the good result attained in each case to the use of the small Hirschberg electromagnet, which is a much more exact instrument than that of Haab's.

5.—Górski reports the case of a child that had swallowed a double fish-hook, the shape of an anchor, a week before she came under the care of a medical attendant. At that time deglutition was almost impossible, tracheal stenosis was marked, and there was edema of the left side of the neck. Not being able to extract the hook by the mouth, esophagotomy was performed and the object secured and removed.

6.—Kolle has found that the **immunity to the cattle-plague** conferred by the injection of the bile from animals dead of the disease rarely lasts more than 1 or 2 months. If, however, such immunizing injections are practised on an extensive scale, they serve to protect the animals and practically to eradicate the disease in any particular locality. As it is important, however, to secure more permanent and efficient immunity Kolle has, in association with Turner, employed injections of a mixture of serum obtained from an immune animal and of virulent blood in such proportion that the injected animal will have a mild attack of the disease. At least 1% or 2% of blood must be used, and the mixture must be freshly made; otherwise there will be no symptoms and only transient immunity. Powerful serums are obtained by injecting virulent blood into immune animals. This effect seems to show that the cause of cattle-plague is a specific microorganism. In order to prevent the spreading of such diseases as Texas fever or pleuropneumonia, the virulent blood may be first injected into a sheep. Passive immunity may be conferred by the injection of from 150 to 200 cu. cm. of serum from an immune animal, and this sometimes lasts for six months. One hundred thousand doses of serum have already been sent to various farms, and altogether 9,478 instances have been reported with 97 deaths. The microorganism of the dis-

ease is probably about one-third the size of Pfeiffer's influenza-bacillus, for it cannot be seen with ordinary lenses; but it will nevertheless not pass through a porcelain filter.

June 30, 1898. [24. Jahrg., No. 26.]

1. The Behavior of Orthoform in the Organism. MAX MOSSE.
2. Echinococcus and Syphilitic Tumors. RUDOLPH LENNHOF.
3. Abdominal Extirpation of Fibromata, with Partial or Total Preservation of the Uterus. DANIEL TÉMOIN.
4. Total Extirpation of the Gall-Bladder and the Cystic Duct, together with Resection of the Liver for Carcinoma. HOLLÄNDER.
5. Concerning a Bacillus Found in Milk. CAMPBELL McCLEURE.
6. The Morphologic Changes in the Cells of the Anterior Horns of the Spinal Cord During Activity. JOSEPH LUXENBURG.

1.—Mosse has endeavored to determine whether **orthoform** is absorbed and excreted as such, or whether it is excreted as one of its end-products. He finds that the urine yields the reactions of orthoform after the use of this drug, but that orthoform itself cannot be extracted from the urine; so that it seems that it is excreted as some substance closely related to orthoform. Orthoform is absorbed rapidly from the stomach, being found in the urine after complete ligation of the pylorus. Added to cultures orthoform has a marked power of preventing the putrefaction of albumin.

2.—Lennhoff reports a number of cases to illustrate the difficulties often encountered in the differentiation of **echinococcus-cysts** and of **syphilitic disease of the liver**. In one case hard tumors were present in the parotid gland, in the supraclavicular fossa, and in the arm, and there was increase in the size of the liver, which presented a hard, tumorous mass on its surface. The condition was thought to be one of chondrosarcoma of the parotid with metastasis, but it was later considered syphilitic. It did not react to specific treatment, however, but after death the tumors were found to be gummata. A number of other cases are mentioned, one of the most interesting of which is that of a man, 40 years of age, whose liver presented uniform enlargement, with some nodules on its surface, and a suspicion of fluctuation. The right half of the tongue was very much enlarged. A diagnosis of venous angioma was made, as this growth is common in the liver, and is frequently multiple. Operation proved that the tumor in the liver was an echinococcus-cyst. Having noticed in a number of cases that upon deep inspiration echinococcus-cysts of the liver are pressed far down, while the skin above sinks back, causing a deep furrow between the edges of the ribs and the tumor, Lennhoff subsequently made the diagnosis of echinococcus in several doubtful cases upon the existence of this sign, and operation showed the correctness of the opinion. The phenomena is, therefore, a sign of considerable importance, as it is only an echinococcus-cyst that is likely to occupy such a position in the liver as to give rise to such a sign.

3.—Témoin reports a series of 97 **abdominal operations** for extirpation of **fibromata of the uterus** with 6 deaths. The steps of his operation are as follows: (1) An incision in the abdominal wall large enough to easily draw out the fibromatous uterus; (2) the tumor is secured by forceps and the abdominal cavity is explored; (3) the broad ligament is grasped on either side by means of long-toothed forceps and ligated as rapidly as possible with catgut or silk; (4) a deep incision is then made over the entire length of the tumor so as to enucleate the fibroma; this is usually performed readily and quickly; (5) suture of the stump with catgut; (6) hemostasis; (7) toilet of the peritoneum.

4.—In **resections of the liver**, hemostasis is better attained by the application of hot air (300°) than by the actual cautery, the action of the latter being purely local, while the former exerts its influence on the deeper-lying tissues, causing contraction of the bloodvessels and anemia of the parts. Holländer recommends the following method of performing resection: (1) Apply steel clamps early to control hemorrhage from the large veins; (2) excise the desired portion of liver-substance; (3) cauterize the surface with the superheated air and when the surface is perfectly dry



remove the clamps. A case is reported in which this method was adopted, with unqualified success.

5.—McClure has found a bacillus in milk, which, in its morphology, very much resembles the diphtheria-bacillus and in its cultural characteristics seems to be like the bacillus lactis pituitosus, though some of its characteristics do not sustain this resemblance. The pathogenicity of the organism was not fully proved, but it caused death in a mouse, although the bacillus was, however, not found in the blood or the organs after death.

6.—Luxenburg has cut the spinal cords of animals cross-wise and then separated the two halves from each other, afterward stimulating them with electricity, and investigating the changes induced in the cells. These were practically the same as those mentioned recently by Pick, namely, the cell-protoplasm was filled everywhere with fine granules representing the altered chromatin-bodies. Luxenburg differs from Pick, however, in finding that this destruction of the chromatin-substance begins at the periphery of the cell, as well as about the nucleus, and the changes observed in the nucleus and nucleolus, as to contour and size, were less marked than those described by Pick.

#### Berliner klinische Wochenschrift.

June 20, 1898. [35. Jahrg., No. 25.]

1. The Effect of Antiseptics on Toxins. E. SALKOWSKI.
2. Three Cases of Hermaphroditism. HANSEMAN.
3. A New Method of Disinfecting Dwellings. A. SCHLOSSMANN.
4. A Contribution to the Recognition of the Occurrence of Trichomonas Vaginalis in the Intestinal Tract of Man. SKALLER.
5. Primary Epithelial Tumors of the Oviduct. E. FALK.
6. Simple Tincture of Iodin in the Treatment of Acute Infectious Gastrointestinal Diseases. GROSCH.
7. A Contribution to the Knowledge of so-called Polyneuritic Psychoses. E. SCHULTZE.

1.—Salkowski made a number of experiments to determine whether the tissue of the liver had any effect upon the virulence of diphtheria-toxin with which it was digested. It first seemed that it had, but salicylic aldehyd was used to prevent putrefaction of the liver-tissue and it was found that when the aldehyd alone digested without toxin it prevented its toxic action. Carbolic acid and formalin had the same effect upon the toxin, so that it was evident that **toxins may be antidoted by antiseptics**. It appears probable that the gradual decrease of toxicity of toxin solutions after they are kept for a while, which Ehrlich attributes to the production of toxoids, is really in all probability due to the effect of antiseptics used in their preservation. Salicylic aldehyd can be used in large quantities without causing toxic symptoms, and it therefore seems possible to Salkowski that in this principle may reside a method of great value in the treatment of infectious diseases. From his investigations, it seems improbable that antiseptics are capable of a similar action upon antitoxins.

2.—Hansemann reports three cases of **hermaphroditism**. One was in an individual, 21 years old, who died of pulmonary tuberculosis, and whose abnormal condition was studied on the dissecting-table. The second case was in a woman, 82 years old, who presented a condition resembling that of hypospadias in the male. The third case was similar to the second.

3.—Schlossmann's method of **disinfection** consists in the use of a preparation that he calls **glycoformal**. It is a 40% formaldehyd-solution, to which 10% of glycerin has been added. This forms a cloudlike vapor, which has the advantages that in disinfecting rooms it is unnecessary to keep the windows and doors closed, as the substance settles downward, and by so doing carries all the bacteria in the air with it. It effects absolute disinfection, is cheap, and disinfects within 3 hours. There is no danger of explosion and gas penetrates thoroughly. A special apparatus is required for the application of this method.

4.—Skaller has found the **trichomonas vaginalis** in the stools of a patient with esophageal stricture. There was much stagnation of food behind the stricture, and it seemed probable that this gave an opportunity for the development of these monads. They were present in large numbers as a

rule, and, although the patient suffered from protracted diarrhea, it did not seem probable that the parasites had anything to do with the causation of this, as their number did not show any relation to the severity of the diarrhea at various periods, and the entrance into the gastro-intestinal tract of putrid food from above the esophageal stricture was sufficient explanation for the diarrhea. After investigation of the literature, Skaller finds that there are undoubted cases on record in which a large number of the parasites in question were present without any influence upon the occurrence or course of diarrhea, and there is no case on record in which they were undoubtedly the cause of such disturbance. Living trichomonads have, up to the present, been found only in loose stools, but there are no experimental proofs that their injection can cause diarrhea, and they may be found in healthy persons.

5.—Falk records an interesting and rare case of **primary epithelial growth of the ovary**, in a woman, 45 years old, who was relieved by operation.

6.—Grosch believes that **tincture of iodine** should be used more frequently when septic substances are present in the gastro-intestinal tract. He has used it with success in 300 cases, among which there were instances of typhoid fever, acute infectious gastro-intestinal catarrh, and the gastric conditions associated with influenza, or with icterus.

7.—Shultze closes his article by a general resumé of the conditions in his cases. It was remarkable that all three patients forgot at once things that had occurred but a few moments before. There was, however, not only this loss of memory of recent events, but there were false remembrances. There was no distinct evidence of pseudo-reminiscences, but there was, for instance, difficulty in connecting events and their place of occurrence or the time in which they occurred, *e. g.*, the patient might insist that some actual occurrence had taken place upon an entirely incorrect date. The disturbance of memory was not always alike, being sometimes better, sometimes worse. Usually, sharp, quick questioning would embarrass the memory entirely. The patients all lived in the present time, and gave little thought to past or future. All of these cases resembled one another. While in one there was polyneuritis, in the two others there was not, and it is not necessary to believe that in these latter cases there had previously been neuritis. It is only necessary to accept alcohol as a causative agent, which is capable of producing either neuritis or psychosis, or a combination of the two, and Shultze considers the term "polyneuritic psychosis" entirely improper. He believes that it should rather be called "Korsakow's psychosis," which is an affection in which there is an entirely unique psychic weakness, with special implication of memory, and which represents a specific reaction of the brain to various intoxications and infections.

June 27, 1898. [35. Jahrg., No. 26.]

1. Brachialgia and Brachial Neuralgia. HERMANN OPPENHEIM.
2. The Present Status of our Knowledge of the Suprarenal Capsule and its Functions. MAX RADZIEJEWSKI.
3. Primary Epithelial Tumors of the Oviduct. EDWARD FALK.
4. The Diagnosis of Gonorrhea in the Female. P. BROESE and H. SCHILLER.

1.—From a study of the various **painful affections of the arm** simulating neuralgia, Oppenheim concludes that actual brachial neuralgia is extremely rare. Among the affections simulating this disease are neuritis and conditions arising from compression as a result of disease of the vertebrae or of affections of the bones or joints. In the greatest number of cases the condition is one of brachialgia or psychalgia of the arm, namely, a pain in the arm of uncertain localization and irregular character, which is the symptom of a general neuropathic or psychopathic condition.

2.—Radziejewski has found that a 10% watery solution of extract of the suprarenal gland causes marked increase in blood-pressure lasting about 3 minutes, the pressure then approaching the normal. This seems due to a peripheral action upon the blood-vessels and the heart, as it occurred when the cervical cord was cut. The action upon the heart could be seen with the naked eye. If the heart was almost arrested by poisoning, a few drops of the extract placed upon



the organ itself caused it to beat again with regular, strong pulsations. The local action upon the conjunctiva has been noted by Bates when it causes total anemia. Radziejewski has repeated Bates' trials with the extract, and had found that with his own preparation, as well as with the powder prepared by Merck, the instillation of a few drops caused absolute anemia, greater than that caused by cocaine, and without any dilatation of the pupil. It had proved valuable in many cases of severe injection after the removal of foreign bodies. Redness and pain disappear almost immediately, and its use is suggested for inflammations of other mucous membranes. In the treatment of keratitis and pannus, it has been found of no value, but it might be tried in cases of glaucoma by injection into a vein.

3.—Falk reviews the pathology of the cases thus far recorded of **primary carcinoma and epithelioma of the ovary**, and concludes that clinically these epithelial new-formations are composed of the same material as the carcinomata, but from an anatomic-pathologic point of view there is a marked distinction between the two forms of the disease.

4.—Broese and Schiller have studied 271 cases of gonorrhea in women, making in all 1,500 examinations of the secretions from the urethra, Skene's glands, Bartholin's glands, the vagina, and the cervix, according to the improved histologic technic. In taking the secretions the outer surface of the vulva, urethral orifice and vestibule were bathed first with an antiseptic fluid; the lips were then separated, and the secretion from the part desired caught upon a sterilized cover-glass. The stains employed were methylene-blue, and carbol-fuchsin solution (fuchsin 0.1; alcohol 20.0; 5% solution of carbolic acid 200.0).

#### Wiener klinische Wochenschrift.

June 23, 1898. [11. Jahrg., No. 25.]

1. The Uremic Psychoses. E. BISCHOFF.
2. Two Cases of Dacryocystitis, with Rupture in Unusual Positions. J. SEK.
3. The Effect of Iron-Somatose. T. PANZER.

1.—Bischoff has observed 2 cases of **uremic psychoses** among 3,000 cases of insanity. This rarity probably explains the doubt of some observers as to the existence of true uremic insanity and the belief that the albuminuria occurring in the course of mental conditions is accidental. The two conditions may coexist accidentally and independently, but, nevertheless, in some cases the causal influence of the renal condition is indisputable. Bischoff reports the case of a man who at the age of 15 years had acute nephritis, and 4 months before admission to the hospital, after a period of prolonged anxiety, suddenly found himself unable to see clearly and feeling greatly fatigued. The diagnosis was made of nephritis and albuminuric retinitis. In the course of 3 months the man had a convulsion, with loss of consciousness. From this time he was more or less somnolent, had amnesia and showed slight restlessness. Later, there was a period of excitement, during which he cried and laughed, and was somewhat violent. This ultimately passed into a state of acute mania. When admitted to the hospital the pupils were contracted, the reflexes exaggerated. The man remained excitable, was confused and in the course of a few days there was pronounced echolalia. Six days after admission he died. There was no autopsy. This case appears to be one in which it is impossible to deny the influence of the renal disease. Bischoff has collected altogether 56 cases of the same nature. In 27 of these, disturbances of vision are mentioned, and they were present in 12. Therefore such disturbances are of minor significance. In the present case the immediate cause of the outbreak was the uremia, and it is probable that the psychic condition in some way replaced the convulsions. This conclusion, however, does not apply to the majority of recorded cases. Sometimes the convulsions occur after the development of the psychic condition, so that the two are contemporaneous. In other cases convulsions do not occur at all and Bischoff concludes that the two conditions must be regarded as wholly independent. As mental disturbances do not occur in all cases of uremia there must be some other predisposing cause, and in the present case a neuropathic tendency was inherited from the

mother. This, however, was found in only 7 of 30 reported cases. Chronic alcoholism is more frequent, occurring in 10 cases of 23. Fever appears to be a secondary condition, for in only one case was it present before the insanity. Pregnancy is a most important predisposing cause. The symptomatology is variable, but in general the symptoms resemble those of the maniacal stage of mental exhaustion. It must be remembered, however, that similarity of symptoms is no proof of identity of cause. Two types of uremic psychoses may be distinguished: the maniacal and the depressed type. The former predominates greatly. In addition, there are often so-called hysterical manifestations, such as catalepsy, dramatic posing, and the majority of cases presenting these symptoms have a neuropathic heredity. After the acute period has passed, the patients ordinarily recover their intelligence completely. The other symptoms of the disturbance of the nervous central system are tremblings of the muscles, which may affect speech, or writing, or appear as inequality of the pupils. The diagnosis depends upon the recognition of the renal condition. The prognosis is unfavorable for life, but if the patient should recover from the uremia the psychic condition usually disappears. The treatment, of course, is that of uremia. The pathologic changes are edema of the brain, and perhaps signs of multiplication of the neuroglia-cells and degeneration of the ganglion-cells.

2.—The direction in which the lacrimal sac ruptured and the subsequent inflammation of the orbital contents make this case of **dacryocystitis** worthy of notice. But five cases of the kind have hitherto appeared in the literature.

3.—Panzer has employed **iron-somatose** in 1 case of purpura, 8 cases of chlorosis, 1 of secondary anemia following gastric ulcer, and 1 of anemia of unknown cause. The dose varied from 1 to 6 teaspoonfuls per day, and the period of treatment ranged from 8 to 14 days. Several of the cases were treated beside with absolute or partial rest in bed. In the case of secondary anemia, and in 3 of the cases of chlorosis the results were excellent. In 1 case of chlorosis and in the case of purpura they were practically negative. The preparation has the advantage of being well borne and it is readily taken by patients, but it is impossible to say whether the iron is absorbed more completely than when given in other combinations; while in 1 case vomiting followed its administration.

June 30, 1898. [11. Jahrg., No. 26.]

1. A Pancreatic Cyst of Unusual Topography; Operation, Recovery. ERWIN PAYR.
2. A Chemical Examination of the Mineral Springs of Levico. E. LUDWIG and R. v. ZEYNEK.
3. A Report of the Austrian Society of the Red Cross Concerning its Work in the Royal Ottoman Military Hospital in Constantinople. M. BAYLON and A. IRTL.

1.—Payr reports a case of **pancreatic cyst** in a man who had received a severe blow in the pit of the stomach, which rendered him unconscious for a time. Two months subsequently the patient complained of symptoms of pressure in the epigastrium, vomiting and colic, these symptoms being followed by the appearance of a tumor in the hypogastric region. During the following months the tumor periodically disappeared, its disappearance being attended with diarrhea, fatty stools, and marked emaciation. Under chloroform-anesthesia the tumor proved to be, as was suspected, a pancreatic cyst, and it was evacuated and the cavity packed with gauze. The post-operative history was uneventful. The previous history in this case has many points in common with that of the 104 operative cases that have been tabulated by Takayasi. As to the topographic relations of the cyst to the neighboring organs and to the peritoneum, it was observed that the pancreas was situated in the posterior wall of the peritoneal cavity, and covered on its anterior surface by parietal peritoneum, which was really the posterior wall of the omental bursa. Immediately above the lesser curvature of the stomach was the upper border of the pancreas, covered by the lesser omentum. In most cases the cyst grows into this omental bursa, which it eventually fills; in some cases it presses the stomach downward and has as one of its tunics the lesser omentum also. The question arises as to why in spite of the position of the cyst between the liver and the stomach the



lesser omentum did not form one of the tunics, and was seen to be free in the peritoneal cavity. The only answer that suggests itself is that the cyst in its growth reached its position by passing through the foramen of Winslow. As to the diagnosis of a pancreatic cyst being based upon an examination of the cystic fluid, it may be said that while the absence of ferments is not conclusive evidence against the existence of a pancreatic cyst, the presence of a cystic fluid of marked diastatic activity is of positive diagnostic importance. The question of the relation between trauma and the formation of pancreatic cysts has been studied by Körte, who divides these cysts into two classes; those in which the tumor develops gradually after trauma, and with its appearance are observed inflammatory symptoms; and those in which a very brief period of time elapses between the injury and the formation of the cyst. The latter class should be designated as pseudo-cysts and the other as true pancreatic cysts. The case here reported belongs properly to the latter, being one of true pancreatic cyst of traumatic inflammatory origin.

2.—Ludwig and Zeynek conclude from their examination that both **mineral springs at Levico** belong to the so-called sulphur-springs. The stronger water contains a large amount of iron sulphate, and relatively an extreme amount of arsenic, while the weaker water is relatively poor in mineral substance. Arsenic exists in the latter, but in very small quantities.

### Centralblatt für Gynäkologie.

June 18, 1898. [22. Jahrg., No. 24.]

1. Two Conservative Cesarean Sections, with Transverse Division of the Fundus for Osteomalacial Contraction of the Pelvis. L. HEIDENHAIN.
2. A Case of Obliteration of the Non-Puerperal Uterus after Vaporization. O. v. WEISS.
3. The Technic of the Production of Sterility in the Female by Division of the Tubes. A. NEUMANN.
4. A Simplification of the Technic of Operations in the Cavity of the Pelvis after Celiotomy. H. THOMSON.

1.—Heidenhain states that notwithstanding his long experience he has never seen an ordinary Cesarean section performed until too late to save the patient. He is, therefore, inclined to favor the operation of **conservative Cesarean section** as recommended by Fritsch, with a transverse incision in the fundus. He records 2 cases operated upon in this way on account of pelvis contracted by osteomalacia. The pelvic outlet in both cases would admit only two fingers. The first patient was operated upon about 12 days before the natural termination of pregnancy. The first operation occupied but 4 minutes, and the second 5, from the time of the primary incision until the extraction of the placenta. The first child was slightly asphyxiated in consequence of manual compression of the circulation; the second cried immediately. The bleeding was in both cases very trifling—not as much as attends any amputation.

2.—Weiss records a case of **obliteration of the non-puerperal uterus after vaporization**, the treatment that is being advocated for climacteric hemorrhages, putrid abortions, puerperal endometritis, chronic endometritis, and endometritis associated with intramural or subserous myoma of the uterine wall. Baruch has recorded a case of atrophy of the uterus after vaporization, and Pincus has reported a case of partial stenosis of the uterine canal so treated for persistent post-climacteric flow. Weiss' case occurred in a 19-year old nullipara who was operated on by vaporization for profuse menorrhagia. Her bleeding had been so profuse as to render her anemic and very weak. The uterus was retroflexed and somewhat increased in size. The uterine cavity was large and the uterosacral ligaments infiltrated and sensitive. The vaporization was performed without an anesthetic with steam of 100° for  $\frac{3}{4}$  minute. The reaction was very trifling and the bleeding was controlled. Four months later the woman returned, and examination showed an ante flexed uterus, with the vaginal portion of the cervix conical. The body of the uterus seemed smaller than normal and hard. Specular examination showed absolute occlusion of the cervical canal. The patient was put through a course of gradual canalization of the cervix until after 8 weeks the sound could be passed 5 cm.

3.—Neumann, in speaking of the production of sterility

in women by resection of the oviduct, remarks that in case of the existence of an additional or supernumerary ostium of the tube it is possible not only for uterine gestation, but also for tubal gestation to take place. To prevent this he advocates the use of the Paquelin cautery to thoroughly cauterize the tubal canal and orifice into the uterine cavity. All that is necessary is a small abdominal incision in the median line, and the danger of the operation is as slight as in any similar operation.

4.—In the presence of a small pelvis, when access to the pelvic viscera is difficult after the performance of abdominal section, Thomson suggests not only the use of vaginal colpeurynters to raise the viscera by ballooning the vault, but also the use of a rectal balloon or the filling of the bladder with fluid. The finger in the vagina will also assist in the enucleation of adherent tumors, as an extrauterine gestation-sac or a retroflexed and adherent uterus.

June 25, 1898. [22. Jahrg., No. 25.]

1. Conservative Cesarean Section with Castration for Osteomalacia. A. SOLOWIJ.
2. The Technic of Version from Head-Presentations. A. MUELLER.
3. A Case of Hydramnios with Triplets. W. GRUDEW and S. POLOLEFNOW.
4. A New Needle-Holder. O. BEUTTNER.

1.—Solowij reports a case of **conservative Cesarean section with castration for osteomalacia**. The patient was 37 years of age, and an operator in a cigar manufactory. She had menstruated regularly since her 17th year, had been married 15 years and had given birth to 8 children. Toward the end of the 8th pregnancy she commenced to suffer from pain in the bones. After a prolonged lying-in she slowly returned to a condition of health. In the 7th month of the succeeding pregnancy pains in the bones again occurred, especially marked in the legs, and confining her to bed. The administration of phosphorus did not bring relief. The woman was now markedly emaciated, with an olive-colored skin and a normal body-temperature. Abdominal palpation detected weak and infrequent uterine contractions. The fetus lay in the second position of the vertex; the fetal heart-sounds could be heard on the right side. The distance between the iliac spines measured 22.5 cm.; between the crests 26.5; between the trochanters, 27, and the external conjugate, 19. The transverse diameter of the outlet was 4 cm. The symphysis was very movable. Abdominal section was performed and the child extracted through the uterine incision. The uterus contracted well. The ovaries were removed. The fetus was a living girl, weighing 2,750 grams. There were no ill-results, and the incision in the abdomen closed by first intention.

2.—Mueller describes the technic of **version** in cases of **head-presentation** when the occiput is directed anteriorly or posteriorly. He bases his study upon a series of 70 versions performed by him and thinks that with care the operation may be performed as easily as with foot-presentations. In 10 cases the head lay with the occiput posteriorly. The foot was reached easily by introducing the hand and wrist through the pelvic brim, while pressure was made with the other hand on the uterine fundus in order to depress the fetal limbs. In some cases it is better to introduce the hand with the palm turned away from the fetal abdomen, in order to catch the foot, the toes being grasped in the palm of the hand. Mueller reports a case of version, in a case of face-presentation in a tertipara, 29 years old, with a contracted pelvis, the distance between the spines being 25 cm., between the crests 27 cm., and the diagonal conjugate 10 cm. With face-presentations the breast and arms of the child are pressed against the uterine wall, while the lower extremities lie near the uterine fundus. In these cases it becomes necessary to pass the hand and arm in front of the child and clear up to the fundus in order to grasp the feet.

3.—Grusdew and Pololefnow report an interesting case of **hydramnios in a pregnancy with triplets**. The patient was 31 years old and in her third pregnancy, the first occurring 7 years before. Palpation revealed an excessive amount of liquor amni, while the parts of two children could be detected; a diagnosis was, therefore, made of twin-pregnancy with hydramnios. The children were all born alive, although they did not long survive.



## Special.

## INSPECTION OF MEAT FOR ANIMAL PARASITES

is the title of a compact little volume recently issued (Bulletin No. 19) by the U. S. Department of Agriculture, Bureau of Animal Industry, and prepared under the direction of Dr. D. E. Salmon. It comprises three articles—first, one on the flukes and tapeworms of cattle, sheep, and swine, with special reference to the inspection of meat; secondly, a compendium of the parasites arranged according to their hosts; and, thirdly, a bibliography.

The first article, written by Dr. Chas. Wardell Stiles, well known in this country and abroad as an expert helminthologist, is an exhaustive, splendidly illustrated resumé of the numerous parasites that have been described, the majority of which are of interest chiefly to the sanitarian and veterinary surgeon. We are somewhat surprised to learn that the most dangerous animal parasite of man is the *tænia echinococcus* in its larval stage; fully 50% of the persons effected die within 5 years after infection. In some way we had gotten the impression that the ankylostoma duodenale was man's most harmful zooparasite among the metazoa. Of 100 cases of hydatid disease in the U. S. collected by Dr. H. O. Sommer, New York furnished 33, Pennsylvania 10, Ohio 7, New Jersey 1. Undoubtedly, the echinococcus cyst is not rarely an accidental discovery, having had nothing to do with the death of the subject that harbored it. In Central Europe the hydatid is found on an average in one of every 130 autopsies. The disease may be prevented in man by observing the excellent rules laid down by Dr. Stiles, namely (1) by recalling that the dog is not a human being and should not be treated as one; (2) by preventing infection among dogs by keeping them away from slaughter-houses, and by the destruction (by heat) of all hydatids found in slaughtered animals; (3) by killing all stray and ownerless dogs. Dr. Stiles has also incorporated in his article a most useful key for the differentiation of the adult tapeworms of man, which it might be well to adopt in our schools for teaching purposes, and which we here reproduce.

From Hassall's compendium we learn that *homo sapiens* may become the host of 19 different flukes and tapeworms—at least that number is described in the present volume.

The subject of helminthology should have a peculiar fascination for physicians with a scientific bent, and it deserves the particular attention of Philadelphians, as the late distinguished Joseph Leidy ranked among the greatest of entozoologists. We must not neglect to pay tribute to the National Government, which, in its Agricultural Department, and also in other branches, is beginning to foster the spirit of scientific research in a manner becoming a great and powerful nation.

The following key is excerpted from an article on the Flukes, and Tapeworms of Cattle, Sheep, and Swine, with Special Reference to the Inspection of Meats, by Dr. Ch. Wardell Stiles in Bulletin No. 19, U. S. Department of Agriculture, Bureau of Animal Industry on the Inspection of Meats for Animal Parasites.

- (1) Head with two elongate grooves or slit-like suckers; rostellum absent; uterus with special pore; genital pores generally dorsal or ventral.....*Bothriocephalida*, 2.  
Head with four cup-shaped suckers; rostellum present, but not always evident; uterus without special pore; genital pores generally marginal .....*Tæniida*, 4.

BOTHRIOCEPHALIDE (Subfamily *Bothriocephalina*).

- (2) Body with external segmentation; head with two elongate or groove-like suckers; genital organs single in each segment; cirrus, vulva, and uterus open ventromedian.....*Bothriocephalus*, 3.  
Genital organs double in each segment; cirrus, vulva, and uterus open ventrally; worm very large, attains about ten meters in length by 2 cm. in breadth; life-history unknown. Found in Japan....*Krabbea grandis*.

## BOTHRIOCEPHALUS.

- (3) Very large, attains 10 meters or more in length, reddish gray in color; very rare in this country; obtained

from eating fish: Common pike (*Lucius lucius*), ling (*Lota lota*), perch (*perca fluviatilis*); several numbers of the salmon family (*Salmo umbella*, *S. leuostictis*, *Thymallus vulgaris*, *Coregonus lacustris*, *C. albus*, *Oncorhynchus Pegei*, and perhaps *Salmo salar*).....*B. latus*. (*B. latus* includes *B. cristatus*, Davaine, 1874)  
Length a little less than 4 feet; found in Greenland

*B. cordatus*.

(A larval *Bothriocephalus* (*B. Mansonii*) is found in sub-peritoneal connective tissue of man.)

## TÆNIDE.

- (4) Egg with thin outer shell and thick brown inner shell (embryophore); uterus median and longitudinal with lateral branches; head generally armed; larval stage a *Cysticercus*, *Cenurus* or an *Echinococcus* generally in herbivora; adults in carnivorous or omnivorous animals.....*Tæniina*, 5.  
Egg with thin, transparent shells, and frequently in egg-capsules; in some cases scattered through the segment; head nearly always armed with hooklets on rostellum; larval stage a *cysticercoid*; adults in birds and mammals.....*Dipylidiina*, 7.

## TÆNINÆ.

- (5) Head with armed rostellum.....6  
Head unarmed, rostellum absent; strobilla attains 3 to 10 meters in length; ovary of pore undivided; uterus with 17 to 30 branches on each side; the most common tapeworm of man in this country; larva in swine.  
*Tænia saginata*.  
Rostellum (?); strobila attains 5 meters in length; terminal proglottids 27 to 35 mm. long by 3.5 to 5 mm. wide.....*T. confusa*.  
(The larval stages of *T. solium* and *T. echinococcus* are also found in man.)
- (6) Rostellum with two rows of hooks, 24 to 32 in number; strobilla attains 4 to 8 meters in length; ovary of pore side undivided; uterus with 7 to 12 branches each side; comparatively rare in this country; larva in swine.  
*T. solium*.  
Rostellum (?); strobila attains 5 meters in length; terminal proglottids 27 to 35 mm. long by 3.5 to 5 mm. wide.....*T. confusa*.  
(The larval stages of *T. solium* and *T. echinococcus* are also found in man.)

## DIPYLIDIINÆ.

- (7) Suckers unarmed.....8.  
Suckers armed (the suckers of the young specimens will undoubtedly be found to be armed, although the specimens thus far found in man were unarmed, the hooks probably having fallen), the hooks being arranged in circular rows on border; hooks on rostellum resemble a hammer in form, about 90 in number and arranged in a double row, or rostellum rudimentary and unarmed; strobila 25 to 30 cm. long. Very rare; not yet recorded for America. Larva probably in some invertebrate.....*Davainea madagascariensis*.  
*Didyldium caninum*.  
Genital pores single and unilateral (on left segment); rostellum with 24 to 30 hooks, the dorsal root longer than prong or ventral root; three testicles normally present in each segment; eggs with three envelopes  
*Hymenolepis*, 9.
- (8) Genital pores double; two submedian ovaries in each segment; several rows of hooks on rostellum; strobila attains 15 to 35 cm. in length; gravid segments elliptical. Adults found in dogs and cats; rare in man. Larva found in lice and fleas of dogs. (*Trichodectes canis* and *Pulex serraticeps*)  
*Didyldium caninum*.  
Genital pores single and unilateral (on left segment); rostellum with 24 to 30 hooks, the dorsal root longer than prong or ventral root; three testicles normally present in each segment; eggs with three envelopes  
*Hymenolepis*, 9.
- (9) Hooks (24 to 28 in number, 15  $\mu$  long) present on rostellum; body 10 to 15 mm. long; not uncommon in Italy; found also in other parts of Europe. Found in rodents (rats, etc.) as well as man; larva develops in the villi of the intestine.....*H. murina*.  
(Including *Tænia nana*.)  
Rostellum rudimentary and unarmed; 20 to 40 cm. or more long; adult generally parasitic in rodents (rats); larval stage develops in certain insects (*Asopia farinalis*, *Anisotabis annulipes*, *Akis spinosa*, *Scaurus striatula*).....*H. diminuta*.  
(Including *Tænia flavopunctata*)



## Original Articles.

### SCURVY IN INFANTS.

By DAVID BOVAIRD, JR., M.D.,

of New York City.

In 1894 Crandall and Northrup published a report of 36 cases of "Scorbutus in Infants." Since that time the contributions to this subject have been limited to the reports of individual observers. By means of these reports the majority of the profession have been made familiar with the affection, but inasmuch as it is not uncommon to find cases of infantile scurvy passing through the hands of several physicians before the diagnosis is made, and also in view of the fact that one of our leading medical journals has in the interval published a pronounced case of scurvy under the caption of "Acute Rickets with Unusual Mouth-Symptoms," it appears not unprofitable to again call attention to this subject by grouping the cases reported since 1894, and presenting some study of the characters of the affection therein described. With the cases already published I shall report a number not previously recorded, some of which have come under my personal observation, and others were communicated to me through the courtesy of friends.

The total number of cases with fairly complete records is 64, raising the total of cases of scurvy in children in this country to 100. This number comprises but a part of the total number of cases observed up to this time. One writer alone (Rotch, of Boston) states that he has seen 60 cases, and many others have seen 10 or more.

Of these 64 children the youngest was 6 months old, the oldest  $2\frac{1}{2}$  years; the average age was 12 months. Only 4 were more than 18 months of age, and 35, or 54%, were from 9 to 13 months old. Of 50 cases in which the sex was noted, 24 were in girls, 26 in boys.

Forty-five of the cases were seen in private practice; 12 only at hospitals or dispensaries; in 7 there is no reference to this point.

In only one case, to which reference will be made again, were the surroundings so bad as to call for special remark. In many the hygienic conditions were of the best. The reports come from all parts of the country, even from the plains of Montana. It seems evident that even the most healthful surroundings cannot in themselves prevent the development of scurvy.

There are many interesting features in the record of symptoms. Pain is noted in practically all of the cases. In some the notes are so meager that its presence must simply be inferred from the record, but in nearly all there is a definite statement of pain elicited by motion or touch of the affected limbs. In most cases the pain is so severe that the patients watch with anxious eyes every motion of the observer and scream loudly

on the first attempt at examination. Unwillingness to move the limbs, sometimes termed pseudoparalysis, sometimes disability, was noted in 28 of the 64 cases. In 49 cases the affection was bilateral; in 9 unilateral; in one case there was no lesion of the extremities; in the remainder the location of the lesion was not specified. Although both sides of the body are usually involved, one is affected earlier and more severely than the other. The character of the reports does not permit of an accurate classification of the parts involved, beyond the fact that the legs were affected in 56 cases; the arms in 8 cases, but never without an accompanying affection of the legs. In 8 cases there was either no affection of the extremities, or no definite statement on this point. In most cases the affected part is reported to have been swollen, and in many deep thickening of the limb was noted; in some few cases there is a definite record that no such symptoms were observed; but the records are not explicit enough to allow of definite classification with reference to these symptoms.

The mouth-symptoms are hardly less characteristic of scurvy in infants than the pains in the extremities. Of the 64 cases, 52 presented a definite affection of the gums; in 2 cases the record is incomplete in this respect; in 10 the gums were normal. Of the latter group two cases (Nos. 36 and 45) have a definite record of absence of teeth; in a third, the child being but 6 months old, the same may be inferred. Case No. 33 is of peculiar interest, for, although two teeth were present, and the child was suffering from pains in the extremities and ecchymosis (all of which yielded promptly to antiscorbutic treatment), the gums were normal. In the remaining 6 cases of this group (Nos. 47, 53, 56, 58, 59) there is no statement regarding the teeth, although the ages range from 9 to 10 months. The condition of the gums is variously described as spongy, or swollen and purple, congested and bleeding, ecchymotic, or ulcerated. In these terms various degrees of the same process are evidently described. The process begins as a simple congestion about the roots of the teeth present. As the congestion deepens, diapedesis occurs and the gums become swollen, softened, purple, and bleed easily, the condition usually described as spongy. If the affection persists slight injury may cause ulceration and a condition of ulcerative stomatitis is seen. In the worst cases the swelling of the gums has been sufficient to prevent closure of the mouth. In some cases the mouth-symptoms have been the most prominent feature, usually they are noted only after examination.

Northrup affirms that in an infant pains in the extremities (rheumatism of the legs?), with spongy gums, suffice for the diagnosis of scurvy.

It is interesting to note that the pathologic basis of these apparently different symptoms is the same. The pains in the extremities, as the autopsy-reports of Barlow, Northrup and others show, are due to hemorrhages

beneath the periosteum. The mouth-symptoms are due to a similar hemorrhagic process in the gums.

There may be hemorrhages in other parts to fortify the diagnosis. Twenty-one cases (Nos. 2, 4, 7, 14, 17, 18, 20, 24, 25, 27, 28, 29, 30, 33, 34, 40, 43, 44, 47, 48, 50) presented a hemorrhagic affection of the skin, designated variously as hemorrhage, petechiæ or purpura; in three cases (Nos. 15, 44 and 50) hemorrhage into the orbit produced the familiar "black eye;" while bleeding from the nose, stomach, bladder, intestines is recorded, and one case (No 14) is said to have shown hemoglobinuria.

The constitutional symptoms are of some interest. Anemia is recorded 14 times, marasmus 7. The more recent do not give such prominence to anemia and emaciation as the earlier reports. In a number of cases the records declare that, apart from the leg-pains and spongy gums, the infants appeared quite well, were even plump and rosy.

Fever was noted as present in 8 instances. In 2 of these the record is remarkable, in 1 (No. 13) the temperature reached 105° F., and in the other (No. 14) 106° F. In both the elevation of temperature was ascribed to the scorbutic affection, and no other explanation was afforded. In the other cases the fever recorded was slight, in correspondence with previous reports.

The condition of the alimentary tract is referred to in only a few cases,—vomiting, constipation and diarrhea being each reported in several instances.

The relation of scurvy to rickets has from the first been of interest.

In 38 of the records there is no report on this point; in 16 cases rickets was present, in 10 definitely absent. In 5 of the 16 cases in which it was observed the rachitic affection was severe, in 11 slight. No argument can be founded upon these figures, but the fact that in 60% of the reports there is no mention of this point shows clearly that the doctrine of a close relationship between rickets and scurvy has made but a slight impression. The most interesting feature of these reports lies in the feeding of the scorbutic children. The substance of the reports can best be presented in tabular form, as follows:

Proprietary foods (including condensed milk)	34
"    "    and sterilized cow's milk	4
"    "    and fresh milk	1
"    "    animal broths and milk	1
Cow's milk—very dilute mixture	1
"    (milk and cream mixture)	1
"    sterilized	15
"    "    and flour	1
"    "    and porridge (very dilute)	1
Oatmeal gruel	1
Graham gruel and milk	1
Bread and butter, sweet potatoes and bananas	1
Breast-milk	3
Not stated	1

The proprietary foods still maintain their well-earned rank as the most effective producers of scurvy. In 32 cases, or exactly 50%, they constituted the sole food of the little patients; they figured also in the records of 6 other cases. We next note that no less than 15 cases, 23% of the total, developed on a diet of sterilized milk. The exact proportions of the milk sterilized are not given, but it is evident in most cases that the sterilization and not the milk-formula was held to be at fault. Moreover, in 5 cases (Nos. 10, 11, 47, 63, 64) prompt recovery occurred when the same milk was given fresh.

In all but 2 of the cases the sterilization was accomplished by boiling the milk; in one of these 2 cases (No. 36) 180° was the limit set in heating, in the other (No. 57) the milk was regularly pasteurized at 167°.

In the latter case the reporter states that he considered the proportions of the milk, which were 3.50, 6.50, 1.00, to be the cause of the trouble, and that the child promptly recovered when the formula was changed to 4, 7.10, 2, the milk still being pasteurized! In case No. 28 it is said that the child, having developed scurvy on a diet of sterilized milk, treatment was begun by simply giving it orange-juice; but little progress was made, until pasteurization was adopted instead of sterilization, when rapid gain ensued. On the other hand 2 cases (Nos. 13 and 23) are reported to have recovered when sterilized milk was substituted for a proprietary food, and in Holt's *Diseases of Infancy and Childhood* Winters is reported to have cured 4 cases of scurvy, in which proprietary foods had formed the diet, by simply giving sterilized milk instead. In 2 cases (No. 12 and 28) recovery followed a change from sterilization to pasteurization. And in 3 (Nos. 18, 19, 27) the recovery was apparently brought about by the substitution of pasteurized milk for proprietary food. Sterilized milk has, therefore, apparently, caused scurvy; it seems also to have cured it. Further evidence must be had, before any sound conclusion can be drawn with reference to its influence.

The greatest interest, however, attaches to the fact that in 3 of the cases the scorbutic children are said to have been nursed. In case No. 1 the reporter states that, under the supposition that the child was the victim of specific taint, both mother and child had been for months kept under the influence of mercurials almost to the point of salivation.

Moreover, analysis is said to have shown that the mother's milk was deficient in every respect. From the symptoms recorded, the diagnosis cannot be questioned and this case must stand as one in which scurvy developed in a breast-fed child. How much influence the mercurial treatment had in the development of the scurvy cannot be determined.

In case No. 17 the details are not given. It is simply stated that the child was taken from the breast and put upon a mixture of cow's milk.

Our interest culminates in the case No. 40, reported



## SCURVY IN INFANTS.

## CASES REPORTED SINCE 1894.

CASE.	ATTENDANT.	PUBLICATION.	AGE.	SEX.	SUR-ROUNDINGS.	SYMPTOMS.	LESSONS.	DIEET.	TREATMENT.	COURSE.	REMARKS.
1	I. N. Lave.	<i>Jour. Im. Med. Assoc.</i> , '95.	9 mos.		Private.	Marasmus, fretfulness, constipation, pain on motion.	Puffy, bleeding gums; swelling of both legs.	Breast-milk.	Fresh cow's milk, Mellin's food, orange-juice and beef-juice.	R.	
2	"	"	8 mos.	"	"	Marasmus; fretfulness; pain on handling.	Swelling lower one-third of right femur; spongy gums; purpuric spots.	Cow's milk greatly diluted with water and lime-water.	"	Food in 3 days.	Child born twins; but one exactly same condition. One child fully developed, healthy and died; the other born asphyxiated.
3	"	"	10 mos.	"	"	"	"	Sterilized milk, too much diluted with barley-water.	"	R.	
4	Chas. Douglas.	<i>Arch. of Pediatrics</i> , 1895.	10 mos.	Girl.	"	Anemia and emaciation; diarræa; pain on motion of ankles and legs.	Multiple ecchymoses; gums swollen and spongy; ecchymoses tender.	Artificial foods always sterilized.	Wet-nurse. Fresh milk, orange-juice and beef-juice.	R. in 1 mo.	Two similar cases soon both had been treated by spirits.
5	Orr.	<i>Mont. Medical Journal</i> , 1895.	11 mos.	Girl.	Private.	Very sore all over.	Spongy gums.	Artificial rhubarb.	"	R.	
6	A. D. Blackader.	"	"	"	"	Anemia; pain in knees; pseudoparalysis.	Gums swollen and bleeding easily; slight rachitis.	Mixtures of milk and flour sterilized.	Fresh milk, orange-juice and beef-juice.	R.	Patient was last of 10 children all brought up in the bottle; thus one developed scurvy. Sterilization only change.
7	"	"	12 mos.	"	"	Anemia; diarræa and vomiting; pseudoparalysis.	Slight bending of ribs; gums swollen and bleeding; swelling about both knees; ecchymoses about both.	Variety of proprietary foods.	Milk and barley water, orange-juice and beef-juice.	R.	
8	Morrow.	"	13 mo.	"	"	Restlessness and crying.	Gums swollen so as to protrude, ecchymoses.	Very much diluted milk and porridge.	Orange-juice and beef-juice.	R. 1 wk.	
9	Kenneth Cameron.	"	6 mos.	Girl.	"	Pain and stiffness at joints.	Subcutaneous abscesses, gums normal; no swellings.	Nestlé's food and sterilized milk.	Fresh milk and orange-juice.	R. 1 wk.	
10	Louis Starr.	<i>Am. Jour. Med. Sci.</i> , '95.	7 mos.	"	"	Anemia, pain on motion and touch, knees and ankles.	Gums swollen and purple, no swelling or inflammatory exudate about joints.	Milk, cream and sugar, mixture sterilized.	Peptogenic milk powder, No. 2, sterilized, beef-juice.	R.	
11	"	"	8 mos.	Boy.	"	Anemia; fretfulness, pain in limbs on motion and touch.	Spongy gums; swelling lower one-third of both thighs and over ankles.	Sterilized milk, two-thirds in water.	Same milk, fresh orange-juice and beef-juice.	R. 3 wks.	
12	"	"	10 mos.	"	"	Fretfulness; slight fever; pain on motion and touch, both limbs.	Spongy gums; slight swelling above each knee.	Milk, cream and lime-water sterilized.	Same milk, pasteurized; orange-juice and beef-juice.	R. 3 wks.	
13	H. D. White.	<i>N. Y. Med. Journal</i> , '95.	8 mos.	"	"	Anemia and malnutrition, fever over 107°; pseudoparalysis of legs.	Swollen, bleeding gums, protruding closed mouth; rachitic rosary.	Malted milk.	Mong's mixture, sterilized, meat-juice, syl. hypophosphitum.	R.	This case was reported at a child's table with unusual mortality.
14	C. I. Parnum.	<i>Med. and Surg. Rep.</i> , 1894.	1 yr.	"	"	Fever temp 106, pseudo-paralysis, heat-sweating, hemoglobinuria.	Spongy gums; thickening of lower part of femur and upper part of tibia; rachitic rosary, ecchymoses.	Peptogenic milk powder and sterilized milk.	Fresh milk, beef-juice and fruit-juice, vegetable.	R.	Temp fell gradually.
15	I. C. Wise.	<i>N. Y. Med. Rev.</i> , '95.	13 mos.	"	"	Malnutrition; pain on motion of legs, pseudo-paralysis, fever 102°.	Spongy gums; ankles and wrists enlarged and tender; hemorrhage into orbit.	Artificial foods.	Cow's milk, potatoes, orange.	R.	
16	P. R. Eggen.	<i>Jour. Im. Med. Assoc.</i> , '96.	16 mos.	Girl.	"	Anemia, diarræa, blood in stools, pain on motion of legs; pseudo-paralysis.	Spongy gums, infiltration of thighs; slight rachitis.	Mellin's food.	Fresh milk, cod-liver-oil and potatoes.	R.	Two severe cases of scurvy reported.
17	J. H. Froumlich.	<i>A. A. &amp; Pediatrics</i> , '91.	15 mos.	"	"	Pseudo-paralysis of both legs.	Swelling of both thighs; suppurating, hematoma above right knee, spongy gums; ecchymoses, marked rachitis.	Breast milk.	Cow's milk diluted with fruit-juice, tomatoes.	R.	
18	"	"	8 mos.	"	"	Pain on motion of right arm and left ankle; bleeding from gums, temp 100°, blood in stools.	Purple, bleeding gums, lower part of left femur and left ankle swollen, ecchymoses.	Various proprietary foods.	Pasteurized milk, cod-liver-oil, tomatoes.	R.	
19	"	"	18 mos.	Boy.	"	Pain on motion of right leg; pseudo-paralysis.	Extreme rachitis, swelling of lower end of right femur and right ankle, gums swollen, spongy and bleeding.	Proprietary foods.	Pasteurized milk, orange-juice.	R. 2 wks.	
20	"	"	18 mos.	Girl.	"	Pain on motion of right leg; offensive breath.	Gums swollen, purple, bleeding, swelling of right ankle, ecchymoses on trunk.	Artificial foods.	Medicated milk, orange-juice, apple pulp, non-fermentable.	R. 10 mos.	

ATTENDANT	PERTINENT	AGE	SEX	STR. SOUND	SYMPTOMS	DIAGNOSIS	TREATMENT	COURSE	REMARKS
21 G. R. Miley	A. Y. M. J. L. 15.	9 mos.	Boy	Private	Pseudoparalysis of legs with tenderness; pain on motion; faint breath.	Spontaneous, swelling of legs from ankles to knees.	Malted milk.	R 1 wk.	Child had apparently been saved from malnutrition by receipt of milk.
22 W. T. Cherry	W. T. A. 15.	10 mos.	Girl	"	Anemia and malnutrition; pseudoparalysis of right leg.	Echymoses on gums, black crusty swelling of whole gut thigh and just below the knee; rachitic rosary and box chest.	Malted milk.	R 7 wks.	
23 E. T. Graham	E. T. C. 15.	10 mos.	"	"	Anemia; malnutrition; pseudoparalysis of both legs.	Spongy gums; swelling of legs from ankles to knees and left forearm; rachitic rosary and ecchymoses.	Mellin's food and condensed milk.	R 5 wks.	
24 L. M. Snow	R. M. M. J. L. 15.	11 mos.	Girl	"	Emaciation; cold breath; tenderness to touch; vomiting of food.	Spongy gums; no swelling of legs; rachitic rosary; putrid odor.	Pro-Lactin preparation.	R 10 d.	History from mother.
25 H. T. Macdonell	Good. P. 15.	11 mos.	"	"	Pain on motion of legs.	Spongy gums; swelling over both tibia and tibia; putrid odor; no rickets.	Milk and barley water, malted milk, grapefruit juice.	R 5 days.	
26 H. M. C. Graham	A. Y. M. J. L. 15.	9 mos.	"	"	Marasmus; toothfulness; constipation; pain on motion.	Right thigh swollen and tender to touch.	Malted milk, meat juice and orange juice.	R 4 wks.	
27 Joseph Leedy	R. M. M. J. L. 15.	10 mos.	"	Chloric	Anemia; constipation; irritability and fretfulness; pain on motion of legs; pseudoparalysis; tenderness over tibia and knees.	Ulcerated gums; petechiae.	Proprietary food.	R 5 wks.	
28 " " "	" " "	11 mos.	"	Private	Anemia; tenderness to touch in lower extremities and arms.	Petechiae on gums and skin.	Sterilized milk.	R 1 wk.	Fourth part of mother's milk and sterilized milk. Rapid gain when pasteurized milk and peptogenic milk powder were given.
29 L. A. Ald	Chicago Med. Rev. 15.	11 mos.	Girl	"	Anemia and emaciation; constipation; extreme pain on motion of arms or legs; albuminuria and glycosuria.	Gums spongy and bleeding; swelling of both lower extremities; petechiae; located ribs and enlarged epiphyses.	Sterilized milk.	R 6 wks.	
30 I. M. Barth	Robt's. P. 15.	6 mos.	"	"	Pain, pseudoparalysis in arms and legs; no rachitis.	Swelling of right wrist over tibia and femora; hemorrhages in skin over swellings; gums purple and bleeding.	Malted milk and orange juice.	R 10 few wks.	
31 L. T. Holt	Procter's. C. 15.	"	"	Hospital	Anemia and ecchymosis; pain and tenderness.	Spongy, bleeding gums; swelling about left knee.	Proprietary food.	Death.	Swelling as perated, only blood found.
32 " " "	" " "	14 mos.	Boy	"	Anemia; epistaxis; pseudoparalysis; tenderness in ankles and knees.	Swollen and bleeding gums; swelling about one knee and both ankles; moderate rachitis.	Proprietary food.	R	Improved in 3 days, well in 2 weeks.
33 " " "	" " "	9 mos.	"	"	Pain and tenderness about left knee and right shoulder.	Echymoses about left tibia and right shoulder; gums normal, although 2 teeth were lost.	Infant food and milk, sterilized at 170°.	R 3 days.	
34 W. P. Northrop	Personal communication.	8 mos.	"	Private	Pain in legs; exquisite tenderness; pseudoparalysis in both legs.	Spongy gums; ecchymoses.	Boiled and pasteurized milk and proprietary food.	R 4 wks.	
35 " " "	" " "	12 mos.	"	"	Pseudoparalysis of both legs; exquisite tenderness.	Gums congested and easily bleeding; swelling of left thigh and leg.	Fresh milk and orange juice.	R 2 wks.	
36 " " "	" " "	14 mos.	"	"	Emaciation; pain in legs; sweating about head.	Beaded ribs; no swellings; gums normal; no teeth.	Fresh milk and orange juice.	R.	
37 " " "	" " "	14 mos.	"	"	Pain in legs; laryngismus stridulus; blood in urine.	Spongy gums.	Fresh milk and orange juice.	R.	
38 " " "	" " "	10 mos.	"	"	Pain in legs.	Congested and spongy gums; beaded ribs.	Fresh milk and orange juice.	R.	
39 L. H. H. M. Holt	Lab. at Philadelphia, N. L.	2 1/2 mos.	Girl	"	Pain on handling legs; pseudoparalysis.	Congested gums; swelling of lower ends of both femora.	Appetite, orange juice.	R 3 days.	
40 F. H. Southgate	Lab. of Pediatrics X	15 mos.	Boy	"	Pain on handling legs; pseudoparalysis; arms and legs; purpuric diarrhea; anemia.	Swelling of feet, hands and legs; petechiae; bleeding gums.	Cow's milk, malted milk and orange juice, potato.	R 2 mos.	Diagnosis made by B. K. Rachford.





by F. H. Southgate, of Louisville, Ky. The history is evidently that of a pronounced case of scurvy, and in view of the fact that the child was seen and the diagnosis made by Dr. B. K. Rachford, of Cincinnati, no question can be raised on that point. The surroundings of the patient are said to have been of the very worst description, the home being a rear tenement constantly in use as a laundry. The mother is said to have raised several other children under such conditions, all thriving. As if to make the record as unique as possible, the mother's milk was subjected to analysis "by a competent chemist," and the following report obtained:

Water, 87.2, fat, 4.5, casein, 2.1, sugar, 5.7, ash, 0.2.

Why a child getting an abundant supply of breast-milk of such proportions should develop scurvy is a mystery not in harmony with any theory of this affection at present entertained.

The treatment of infantile scurvy has been reduced to two things, fresh milk and orange-juice. Nothing more is needed. As already noted, both sterilized and pasteurized milk have been successfully employed in a number of cases. To the former, objection may justly be made on the basis of the evidence contained in this report, and even pasteurized milk is not altogether free from suspicion.

Of the 64 cases but 2 died. In one of these the diagnosis was evidently made at the autopsy; the other (Case No. 2) was so exhausted at the time of beginning treatment that there was no chance of saving it. The reporter calls attention to the fact that this child was one of twins reared under exactly the same conditions. One developed scurvy and died of it; the other became marantic, but showed no signs of scurvy. Under appropriate treatment it lived and thrived.

In the 62 cases that recovered the longest period of treatment noted was 7 weeks. In 2 instances the little patients are said to have recovered in 3 days!

The rapidity of improvement in symptoms that have usually persisted for weeks or months, is in most cases dramatic and often almost magical. In one of my own cases the mother reported that after 36 hours' treatment the child slept quietly through the night for the first time in 3 months! It seems almost incredible that a change of diet and the juice of a few oranges could effect such a transformation in a grave constitutional disorder.

Experience lays the emphasis still more strongly upon the diagnosis of the scorbutus. All the drugs in the pharmacopeia may be used but will give no relief. Time will not cure. But once the diagnosis is made and a proper regimen instituted rapid recovery is assured. Practically, all cases recover within a few days or, at most, weeks.

The problem of diagnosis has been simplified by more extensive experience. The anemia, wax-like pallor, and emaciation are no longer considered essen-

tial. Northrup's dictum that in an artificially-fed infant leg-pains, with spongy gums, suffice for the diagnosis of scurvy still holds good, but, as these reports show, some cases do not present the mouth-symptoms. In these hemorrhages in the skin, ecchymoses or petechiae may establish the nature of the affection. If there is no visible hemorrhage in skin or mucous membrane to suggest the nature of the affection of the extremities, the diagnosis can only be made from the results of treatment. This must remain the final and decisive test.

From the cases here tabulated two inferences seem to be justified:

1. The contention that there is no evidence that scurvy has been caused by sterilized milk must be given up. The evidence here presented is not considered conclusive, but it renders it highly probable that persistent sterilization of the food by boiling may produce scurvy.

2. It must even be admitted that scurvy may develop in nurslings.

The admission of this proposition carries with it a frank confession of inability to accept as adequate any theory of the causation of scurvy thus far advanced. Practically, the only theory that has of late commanded any general support is that which attributed the production of scurvy to the absence of some vital principle from the food, the "life" of the food being destroyed by some process of preparation. If, now, we admit the possibility of scurvy developing in nurslings, we must abandon even this hazy attempt at the elucidation of the problem, and frankly confess that a satisfactory explanation of the etiology of scurvy is still to be sought.

## THE PATHOGENESIS OF THE NASAL REFLEX NEUROSES.

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As it has been the habit for some years on the part of rhinologists to designate as nasal reflex neuroses all sorts of manifestations that seemed to have any connection whatever with existing disease of the nose, we have as a consequence under this head a catalog of symptoms and diseases of appalling length. But when all those that are in reality the results simply of mechanical obstruction and interference with function, and all those due to the direct extension of the disease-process shall have been stricken from the list, the number will be very materially reduced. When we consider how easily certain affections of the eye can be produced by way of the lacrimal canal (by occlusion, or direct extension of the nasal disease), how great a number of aural affections can be brought about by



nasal stenosis with the resultant deficient aeration of the Eustachian tubes, or by a more direct extension of the disease-process through these tubes; when we consider that interference with the lymph-circulation as well as the venous circulation of the nose may operate to bring about cerebral disturbances; when, furthermore, we recall the effect upon the lower respiratory tract of the failure of the nose to perform its usual functions of filtering, warming, and moistening the inspired air, and finally, when we note that nasal stenosis may be responsible for general anemia and malnutrition, with many attendant evils—we have good reason to be on our guard against accepting as reflex all that has been so designated. But, without doubt, there are certain manifestations of nasal origin that, after the most careful scrutiny and the application of all diagnostic criteria, cannot be explained otherwise than as reflex phenomena.

The nasal reflex neuroses have been from the beginning, as regards their nature and pathogenesis, the subject of great diversity of opinion; but all the theories proposed will, upon examination, be found to fall into three classes accordingly as they are thought to depend chiefly upon the local pathologic lesion, or upon the abnormal condition of the nervous system, or equally upon a combination of both these factors. Writers, especially in the beginning, carried away in their enthusiasm by the brilliant results obtained from operative procedures upon the nose, laid all the stress upon the local lesion present. Day pointed out the hyperesthesia of the nasal mucous membrane in these cases, and made it the cause of the reflex disturbances. Hack thought the whole trouble lay in the swollen erectile tissue. Roe, though he acknowledged a neurasthenic condition, distinctly asserts that it is the effect of the nasal lesion, and not a cause of the symptoms.

As illustrating the other extreme, Herzog maintained that the neurasthenia is the factor primarily accountable, the nasal disease being of secondary importance; while the other theory of middle ground is represented by J. N. Mackenzie, of Baltimore, who holds that both local and general conditions are necessary and equally important in the production of the reflex phenomena.

Some constitutional defect on the part of the nervous system having been noted in a great proportion of the cases, is it not fair to presume, that in many others it was overlooked by reason of careless observation or by including in nasal neuroses affections improperly so classed? As I have stated, there are many pathologic manifestations dependent upon nasal disease, yet arising in other ways than reflexly, and the disappearance of which as a consequence of nasal treatment has led observers to erroneously set them down as nasal neuroses. Under such circumstances, the constitutional taint has, of course, been missed.

But confining ourselves to only the genuine cases—those that respond to all of the tests, positive and nega-

tive, of nasal reflexes—we shall then, I am convinced, find in all, without exception, that there exists a pronounced morbid state of the nervous system.

What is the character of this morbid state; to what other condition is it allied; what is the significance and its relation to the reflex phenomena?—are questions, however, that remain yet to be answered.

First, as to its nature, we find that among the designations employed to describe it are simply, nervous or neurotic, neurasthenic, hysterical, and by the French especially, arthritic, and neuro-arthritic. The patients have been said to be restless, irritable, anxious, hypochondriacal, and it has been frequently observed that the attacks are precipitated by psychic, emotional influences, such as anger, fear, worry, etc. The peculiar paroxysmal nature of the attacks themselves, as well as the fact that generally there is a family-history of nervous diseases, contributes to the idea of a neurotic basis. In seeking to learn something more definite of this morbid nervous state, let us begin with that one of the nasal neuroses which was the first to be recognized as such. Since asthma, more than any other, has come to be admitted to have an undoubted intimate connection with the nose, and as it is universally regarded as a typical nasal neurosis, we can, perhaps, best enlarge our knowledge of the class by some attention to this particular disease.

The pathology of asthma, as is well known, is a warmly contested problem, and so far it has been impossible to reconcile the various theories advanced to explain the asthmatic paroxysm.

*The Eosinophilic Cells.*—It is remarkable that, though every other conceivable circumstance and phenomenon has been brought into requisition in the interest of one or the other of existing theories, there remains yet one whose significance has, I think, been overlooked. It comes from the department of hematology, to which we must acknowledge ourselves indebted for many recent discoveries that have contributed to the advance of medicine generally. The observation that I have especially in mind is as to the occurrence of eosinophilia in asthma. Müller and Gollasch<sup>1</sup> first noted the presence of abundant eosinophilic leukocytes in the sputum of asthmatics during the paroxysm. Gollasch demonstrated that the eosinophilic cells were closely related to the Charcot-Leyden crystals found in asthmatic sputum, and Gabritschewski<sup>2</sup> soon found that there was an increase of the eosinophiles in the blood during the paroxysm.

Before drawing any conclusion as to the significance of the eosinophile cells, we should first satisfy ourselves that an increase takes place often enough also in other nasal neuroses to warrant us in concluding that it is one of the phenomena or has any connection with the pathology of these affections. Unfortunately the inves-

<sup>1</sup> *Zeit. f. klin. Med.*, N. 0, 1884.  
<sup>2</sup> *Arch. f. exp. Path. u. Ther.*, 1890, I, 2.

tigation has been limited, and we have not so much direct observation in this regard as we should like. So far, however, as it has gone, it has been positive, Neusser and his pupils report having found an increase of the eosinophiles to be the rule in migraine, epilepsy, angina, neuralgia, convulsive disturbances, and gastric crises; all of which will be recognized as parading frequently under the guise of nasal reflex neuroses.

Eosinophilia has been found in chorea, sometimes a nasal reflex; and striking is its occurrence in exophthalmic goiter, two or three cases of which have been reported as cured by cauterization of the nasal turbinated bones. Eosinophilia in this disease was found both by Klein<sup>3</sup> and by Zappert,<sup>4</sup> reaching in some cases 8.5% (the normal being about 2%). Though direct testimony as to the occurrence of the eosinophilic leukocytes in the nasal neuroses is meager, we have nevertheless indirectly much to support the theory that a close relationship exists between the nasal neuroses and the eosinophilic cells. The relationship is to be argued from the fact that these cells are found associated with precisely the same manifestations, physiologic and pathologic, with which the nasal reflexes are associated.

*Eosinophiles and Reflex Neuroses in Relation to the Reproductive System.*—From the investigations of Neusser and his pupils, it is clear that the eosinophilic leukocytes are in some way influenced by excitation or disease of the sexual system. An increase is found to occur at the menstrual epoch, before coition, during lactation, and in sexual neurasthenia, puerperal mania, and in the psychoses incidental to the climacteric. Eosinophilia would also often be found in inflammation or disease of the genitalia, as, for example, cysts of the ovary. To be compared with these facts are the observations, sufficiently well established, of a connection likewise between the sexual system on the one hand and the nasal reflexes on the other. It is a matter of common knowledge that migraine, a great majority of the cases of which are of nasal reflex origin, is very prone to recur or to be much worse during the catamenia. The same may be said of epilepsy, some cases of which have certainly been cured reflexly by treatment of the nose; as well as of asthma, whose connection with uterine and ovarian disorders has been frequently noted.

Had we no further ground on which to base our belief, we might at least presume from these instances that the exaggeration of the affections named was due to nasal engorgement, in view of their dependence upon the condition of the nose. But we have the fullest proof of a close relationship between the nose and the reproductive organs. J. N. Mackenzie was one of the first to draw attention to this subject, and in a paper read before the British Medical Association at its meet-

ing in Montreal last fall<sup>5</sup> he presented in a masterly way an account of the operation of sexual disorders upon the state of the erectile tissue of the nose. Physiologic relations are exemplified in the tendency of the turbinated erectile tissue to become turgescient in many persons at the menstrual period and from the occurrence of sneezing and epistaxis at this time. For a long time it has been observed that vicarious menstruation could at times be represented by hemorrhage from the nose. Among the pathologic effects Mackenzie mentions that rhinitis will sometimes appear about the time of the menstrual period or that existing disease of the nose may become exaggerated, and especially that ozena will become more pronounced. He points out that masturbation, venery, and uterine and ovarian disease have the effect also of increasing or giving rise to disease of the nose. Hack, Bresgen, Schmalz, and others, have made observations in line with those of Mackenzie. Scheinman<sup>6</sup> relates the case of a woman who at each menstrual period had obstruction of the nose, with sneezing, headache, and asthmatic paroxysms, and an interesting case is recited by Schnetter<sup>7</sup> of a patient having severe headache following coition and lasting several days, in whom he effected a cure by cauterizing the turbinates. Joal<sup>8</sup> has reported some cases in which symptoms incident to the menopause (vertigo, eruptions, headache, etc.) were removed by nasal treatment, and on the other hand Alex. Peyer, reversing the rule, was able by removing diseased conditions of the sexual apparatus to influence for the better existing disease of the nose. From all this then it would appear that we have evidence no less convincing that there exists a close relationship between the organs of olfaction and those of reproduction, diseased conditions in the one producing reflexly manifestations in the other, than is the evidence of the relation of the sexual system with the eosinophilic leukocytes.

As we are seeking to establish a connection between the nasal neuroses and the eosinophiles by demonstrating a coincidence of association, let us proceed to another class of affections in which the eosinophiles are commonly increased.

*Relation of Eosinophiles and Nasal Reflexes to the Cutaneous System.*—Those who have made a study of the eosinophile cells especially have remarked upon their frequent augmentation in connection with certain dermatoses—urticaria, pellagra, pemphigus, eczema, herpes, and others. We could call attention in this connection to the fact that pilocarpin, a drug prone to produce a hyperemia of the skin, brings about also a great increase of the eosinophiles, and also that these cells, though generally decreased during the course of the essential fevers, are decidedly increased in that one,

<sup>5</sup> *Annals of Otol., Rhin., and Laryng.*, Feb., 1898.

<sup>6</sup> *Berl. klin. Woch.*, 1889, No. 19.

<sup>7</sup> *Der nervöse Kopfschmerz*, Heidelberg, 1889.

<sup>8</sup> *Revue des Sciences Méd. et Nat.*, 1889, p. 221.

<sup>3</sup> *Stamm. Klin. Woch.*, 1893, No. 87.

<sup>4</sup> *Z. f. klin. Med.*, 1895, p. 266.



scarlatina, having the most pronounced cutaneous eruption.

Though observations are meager, a few facts as to the relation between the nose and the skin may be submitted. Among the first examples of reflex affections dependent upon diseased conditions in the nose, mention was made by Hack of acne rosacea. Mackenzie was struck by the occurrence of coryza and urticaria and of nettle-rash and milk-rash in association with some of the nasal neuroses. Major and others have reported cases of erysipelas and diffuse erythematous eruptions of the face apparently dependent upon co-existing disease of the nose, and I have myself seen a diffuse erysipelatous rash follow cauterization of the nose and reappear with a repetition of the procedure.

*Relation of Eosinophiles and Nasal Reflexes to Uric Acid.*

—As eosinophilia is known to be associated with the so-called uric-acid diathesis, we have in this circumstance another proof of a connection of these cells with reflex neuroses, for upon analysis it will be discovered that the very affections that observation has shown to be most frequently associated with uric acid are those that manifest themselves as nasal reflexes. Not only in asthma, but according to the investigations of Haig, uric acid occurs quite constantly also during attacks of migraine and epilepsy and other convulsive disorders, which are at times evidently of nasal origin. It is interesting to note that uric acid seems also to be excreted in abnormal amounts often in chorea, neuralgia, and angina, which we know may manifest themselves as nasal reflexes.

To resume, then, it appears from the foregoing to be sufficiently demonstrated that certain sexual disturbances, cutaneous eruptions, and uric-acid abnormalities are similarly associated with the production of the eosinophilous cells and a class of manifestations known as nasal reflex neuroses, which permits us by a simple logical process to reason that the two last-mentioned are closely associated with each other. If it be admitted that we have succeeded, in the absence of direct investigation as to the character of the blood in the reflex neuroses, in showing nevertheless by indirect testimony that the eosinophilic cells are common to this class of affections, it is reasonable to presume that they have some pathologic relation. Does there exist any information as to these cells that would be likely to throw any light upon the possible significance in the reflex neuroses?

*The Significance of the Eosinophiles.*—The fact that the increase is confined to this particular variety of the leukocytes is of itself ground for presumption that these have perhaps distinct physiologic properties, and we have Neusser as an authority that this is indeed the case. He holds that leukocytes distinguished by the presence of coarse, acid-staining granules (and known as eosinophiles because eosin is employed) are different from the others so far as their genesis is concerned.

According to him they are directly under the influence of the sympathetic nervous system and are produced in increased numbers when for any reason there takes place irritation of the sympathetic, representing what he calls a kind of secretory neurosis.

This theory of the origin of the eosinophiles is supported by a number of facts, among which may be mentioned: (1) The fleeting character of the eosinophilia generally; (2) its taking place in diseases in which the nervous system is thought to play a part, and especially occurring during attacks in which are observed phenomena that indicate irritation of the sympathetic; (3) its association with sexual psychoses, with the psychoses of puberty, menstruation, and the climacteric, which are well known to indicate sympathetic irritation; (4) its association with certain cutaneous eruptions, pellagra, pernicious lymphoderma, etc., that are perhaps caused by excitation of the sympathetic; (5) its connection with intestinal intoxication, the toxins probably acting as sympathetic irritants; (6) its occurrence as a result of the action of pilocarpin, a well-known vasomotor excitant.

The theory of the sympathetic origin of the eosinophilic cells emanating from such high authority, and resting upon such apparently good grounds, we may well accept it, at least provisionally, so long as we find it consistent with and offering an explanation of demonstrated facts. If this view of the eosinophilia be applied to the nasal neuroses, with whose pathology it has, as I believe I have shown, an undoubted connection, how does it help us?

In the first place it agrees with the fact stated at the beginning of this paper, that at the basis of the nasal reflex neuroses there is some abnormality of the nervous system. In the second place it appears to point out, with more definiteness than has heretofore existed, the real nature of that condition of the nervous system presumed to be present. From what we have learned of the eosinophiles we may infer that their presence in the blood in unusual proportions indicates an over-activity on the part of the sympathetic ganglia that must be owing either to an extraordinary irritation or to the fact that these centers are in such an abnormally hypersensitive state that they respond too readily to ordinary irritation. That it cannot be the former is evidenced by the fact that such local nasal lesions as are considered to produce reflexes, are found frequently unattended at all with reflex phenomena.

The other, then, is the only deduction possible, and it agrees, moreover, with the knowledge derived from other sources of the presence of a morbid nervous state in this class of affections.

In order for the production, then, of a nasal reflex there must be not simply the local lesion in the nose, but at the same time a certain morbid state of the sympathetic centers, constituting the diathesis of which I have spoken. This morbid state consists in an extra-

ordinary sensitiveness, or we may say a hyperkinesia of the vasomotor sympathetic ganglia, by reason of which extraordinary activity is brought about by only an ordinary stimulus. There is seated, let us say, a polypus in the nasal fossa; from this there goes out an afferent impulse that, conveyed to an oversensitive center, becomes converted into an efferent impulse of unusual intensity, which manifests itself as a reflex phenomenon. In some location, determined by certain laws and conditions, there will take place vasomotor disturbances whose symptoms will differ according to the part affected.

That the vasomotor system plays a part in the class of affections under consideration has been maintained by more than one observer in the past, although there was far less upon which to base such a belief than we have at present. DuBois Reymond,<sup>9</sup> for example, long ago advanced the theory that migraine is due to irritation of the sympathetic. Mollendorf, who like DuBois Reymond was a sufferer from this malady, considered it to be the result of sympathetic paralysis (hemicrania sympathica paralytica), whereas Jaccoud, combining the two apparently opposing theories, says the attacks are due to excitation of the great sympathetic, succeeded by paralysis from nerve-exhaustion.

Among the many theories invoked to explain asthmatic paroxysms, we find that of vasomotor disturbances advocated by Weber, Stödk, Fräntzel, and others. I may mention, in this connection, that Nothnagel has described cases of what he calls vasomotor asthma, and likewise vasomotor angina, and also the experiments of Kussmaul and Tenner showing that epilepsy may be provoked by cerebral anemia, a condition easily produced by vasomotor spasm.

There is indeed in the literature no want of authority for the views advocated here, which will be found, moreover, to be further substantiated by much collateral evidence. What I wish to emphasize at present is the fact of the occurrence of an augmentation in the blood of the eosinophilic leukocytes in connection with attacks of nasal reflex neuroses. This eosinophilia, being the result of sympathetic irritation, an essential feature of the disease, must be regarded as distinctive of the whole class of nasal reflex neuroses, and we have a right to look upon this phenomenon accordingly in the light of a diagnostic criterion. This distinction is the more important in this class of affections than in all others, because of the existing confusion that has arisen as the result of their frequent simulation.

**Hereditary Morphinism.**—P. C. Layne (*Quincy Lancet-Clinic*, July 9, 1898) reports the delivery of a morphinababe, who had been taking daily 5 grains of morphin hypodermically, of a well-developed child, which gradually became irritable, and fretful, and finally refused food. One-twentieth of a grain of morphin was administered hypodermically with no other than a soothing effect and under small doses the child has continued to grow rapidly.

## A CASE OF UNILATERAL FLUSHING AND SWEATING OF THE FACE.

By J. H. WALLACE RHEIN, M.D.,

of Philadelphia.

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AN unmarried woman, 23 years old, employed as a soap-worker, applied to the Clinic for Nervous Diseases at St. Agnes' Hospital, complaining of numbness in the right hand, involving all the fingers except the little one, of sweating and flushing of the right side of the face and neck, and of periodic swelling of the right hand. The symptoms had begun suddenly about 3 months previously. She awoke one morning to find her arm swollen, from the middle of the arm to several inches below the elbow. The member was painful, red and apparently inflamed, but not sensitive to touch. The swelling was reduced in 3 days by means of local applications. Shortly afterward the woman noticed that her face flushed and sweated profusely on the right side. These symptoms have persisted, unaltered, since.

The family-history is negative. The patient always enjoyed excellent health, although of a nervous temperament, until 8 years ago, when, while ironing, she was suddenly seized with numbness in the fingers of the right hand, and this was the beginning of a nervous attack which lasted 3 months. Again 3 months ago she suffered from a similar attack. She was under treatment about 7 years ago at the Woman's Hospital, at the hands of Dr. C. K. Mills, for curvature of the spine, which symptom still persists.

About a year ago, the right upper extremity became swollen, with the exception of the tips of the fingers. The manifestations resembled those already described as having occurred 3 months before coming to the clinic. The swelling disappeared in a few days, but there remained tenderness on the inside of the arm and flexor surface of the forearm for a few days. There have, however, been during the day several attacks of sharp pain in the same locality, ever since.

In August, 1897, upon awakening in the morning, the patient discovered that her hand was numb and the arm felt paralyzed. These manifestations were subjective entirely, as power remained unimpaired. The arm, however, was white and cold as far down as the wrist. Ice was applied for the relief of the symptoms, whereupon feeling returned, the arm grew red and then finally in the space of half an hour, normal in color again. Since then, when, on a few occasions, ice has been applied to the fingers for the relief of the numbness, these parts became white, cold, then in a few minutes red, and finally normal again.

Upon examining the patient, a flushing of the right side of the face was at once noticed. This extended well down upon the surface of the neck anteriorly and laterally, and was limited rather sharply by the median line of the face. It was very marked, although the left side could be said to be florid. At the same time excessive sweating could be seen, localized mainly to the forehead on the right side. At the time of examination this was not very excessive, but the patient informs me that at times it becomes very profuse, the secretion rolling down upon the face in great drops. The latter symptom seems more or less dependent upon exertion or emotional disturbances. The flushing, however, usually does not begin until after midday and disappears as night comes on, although it may occur, but more rarely, at any time of the day. The right hand was swollen, shiny, and somewhat flushed. There was no pitting, but the joints were stiff and the fingers seemed clumsy. This swelling, the patient asserted, disappeared entirely in the morning and came on at about the same time as the flushing, and persisted till evening. The numbness was always worse when the hand was swollen. Besides these symptoms the woman was generally nervous, complaining of occasional headache, indigestion and constipation.

The knee-jerks were normal, the arm-jerks present, but there was no chin-jerk. Station was good. There was no alteration in sensation anywhere. There was no evidence



pointing toward the presence of an aneurysm or other vascular tumor. There was no paralysis, the grasp being equal on both sides. Upon resting the back a marked right cervical and left dorsal scoliosis was seen, but no tenderness of the spine or other deformity could be found.

Examination of the eyes by Dr. A. G. Thomson revealed nothing abnormal in the color, fields, eye-grounds or muscular balance. There was some defect of refraction, which was properly corrected. The pupils were equal and responded normally to light and in accommodation, but the patient states that the left pupil is at times contracted. The urine was normal. A soft systolic murmur, probably of hemic origin, was heard over the base of the heart. Examination of the lungs yielded negative results.

It will be observed that the symptoms presented by the patient are, for the most part, vasomotor in character. She is, however, generally neurasthenic. In the past history there is evidence of repeated attacks of local asphyxia; and at the present, the swelling of the hand, the flushing of the face, the unilateral sweating, point to some parietic condition of the sympathetic nerves. I have examined in vain for some source of reflex irritation. There is no evidence of central disease; there is no history of injury to the cervical sympathetic. In making a diagnosis, I have thought of neurasthenia and hysteria, and in spite of the absence of paralysis, convulsive attacks and anesthetic areas, I have been inclined more to the latter. However, unilateral flushing may be a symptom of neurasthenia. I have seen but one such case, but the flushing was permanent. This was in a patient of my friend, Dr. C. W. Burr, who gave me the opportunity to see the case. She was a profound neurasthenic. There was an area of flushing which had not previously been noted, located on the left cervical region and occupying a space of about 3 x 4 inches. Dr. Burr informed me that as the patient improved the skin regained its natural color. There was no excess of sweating over this area and the flush was permanent.

It is well known that local sweating, flushing and local edema are sometimes present in cases of hysteria. Weir Mitchell's cases<sup>1</sup> of local edema in hysterical paralysis are interesting examples of this.

The flushing and contracted pupil in the case here reported would indicate a paralytic condition of the sympathetic, but what of the sweating? In Weir Mitchell's cases with unilateral flushing and oculomotor symptoms there was absence of sweating on the affected side. On the other hand Landois and Stirling assert that unilateral hyperhidrosis may be accompanied by symptoms of paralysis of the cervical sympathetic, such as redness and contraction of the pupils, or with symptoms of stimulation of the sympathetic, when there are dilated pupils and exophthalmos. When occurring without these phenomena, the manifestation is probably due to stimulation of the proper secretory fibers alone. Unilateral sweating may be, according to Raymond, (1) of central origin; (2) dependent upon some disturbances of the cervical sympathetic; (3) due

to disturbance of the facial and fifth nerves; (4) of reflex origin.

A review of the literature of this subject throws little light upon my case. Unilateral sweating has been observed in hemiplegia, as in cases reported by Lloyd,<sup>2</sup> Mills,<sup>3</sup> Ringer,<sup>4</sup> and others, and as Strümpell and Gowers claim, this is especially true when the patient suffers from kidney-disease. Pandi<sup>5</sup> has studied this phase of the subject carefully, and concludes that sweating is controlled by a cortical center, to which are carried impulses from the periphery through the anterior roots and the motor fibers of the sympathetic; secondly, that sweating can be pathologically caused either by irritation or by interruption of the transmitting fibers; thirdly, that the cause of pathologic sweating, when there is obstruction in the pathway, is either degeneration of the sweat-glands above the palsied parts or due to psychomotor influences.

In the case reported by Marselli<sup>6</sup> there was gradual weakening of the legs, then a paralysis of the right leg and pain in the right side of the head. The right cheek became swollen and was covered with a profuse sweat, while at the same time the face became redder and warmer. Post-mortem examination revealed changes in the cervical ganglia. This was probably a case of central origin. Unilateral sweating was present in a case of abscess of the brain, reported by Adamkiewicz.<sup>7</sup> It has been frequently seen in certain forms of insanity, such as parietic dementia, of which Mickle<sup>8</sup> reports 3 cases, and Meschede<sup>9</sup> one. It was present also in a case of Wiedmeister.<sup>10</sup> It has been described as occurring in epilepsy. In Russell's<sup>11</sup> case recurrent sweating and flushing on the left side sometimes preceded an attack and sometimes did not. It has been noted in a few cases of locomotor ataxia. (Bazaire,<sup>12</sup> Nitzelnadel.<sup>13</sup>) In Anstie's<sup>14</sup> case the face was flushed and hot on the same side as the sweating.

Unilateral flushing is a well-known symptom of aneurysm of the aorta. It was Gairdner<sup>15</sup> who was probably the first to call attention to this fact. Bartholow<sup>16</sup> cites a case of thoracic aneurysm with redness of the right ear, and Clark<sup>17</sup> reports a case of similar nature.

Alonzo Bryan<sup>18</sup> reports a case of neuralgia in which

<sup>2</sup> *Twentieth Century Prac. Med.*, Vol. XI.

*Med. and Surg. Reports*, 1886, p. 239.

<sup>3</sup> Cited by Lloyd, *Twentieth Century Prac. Med.*, Vol. XI.

<sup>4</sup> *Wien. Med. Woch.*, 1886, p. 700.

<sup>5</sup> Cited by Pandi.

<sup>6</sup> *Arch. f. Anat. and Phys.*, 1896.

<sup>7</sup> *J. Clin. Med.*, 1877, 8.

<sup>8</sup> Virchow's *Arch. f. Anat. and Phys.*, No. 47, 1877.

<sup>9</sup> *Arch. f. Anat. and Phys.*, No. 52.

<sup>10</sup> *Med. and Surg. Prac.*, 1896, p. 366.

<sup>11</sup> *Trousseau's Clin. Med.*, No. 8, 1877, p. 100.

<sup>12</sup> Cited by Pandi.

<sup>13</sup> *Narcotics and Sleep*, 1877.

<sup>14</sup> *Clin. Med.*, 1877, 2, p. 200.

<sup>15</sup> *Clin. Lancet and Observer*, 1868, No. 11, p. 464.

<sup>16</sup> *Med. J.*, 1877, 2, p. 100.

<sup>17</sup> *Clin. Clinic*, 1878, p. 265.

there was sweating on the same side as the pain. Lewis<sup>19</sup> reports a curious case of sweating on one side occurring in malaria. The temperature of the affected side was over 3° lower than that of the opposite side. Mundt<sup>20</sup> and Schultz<sup>21</sup> described this condition in syringomyelia.

In pneumonia in children unilateral sweating and dilatation of the pupil has been noted on the same side as the consolidation. Fleischmann<sup>22</sup> in two cases of pulmonary tuberculosis, with a cavity on one side, observed redness of the face on the same side.

Parfianovitch<sup>23</sup> and Wilde report cases of unilateral sweating due to parotiditis complicating typhoid fever. Rice<sup>24</sup> has observed unilateral sweating in a case of gout. In the case reported by Pakroffsky<sup>25</sup> in which there was specific history there was unilateral sweating and redness after eating. Cotman<sup>26</sup> reports a similar case of sweating on one side after mastication, and Schweniger and Buzzi<sup>27</sup> describe a case in which after eating, flushing and sweating were limited to a small area on one cheek. Unilateral sweating has been seen in true exophthalmic goiter, as in a case of Nitzelnadel and Kulz.<sup>28</sup>

Eberle<sup>29</sup> himself suffered from sweating on the right side of the face, neck, breast and body upon exercise. Unilateral flushing has been noted in cases of injury to the sympathetic nerve, as in Weir Mitchell's case reported in *Injuries of Nerves* in 1872. The pupil was contracted, there was ptosis, increased lacrimation and unilateral flushing. There is no note of sweating. Mitchell quotes Ogle's case of destruction of the cervical sympathetic by abscess, in which there was flushing, contraction of the pupil and absence of sweat. In *Injuries to Nerves*, 1895, J. K. Mitchell cites a case of buckshot-wound through the left side of the larynx and neck, in which there was absence of sweating on one side and an area of flushing under the armpits on the same side.

Ebstein<sup>30</sup> relates a case of left-sided sweating, without flushing, following an attack of angina pectoris. In this case the cervical ganglia were diseased. Olivier<sup>31</sup> reports a case of hereditary unilateral hyperidrosis. The sweating occupied the skin in the distribution of the superior maxillary branch of the fifth nerve. The skin was injected at the time of the sweating. The maternal grandfather and aunt suffered from a similar disorder. The condition had been seen with-

out apparent cause, as in Berger's<sup>32</sup> case; and in Jamieson's<sup>33</sup> case the unilateral sweating and flushing came on when the patient was warm and excited, disappearing when he was quiet or at rest. Penny<sup>34</sup> reports two cases of unilateral inguinal sweating, in one about an old scar from a bubo, in the second after gonorrhea.

Campbell<sup>35</sup> considers flushing very fully in his book *Flushing and Morbid Blushing*. He says:

"The patient at first feels hot, some portion of the skin being flushed; the blood immediately after, or in a very short time, sweating occurs, finally, while the sweat is still on, or while it is diminishing, or after it has actually disappeared, the patient feels cold, and may shiver."

This describes what he terms the typical flush, but he points out several modifications. He considers a flush a symptom of a "highly complex definite nerve-storm." He cites briefly 4 cases of unilateral flushing.

Eshner<sup>36</sup> has reported a case of basilar meningitis presenting unilateral sweating of the head and face, with absence of perspiration on the entire opposite side of the body. Death resulted from cerebellar hemorrhage and the diagnosis was confirmed on postmortem examination.<sup>37</sup>

## TRAUMATIC DISLOCATION OF THE HIP IN CHILDREN, OLD AND RECENT.

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THE comparative rarity of dislocation of the hip in children will excuse my quoting a little from textbooks. Edmund Owens<sup>1</sup> does not mention it. Ashby and Wright<sup>2</sup> say, in very few words, that the accident is rare, but that the dislocation is easily reduced. D'Arcy Powers<sup>3</sup> says also that it is rare, and that he has seen but one case, which was reducible. Packard<sup>4</sup> has collated and refers to 44 individual cases, reported by different surgeons from 1772 to 1890. Counting the congenital cases with the traumatic, Packard says that dislocations of the hip are the second most common dislocation in children. That it is not so uncommon, absolutely, as one might infer from the light dismissal of the subject by the English writers quoted, is shown by Stimson, who quotes Krönlein, 8 cases, 4 under 10 years of age, and Prael, 41 cases, 12 under 10 years of age. Hamilton, 84 cases, Malgaigne 41 cases, and Agnew, 89 cases, do not, however, give anything like so high a proportion as occurring in children; in fact in Agnew's list there is no case that occurred in a child.

<sup>19</sup> *Inaug. Diss.*, 1888.

<sup>20</sup> *Brit. Med. Jour.*, 1887, p. 918.

<sup>21</sup> *Brit. Med. Jour.*, 1887.

<sup>22</sup> *Brit. Med. Jour.*, 1887, p. 918.

<sup>23</sup> *Med. Repository*, 1817, No. 18.

<sup>24</sup> *Med. Repository*, 1817, No. 18.

<sup>25</sup> *Med. Repository*, 1817, No. 18.

<sup>26</sup> *Med. Repository*, 1817, No. 18.

<sup>27</sup> *Med. Repository*, 1817, No. 18.

<sup>28</sup> *Med. Repository*, 1817, No. 18.

<sup>29</sup> *Med. Repository*, 1817, No. 18.

<sup>30</sup> *Med. Repository*, 1817, No. 18.

<sup>31</sup> *Med. Repository*, 1817, No. 18.

<sup>32</sup> Virchow's *Arch. f. path. Anat.*, No. 51, p. 427.

<sup>33</sup> *Brit. Med. Jour.*, 1887, p. 675.

<sup>34</sup> *Brit. Med. Jour.*, 1887, p. 675.

<sup>35</sup> *Flushing and Morbid Blushing*, 1890.

<sup>36</sup> *Philadelph. Polylinic*, January 1, 1898, p. 5.

<sup>37</sup> *Surgical Diseases of Children*, first edition.

<sup>38</sup> *Surgical Diseases of Children*.

<sup>39</sup> *Surgical Diseases of Children*.

<sup>40</sup> *Surgical Diseases of Children*.

<sup>41</sup> *Surgical Diseases of Children*.

<sup>42</sup> *Surgical Diseases of Children*.

<sup>43</sup> *Surgical Diseases of Children*.

<sup>44</sup> *Surgical Diseases of Children*.



It is not to be expected, however, that all collections of cases will give, on analysis, the same results, and that the dislocation does occur in children is well known.

A rather cursory review of recent medical magazines and journals, however, would lead one to infer that the condition is either too common to make it worth while to report cases, or that it is comparatively rare, as I believe it to be. I could find but one case reported, that of Mr. A. Clark.<sup>6</sup> In this, immediate reduction by manipulation was effected. By the courtesy of Dr. Emma S. Merritt, one of my colleagues on the staff of the Children's Hospital, San Francisco, I am permitted to report two cases that have occurred in her service in the hospital.

David D., 12 years old, was in 1892 thrown from a wagon, receiving, among other injuries, a dislocation of the right hip. The head of the femur was on the dorsum of the ilium, and the limb was in the position usual with dislocation in this direction. Practically the only movement permitted was flexion and limited extension. Reduction under an anesthetic was easily effected by Dr. Merritt, and the boy was dismissed from the hospital, practically recovered, in 23 days.

Horace R., 3 years old, fell in 1892 into a hole in the sidewalk, and suffered an iliac dislocation of the right hip. The position of the limb and the other conditions were what are usual with this dislocation. Under an anesthetic the bone was easily put in place, 3½ hours later. In two weeks he could walk, and left the hospital.

There is nothing of special interest in these cases, but they are, with perhaps one exception, the only cases of recent dislocation of the hip admitted during the 12 years I have been connected with the hospital.

All writers assert that reduction should be accomplished at once, by manipulation under an anesthetic; but Packard refers to 8 cases in which reduction was delayed for a varying time from 10 days to 11 weeks, and yet was finally successful.

Stimson, writing in 1888, refers to 6 cases of irreducible dislocation of the hip—only one was in a child—that were subjected to open cutting operations. These had been reported by Volkmann, MacCormac, Polaillon, Quenu, Severano and McBurney. Of these Volkmann, MacCormac, Quenu, and Severano failed to reduce. Polaillon succeeded, but his patient, an alcoholic, who had been subjected to rather violent manipulations before the operation, died of sepsis. McBurney also succeeded in the case of a boy 7 years old, but the head of the femur afterward necrosed and had to be removed. Nélaton<sup>6</sup> adds to this list Margery, Nicoladoni, Vecelli, Paci, Bloch, and Ricard, and all of these failed to reduce except Vecelli. Nélaton points out the failures were primarily due to incisions made behind the trochanter, as if for excision. Vecelli made his incision in front of the trochanter, as did Polaillon, already mentioned as having effected reduction.

Engel<sup>7</sup> reports two cases of old dislocation of the hip

in adults, one in a woman of 40 and the other in a man of 18 years. In each, manipulation failed and reduction was accomplished through incisions, and with section of muscles and ligaments. In both, most unfortunately, suppuration occurred, but finally the patients recovered, the reduction remained permanent and the limbs were useful, although the joints were stiff.

I am able to report a case of my own that has proved a most satisfactory success:

Margie C., 11 years old, climbed, in June, 1897, over a fence, was 3½ years old, on a gate that morning was leaning against the fence. It is supposed that she caught her foot in the slats, that the gate then fell over on her and that, in trying to escape, she twisted around, for when she was found she was lying on her face, the gate was on her back and her foot was pointing upward, but was disentangled from the slats. Attempts at reduction were made at once, but failed. Traction was then made for 6 weeks, by weight and pulley, and efforts at reduction at that time again failed. There was, after that, no further treatment.

I saw the child with Dr. W. D. Clark, in January, 1898. The child was running about, but with some limp. The limb was 2.5 cm. short. The position was that of an old dislocation, but with an unusual amount of mobility, for abduction and rotation outward were the only motions absolutely prohibited. The femoral head could be plainly felt under the gluteals, resembling in this the congenital cases. The child was otherwise healthy. She was transferred to my care through the kindness of Dr. Clark, and was sent to the Children's Hospital.

On January 15th, efforts were made at manipulative reduction, but were quite futile. Neither the Bigelow maneuvers for traumatic dislocations, nor those of Lorenz for congenital dislocations, nor the slight variation of the latter that I practise with success in congenital cases, produced any result.

An incision was then made along the posterior border of the tensor vaginæ femoris, the dissection carried down in front of the dislocated trochanter, between the gluteus medius and gluteus minimus, to the head of the femur, and this was cleared from its adhesions to surrounding tissues. There was no evidence of an attempt to form a new socket. To bring the head down to the level of the acetabulum it was necessary to cut both the gluteus medius and the gluteus minimus from their attachments to the trochanter. Investigation of the acetabulum showed that the capsular ligament had been torn entirely from the femur, and it was lying collapsed in the cavity of the acetabulum. Its adhesions along the upper margin were detached, and it was peeled from the floor of the acetabulum. The round ligament was not seen. The articular cartilage on the head of the femur and in the acetabulum was apparently unchanged. The head was put into the acetabulum quite easily. It was not possible to suture the capsule, nor the anterior fibers of the gluteus minimus, but sutures of catgut were put into the muscles at the deepest situation possible, and the skin was sutured, also with catgut. A gauze drain was carried to the deepest part of the wound. The leg was put up in a plaster-of-Paris spica in a position of 25° of abduction, with the toes pointing forward. All of the muscle cut and left unsutured was abductor in function, and this position approximated the cut ends to a certain extent. The gauze drain was removed 5 days later. The splint was taken off on the nineteenth day. Healing had been quite uneventful; a few granulations at the drain-opening required, when the splint was removed, a little touching with copper sulphate.

No massage or passive motion was used. Limited motion, within a limited range, was present. The limb lay in a position of abduction and some rotation outward. The child was kept in bed a week longer, but with no splint-restraint. She was then gotten up and dressed; it was found that she could walk with assistance, and she was sent home.

Three months after the operation she walked easily and well, but with a little catch in the step. The hip had ample motion; full extension, but with a little rotation out; flexion of 72°, but in this position there were about 27° of abduction.

<sup>6</sup> *Arch. Med. Sci.*, 1897, vol. 1, p. 780.

<sup>7</sup> *Traité de Chirurgie*, tome III, page 221, Paris, 1891.

<sup>8</sup> *Archiv für klinische Chirurgie*, Klinik der k. k. Universität Berlin, 12, 1897.

Outward rotation was normal, but inward rotation existed to but half the normal. No shortening was present and the leg was strong and stable.

By the kindness of Dr. Merritt I report also the following case of hers, as it belongs in the same category :

E. C., 9 years old, had, in the summer of 1895, fallen into a well and injured his left hip. He could, however, get about and did so, but with increasing disability, and finally, in August, 1896, a year after the injury he was sent to the hospital. The left hip was dislocated, the head on the dorsum of the ilium, and the limb in the position usual with this dislocation. Dr. Merritt cut down between the tensor vaginae femoris and the gluteus medius, reached the head of the femur, and found it in a fairly well-defined new socket. All around was much adventitious tissue, binding the bone in its dislocated place and limiting its movements. This was cut, the capsule found and incised, and the acetabulum reached, and some new tissue in it cleared out with a sharp spoon. With considerable difficulty the head was then put into the proper socket. The wound was closed, with drainage, and a double plaster-of-Paris spica put on. The boy had had a bad tonsillitis some time before the operation, but he seemed to have entirely recovered from it; still, after the operation he did not do well. There was some elevation of temperature; pressure-sores occurred with really slight provocation; the boy had some nervous symptoms; and the wound had some pus in it, but never very much. Ultimately the wound healed, but the joint was very rigid. The limb, in spite of this, was useful, and the boy walked without crutch or cane, but with a certain limp, due to his immobile joint. The boy lives outside the city, and nothing has been heard of him since he left the hospital.

In both of these cases the operation done was on the lines of the Lorenz operation for the reposition of congenital dislocation of the hip, modified only so far as the particular conditions that were found plainly required. In neither was there any great difficulty, but in Dr. Merritt's case the pelvi-femoral muscles seemed to have undergone some retraction, and considerable force was necessary to pull the femoral head down to the level of the acetabulum. In my own case the complete separation of the capsular ligament from the femur explains the futility of all the efforts at manipulative reduction, for the torn "Y" ligament gave no fulcrum for the control of the head of the femur. In Dr. Merritt's case there was no record of any early efforts at reduction having been made. In my own case, at the end of 6 months, there had been no attempt at the formation of a new socket, but these 6 months should be counted as, practically, only between 3 and 4, for during the first 2, and perhaps more, the child was certainly in bed under treatment, and not using the limb. In Dr. Merritt's case, after the lapse of a year, during all of which time the joint had been used, there was a well-marked new socket. In my case the adhesions around the head were insignificant and in Dr. Merritt's case they were many and strong, and this may be explained, not only by the difference in the ages of the dislocations, but also by the difference in the ages and sex of the patients, one being a little girl of 4 years, and not extraordinarily active, and the other an energetic boy of 9 years, whom not even a dislocated hip could lay up.

The point is made that traumatic dislocation must be differentiated from the pathologic dislocation that some-

times occurs in cases of tuberculosis of the hip-joint. The following case illustrates this necessity :

Rachel C. was seen by me in January, 1893, with Dr. Albert Abrams. The history was that the child had given, 3 months previously, a vague report of having been thrown out of a wagon, and she complained of pain in the knee. There was no record of previous illness. Very shortly afterward an abscess was found over the hip and was opened by a surgeon in the country. The incision healed, and then the hip was found to be dislocated. When I saw her, the head of the femur was on the dorsum of the ilium, and the healed abscess-incision was in the skin of the buttock. Under chloroform the dislocation was easily reduced and the limb and pelvis put in a plaster-of-Paris spica. This was kept on about a month and it was removed because the abscess had refilled and opened. On removal of the splint the dislocation easily recurred. The child was then sent to the hospital and the abscess opened and explored. The neck of the femur was found to have been fractured, and some injury had also been done to the acetabulum. The abscess was thoroughly cleaned out, the head of the femur placed in the acetabulum, the abscess closed, with a drainage-tube in it, and hip-traction applied. Healing was prompt and uneventful. The limb remained in good position, and proved quite capable of sustaining the weight of the body, though the child could walk but poorly.

However, a smooth gait was not to be expected after such a mutilation of the joint-structures, and I confidently expected the gait to improve and the child to do well at her home in the country. The question of hip-joint tuberculosis was considered and discussed, but, on the history and on the clinical conditions (none of the tissues, as well as the pus, being macroscopically tuberculous, and the microscopic examination having failed to be made through a misunderstanding), the case was decided to be non-tuberculous. This opinion was strengthened by the prompt healing and the general condition of the child.

In 1895 the child was brought to me in a bad state, with frank and unmistakable tuberculosis of the hip-joint. No treatment was permitted, and last year she was again brought to me in a much worse condition, a large abscess having formed in the buttock, and the leg being in bad position. The abscess opened spontaneously, discharged and healed. The malposition was corrected and the child is now doing well, in a long, immobilizing traction-splint. There has, however, judging from the position of the trochanter, been a recurrence of the dislocation.

Packard<sup>8</sup> refers to a similar case of Bigelow's, who reduced a 3-months-old dorsal dislocation of the hip. Abscesses and sinuses followed, and it transpired that the dislocation had been preceded by disability for some time, and the luxation was a pathologic and not a traumatic condition.

### THE DIAGNOSIS OF CALCULOUS NEPHRITIS BY MEANS OF THE RÖENTGEN RAYS.

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THERE is no disease in which early diagnosis and operation yield more brilliant results, with absolute relief from a condition that is a constant menace to

<sup>8</sup> *Kennedy's Cyclopaedia of the Diseases of Children*.



life, than calculous nephritis. Many cases, however, go undiagnosed, and in many more the diagnosis is not made till so late that irreparable injury has been wrought in the substance of the kidney. In these cases the early symptoms and physical signs are insufficient, and though they may suggest the possible presence of a calculus, they hardly justify exploratory operation unless the patient's general condition demands immediate operative relief.

Here we find one of the problems of physical diagnosis for which the Röntgen rays seemed to offer a solution. The problem was, however, surrounded with difficulties that were not appreciated. The kidneys lie in a region of the body that was found to possess a very great relative opacity to the rays, and careful study showed that rays of the quality then produced, yet sufficiently intense to penetrate the tissues surrounding the kidney, would penetrate the calculi most commonly present. The value of this means of diagnosis was thus limited, as positive evidence could alone be depended on; for the absence of all signs of calculi in the skiagraph did not preclude the presence of one of the less opaque and, unfortunately, more common varieties.

The improvements that have lately been made in tubes and other apparatus permit greater control over the quality of rays produced, while the self-regulating tubes have made it possible to obtain a relative measurement of the vacuum employed, and to repeat at will exposures with equal vacua. Thus, we have produced a quality of Röntgen rays capable not only of penetrating the more opaque portions of the body, but also of differentiating between the less opaque structures. With this improvement in technic there has been a marked advance in the application of this method of diagnosis to renal lithiasis. The absolute conditions essential to the detection of calculi in the kidney have been determined and proved repeatedly by positive clinical evidence, so that it is certain that under these known conditions a renal calculus must be detected, and that the absence of the shadow of a calculus, in a negative showing certain definite details, is conclusive evidence of the non-existence of all calculi in that region.

This is the positive evidence essential to a complete diagnosis that has heretofore been wanting. The value of such evidence in relation to renal disease is especially great in differentiating between the many conditions that simulate calculous nephritis. Exploratory operations have been resorted to with increasing frequency in these cases, and while valuable and often essential to exact diagnosis, they are liable to be undertaken before a sufficient differential study of the symptoms and physical signs has been made, and in many instances when the operation is entirely unnecessary.

On the other hand, there are many cases of calculous nephritis in which the classic symptoms of stone are nearly all wanting, either from some peculiarity in the individual and the development of the calculus, or

because it is so small as to produce few or only occasional symptoms. The cases that go undiagnosed to the post-mortem table are usually of this character, the gradual disintegration and destruction of the kidney, or a sudden fatal attack of anuria, terminating the disease, while, practically, all cases of renal lithiasis, in their incipient stage, when diagnosis and operation are most valuable, may be considered in this group.

The peculiarly insidious development of these cases, with masked or almost no symptoms, makes them much more dangerous than the more acutely open cases. The absence of data from which to reach a diagnosis places the patient in a more critical position than when a positive diagnosis can be readily made; while with the smaller calculi, in the early stages of all cases, the danger of impaction and consequent anuria is always imminent. Exploratory operation has been the only rational procedure in many of these cases, and the invaluable information often procured has saved many patients.

The application of the Röntgen rays to the diagnosis of such cases will be of inestimable value to these patients. In many instances exploratory operation will be avoided, while the detection of small calculi will result in all the advantages of an early operation. Although this method of diagnosis is particularly valuable in obscure cases with masked symptoms, and in the incipient stage of all calculi, it is also very valuable even when the symptoms and physical signs are so marked as to seemingly make a differential diagnosis unnecessary. Here the skiagraph will show whether there is one or more calculi present; what their size and relative position are, whether one or both kidneys are involved, and if there is a calculus impacted in a ureter.

The value of these data has been illustrated by cases that have come under my observation. In one case<sup>1</sup> two calculi were discovered and their relative size and position determined. The removal of the smaller uric-acid calculus was entirely due to the data obtained from the skiagraph; it was encysted in the inferior calix, could not be detected by palpation of the kidney, and was removed through an incision based entirely on measurements derived from the skiagraphs. In a second case a calculus was found partially encysted in the upper calix, after a search that was persisted in because of the skiagraphic evidence, while in a third case calculi were found in both kidneys.

The operative technic, upon which such definite diagnostic results can be based, is the power to produce at will Röntgen rays of known quality, powerful enough to penetrate the lumbar region and yet capable of differentiating between the lesser opacities of the more translucent structures, and thus making certain the detection of all calculi present.

The chief factor in the production of a ray of this quality is a tube capable of maintaining itself at a low vacuum, without overheating, while it is energized by

<sup>1</sup> Archives of the Röntgen Ray, May, 1905.

a current of high ampèreage and voltage. The discharge in the secondary circuit of the coil, or apparatus used to energize the tube, must also be taken into consideration. The spark need not be over 8 inches, but it must have high ampèreage, or, in other words, a "fat" spark is an essential to the production of a sufficient amount of the Röntgen discharge in a low vacuum.

The self-regulating tube has made it possible to produce Röntgen rays of this known character. Exhausted to a high vacuum, to prevent the melting of the platinum anode, it is capable of maintaining itself at a low vacuum through its power of self-regulation. Its possibilities of adjustment give perfect control over the vacuum, as it can be relatively measured by the length of the spark-gap, and consequently the same conditions can be repeated in any subsequent exposures.

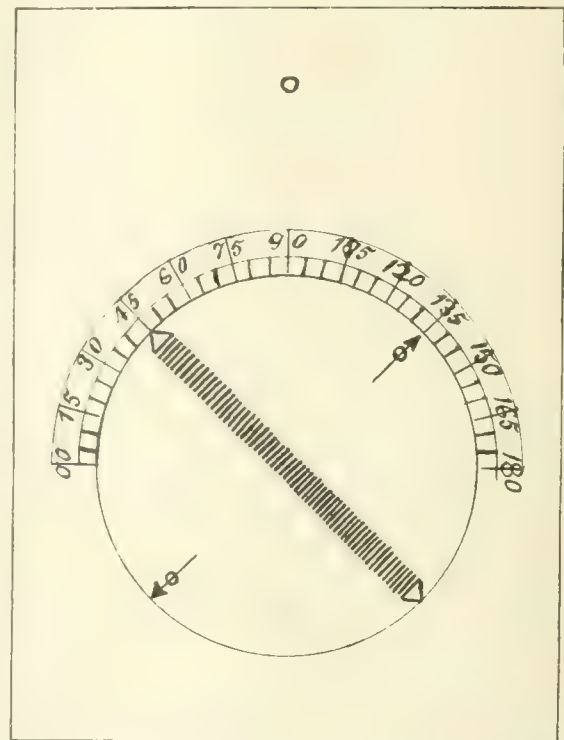
This method of diagnosis, therefore, adds to our knowledge in the most difficult cases of calculous nephritis, enabling us to reach a diagnosis, when the classic symptoms and signs are wanting, and all the symptoms are so masked as to make a differential diagnosis impossible. It gives definite information when the indefiniteness of the symptoms is the greatest menace. It enables us to make an absolute diagnosis in the early stages of the disease, when the destruction of the renal tissue has not commenced, when infection is absent, and when operative interference is most opportune and benign. When the diagnosis of calculous nephritis is clear, it furnishes, besides a confirmation, detailed data that add materially to the simplicity and effectiveness of the operation. These results seem a sufficient reason for holding that all cases of suspected renal calculus should be submitted to this method of diagnosis before so serious a diagnostic measure is employed as exploratory nephrotomy; and, if for no other reason, it should always be employed to determine whether only one or both kidneys are involved; for the very nature of renal lithiasis makes it possible that a similar deposit has occurred in the other kidney.

### AN IMPROVED DIAL FOR THE DETECTION OF ASTIGMATISM.

By G. A. HILL, M.D.,  
of Philadelphia.

The following description of a new test-dial for determining astigmatism, which I have used for some time with satisfaction, will, I believe, be of sufficient interest to warrant publication, especially to the general practitioner and to the ophthalmologist who does not place practical reliance upon the retinoscope in refraction. A good deal of the annoyance and uncertainty sometimes experienced in the estimation of astigmatism comes from the incapacity, either through ignorance or through over-anxiety, on the part of the patient, to correctly state his visual impressions when told to look at the astigmatic chart as usually constructed. Under a test with lines

radiating in all directions he will not infrequently make confusing statements as to the blackness or dimness of these lines and thus render it difficult or impossible to correctly establish the axis of the astigmatic zone. With a view to simplifying the question to be met by the patient, and otherwise to increase the accuracy of the finding on the part of the observer, I have devised a dial that I believe accomplishes this result to a nicety. Upon cardboard about 11 x 15 inches in size is mounted on a pivot a circular disc 8 inches in diameter. Extending diametrically across the face of this disc is a row of small, black bars parallel to each other and separated by spaces. The width of these bars, as also of the spaces, is such as to subtend an angle of 1' for the distance at which the test is made. The length of the bars is five times their width, thus conforming to the Snellen standard for normal visual acuity. At right angles to this row of bars and near the periphery of the



disc are two little knobs for convenience of turning. On the upper half of the boundary of the disc is a scale of degrees, as on the trial-frame, the order of notation, however, being reversed.

The spherical error having been corrected, the disc is rotated until the zone of emmetropic vision is thus discovered. Rotation is then continued slowly till the bars appear to have merged into a band or ribbon, and the point at which this occurs is noted on the scale. The disc is then turned in the opposite direction until the bars have again merged and the spaces between them are lost. A point midway between these two points is the middle of the astigmatic area, and a cylinder of proper strength, at right angles, to this will correct the error.

As but one question is to be met on the part of the patient—that of distinguishing between isolated bars and a solid black band—no trouble is usually experienced in getting unequivocal replies, and thus correct results are quickly obtained.



# The Philadelphia Medical Journal

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**The Plague in India**, it is to be hoped, has at last practically subsided. The apparent extinction from a district, however, is unfortunately no guarantee against a recurrence, so that sporadic outbreaks may be expected for some time; but the great epidemic seems at least to be at an end. There is a loud call being made for the establishment in India of a government laboratory where experiments can be made under the most favorable conditions with the various curative serums.

**The Endowment for Original Medical Research** is not often the theme of the statesman's eulogy. This is because "statesmen" are by discriminating people called politicians. Partisan conquests, getting offices, rewarding henchmen, holding their power, controlling votes—these too often are the absorbing occupations of "statesmen." Here are some noble words of one who has a larger view:—

"The man who would succeed in research, the man who, at all events, desires to devote himself to research, must not be asked to burden himself with other labors. He has upon his shoulders not merely what I may call the specialized work of his profession, but he must have a sympathetic and appreciative eye for everything which is going on in other departments of science, so that even where he cannot follow those other departments minutely he knows by the instinct of genius where to pick up those new discoveries which may help his own special branch of research. For men of that kind I think we require further endowment. I have all my life been an ardent believer in the cause which is often laughed at—the cause of the endowment of research. In that cause I most firmly believe, and I think there is no branch of knowledge in which it may find a more useful field of application than in that of advancing medical knowledge."—[ARTHUR BALFOUR.]

**The Sale of Territorial Right to Use Medical Secrets.**—Here is a circular-letter guaranteeing for \$15 to give exclusive right, in the community controlled by the buyer, of a sure cure for all hernial, rectal, and catarrhal diseases, "without knife, cautery, or chloroform." The mental outfit of the secret-seller is, as always, betrayed by some touch of literary or scientific blundering or banality. We have not room for several instances, but the fact that catarrhal disease is used as a perfect synonym for nasal catarrh is a little sample. The secrets are in a pamphlet, "copyrighted, so you cannot be deprived of its benefits by publication." Every appeal to selfishness and dollar-making is made, how to outwit rivals, weaklings, and "waybacks," and to beat them in getting the swill in the trough. Judges, presidents of banks, pension-boards, all testify to the

excellent standing of this fellow "as a man and a physician," M.D.'s join in concord, and all that is wanting for perfect success are a few Governors, Senators, Revs., and DD.'s to testify unctuously in behalf of this farmer-out of copyrighted medical secrets. And there are fools enough to make this sort of thing pay!

**The Condition of American Medical Journalism** is a serious matter to every conscientious physician, and we beg our readers to ponder carefully the earnest words of Dr. Emmet quoted in another column. This intelligent editor and reformer has considered the question in a thorough and practical manner, and his conclusion is one that must be reached by everyone of us if we fully realize the demoralization to which our class-journalism has come. There is but one way out, and that is the way indicated by the *American Gynecological and Obstetrical Journal*. Our own success and that of Dr. Emmet, with others, warrants the conviction that at last the profession is awakening to the fact. A few medical men are making heroic sacrifices to do away with the present degradation, and of every physician there is only asked the cooperation indicated by a cash-subscription to abolish the commercial control of our serial literature. When far more and better literature is offered for the subscription-price, coupled with professional management and aims, it would be strange indeed if the opportunity were not eagerly seized.

**A Chicago Judge on Doctors' Bills.**—Judge Kell saat, of Chicago, does not think a patient can ever need but one physician. In his own profession a number of attorneys may be employed upon one side, and the wine-bills, club-dues, etc., of the decedent must also be paid in full. Even the moderate bill of the one physician whose claim is, to some extent, valid, he reduces according to his enlightened conception of civilization and justice. From the *Journal of the American Medical Association* we clip the following extract from the letter of an excellent practitioner:—

"My bill was not allowed standing an apothecary and assisting at an operation. The surgeon's bill presented at the same time, was allowed after being cut down. My bill was taken up immediately afterward, when the judge delivered himself, in substance, as follows: Haven't I just allowed one doctor's bill against this estate? When one doctor is paid, they are all paid; I can't have half a dozen doctors coming here making claims against this estate. If you are entitled to

...just look to the other doctor for it. The bill ...

This is the same judge who, in another case, without informing himself of the circumstances, cut down to \$2 a visit a claim against an estate in which the executrix was willing to allow \$8 a visit, remarking that the court would never allow a claim for more than \$2 a visit.

**The "Old Man of Peru."**—Some time ago one of the most famous of American physicians was somewhat shocked, in reading *The Medical Press and Circular*, of London, to see himself described as "the late Dr. M—," and, writing to the nameless editor his remonstrances, his indignation was turned to merriment by finding the doubtful anonymous "not responsible for the opinions expressed by correspondents." Many similar blunders in the same journal, most needless, if the editor (supposing his existence) were a careful man with a good liver, have at different times afforded amusement to many readers. In his last issue, the unknown, speaking editorially, locates the "Johns Hopkins University at Washington," and in another paragraph makes Dr. Osler a professor in "the University of Baltimore." As a grin may exist after the cat has disappeared from view, so, we are convinced, may an (English) roar continue to issue from an editorial cage when no lion or bear is confined there, when, indeed, the animal formerly there was far from leonine or even ursine. In the last growl, if we may so dignify the noise, the PHILADELPHIA MEDICAL JOURNAL is likened to "the Excretory Gazette" a "penny weekly newspaper," which "introduced the insurance-system into its management," in order "to stimulate its circulation." This gracefulness, politeness and courtesy, we cannot hope to equal or answer, and regret that our inability to accede to the former requests of our kind contemporary to quote him more frequently should have so profoundly upset his equanimity and unbalanced his judgment. He must be the same person described by the poet:

There was an old Man of Peru,  
Who could not know what he should do,  
So he took off his hat, and behaved like a cat,  
That always would meow at Peru.

**The Educative Treatment of Convergent Squint.**—The Bowman lecture, by Mr. Priestly Smith, is of extreme value and interest, chiefly in showing that actual practice is at last beginning to take a physiologic and curative course. In this country our best men have long been proving that it is not enough to snip off the muscle and turn the patient adrift. The oculist's office is constantly presented with many tragic examples of this old surgical stupidity. Mr. Smith concludes that squint is a disorder of innervation. We well remember the obloquy and silent derision heaped upon one poor man who only a few years ago, in the face of rampant tenotomomania, had the temerity

to contend that heterophoria generally was, at least in origin, innervational. Every day his thesis is being proved true. Mr. Smith well shows that the educative treatment is highly important; nay necessary, for the real cure of the cause of squint, which is, not primarily the hyperopia, but the central mechanism, disuse, amblyopia, etc. The shield or blinder has long been in use by our leading oculists. But Mr. Smith fails to allude to the great aid to be gained by a cycloplegic in the good eye. He also says: "Concerning the value of glasses and operation we are all practically agreed." But we are not, we are sorry to say. Hundreds of oculists are not theoretically agreed, and thousands, we were about to say, are not *practically* agreed, if by the word we mean that they carry into practice and daily detail the "value." Then, moreover, there remain two essential and vital considerations: (1) The value of glasses is really valuable only when they are scrupulously correct, not when astigmatism is omitted, low defects not corrected, a cycloplegic not used, glasses not frequently changed, the adjustment not watched, etc., etc. (2) The absolutely proper glasses, applied early enough, often prevent the operation and cure the squint. We wish Mr. Smith could have devoted half of his lecture to the consideration of these imperative values instead of leaving them wholly unmentioned.

**The New English Vaccination-Bill.**—Another and presumably the last vagary in political procedures has to be chronicled with regard to this bill. It will be remembered that the House of Commons added to the bill a conscience-clause allowing every parent who is a conscientious objector to register his objection before a magistrate, when his child will escape vaccination. The House of Lords cut out the amendment and referred the matter back to the Commons for consideration. Now the Commons have reinstated the amendment and have returned the bill to the Lords, saying that their final decision is that the bill should pass as altered. The Lords gave in, and, in spite of the fact that only a few hours before they had declared a conscience-clause foreign to the principles of good legislation, have now permitted the addition of the amendment. Lord Lister's position in the matter has been much criticised not only by medical men, but by many responsible citizens. His lordship made a most positive speech, in which he advised the Lords to accept the amendment. His advice bore all the stamp of being tendered with the object of assisting the government and Lord Salisbury to pass a bill against which there is some revolt in the Conservative party, and of avoiding an undignified struggle between the Lords and the Commons. This is not the sort of work that Lord Lister was expected to do when he was called to the highest legislative assembly in the land. He was not expected to be a politician or a party-man, but to be an exponent of the highest scientific and medical teach-



ing, a sort of glorified expert witness to the truth. If Lord Lister had stated that all the medical profession of the world is practically unanimous in believing that in vaccination and re-vaccination we have a prophylactic against smallpox, and that he did not intend to enter into details of party-policy, he would have discharged his duty toward his profession in a more intelligible manner. As it is, a Vaccination-Bill has been passed—for the bill will now receive royal assent without further modification—which no longer renders vaccination compulsory and for which the country may have to pay dearly in the future.

**The Discovery of the Law and Power that Propels the Blood**, is the title of an essay kindly sent us by the author with the following personal note:

APPLETON, WIS.

MY DEAR DOCTOR—After carefully reading the enclosed address, will you kindly favor me with your opinion? The subject matter is of great importance to the profession—hence, its acceptance or rejection means much.

Very truly yours,

M. J. RODERMUND, M.D.

The pamphlet says that the address was delivered at Omaha, Neb., before the National Medical Association held on June 21, 22, and 23, 1898. (Have the homoeopaths so far abjured sectarianism that they have excised the distinctive name from the titles of their meetings and societies? This is hopeful, but the more difficult task remains of excising cranks from membership and contributing.) Dr. Rodermund's second paragraph is as follows:

"This theory, that the heart propels the blood, is erroneous, absurd, and an absolutely [sic] physical impossibility. The heart has no more to do with propelling the blood through the arteries than the stomach or liver."

Undoubtedly the heart has no more to do with propelling the blood through the arteries than through the stomach and liver. We have to surmise the meaning intended by very traitorous English.

We hesitate to comply with the author's request to favor him with our opinion of his "discovery." Our mind is still sunk in the depths of prejudice and ignorance, and we are afraid we might offend—either the author, or "the writers and teachers on physiology of three centuries." We are also somewhat dazed and our intellect works poorly, confronted as it is with the crass stupidity, the impertinent egotism of ignorance displayed—either by modern authors or those of the three centuries before-mentioned. Moreover, as a good novel-reviewer will not "give away" his author's plot, so we refuse to spoil prematurely the curiosity of the reader by telling him the secret Dr. Rodermund has at last discovered. The pamphlet (privately printed, evidently, —would none of our 300 American journals father it so far as to publish?) will doubtless be gladly sent by the author.

**A Nice Question of Professional Confidence.**—In the Supreme Court of New York recently an interest-

ing question affecting the right of a physician, when called as a witness, to disclose a matter of professional confidence, was decided. The plaintiff, a woman, was injured by the breaking of a staircase, and brought suit for damages against the owner of the house in which the accident occurred. In the trial of the case the woman herself testified as to the treatment which she had received in a hospital, and mentioned by name the physician, or surgeon, who had made the examination, and performed an operation. This surgeon was afterwards called as a witness by the defendant and asked to give his own report of what he had seen and done in the plaintiff's case. Objection to this was raised by the plaintiff's counsel on the ground apparently that the surgeon had no right to disclose a matter of professional confidence. This view was sustained by the trial-judge, who decided that the defendant's counsel was not entitled to obtain from the witness a disclosure of what he had ascertained by an examination of the woman as his patient. This decision, it is to be noted, was given in spite of the fact that the patient herself in her testimony had given her own version of what the surgeon had done.

The case was appealed to the Supreme Court, and, we are glad to say, the judgment of the lower court was promptly reversed. Justice INGRAHAM held that the testimony of the plaintiff detailing the operation that was performed on her by the surgeon in the hospital, the treatment she had there received, and the statements of the surgeon to her as to the facts of the operation and as to his advice, operated as a waiver by her of her privilege to exclude the testimony of the surgeon himself. The judge declared that the waiver by the plaintiff could not act only in part, but that it extended to the whole professional conduct of the case. As the plaintiff had submitted evidence as to the transaction between herself and the surgeon, she waived her privilege not only in part but in toto; and consequently the surgeon could give his own testimony as to what he had found and how he had treated the patient.

No one, we think, will deny that this was a righteous decision; certainly no medical man will deny it. The claim of a patient that she could go on the witness-stand and give her own prejudiced and probably garbled account of a surgical operation and the treatment in her own case, and even name the surgeon, and then that he should be barred from giving his own report of his operation and treatment when called as a witness by the defence, is too obviously unjust to need extended comment. A patient who goes on the stand and gives such testimony waives every privilege she may have, either in law or in ethics, to seal the mouth of her medical attendant on the specious plea of professional confidence. It is a poor rule that will not work both ways, either in court or out of it. The question of professional confidence is not a little overstrained at times, and always by some patient for his or her own

selfish or even unlawful ends. When, however, this is done in reckless disregard of a physician's rights and reputation, the quality of justice that supports the claim is of a somewhat doubtful flavor. We may refer to some other aspects of this matter at another time, but for the present we merely point to Justice INGRAHAM's decision as embodying a most important solution of one nice question concerning the privileges of a medical witness.

**Spinal Meningitis vs. Hydrophobia.** We have the respectable authority of our contemporary, the *Press*, for the statement that the case of young Sayers, who died recently in Philadelphia from alleged hydrophobia, was not one of rabies, but of "spinal meningitis." We presume, of course, that the *Press*, as a careful lay journal, was merely quoting from some medical source. We have seen no authentic report of the autopsy and microscopic examination upon which this diagnosis of spinal meningitis is based, and so we intend to express merely a qualified opinion on the case; but we declare without hesitation that fatal acute "spinal meningitis" in a child is such an exceedingly rare disease that it is a greater tax on our credulity to accept this diagnosis than it would be to accept a diagnosis of hydrophobia.

This matter is of sufficient importance to merit a brief criticism, to which we intend to subject it.

In the first place there is a distinct tendency in certain quarters nowadays to decry the diagnosis of hydrophobia. The pendulum has swung from one extreme to the other. Whereas formerly there may have been too much credulity there is now too much skepticism. This has led not infrequently, in our observation, to rash statements and totally illogical conclusions about the real cause of death in disputed cases. The *onus* of the proof against hydrophobia in a given case that has presented a fair clinical picture of the disease is with those who claim that there is no such disease or that it was not present in such a case. This responsibility they have often failed to meet, or in their efforts to meet it they have sometimes floundered in a pathological quagmire in which their diagnostic acumen has not conspicuously appeared.

The present case is one in point, provided the statement in the *Press* is accurate that the diagnosis as made was "spinal meningitis." There are two diseases especially that are attended with acute inflammation of the meninges in children; these are tuberculous and cerebro-spinal meningitis or spotted fever. In both these diseases the meningeal inflammation is more marked in the brain than in the spinal cord, and it is the brain-involvement that kills. To call either of these diseases simply "spinal meningitis" would be totally misleading; and so true is this that we cannot for a moment suppose that such a loose nomenclature was adopted in the case of Sayers, provided he had one

or the other of them. Hence, if we are driven to exclude both of these diseases, we are left in absolute doubt as to what kind of "spinal meningitis" the boy had. Septicemia and syphilis may cause spinal meningitis, even in children, but we should like to know clearly the appearances of the membranes and spinal cord before we accept a diagnosis of either. The diagnosis, in other words, of "spinal meningitis" due to either septicemia or syphilis is, in children, one that requires the greatest care and most expert knowledge. It is scarcely conceivable that either of these diseases would simulate hydrophobia, unless the brain-membranes were involved, in which case, of course, the diagnosis of *spinal meningitis* would be inexact. Cases of exclusive spinal meningitis simulating hydrophobia and causing speedy death, as in the case of young Sayers, must be exceedingly rare, if they occur at all; and we think that such a diagnosis calls for interpretation even more loudly than a diagnosis of hydrophobia.

We should like to know in such a case: (1) Were the brain-membranes involved? (2) What were the microscopic appearances? (3) Was a bacteriological examination made?

The education of the public is a laudable scheme, but the education of the medical profession in a right knowledge of a rare pathological condition is still more so.

**The Psychology of Double Suicide.**—The recent dramatic double suicide of two young women from the deck of a ferry-boat plying between Philadelphia and Camden presents a problem of unusual interest to the mind of the medico-psychologist. Double suicides are not unheard of, but they are at least comparatively rare. They usually occur in persons closely related or at least intimately associated, who consequently have some kindred grievance against the world, or have suffered some mutual disillusionment in the game of life. COLLINÉAU, who studied this subject, found that the great majority of cases occurred in unhappy lovers. BRIERRE DE BOISMONT, in his classical work on suicide, analyzed 50 cases of double suicide, with the following results: Between men and women, 38; both men, 4; both women, 8. Thus it appears that cases in individuals of the same sex are rare, though not so rare in women as in men. So far these instances are not hard to understand; it is sufficient to know that the motive, whatever it may be, arises from a common cause.

It is not so easy, however, to adjust, as it were, the various psychic factors in such a case. There immediately arises the vastly important question, to what degree has the predominating influence of one mind over another acted in the tragic climax? This is the vital point of inquiry: here, perhaps, may be found the key to an obscure problem that presents some of the elements of genuine hypnotic suggestion. For it cannot be sup-



posed that two minds are so evenly mated that the impulse to self-destruction should occur in both synchronously and with equal force. An initiating and predominating personality has, on the contrary, most likely imposed its own more daring concepts upon a more frail and unresisting mind. We can possibly catch a glimpse here of one of the most direful of psychic phenomena—the masterful role of morbid suggestion. This requires no hypnotic ritual for its display; nevertheless it is of the very quintessence of hypnology, according to any rational and scientific criticism of that cult, because it means simply the overpowering influence of suggestion acting upon a susceptible brain. The last word of encouragement spoken ere they took the fatal plunge was, in the case of these young women, endowed with a potency that far exceeded the average spell exercised by the most expert master in suggestive psychology.

From still another standpoint, however, we may doubtless observe in such a case the mutual action and reaction of one morbid personality upon another. This is now a well-recognized danger, which all psychiatrists have come to heed. A morbid thought may be nourished and developed into frightful dimensions by the constant brooding over it of two or more distraught minds. This is what is meant by mental contagion—a process that has more than once come near subverting a whole community. That such mental epidemics have occasionally brought forth a goodly crop of suicides is well known. Hence, the disastrous reaction of one ill-starred mind upon another, even to the accomplishment of a double suicide, can be understood.

That suicide may be epidemic is now a recognized historic truth. Not only suicide-clubs have been founded, but veritable plagues of suicide, such as MOREAU described after the French Revolution, have occurred. This applies not only to the act itself, but also to the means for its accomplishment. When the body of a man was recently found floating in one of Philadelphia's reservoirs, a city official predicted that another body would probably soon be found because of the publicity given the subject by the newspapers—and this prediction came true. In ancient times one of the Greek cities, Miletus, was the scene of an epidemic of suicide among young women, until the magistrate proclaimed that the body of the next victim would be exposed nude in the marketplace. This harsh decree, so contrary to the instincts of our modern civilization, promptly put an end to the appalling craze.

In conclusion, we may refer to the medico-legal aspects of double suicide. If one of the pair survive, it may be claimed that he or she is guilty of wilful homicide in aiding in the death of the other. This question has actually come up in France, and has been discussed by GARNIER. In his cases, however, the partners were mother and child, and the mothers were acquitted on the ground of insanity.

## Selection.

### THE AMERICAN MEDICAL PRESS.

THE average busy practitioner—and even he who is not so blessed—rarely gives a thought to the medical press of this country; to what it is; to what it costs in effort and money; to the immense power for good which lies latent in it, and for the progress or deterioration of which he alone is directly responsible. If he thinks of it at all, he soon dismisses it as a necessity—agreeable or otherwise, as he happens to be fond of his profession or is merely a money-grabber—for which he pays or expects to pay in the very distant future. A short dissertation on this subject, therefore, will be a very profitable employment of time to most of our esteemed readers, and will be the medium of information upon a topic than which none can be of greater interest, because this touches most closely the physician himself in his reputation and in his capacity and the opportunity for earning his daily bread. For the medical press is what its subscribers make it. It is a lever of mighty power—"a lever to move the world"—and its significance to the profession is whether the handle of this lever is controlled by the profession or whether the profession rests upon the short end and the long end is held in the hands of those who know its value and have so long exploited it. The value of the press to us—and who will deny its potential might?—lies in its control, its universal and absolute control, by ourselves, by medical men who are bound by professional obligations, by that common interest which binds us all, that remnant of medical ethical feeling which, notwithstanding the stupendous and blind selfishness of the individual practitioner, is still powerful enough to define our conduct, each to all and all to each, within certain fixed limits. Encourage with your support such a press; make it an accomplished fact by subscribing and *promptly paying your subscriptions*, and you need not doubt that the editors and medical proprietors will unite and act together for the common good. Medical editors know very well that a powerful press must be a united press, and must equally represent a powerful and united body of men, *i.e.*, the profession; for if we editors had universal influence, and our written words the convincing force of a Cicero and a Demosthenes, of what avail if the profession which we represented and for which we spoke remained disrupted, weak and incapable of self-government and the use of power? The profession and its press are indissolubly united for good or evil. Reform your press and it will in turn reform and unite you. Support and encourage medical proprietorship in your journalism—not by platonic good wishes, but by your *exclusive* patronage and by your money, and you will find the lever of a mighty press for use at your hand. Encourage, by your selfish indifference to everything which may benefit others as well as your individual self, journalistic proprietorship by lay publishing houses, and your medical press will continue, as it has hitherto done, to *use you*.

When this journal first entered the field, something more than six years ago, it was almost the only first-class journal owned and edited by a professional man in this country; to-day there are probably a dozen or more in this category. We doubt not that at least a majority of these medical proprietors and editors are actuated by singleness of purpose to work for the good of the profession, to create a great press, and that they are sustained by the hope that the profession will one day recognize practically the honesty of their purpose and its self-sacrifice. Do you fancy that all these journals are supported by the profession? Does that fatuous thought, perchance, cross the mind of the subscriber who throws his bill aside to be paid in a year or two? Does that contributor also believe this who sends his article to be published by some lay medical journal rather than by one owned by a medical man, not because the former is better or has a larger circulation (thank God, that excuse will not hold to-day), but because he thinks he can get a longer subscription, credit and better terms for new medical books?

Remember this: if you wish the movement toward bringing the medical press under medical control to succeed, *you must not expect credit; you must pay your subscriptions in advance*. You must make up your mind to that sacrifice for the sake of the great good to be obtained. Medical proprietors have not large capital behind them; *you*

must supply the capital to work with. After all, you are only expected to pay for what you receive, and we say, without a moment's hesitation, in the case of every journal for which you may have subscribed you get your money's worth and more. If, on the other hand, you have no sympathy with the struggles of these medical men to give you a medical press which you yourselves shall own and whose policy shall always be dictated by your interests, if you prefer your press to remain always merely a grab-bag from which you will have the privilege, as you wish, to draw out a more or less interesting original article or society proceeding, you can accomplish this end without exertion. It is only necessary to neglect to pay your subscription. You will force, in this gentle and easy manner, every medical proprietor out of the journalistic field and you will hand over the medical press absolutely to the great lay publishing houses who do not expect you to support their journals, which are not published in your interests, but as advertising mediums for their other publications.

It is this uneven fight which we editors are fighting and the question at stake is whether the profession, to which we belong and in whose interests we work, mean to aid us or to turn aside. After all, it is for you, the profession, not for us; for we venture to say, there is not one medical proprietor in this country who could not earn more at his profession, with half the labor expended in journalism, than he could ever expect from the most generous support his subscribers could give him. The decision and the responsibility lie with you. It is easy (for the individual sacrifice is not great) to create a great American Medical Press under medical control. It is easier still to place it back again, where for so many years it remained—on a plane of mediocrity and in the hands of lay publishing houses.—[*Amer. Gyn. and Obstet. Jour.*]

## Reviews.

**Manual of Physical Diagnosis for the Use of Students and Physicians.** By JAMES TYSON, M.D. Third Edition, revised and enlarged, with colored and other illustrations. Pp. 278. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$1.50.

There is surely a field for a condensed book treating of the facts of physical diagnosis. The larger works contain much beside the foundation of the knowledge required in this important branch of the diagnosis of cases that come to physicians for opinions. The student is often puzzled by the multiplicity of statements in the larger works, which, however, with a mastery of the elements would not seem so objectionable. By reason of his wide experience, Dr. Tyson is eminently fitted to put these essential facts together for the use of the student, and he has accomplished his task in a highly commendatory manner. The book is evidently appreciated by those for whom it is designed, as two editions have been quickly exhausted. In addition to the facts concerning physical diagnosis proper, there are sections on medical anatomy, blood-examination, the examination of the gastric contents, the use of the Röntgen rays, the making of an autopsy, and the method of examining a patient.

**Lectures on Tumors.** By JOHN B. HAMILTON, M.D., LL.D., Professor of Surgery in Rush Medical College and the Chicago Polyclinic; Surgeon to the Presbyterian Hospital; Consulting Surgeon to St. Joseph's Hospital, etc. Third edition. 21 illustrations, pp. 143. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$1.25.

When a book has reached its third edition, the reviewer is prone to feel that his task is at best a perfunctory one; the survival of the volume being an indication that it is in favor at the hands of at least some for whom it was written. A careful perusal of the book before us, however, fails to elicit wherein its especial merit consists. The author modestly states in his preface that the volume makes no pretence of being exhaustive, but that it deals simply with the elementary principles of the subject, and is intended for students; so that its manifest shortcomings must be somewhat condoned. The volume contains a fair presentation of the sub-

ject from the clinical standpoint, but from a purely pathologic point of view it is hardly enlightening. This is especially to be regretted as more of value and less of inexact and obsolete matter could assuredly have been compressed within the allotted space. The chapters dealing with pathologic technique are in their present brevity worthless, and can well be omitted from future editions, in which also, it is to be hoped, that greater attention will be devoted to diction.

**Manual of Gynecology.** By HENRY T. BYFORD, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago, etc., etc. Second Edition. Pp. 596. Philadelphia: P. Blakiston, Son & Co., 1897. Price, \$3.00.

This second edition of Professor Byford's able little manual contains some attractive new features, most notable among which is a system of marginal notes that has been devised to serve as a guide to the student. They are not intended as headings, but rather as pointers to the important matters in each paragraph. In order to keep pace with the rapid progress of gynecology, descriptions of the use of the cystoscope, of ureteral instruments, and many other matters of minor detail have been incorporated. The illustrations are numerous, and many of them are original. The proof-reading has not been as carefully done as it should have been. We regret that the author has seen best to recommend, even in the slightest degree, the use of electricity in the treatment of uterine fibromyomata. He also adheres to the old and exceedingly reprehensible method of employing electricity in the treatment of early ectopic gestation prior to the occurrence of rupture. We do not know of any other authority in pelvic and abdominal surgery who recommends this most dangerous and unsurgical procedure. The book is written entirely upon a pathologic basis and in consequence suffers materially from a systematic point of view, which detracts somewhat from its value to the student. This, however, is purely a matter of individual preference, and with a few exceptions like those already mentioned, the subject-matter is excellent and safe in its teachings.

**A Practical Text-book of the Diseases of Women.**

By ARTHUR H. N. LEWIS, M.D., London. Obstetric Physician to the London Hospital, etc., etc., etc. Fifth Edition. With 174 illustrations, 4 colored plates, and 71 illustrative cases. 526 pages. Philadelphia: P. Blakiston, Son & Co., 1897. Price, \$2.50.

This little volume very ably presents the purely English side of gynecology, sharing in this respect in the common failing of the books published by our Anglo-Saxon confreres, in which there is a noteworthy ignoring of the labor of men of other lands. In illustration of this truth we note that Tait's useless (as pertaining to support) but cosmetic perineorrhaphy is described *in extenso*, while Emmet's colpoperineorrhaphy, which is the only operation that restores the pelvic floor to its original condition, is not even mentioned. The book, however, presents much that is to be commended and but little that merits adverse criticism. Especially worthy of commendation is the most excellent method of taking the history of the patient and the order of physical examination that is advised. It is both full and systematic. Unfortunately it is marred by the dangerous recommendation of the so-called "master's turn" in the introduction of the uterine sound. In the same line we would add that cervical dilatation by means of tents should no longer be taught. With the eradication of these few defects, however, the sixth edition of the book should be one of more than average merit, for the subject has been well treated and the teaching in general is modern and safe.

**Atlas and Epitome of Operative Surgery.** By OTTO ZUCKERKANDL, Privat-docent in the University of Vienna. Edited by J. CHALMERS DA COSTA, M.D., Clinical Professor of Surgery in Jefferson Medical College, Surgeon to the Philadelphia Hospital, etc. Pp. 395. Philadelphia: W. B. Saunders, 1898. Price, \$3 net.

This book is an authorized translation of one of Lehmann's Hand-Atlases. The author first takes up the subject of



divisions of the tissues. The last chapter, an essentially elementary one, is devoted to a discussion of the manner of handling the instruments that are employed in the division of tissues. The second chapter includes a description of the various sutures, their manner of introduction, and their special application to the various structures, muscles, tendons, bones, nerves, intestines, and bladder. The bulk of the book is taken up with the various operative procedures, subdivided into chapters on operations on the extremities, operations on the head and neck, and operations upon the trunk and pelvis. In addition to the now classic methods of amputation, the author has included in this chapter the osteoplastic supracondylar amputations by the method of Gritti, and that of Ssabanajeff. The chapter on resections of the joints is extremely liberal; four methods of resection of the ankle are given, including the Wladamiroff-Mikulicz method, three of the hip-joint, and two of the elbow-joint. Under operations on the head and neck, those of resections of the jaws, the plastic operations, and the operations on the air-passages deserve especial mention. In the final chapter, devoted to the trunk and pelvis, are to be found descriptions of operations upon the stomach and intestines, biliary passages, and urinary organs; operations upon the structures of the genito-urinary tract, as well as those upon the rectum and anus. This Atlas should prove of the greatest service to the student pursuing a course in operative surgery on the cadaver, and in some degree to the young surgeon, whose limited experience has not allowed of his becoming thoroughly familiar with all the achievements of modern surgery. While the descriptions of the operations are both clear and concise the book is profusely illustrated, containing 24 colored plates and 217 wood-cuts, all of them excellent in character, explanatory of the text. The operations selected for descriptions have been almost altogether of German authorship, but none has been included that has not gained well-earned reputation. Many of the operations belonging properly to the field of orthopedic operations have been, perhaps purposely, omitted. On the whole, however, it may be said that few, if any, books of this description are so comprehensive in their scope; it is this feature, combined with the lucid and concise manner of presenting the subject, that especially commends this book.

## Correspondence.

### THE FLIES OF CHICKAMAUGA.

To the Editor of the Philadelphia Medical Journal.—

THE high mortality from typhoid in the camp at Chickamauga, in that of Camp Alger, and other camps where our troops are assembled in large numbers, has awakened profound interest throughout the country, and angry remonstrances are heard on every side, from both professional and lay critics. During the War of the Rebellion, when sanitary science and art were on a plane much lower in efficiency than at present, the average yearly mortality *per regiment* from typhoid fever was only about three, while in many regiments during the present war a typhoid death-rate of more than three a week is common. Maladministration is the prolific cause of the general prevalence of typhoid conditions, and of their extremely virulent character.

The most ordinary rules of medical common sense have frequently been violated, and on a large scale, with the inevitable result, but no one seems to have clearly set forth the specific acts that have produced these consequences. "Bad water" is the common cry, and polluted waters are, of course, prolific agents in the spread of typhoid fevers, but besides these there are other and far more energetic conveyors of the pathogenic germs which, I think, have not yet been even mentioned.

I have investigated the conditions, at second hand, at Chickamauga, from letters of skilled observers there, and

from conversations with returned convalescents, and I would be glad to call professional attention to the most active of these malific causes, and to the remedy.

As an example of mismanagement in locating hospitals, I might refer to the location of the Third Division Hospital of the First Army Corps. This was midway between the camps of the Fifth and the Ninth Pennsylvania Regiments (which were two of the most infected regiments there), and from 300 to 500 yards distant. The camps were also along the lower waters of the Chickamauga creek (as the map shows), with several divisions of other troops encamped along affluents of this creek higher up along its course. In sinking wells they were drilled or bored until water was struck, a pump was put in, and they passed muster as artesian wells.

I stop to say that an artesian well is one in which some extensive and impermeable stratum has been penetrated, totally irrespective of its depth, and the bore above this impermeable stratum is securely tubed to keep out surface-water, while the flow, which usually rises much above the bottom of the bore, is drawn from some natural drainage-area at a considerable distance, varying with the depth and the dip of the stratum penetrated, but usually many miles away. It is a *sine qua non* that all water above this watertight roof, preferably of clay, shale, or limestone rock, shall be excluded, partly for sanitary reasons and partly to prevent loss of water through surface-exit. No other sort of a well is artesian, though it be a thousand feet deep, and no water but artesian water can possibly be fit for use in a populous camp of soldiers. Failing this, the only proper location for a camp is on high, sloping and rocky ground, or else along the banks of the main stream-flow of a large river, with no camps or city for at least 30 miles above the source of water-supply. There was such a location above Chattanooga, on the Tennessee River, where Sherman's army encamped after the battle of Chattanooga; it was an ideal spot. The same is true of Camp Alger and the bluffs of the lower Potomac, which are high and healthy.

These surface-wells were bored indiscriminately at Chickamauga, wherever the convenience of the different camps indicated, and the "sinks," the water-closets of the different regiments, were also dug wherever convenience required, so that they alternated most regularly all over the ground, except that the sinks were not claimed to be artesian. The soil along the lower Chickamauga Creek is largely alluvial, and often overgrown (as the maps of the Government reservation show) with forest.

These sinks are perhaps thirty feet long, a dozen feet or more wide, and probably ten feet deep. A forked timber, inserted at each end, along the front margin, and projecting above the surface, receives a smooth pole which constitutes the *point d'appui* of the soldier's evolutions. These sinks, when gradually filled with fecal matter, washings of the surface, or springs beneath, are abandoned, and new ones dug.

A returned convalescent asked me, as his first question, "Where are all your flies?" I told him that by a curious spell of weather last spring the ova had been drowned out, but he told me that at Chickamauga there were millions and billions, and that they were over everything. In the hospitals the vessels used by the patients beside their beds were black with them, and they only disappeared when the diners were brought along, and the attendants went back to the cook-house, to chase off the invading inhabitants there, and bring up milk to complete the *menu*.

The open sinks are also black with these buzzing scaven-

gers, which rise in clouds when the surface is disturbed, and, their feet loaded with fecal debris, rise to seek new pastures, at breakfast, dinner and supper, and all through the day intermittently around the cook-houses. Into these sinks go the discharges of the typhoid patients, and pathogenic bacteria that cannot make an effective culture there, on a most majestic scale, are "simply not in it."

Can any one wonder that a single typhoid case will thus infect a whole camp and increase the virulence of a mild case to the point of a necessarily mortal result? Ingenuity could not devise any plan so simple, so efficacious, and so widespread for scattering a pestilence as this; every fly-leg is good for a large number of almost any required sort of pathogenic bacilli, and some flies are nearly all legs, and the rest snout and wings, which also play their part with regularity and dispatch.

I had some experience in these matters in a four years' service in the army during the War of the Rebellion, and in a similar case of threatened infection, the difficulty was overcome in a simple and inexpensive manner.

Over the sinks as dug were laid lengthwise a close layer of rough poles (young trees), leaving at the sides a space between the first pole and its neighbor, of about two feet or less. A strip of board (cracker-boxes) was nailed at the ends to hold these poles all secure, and a number of vinegar, sugar, or other barrels (a waste product at the commissary's) were sawed in two, and a good, old-fashioned country privy-hole was sawed out of each end, and bevelled off. These half-barrels were then set, at somewhat of a slant, along and over the spaces at each side, between the poles, and nailed fast, and branches of trees, and then dirt were spread over the whole. As it was stone-dark down below, the flies kept out, and the soldiers did not fall into it. It was cleanly, sightly and sanitary.

As for water, we went *long distances*, and hauled it in barrels from places where there were no soldiers, if necessary; and only in sudden emergencies were shallow camp-wells relied upon, and then only for brief periods. When before Petersburg, in 1864 and 1865, the water-supplies were as carefully looked after as the food-supplies, and both, all old soldiers will agree, were far better looked after, when we had a couple of million men to deal with, than now, when we have relatively but few. But "things were different" then.

Your obedient servant,

I. W. HEYSINGER, M.D.

Philadelphia, August 22, 1898.

### A LITTLE ALLEGORY.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

"I'll wash!" It was early getting-up time; earlier by half an hour than the Wramble family usually awoke, and allowing 15 minutes for the necessary courage to develop to get out of a warm bed into the freezing air of the chamber, it was fully an hour earlier than the most aggressive member of the household was accustomed to arise.

"I'll wash," greatly to the surprise of Rod Wramble, was spoken out loud, so loudly indeed that it had disturbed all of the sleepers in the house. For half the night Rod had been turning over and around in his mind a problem, looking now at this phase of it, then from another angle of observation, his interest in the solution of the problem increasing as the hours passed, until finally he was astonished to find that what had been a formidable problem, now stood before him in the nakedness of a new-born resolution, and in exultation, but inadvertently he had said "I'll wash."

Having had no thought that he was going to speak, he had made no effort to modulate his voice, and when the sound startled him he began to wonder how loudly he had announced to the household what he had intended should be his own secret.

If there is any one hour of the eight usually spent in bed, in which two words spoken as these had been are more likely than at any other to attract attention, it is at that hour just before the customary getting-up time. Everybody in a farmhouse, and especially those who are old enough to work, are then trying either consciously or unconsciously to make themselves sleep right up to the minute when the constituted authority shall rout them out of bed.

Soon after Rod had said "I'll wash," he could hear the steps of stockinged feet going from bed to bed, and he presently heard the same steps coming toward him. He knew that they were those of his father, who, looking upon each and finding no cause for the noise, finally came to Rod's bed. So far as the dim light revealed his face to his father, Rod was sound asleep. After stooping over the bed and in a low tone asking, "Be you awake, Rod?" and receiving no answer, his father concluded that the early awakening was an omen of a good day's work, and so set about kindling the fire. By his rattlings of the stove, etc., it was made sure that the other members of the family should be awakened.

Between the time when the father left his own bed and called to him, Rod had amended his original resolution so that it then stood, "I'll wash, 'n I'll wash all over!" When Rod was in his warm bed this resolution seemed to him to be an inspiration, but while he was dressing in that cold chamber, and while pulling on his frozen boots, and particularly when he was hustling around in the nipping frost trying to keep from freezing while feeding "the stock," he felt more than a little like accusing himself of rashness. Rod, however, was not the boy to make resolutions merely to break them with indifference, and so with set teeth he went about his work trying to fortify his courage by repeating many times mentally, and occasionally audibly, "I'll wash, 'n I'll wash all over!" But the idea of a general bath under the circumstances in which he knew he must take it nearly chilled the marrow in his bones. He led a frisky colt out to water. He held a bucket full to the brim up to the colt. Suddenly there was a snort, a pull, a splash, and already thoroughly chilled, Rod was deluged with the water from the bucket. Instantly the covers were kicked from the bed, and he stood before the mirror. He had been dreaming! His eye caught sight of a generous row of free samples, pocket-books, medicine-cases, knives, trinkets, etc., presented to him by kind manufacturers of secret cure-alls and pain-killers. He was not Rod Wramble at all, but the great Dr. Blank! Then he remembered that before going to bed he had been testing the efficacy of some of the nostrums on his own person, and had been writing enthusiastic testimonials as to their great therapeutic value, signed by "Prof. in — Medical College," "Physician to — Dispensary," "Ex-President of — Medical Society," etc. He tried to recall what he had eaten for supper, and what drugs he had taken, in order to learn whether the cause of the dream was to be sought in a disturbance of digestion, or of conscience.

J. L. TRACY, M.D.

Toledo, Ohio.

Signorina Esther Bonomi has received the first degree of doctor of medicine granted by the University of Genoa to a woman in Italy in modern times.



## American News and Notes.

**Cremation** has been officially recommended by the Indiana State Board of Health.

**Typhoid fever** is reported to be constantly increasing at Camp Wikoff. There were 225 cases in camp on August 22d.

**Counter-Prescribing.**—There are now pending in the local courts suits against three New York City druggists for violations of the State Medical Law.

**Dr. Frank E. Waxham**, formerly of Chicago, has been elected Professor of Medicine, Clinical Medicine and Laryngology in the Medical Department of the Colorado State University.

**Typhoid Fever at Fort McPherson.**—When last reported there were between 500 and 600 cases of typhoid fever in the General Hospital at Fort McPherson. A number of deaths have been reported.

**Sickness Among "Immunes."**—It is reported that there are 150 sick, including 30 cases of malarial fever, in one regiment at New Orleans. The troops are not considered in fit condition to send to Santiago.

**Helen Gould Endows a Hospital-Bed.**—Miss Helen Gould has given \$5,000 to endow a free bed in perpetuity in the Manhattan Eye and Ear Hospital. She has also contributed \$25,000 to supply the necessities of the invalid soldiers at Camp Wikoff, Montauk Point.

**Hospital on Bedloe's Island.**—Lieutenant-Colonel J. Morris Brown, in charge of the Medical-Supply Bureau at the Army Building, New York, was notified to have 100 cots in readiness for use on Bedloe's Island, in the harbor, where it is planned to have a military hospital.

**The Sick at Santiago.**—General Shafter reported, on August 22d, as follows: Total sick, 1,101; total fever cases, 817; total new fever cases, 156; total fever cases, returned to duty, 91. And on August 23d: Total number sick, 900; total fever cases, 631; total new fever cases, 74; total fever cases, returned to duty, 85.

**U. S. Hospitals at Honolulu.**—It is understood that General Merriam, who sailed from San Francisco, August 22d, on the *Arizona*, carried with him plans and authority to construct barracks and hospitals for the troops at Honolulu, which post is now attached to the Department of the Pacific, of which he is the commanding officer.

**A Pennsylvania State Hospital-Train** has been sent to bring home sick Pennsylvania soldiers from the Southern camps. Twenty-three hospitals throughout Pennsylvania, including five in Philadelphia, where the sick of the First and Sixth Regiments were received, have assured Governor Hastings that they will care for sick soldiers who may be brought from the camps.

**The health of the troops in Porto Rico** is said to be steadily improving. The typhoid fever brought from Camp Alger and Camp Thomas is of a mild type, and is fast disappearing. Strict sanitation is being enforced, with the gratifying result that sickness has decreased from 10 to 3%. Reports for August 17th showed only 430 sick in hospital-quarters out of a total command of 15,000. Most of these cases are climatic complaints. The army is being revaccinated, as there is a small-pox epidemic in some parts of the island.

**Morbidity of the Army.**—Up to August 15th there were recorded in the office of the Surgeon-General of the United States Army 40,520 cases of sickness and wounds among a mean strength of 154,028 men, during the months of May, June and July. Throughout this period probably an average of 6% of the troops were constantly sick.

**The Medical College of Ohio and the Association of American Medical Colleges.**—At its last meeting the Association of American Medical Colleges unanimously resolved to "vacate and set aside" its action of last year declaring that the Medical College of Ohio had forfeited its membership. The original action was based on an oversight, and was taken in the absence of any representatives of the college.

**Conditions at Camp Wikoff.**—There were 4 deaths at Camp Wikoff on August 24th, 1 from typhoid fever, 1 from malarial fever, and 2 from dysentery. There were 780 men in the general hospital, of whom 225 were suffering from typhoid fever; 300 men were in the detention-camp. The transport *Leona* unloaded 104 sick men, who were removed to the hospital. The *Yale* had on board 1,069 men, of whom 178 were sick. The transport *Montauk* had on board 1,169 troops, of whom 173 were sick.

**Maine Hospital-Train.**—A hospital-train, consisting of six Pullman sleeping-cars and one baggage-car left Chickamauga Park August 16th with 178 sick men for Portland, Me. The train was provided by the Maine State authorities to carry home the sick and convalescent men of the First Maine regiment. The large majority of the men on the train were convalescents, although there were several who were very sick. The train was fully equipped with medical supplies, food, and all essentials for caring for the sick.

**A Course in Surgical Pathology and Histology** is to be given at Harvard in the second half-year by Dr. E. H. Nichols, supplementing the recitations in Surgical Pathology conducted by Dr. C. A. Porter. The processes of surgical infection, wound-healing under septic and aseptic conditions, the macroscopic and microscopic study of tumors, etc., will be taken up. Steps have been taken for the establishment of a special laboratory for the work, and \$5,000 have already been received toward an endowment.

**Hospital-Corps of the United States Army.**—At the outbreak of the war the hospital-corps consisted of 100 hospital-stewards, 103 acting hospital-stewards and 520 privates. The larger part of this number was ordered with the troops that left their respective stations to the camps of concentration and accompanied the regular regiments in the 5th Army Corps to Cuba; the smaller part being left behind at the various Army Posts, and being just enough to take care of the medical property. Enlistments were at once ordered throughout the country of suitable men for the hospital-corps, special attention being paid to enlisting nurses, pharmacists, cooks, drivers, mechanics, etc. A good many medical students and young physicians were also accepted. By means of enlistments and afterward by transfers from volunteer regiments to the hospital-corps a large number of men were obtained, and to-day there are in service by actual count 5,084. Probably 1,000 are in service whose enlistment and transfer are not yet reported. In addition to the members of the hospital-corps enlisted for the purpose of taking care of the sick and wounded, there have been employed 141 male nurses and 336 female nurses under contract.

**Sick and Wounded for Boston Hospitals.**—The hospital-ship *Olivette*, which arrived at Montauk Point on August 22d with 200 sick on board, was ordered to proceed to Boston, and arrived at that city on August 23d. The sick soldiers were taken to the Massachusetts General, Boston City and Carney Hospitals, which had volunteered to Surgeon-General Sternberg to take care of them.

Major George H. Torney, of the hospital-ship *Relief*, has received instructions from the Secretary of War that the *Relief* must sail for Ponce not later than August 24th, there to load with sick and wounded, who are to be taken to Boston and placed in hospitals. She carries 20 nurses and 5 surgeons, as well as 1,000 bottles of malted milk, 5,000 cans of soup, 700 bottles of whisky, 50 little slings and 100 medical glasses.

**Hospital-ship Movements.**—The hospital-ship *Missouri* sailed for Santiago, August 22d, with 9 surgeons, 40 hospital-corps men, 10 trained nurses, 2 hospital-stewards, and 18 stragglers of the Eighth Illinois (colored) Volunteers. The vessel is without an electrical plant, and she has no ventilating plant, so that her carrying capacity is reduced one-half. She will thus be able to bring back but 200, instead of 400 men. The carbonating plant is also missing. The *Missouri's* executive officer, Dr. A. H. Stark, has put on board the vessel 50 tons of ice, 25 tons of fresh beef, and 1,000 suits of underclothing. The *Missouri* will bring back those sick men not suffering from infectious fevers. She is to put the men off at Montauk Point and then return to New York, when it is expected that the necessary plants for her will be ready and can be placed aboard.

**Life-Insurance Hospitals for the Soldiers.**—Concerning the abandonment of his scheme to provide a hospital service for policy-holders at the front, Mr. Thomas H. Bowles, President of the National Association of Life-Underwriters, said at the recent meeting in Minneapolis:

"With the desire to be of service to such policy holders as might become sick or wounded, I advocated and brought to the notice of officials of the various companies at the beginning of the war, the question of establishing a hospital service, a measure which found ready endorsement by a large number of the companies, and especially by the Secretary of War. The possibilities in extending the sphere of usefulness of insurance companies were supported by every humane impulse, and if the measure had been carried out, it would have added another and a specific value to the work of insurance, and it was a source of regret that the Surgeon-General of the Army could not see his way clear to release the government from such obligations to its subjects as was proposed to be assumed by the insurance-companies. The project, therefore, had to be abandoned."

**Memphis Medical Society.**—At a stated meeting held August 2d, Dr. E. C. Ellett reported a case of **general emphysema following tracheotomy** undertaken for the removal of a watermelon-seed from the lower air-passages of a boy 2 years old. Dr. Wm. Krauss reported a case of probable **primary tricuspid regurgitation** occurring in a heavily built negro 55 years old, and connected with a fall from a wagon upon the left side of the body, and subsequent heavy lifting. Dr. E. C. Ellett reported the case of a child with an offensive one-sided **nasal discharge**, which was found to be dependent upon the presence of a **shoe-button** that had been retained for 2½ years. Dr. Ellett also referred to a case of **otitis following scarlet fever** in which great improvement in hearing followed removal of the ossicles of the ear.

**Wounded from Porto Rico.**—The United States hospital steamer *Relief*, Major George H. Torney commanding, arrived at Brooklyn August 19th from Porto Rico, having on board 248 sick and wounded soldiers from Gen. Miles' army.

She left Ponce on August 14th and Mayaguez on the following day. Ten deaths from typhoid fever occurred on the voyage. Four other deaths from typhoid fever occurred on the *Relief* while she was lying in Ponce harbor. The ship stopped at Fort Hamilton on the way up, and 47 men with fever were transferred to the post-hospital. When the *Relief* reached the dock at the foot of Pacific Street, Brooklyn, ambulances, patrol-wagons, and carriages were waiting and 100 men were taken to St. Peter's Hospital, and 101 to the Long Island College Hospital. All of the men who died, it is said, were hopelessly ill before the vessel left Porto Rico. The *Relief*, according to the accounts of those on board, proved to be an excellent ship for hospital-purposes.

**The American Climatological Association** will hold its Fifteenth Annual Meeting at Maplewood, in the White Mountains, N. H., August 31 and September 1, 1898. The program includes the following papers:

Opening Address, by the President, Dr. E. O. Otis, Boston. Subject: Avenbrugger and Laennec, the Discoverers of Auscultation and Percussion.

Common Errors of General Practitioners in Dealing with Cases of Pulmonary Tuberculosis, Dr. F. I. Knight, Boston.

Suggestions: The Result of Recent Experience with Phthisical Patients, Dr. Vincent Y. Bowditch, Boston.

Note on the Position of the Lower Border of the Heart, Dr. Glentworth R. Butler, Brooklyn.

A Case of Dissecting Aneurysm of the Thoracic Aorta Rupturing into the Pericardial Sac and Causing Immediate Death, Dr. Judson Daland, Philadelphia.

The Influence of Respiration on the Action of the Heart in Health and Disease, Dr. R. G. Curtin, Philadelphia.

Clinical Notes on Asthma and its Treatment, Dr. Beverley Robinson, New York.

Ergot in Chronic Malaria, Dr. A. Jacobi, New York.

A Preliminary Report upon Sixty-five Cases of Malarial Fever in Relation to their Contiguity to Certain Brooks, Dr. R. C. Newton, Montclair.

Concerning the Natural History of Pulmonary Tuberculosis, Dr. J. C. Wilson, Philadelphia.

Variations in Pathogenic Activity among Tubercle-Bacilli, Dr. Theobald Smith, Boston.

Oxygen-Inhalations in Acute Pulmonary Affections, Dr. Andrew H. Smith, New York.

The Treatment of Hay-Fever, Dr. J. C. Mulhall, St. Louis.

Sanatoria for the Consumptive Poor, Dr. J. M. Anders, Philadelphia.

Infection from the Hands in Phthisis, Dr. E. L. Baldwin, Saranac Lake.

Application of the X-Rays in the Diagnosis of Tuberculosis, Dr. Francis H. Williams, Boston.

The Value of Systematic Physical Training in the Prevention and Cure of Pulmonary Disease, Dr. E. Fletcher Ingals, Chicago.

The Distribution of Pulmonary Tuberculosis in New Jersey, Dr. Guy Hinsdale, Philadelphia.

A New Inhaler, Dr. H. Longstreet Taylor, St. Paul.

A Single Test of the Virulency of Sputa Kept Many Months, Dr. Irwin H. Hance, Lakewood.

Some Statistics upon Serotherapy in Tuberculosis, Dr. J. E. Stubbert, Liberty, N. Y.

Papers are also promised by Dr. H. P. Loomis, Dr. S. G. Bonney, Dr. Charles E. Quimby, and others, whose subjects have not yet been announced.



**Obituary.**—Dr. E. GERHARD CRUM, Assistant Physician of the Binghamton (N. Y.) State Hospital for the Insane, August 5th, aged 31 years.—Dr. JOHN B. HATTON, Des Moines, Ia., August 7th, aged 50.—Dr. JOHN H. PEKERTY, in Elizabeth, N. J., August 9th, aged 33.—Dr. CARL E. ELSNER, in New York City, August 8th, aged 24.—Dr. THOMAS J. DOUGHTY, Health-Officer of Fishkill and Matteawan, N. Y., August 24, aged 31.—Dr. ADA HOWARD AUDENRIED, Primos, Delaware Co., Pa., August 16th.—Dr. WARREN KEMBLE, Saugerties, N. Y., August 10th, aged 57 years.—Dr. JOHN H. BAILEY, Sturgis, Ky., July 30th, aged 28 years. Dr. FRANK HAMER BRICKELL, New Orleans, La., August 8th, aged 41 years.—Dr. WILLIAM MCGREGOR, of the McGregor Hospital, Sioux City, Ia., August 5th.—Dr. J. D. MARTIN, Savannah, Ga., August 3d, aged 40 years.—Dr. E. G. MOORE, Spring Valley, Ill., August 11th.—Dr. AMBROSE MORRISON, Nashville, Tenn., August 3d.—Dr. C. M. HIBBARD, house physician of the Planters' Hotel, St. Louis, was instantly killed by falling down an elevator shaft from the second floor of the hotel on August 22d.—MAJOR HENRY C. BOWEN, of Springfield, Mass., Surgeon to the Second Massachusetts Volunteer Infantry, died at Santiago, August 13th, of typhoid fever. The news of Dr. Bowen's death will be received with much regret in Western Massachusetts, where he was well known as a rising surgeon.—Dr. J. M. WILKINSON, of Dover, Del., August 23d, aged 48.—Dr. JOHN FREDERICK MORSE, a member of the San Francisco Board of Health and of the State Board of Health, died at his home in San Francisco, on August 21st, of cerebral hemorrhage.

**Arrival of Transports from Santiago.**—The *Comanche* and *Seneca* arrived at Montauk Point, August 18th. On the latter were 413 men of the Fourth Infantry, of whom 73 were sick. On the *Comanche* were 480 men of the Twenty-fifth Infantry, and General McKibben and staff, and 114 were sick.

The *Mobile* arrived August 19th, bringing 1,600 of the Eighth and Twenty-second Infantry, and the Second Massachusetts Volunteers, of whom 300 were sick, and 10 died on the voyage, the latter being mainly Massachusetts Volunteers, who suffered badly on the way up.

The *Raccoon* arrived August 20th with 636 members of the Eighth and Twenty-second United States Infantry, and of the Second Massachusetts Volunteers. With the convalescents were removed 26 fever-patients from the transport. They were placed in the Quarantine-Hospital, where the nature of the fever will be closely studied.

The *City of Macon*, having on board 462 of the Seventeenth Infantry, 92 of whom were sick, and the *Marterra*, with 312 of the Twenty-first Infantry, of whom 20 are sick, both arrived August 21st.

The *Leona* arrived August 22d, with 528 men, including detachments of the Twelfth Infantry, Ninth Cavalry, Fourth Artillery, and Thirty-fourth Michigan Volunteers. There were 120 ill on board.

The steamer *Olivette* arrived at Fort Monroe, August 19th, from Santiago, having on board 200 patients of the Fifth Army Corps. Ten of the returning sick died on the voyage. The vessel was ordered to proceed to Boston.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending August 20, 1898:

## SMALLPOX—UNITED STATES.

## COLORADO:

Cascade Canon.

## DISTRICT OF COLUMBIA:

Washington.

## SMALLPOX—FOREIGN.

## INDIA:

Madras.

July 2-8 . . . . . 1

## JAPAN:

Osaka.

June 27-July 27 . . . . . 1

Tokyo Fu.

3

Aichi Ken.

Akita Ken.

Awamori Ken.

11

Chiba Ken.

Fukushima Ken.

Hiogo Ken.

Iwate Ken.

Kanagawa Ken.

Miyagi Ken.

Niigata Ken.

Yamagata.

The Hokkaido.

## RUSSIA:

Odessa.

July 16-23 . . . . . 2

St. Petersburg.

4

Warsaw.

July 9-16 . . . . . 7

July 16-23 . . . . . 7

July 23-30 . . . . . 5

## VENEZUELA:

Caracas.

July 25 . . . . . 150

La Victoria.

July 25 . . . . . A large number of cases.

Valencia.

. . . . . 1,000

## YELLOW FEVER—FOREIGN.

## COSTA RICA:

Port Limon.

July 14-Aug. 4 . . . . . 2

## MEXICO:

Monterey.

Aug. 1 . . . . . 11 cases present.

## YELLOW FEVER—UNITED STATES.

## FLORIDA:

Key West.

Aug. 16 . . . . . cases at marine barracks.

Pensacola.

Aug. 14 . . . . . 1 case.

San Antonio, Texas.

Aug. 14 . . . . . 1 case.

pico, Mex.

## LOUISIANA:

Franklin.

1 case believed to be the pulling down of an old house infected last year.

## ON TRANSPORT SHIPS ARRIVING

FROM WASHINGTON.

## LAND:

S. S. "St. Louis."

Aug. 14 . . . . . 1

S. S. "Albatross."

Aug. 14 . . . . . 1

## CHOLERA—FOREIGN.

## INDIA:

Bombay.

June 21-28 . . . . . 2

Calcutta.

July 5-12 . . . . . 2

Madras.

June 26-July 2 . . . . . 2

Aug. 12 . . . . . Cholera epi-

## JAPAN:

Tokyo Fu.

June 27 . . . . . 10

Fukuoka Ken.

1

Iwakuni Ken.

Yamagata.

## PLAGUE.

## CHINA:

Amoy.

reported daily. Plague epi-

## EGYPT:

Alexandria.

Br. S. S. "Carthage," arrived July 12th, from Bombay and Aden.

ashore in hospital at Aden.

Vessel disinfected.

**Memphis Pathological Society.**—At a stated meeting held August 6th, Dr. E. C. ELLETT exhibited:

1. An eye, embedded in glycerin-jelly, in which a foreign body (steel) had lain for 2½ years. At the time of the accident the patient was seen but once, and the pres-

ence of the foreign body was not recognized. When he returned subsequently, the ball was shrinking and the foreign body was protruding from the scar of the wound in the upper and outer corneal quadrant.

**II. An eye, embedded in glycerin-jelly, removed for a perforated corneal ulcer,** with extrusion of the lens, and detachment of the retina and choroid. The method of embedding was that of Würdemann. The eye is hardened in formalin (5%), frozen in ice and salt, cut and placed in glycerin and water for two days. The jelly is made by dissolving 1 oz. "Gold Label" gelatin in 8 oz. of water by heat. The shells and whites of two eggs are added, and, after filtering, an equal quantity of glycerin. The eyes are mounted in this in specially made glass jars, and the jelly hardened by exposure to formalin-gas.

**III. A macroscopic specimen of Aspergillus from the ear,** showing well the similarity in appearance to wet paper.

**IV. A section of a malignant growth (rodent ulcer) removed from the outer canthus of a young man,** aged 22, and now recurring for the third time.

**V. A slide showing gonococci,** found in the secretion from the eye of a little girl, aged 3.

DR. STEPHEN E. RICE presented a specimen **malarial blood** stained by the Ehrlich-Biondi method, **showing typical crescents.** The patient had been in Memphis only about two weeks, having come from Louisiana. He had a high and somewhat irregular fever, which yielded readily to quinin. There was no albuminuria.

DR. J. H. REILLY showed a slide of **malarial blood**, stained with eosin and methylene-blue, showing small and large hyaline pigmented and unpigmented organisms, as many as 3 or 4 parasites being seen in a single corpuscle. The fever was high and continued, in spite of heroic doses of quinin and phenacetin and cold baths; rose-spots appeared on the abdomen on the fifth day of the illness, and were followed by nose-bleed, considerable delirium, and slight subsultus. The blood yielded a slow but positive typhoid reaction. The patient, a boy of 7 years of age, got well in 8 days; he had not had typhoid fever previously.

DR. M. GOLTMAN presented a specimen of **malarial blood**, double-stained, from a patient 21 years old, who had had a continued fever for 8 days, with throbbing headache, nose-bleed and diarrhea. On his arrival from Water Valley, Miss., examination of the blood yielded a negative typhoid reaction, but there was marked loss of coloring-matter in the corpuscles, which also show numerous estivo-autumnal parasites in different stages of development. Three injections of quinin and ureahydrochlorate in 5-grain doses effected a cure in 3 days. Arsenic was then administered in ascending doses.

**The Sanitary Conditions at Camp Wikoff.**—Mrs. Margaret Sumner McLean, of the Woman's National War Relief Association, has written a letter to Surgeon-General Sternberg concerning her observations of the sanitary conditions at Camp Wikoff, Montauk Point. During a personal visit to the camp she found no serious suffering on account of inadequate supplies either of food or shelter. On the contrary, she declares that the camp is in excellent condition and that good provision has been made for the troops. By inference, she strongly deprecates the publication of sensational stories of the harrowing distress in the camp. Among other things Mrs. McLean says:

"I saw no men lying on the wet ground. I saw no starving men. I saw no men in rags. We took a carriage and drove all over the

camp. We talked with officers, non-commissioned officers and privates, white and black, whom we met. We did not hear a single complaint. We were struck with the cheerful, alert manner and bearing of the men, most of whom were dressed in brown canvas uniforms. Either papers have misrepresented the conditions, or the air of that place has worked wonders. When we reached the hospital, Colonel Forwood met us and showed us the hospital-tents, as far as arranged, and explained to us his plans for its completion. The situation is ideal, and I can imagine nothing more life-giving than rest in the well-equipped hospital-tents, looking out on the broad Atlantic. Between each two hospital-tents there is a fly-tent, which serves as a sitting-room in the daytime for patients able to leave their beds, and a sleeping-place for the nurses at night. There are to be long, wide, floored and roofed alleys at right angles, the tents opening on to them. All was well under way, and would have been entirely completed, but the carpenters refused to work in the rain, although paid experts' wages.

"We went into the hospital-kitchen, saw immense kettles of boiling milk for the very sick, and I saw and tasted roast beef, boiled potatoes, a good rice-pudding and an excellent cup of coffee. There were two large ranges in the kitchen, one of which is to be for the exclusive use of our 'special diet' cooks who went down to-day.

"We saw the very sick men being tenderly moved from the tents first occupied to the hospital-tents, in which were wire cots and new bedding. I never saw such a busy place. All seemed animated by one desire—to do all there was to be done, and to do it as quickly as possible.

"The surgeon in charge, Dr. Brown, was ubiquitous. He had lost fifty pounds at Tampa, but said he felt 'like an athlete.' The poor young Assistant Quartermaster was crazy about the failure of the carpenters. He said he had slept right on the spot where they were to begin work early in the morning, but when we left, after 12, no one had appeared. I asked him for shelves in the kitchen, and he gave me the only 'sickly smile' I saw at Camp Wikoff, assuring and convincing me that barrels would do just as well to put the pans and dishes in for the present.

"I do hope when the President comes North he will visit Camp Wikoff, and if Mrs. McKinley could take the drive I did all over those beautiful 'dunes' on which the tents are pitched, she would not only feel braced by that delicious air, but she would see our government is doing all it can for our brave men, both the sick and the well. I went down there heartsick from all I had heard. I came home rejoicing in the truth as I had seen it, with my own eyes, and wishing to proclaim it from the house-tops.

"The people in the village of East Hampton, where we passed the night, laughed to scorn the notion that good water could not be procured at Montauk; but coming up to New York in the train, a gentleman was dictating an elaborate 'article' to a stenographer, taking exception to everybody in and about Montauk Point. I overheard his harrowing account of the sufferings he had witnessed. I take the liberty of telling you what I saw, and beg you will excuse it for our country."

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Major LEONARD B. ALMY, Chief Surgeon, is relieved from duty with the Second Army Corps and will proceed to Montauk Point for assignment to duty. Aug. 12.

The following-named acting assistant surgeons will proceed from the places specified to Tampa, Fla., to await transportation to Santiago de Cuba: W. L. COLEMAN, from Houston, Tex.; JOHN F. CRONIN, from Savannah, Ga.; L. De Poorter, from New Orleans, La.; JOHN B. SEWELL, from Baldwin, La. Aug. 12.

Acting Asst. Surgeon WM. J. HUGHES, will proceed from Baltimore, Md., to Fort Monroe, Va., to await transportation by steamship "Obdam" to Ponce, Porto Rico. Aug. 12.

The following-named acting assistant surgeons will proceed from the places specified to Chickamauga Park for assignment to duty: T. H. LAXDOR, from Canton, Ohio; HARRY A. BARNHART, from Philadelphia, Pa. Aug. 12.

Acting Asst. Surgeon D. J. JOHNSON, Fort Warren, is assigned to duty at that post, relieving Major CHARLES B. BYRNE, surgeon, who will return to his proper station, Plattsburg Barracks. Aug. 12.

Major JOHN P. DODGE, surgeon, will proceed to Montauk Point for duty. Aug. 13.

Captain FRANCIS A. WINTER, A. S., will proceed to Montauk Point for duty. Aug. 13.

Acting Asst. Surgeon FRANK DONALDSON will proceed to Montauk Point for duty. Aug. 13.



Acting Asst. Surgeon JOHN H. GRANT will proceed from Buffalo, N. Y., to Fort McPherson for duty. Aug. 13.

Acting Asst. Surgeon JOHN C. GREENWALT will proceed from Chambersburg, Pa., to Chickamauga Park for duty. Aug. 13.

Leave for one month on account of sickness is granted Acting Asst. Surgeon LEONIDAS H. MINZLER. Aug. 13.

Acting Asst. Surgeon E. N. NEZ will proceed from Philadelphia, Pa., to Montauk Point for duty. Aug. 13.

Acting Asst. Surgeon GEORGE R. PLUMMER is relieved from duty at the U. S. General Hospital, Key West, Fla., and will report at Key West Barracks for duty. Aug. 13.

The following-named acting assistant surgeons will proceed from the places specified to Chickamauga Park for duty: DONALD S. WERTH, from St. Louis, Mo.; HERBERT M. HUSTON, from Ruthven, Ia. Aug. 13.

Acting Asst. Surgeon CHARLES W. STEVENS will proceed to Fort Wadsworth for duty. Aug. 13.

Acting Asst. Surgeon A. A. BAILEY is relieved from duty at Fort Morgan and will proceed to Fort Ringgold for duty. Aug. 13.

Acting Asst. Surgeon THOMAS B. DOWDEN will proceed to camp at Newnan, Ga., for duty. Aug. 13.

Acting Asst. Surgeon JOHN HORN will proceed to Chickamauga Park for duty. Aug. 13.

Lieutenant-Colonel BENJAMIN F. POPE, Chief Surgeon, is relieved from duty with the Fifth Army Corps, and will proceed by first transport from Santiago de Cuba and report to the Surgeon-General of the Army. Aug. 15.

Lieutenant-Colonel ROBERT M. O'REILLY, Chief Surgeon, is relieved from further duty at Tampa, Fla., and will proceed to Huntsville, Ala., and report to the commanding general Fourth Army Corps, for duty. Aug. 15.

Leave for one month on account of sickness is granted Major PAUL CLENDENIN, brigade-surgeon. Aug. 15.

The following-named acting assistant surgeons will proceed from the places specified to Fort Monroe, for transportation by the U. S. steamer "Obdam" to Ponce, Porto Rico, for duty: JOHN F. GORDON, Buffalo, N. Y.; MICHAEL E. HUGHES, Adams, Mass. Aug. 15.

Acting Asst. Surgeon WILLIAM F. SKINNER will proceed from St. Thomas, Pa., to Montauk Point for duty. Aug. 15.

The following-named acting assistant surgeons will proceed from the places designated to Charleston, S. C., to await transportation by the U. S. steamer "Obdam" to Ponce, Porto Rico, for duty: CHARLES W. FARR, EDWARD A. SOUTHALI, Buffalo, N. Y.; JAMES REAGLES, Schenectady, N. Y. Aug. 15.

The resignation of Major CHARLES M. ROBERTSON, Chief Surgeon, has been accepted. Leave until and inclusive of Sept. 1, is granted Major CHARLES M. ROBERTSON, Chief Surgeon. Aug. 16.

Leave on surgeon's certificate of disability granted Major LOUIS S. TESSON, surgeon, is extended two months on account of sickness. Aug. 16.

Captain WILLIAM E. PURVIANCE, A. S., is relieved from duty at Fort Morgan and from special duty pertaining to the recruiting service, and will proceed to Fort McPherson for duty. Aug. 16.

Captain HENRY D. SNYDER, A. S., is relieved from duty with the Fourth Army Corps and will proceed to Fort Ethan Allen for duty. Aug. 16.

The following-named acting assistant surgeons will proceed from the places designated to Tampa, Fla., to await transportation to Santiago de Cuba for duty: WM. H. AYLESWORTH, from Fairfield, Ia.; LOUIS J. GENELLA, from New Orleans, La.; C. J. KENWORTHY, from Tyron, N. C.; G. W. LUSTER, from Utica, Miss.; J. M. LINDSLEY, from Nashville, Tenn.; E. F. MCLENDON, from Smithville, Tex.; W. E. MOODY, from Hermanville, Miss.; W. H. REYNOLDS, from Packsville, S. C.; O. W. STONE, from Bay St. Louis, Miss.; BATT SMITH, from Wharton, Tex.; A. L. IZLAR, from Ocala, Fla. Aug. 16.

Acting Asst. Surgeon JOHN E. BRACKETT will proceed to New York City and report to Major WILLIAM H. ARTHUR, chief surgeon, in charge of U. S. Army hospital-ship "Missouri," for duty. Aug. 16.

Acting Asst. Surgeon GEORGE M. BRADFIELD will proceed from Philadelphia, Pa., to Fort Myer, for duty. Aug. 16.

Acting Asst. Surgeon FRANK I. DISBROW will proceed from New York City to Charleston, S. C., to await transportation by the U. S. steamer "Obdam" to Ponce, Porto Rico. Aug. 16.

Acting Asst. Surgeon JOSEPH M. HELLER is relieved from Fort Washington and will proceed to Montauk Point for duty. Aug. 16.

The following-named acting assistant surgeons will proceed from the places designated to Chickamauga Park for duty: WM. E. STEMEN, from Kansas City, Kan.; E. D. MEKER, from Trenton, Mo. Aug. 16.

Lieutenant-Colonel VALERY HAVARD, chief surgeon, will report for assignment to duty as chief surgeon of the Department of Santiago. Aug. 17.

Acting Asst. Surgeon GEORGE W. PATTISON will proceed from Buffalo, N. Y., to Fort Myer, for duty. Aug. 17.

Brigade-Surgeon E. R. MORRIS is relieved from duty in the division field-hospital, Presidio, and will report to Brigadier-General Chas. King, as surgeon of Second Brigade. Aug. 11.

Captain IRA LADD, A. S., is relieved from duty at the division field-hospital, Presidio, and will report to his regiment for duty. Aug. 11.

Acting Asst. Surgeon HENRY DE R. PHELAN is relieved from duty at the recruiting rendezvous in San Francisco and will report at division field-hospital, Presidio, for duty. Aug. 11.

Major E. R. MORRIS, brigade-surgeon, is relieved from further duty at the division field-hospital, Presidio, and will report for duty with troops embarking on U. S. transport "Arizona." Aug. 12.

The following assignments are made: Assistant Surgeon HENRY PAGE, to duty with the Third Battalion, Eighteenth Infantry, and will accompany it on the U. S. transport "Arizona;" Acting Asst. Surgeon C. F. DEMAY, to duty with the Third Battalion, Twenty-third Infantry, and will accompany it on the U. S. transport "Arizona." Aug. 12.

Acting Asst. Surgeon Z. TAYLOR MALARY is relieved from further duty at Benicia Barracks, and will report for duty with troops embarking on the U. S. transport "Arizona." Aug. 12.

Acting Asst. Surgeon W. O. TAYLOR will report for duty at the division field-hospital. Aug. 12.

Leave for one month, on surgeon's certificate of disability, is granted Captain HENRY R. STILES. Aug. 15.

The order relieving Acting Asst. Surgeon A. A. BAILEY from duty at Fort Morgan and directing him to proceed to Fort Ringgold is revoked. Aug. 16.

A board of medical officers, to consist of Major WALTER REED, surgeon; Major VICTOR C. VAUGHAN, division-surgeon, and Major EDWARD O. SHAKESPEARE, brigade-surgeon, is appointed to meet in Washington, D. C., for the purpose of making an investigation into the cause of the extensive prevalence of typhoid fever in the various military camps. Aug. 18.

A board of officers, to consist of Major WILLIAM L. KNEEDLER, brigade-surgeon, and First Lieutenant DOUGLAS F. DUVAL, A. S., is appointed to meet at West Point, N. Y., Aug. 27th, for the physical examination of candidates for admission to the U. S. Military Academy, and such cadets thereof as may be ordered before it. Aug. 18.

Captain WILLIAM F. LEWIS, A. S., now at Sullivan's Island, will proceed to Tampa, Fla., and report to the commanding officer, Fifth Infantry, to accompany that regiment to Santiago. Aug. 18.

First Lieutenant OTWAY W. RASH, A. S., now at Fort Monroe, will proceed to Sullivan's Island for duty. Aug. 18.

Acting Asst. Surgeon A. G. DONAHUE, JR., will proceed from Harts-ville, Tenn., to Chickamauga Park, for duty. Aug. 18.

Acting Asst. Surgeon HARRY STREET will proceed from Baltimore, Md., to Charleston, S. C., and await transportation by U. S. steamer "Obdam" to Ponce, Porto Rico. Aug. 17.

Acting Asst. Surgeon GEORGE WILSON will proceed from Norfolk to Fort Monroe to await transportation by the U. S. steamer "Obdam" to Ponce, Porto Rico. Aug. 18.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon F. E. McCULLOUGH, appointed August 10, 1898.

Asst. Surgeon L. P. BALDWIN, detached from the "Alexander" and ordered home.

Passed Asst. Surgeon J. SAILER, detached from the "Arctic" and ordered to the "St. Louis" immediately.

Asst. Surgeon F. E. WAGNER, detached from the "Ajax" and ordered to the "Dale" immediately.

## Foreign News and Notes.

**The Monument to Charcot** will be formally unveiled in the Salpêtrière in Paris on October 23d.

**M. Castex** has been chosen professor of physics in the medical school at Rennes.

**Dr. Carl I. Cori**, of the German University at Prague, has been elected Director of the Zoological Station at Trieste.

**Cases of Plague have been reported at Suez**, with symptoms like those observed in the epidemic at Bombay.

**Vienna Royal Academy of Sciences.**—Dr. Max Gruber and Emil Zuckerkandl have been chosen corresponding members.

**A Permanent International Committee for the Study of Tuberculosis.**—One of the most practical results of the recent congress for tuberculosis held in Paris was the adoption of a resolution offered by Prof. von Schröter, of Vienna, as to the appointment of a permanent international committee for the study of tuberculosis in the various countries represented by the congress, and to report results.

**Professor Alphonso Rosthorn**, of the German University at Prague, has been called to the chair of gynecology at the University of Utrecht.

**The Bubonic Plague** is again epidemic at Bombay. One hundred and three deaths were officially reported for the week ending August 13th.

**The 12th Congress of the French Surgical Association** will be opened in Paris on October 17th, with Professor Le Dentu as president.

**Dr. C. M. Chadwick** has been chosen Professor of Materia Medica, Pharmacology, and Therapeutics for the Department of Medicine of the Yorkshire College.

**A bust of Victor Meyer** is to be erected in the chemical laboratory at Heidelberg, and, should sufficient money be collected, a scholarship for the advancement of chemistry will be established.

**A French Congress of Gynecology, Obstetrics, and Pediatrics** will be held at Marseilles from October 8th to 15th. Professors Pozzi, Pinard, and Broca will preside over the respective sections.

**A Sign of the Times.**—The *Deutsche medicinische Wochenschrift* publishes an abstract from the prospectus of a private school for feeble-minded children in which a sheet is enclosed and sent to physicians, begging them to accept 50 marks for every child sent by them to the school.

**Guy's Hospital** has received an anonymous gift of \$6,000 for the endowment of medical research, as the result of an address by Mr. Balfour, leader of the House of Commons, on the subject of research on the occasion of the distribution of prizes at the medical school of Guy's Hospital.

**Intense Heat in France.**—It is reported from Paris that almost tropical heat has been experienced there for some days, and on August 22d many deaths and sunstrokes were reported. The troops maneuvering in the Nancy district suffered terribly, and 500 of them were overcome by the heat, some of whom died.

**Obituary.**—**DR. WILLIAM SAVAGE SPEER**, a prominent practitioner of Belfast, Ire., August 3d, aged 50.—**DR. WILLIAM HENRY ACKLAND**, formerly physician and senior medical officer to the Bideford Infirmary, August 7th, aged 73.—**DR. CHARLES ALBERT MACAULAY**, fleet-surgeon in the British navy, July 27th, at Wei-Hai-Wei, China.

**Typhoid Fever in the French Army.**—Typhoid fever having been for some time prevalent in the infantry stationed at Val-de-Saire, orders have been given to evacuate the barracks, and the troops are to go into camp at Querqueville. An investigation is also being made as to an epidemic of typhoid fever in the barracks at Laghouat.

**Swedish Public Sanatoria.**—The Swedish Parliament has appropriated 850,000 kroner for the establishment of a public sanatorium for lung-diseases in South Sweden. Two other sanatoria, one for Central, the other for North Sweden, have been established with the fund of 2,200,000 kroner presented by the nation to King Oscar at his recent jubilee.

**Increased Frequency of Diabetes.**—An investigation by Bertillon, of Paris, shows a considerable increase in the death-rate from diabetes; from 1865 to 1869 it was 2 per 100,000 of the population; from 1885 to 1889 it was 12.2, and from 1890 to 1891 it was 16 per 100,000 population. Carö finds that the death-rate in Danish cities was 2 per 100,000 in 1860 to 1869, and 8 per 100,000 from 1890 to 1894.

**Hessing, the Instrument-maker, Decorated.**—Hessing, the well-known instrument-maker of Göggingen, in Bavaria, was recently sent for to make an appliance for the Grand Duke of Luxemburg, who, owing to an injury to his hip, was unable to walk. The Grand Duke was so well satisfied with the results thus far obtained, being able to leave his bed now after long confinement, that Hessing was summoned again, this time to receive the Order of the Crown of Wurtemberg.

**A congress for the hygiene of women**, in conjunction with an exposition of improved hygienic garments for women, is to be held in Berlin from September 3d to 18th. Cards inviting participation on the part of medical societies and prominent physicians have been distributed. Some of the discussions are expected to bring out the present reactionary movement against conventionalism in these matters which has so far been the rule in Germany and they are looked forward to with a good deal of interest.

**Professor Leyden** has been selected as dean of the medical faculty of the University of Berlin for the next year. Under his administration the new law goes into effect requiring medical students to have passed a State examination before admission to examination for the degree of doctor of medicine at the University. It is hoped that the new regulation will effectually close certain loop-holes for the abuse of the doctor's degree and do away with opportunities for quackery that the old law permitted.

**German Universities Closed for the Summer.**—Practically all the German Universities are closed for the summer vacation the last week in July. According to official announcement, they will reopen on October 15th, but this is a polite fiction that means that lectures and laboratory-work will begin regularly during the first week in November. Meantime, there are given, during August and September at certain of the smaller universities, and during October at the larger ones, especially at Berlin and Leipzig, a series of postgraduate courses in advanced work—the so-called "vacation courses."

**Hay as a Panacea in Russia.**—The Russian Government has just forbidden the further sale of a supposed herbal remedy that, owing to extensive advertising, was in wide use among the people. Millions of advertising pamphlets lauding the virtues of the herb and thousands of certificates of supposed cures were confiscated. Under the name of Ephedra Vulgaris the remedy has so far escaped the rigid laws against secret remedies in Russia, its title being its true botanical name. A large amount of the remedy ready for shipment was also confiscated and proved to be ordinary hay. Pound-packages were being sold in large numbers at from 3 to 5 rubles (\$1.50 to \$2.50) a pound.

**Professor Virchow's visit to England**, which takes place in the first week of October, is to be made the occasion of a public dinner in his honor, given to him by the English medical profession. The chair will be taken by Lord Lister, who will be supported by all the leaders of the medical profession then in London. The holiday season may prevent the gathering from being quite representative, but most of the important London medical men hold appointments at one or the other of the medical schools, and as the schools open in October, absentees ought to be few. The purpose of Prof. Virchow's visit is, as has already been mentioned in the JOURNAL, to deliver the Huxley Lecture, or Introductory Lecture to Students, at the Charing Cross Medical School.



**Professor Max Gruber**, the distinguished otologist of Vienna, retires from active service with the end of the present semester, having reached the age of 71. Austrian law requires the retirement of university professors at 70, but custom has allowed the holding of the chair for a year longer (which is called the year of honor), unless special circumstances should seem to demand that the ministry should ask a septuagenarian to forego the privilege, which has not thus far happened. A new incumbent to fill Professor Gruber's place is not to be appointed, but the otological department is to be placed entirely in the hands of his distinguished colleague, Professor Politzer, the two clinics being combined in one.

**The Bacillary Origin of Crab-plague.**—Dr. Höfer, the zoologist of South Germany, has, it is reported, discovered a microbic cause for the crab-plague, which has now for some years wrought much havoc. He has been able to obtain a bacillus in pure cultures, and to reproduce the disease. The total eradication of the crayfish in certain German waters some years ago was followed by the introduction of healthy specimens from other places, but the new race later fell victim to the disease and it looked as though the crayfish-industry were ruined forever in certain quarters. This recent discovery will, it is thought, lead to the development of measures that will eradicate the disease and protect the still healthy fish.

**Professor Waldeyer as Rector of the University of Berlin.**—The Rector for the ensuing scholastic year is always announced on Founder's Day, August 3d, the birthday of King Frederick William III. The Rector for the next year is Professor Waldeyer, who occupies the chair of anatomy, and whose work on connective tissue (he is said to be the greatest living authority on connective tissue) and whose theories as to the growth of carcinoma, have made him well known to the profession at large. He succeeded Du Bois Reymond as the permanent secretary for the department of the physical sciences of the Berlin Academy of Sciences (a great honor for a medical man) several years ago. When the session at the University began to close earlier than the date formally announced, August 15th, Founder's Day, August 3d, and the announcement of the new Rector used to be set as the earliest limit at which the University lectures might cease, but this custom has been deviated from of late years, practically all lectures ceasing at the end of July.

**German Physicians and Bird-protection.**—There has been a recent renewal of the movement in certain quarters in Germany to have some official steps taken with regard to the protection of birds that do not winter in Germany. A German delegation attended the Congress for Bird-protection held in Paris in 1895, but so far no action has been taken by the government. It was hoped that a recommendation from the authorities to the governments whose domains are situated along the Mediterranean would prevent the wholesale slaughter of these birds that is carried on in some places. A number of prominent medical men, who object to the thoughtless massacre of the birds that at present enliven the public parks and squares and are such a source of pleasure, have interested themselves in the movement, which now promises to accomplish something. Medical men in Germany generally take more interest in the protection of animals than is elsewhere the case. The fact, mentioned by Prof. Schmidt at the last German Medical Congress at Wiesbaden, that Prof. Ludwig, the distinguished physiologist, was president of the society for the protection of animals, is not unique.

**The German Ophthalmological Congress honors the late Professor Becker.**—The opening session of the German Ophthalmological Congress at Heidelberg, on August 4th, was an honorary sitting, at which a bust of the late Prof. Otto Becker, the distinguished occupant for many years of the chair of ophthalmology at the University of Heidelberg, was unveiled. Professor Becker, whose work as a practitioner and investigator had made him well known to ophthalmologists all over the world, died in 1890. Most of the professors of ophthalmology in the various German universities were present on the occasion. Dr. Bernheimer, of Vienna, a former assistant of Prof. Becker, delivered the panegyric on the occasion.

**Dr. Hermann Rieder**, of Munich, whose recent work on the Roentgen-rays in the therapeutics of parasitic diseases has attracted a good deal of attention, has just become an extraordinary professor in the university of Munich. Part of his duty is to consist in the delivery, at least once a year, of practical lectures on hydrotherapy, electrotherapy, mechanotherapy, and other methods of physical therapeutics. This is one of the first significant fruits of the recent discussion of the clinical teaching of medicine at the German Congress at Wiesbaden, where there was practical unanimity of sentiment among the medical men present that physical therapeutic methods would have to be given a larger place in the curriculum than has hitherto been afforded them.

**Prussian-Army Suicides and Forms of Insanity.**—According to a recent order issued to Prussian army-surgeons the statement of "suicide from mental aberration or temporary insanity," or any other of the general terms so commonly used under such circumstances, will no longer suffice in reporting self-induced deaths in the army. The specific form of insanity, as far as possible, must be given. It is hoped that in this way a mass of statistics will be secured, of distinct scientific value in the matter of suicide and insanity and that will, besides, by pointing out the manifest significance of certain preliminary symptoms, permit precautions to be taken, especially in the matter of furloughs from service, that will reduce the mortality from this cause especially among army-officers.

**The late Leopold von Dittel**, whose death is announced as having occurred recently at Vienna at the ripe age of 83, was a surgeon of world-wide fame. He became professor of surgery at Vienna in 1865, and held the post for some time, doing important work in the surgery of the genito-urinary passages. He devised an operation, which is still known as Dittel's operation, and which consisted of the enucleation of the labial lobes of the prostate through a perineal incision; and he also introduced a method of excising tumors by the use of the elastic ligature. This device would probably have enjoyed greater vogue had not operative proceedings with the knife become so much simpler and safer with the development of a knowledge of the value of antiseptics. It is noteworthy that Dittel was sixteen years in general practice before he took up the career of a pure surgeon.

**A Benefit for a Sanatorium for Tuberculous Patients.**—A huge benefit concert and banquet, under the patronage of her Majesty the Empress, to be given in the Zoological Garden, Berlin, toward the end of August, has been projected. The profits are to go to the completion of the Sanatorium for Tuberculous Patients, at Belzig, just outside the city of Berlin, at present in course of erection. The Empress is personally greatly interested in the matter of the

care of tuberculous patients, but the benefit itself is a typical expression of the public interest among Germans, and generally on the Continent, in the recent movement to care for the tuberculous in special establishments favorably located with regard to climate and purity of the air, where, under special medical supervision, they may place themselves under a suitable régime without the constant temptations to overstep its bounds. Since Professor Leyden's report on the subject at the International Congress at Moscow, last year, this has been the direction that most charitable and philanthropic efforts have taken in Germany.

**The Suppression of Nostrum-selling in Germany.**—In Germany the same difficulty exists that confronts the profession in America in its efforts to secure legislation against the manufacture and sale of nostrums. Each of the legislatures of the German States viewed the question in its own way and each of the State courts gave its own legal opinions in the matter, and these did not always agree with those in neighboring State courts. It seems probable that at length harmonious agreement among their legal brethren will enable German physicians to fight the battle against this form of quackery more effectively and without the continual recurrence of conflicting judicial decisions in the different courts. A recent decision of a court of appeals declares any remedy a secret remedy, and therefore amenable to the laws governing preparations of this class, whose ingredients and their amounts cannot be immediately determined by any one so as to be able to judge of its value. This decision is practically being affirmed by the different State courts in all recent cases, so that the last loop-hole of the nostrum-manufacturer seems closed.

**The difficulties of diagnosis** have never been more dramatically shown than they are in the report of the London Asylums Board for 1897, just published. The London or Metropolitan Asylums Board has charge of the hospitals for infectious disease in London. If persons are notified by medical practitioners to be suffering from certain infectious diseases, and their domestic circumstances prevent proper isolation at home, they are, for the good of the community, removed by the Board to the hospital serving the particular district where they dwell, and there treated at the expense of the community. During 1897, the cases of mistaken diagnosis, figuring in the Board's report, amount to over 5% of all the cases notified, and some of the figures make startling reading. Of 466 cases notified as suffering from scarlet fever, 62 were discovered on admission to hospital to have measles (a non-notifiable disease, under the last English Act dealing with infectious diseases); 115 had tonsillitis, of which 66 had lost their symptoms, and figure in the return as "suffering from no obvious disease." Of 643 cases notified as diphtheria, 551 were found to be suffering from tonsillitis only. Of 293 cases notified as enteric fever, 61 were suffering from lobar pneumonia. Of 121 cases certified as smallpox, 52 were found to have other complaints. The report shows that only 70 cases of smallpox were treated during the year at the hospitals of the Board; 53 vaccinated cases yielded 5 deaths, 13 unvaccinated cases yielded 5 deaths, and 4 cases, in which no cicatrices could be found, yielded 3 deaths. Of the 5 deaths occurring in the unvaccinated, 4 were in little children.

**Schoolmasters and Chimney-Sweeps.**—The official position of town chimney-sweep, an institution almost unknown in America, but extremely common in the smaller towns on the continent, became vacant recently in a small

town in Switzerland not far from the Italian border. The dignitary commands a salary of 800 francs (\$160) a year, and notices that applications for the succession would be received were posted around the town. Among the applicants were three Italian school-teachers from over the border, who were perfectly ready to substitute the less dignified and more unpleasant occupation of chimney-sweep for their more ideal avocation of teaching the young Italian idea how to shoot, because of the almost princely remuneration (in their eyes) attached to the former. This is but one sign of the times indicative of the fierce struggle for existence that is going on in all the professions in consequence of overcrowding, the professional man despite years of preparation being often compelled to take up manual labor, or eke out an existence by doing extra professional work. The intensity of the competition is making itself felt in every community, and the high nerve-tension required to meet the strain is seriously affecting the nervous condition of a large number who take seriously the struggle for life. It is therefore not to be wondered at, that so many conditions are presented to the physician for treatment that have either underlying or accompanying them a neurotic disturbance of equilibrium that demands correction before all else. Neurasthenia is the modern, not the American, disease *par excellence*. And one is tempted to ask how long the present state of affairs, with its migration to towns and inevitable degeneration of the nervous system, will continue.

## Philadelphia News and Notes.

### Vital Statistics for the week ending August 20th :

Diseases.	Cases.	Deaths.
Diphtheria.....	45	16
Scarlet fever .....	10	1
Typhoid fever.....	78	8
Pulmonary tuberculosis.....	0	50
Total number of deaths .....		446
Children under 5 years of age		147

**A Dial for Determining Astigmatism.**—We are informed by Dr. G. A. Hill that since the publication in the JOURNAL for August 20th of his description of a device for determining astigmatism he has learned that a similar device was described by Dr. G. M. Gould in the *Archives for Ophthalmology* for 1889, vol. xviii, page 435. The former can be obtained of Mr. D. V. Brown, and the latter of Messrs. Wall and Ochs.

**The Late Dr. Wm. Pepper.**—At a meeting held August 19, 1898, the following resolution was adopted: "The Executive Committee of the Board of Trustees of the PHILADELPHIA MEDICAL JOURNAL has heard with deep sorrow of the sudden death of their colleague, Dr. William Pepper, through whose unselfish interest in Philadelphia medicine it became possible to establish a medical journal free from the control of trade-influences and devoted to the advancement of scientific medicine. In his death the Trustees lose a clear thinker and a wise counsellor and the medical profession of the world an illustrious physician, known alike for his scientific attainments and his business-qualifications. It is ordered that this tribute be recorded in the minutes of the Philadelphia Medical Publishing Company and that the Secretary transmit to the family of Dr. Pepper the sympathy of his associates."



**Obituary.**—MAJOR LAWRENCE S. SMITH, Surgeon First Army Corps, died at sea of typhoid fever, August 15th, on board the hospital-ship *Relief*, while on his way home from Porto Rico. Dr. Smith was mustered into the volunteer service at Mt. Gretna, with the First Pennsylvania Regiment, of which he was Major and Surgeon for several years previously. He went with the regiment to Chickamauga and later was detached and ordered to report at Newport News to accompany Gen. Brooke's command to Porto Rico as Surgeon in the general hospital of the First Army Corps. He sailed for Porto Rico on the transport *Massachusetts*, and was taken ill with typhoid fever shortly after landing at Ponce. Dr. Smith was graduated from the college department of the University of Pennsylvania in 1888, and from the medical school in 1891, and he afterward served as resident physician at the Pennsylvania and University Hospitals.

**The Philadelphia Hospital-train** arrived on August 21st with 110 sick soldiers. About 30 of the men were convalescent and well enough to stand up and walk out of the hospital-car to the patrol-wagons, which took them to the hospitals; 25 patients each were taken to the German, Episcopal, and Medico-Chirurgical hospitals, and 17 each to the Presbyterian and University hospitals. The men bore the journey well, although some of them were seriously ill when they left Chickamauga. The train left Broad Street Station at 8.40 A.M., August 24th, on a second trip, for Fernandina, Fla., to bring home the sick of the Third Regiment. It consisted of four hospital-cars, a baggage-car, fitted as a kitchen and medical headquarters, and a parlor-car for nurses, doctors, and committeemen. The train ran as the second section of the Southern Railway Fast Mail, which was due at Fernandina at 9.30 A.M., August 25th. The patients will be divided between the Methodist, Jefferson, and St. Agnes's Hospitals, which supplied the nurses and hospital-equipment, including sheets, rubber-blankets, etc.

**Successful Operation for Strangulated Hernia in an Infant 34 Days Old.**—C. C. Allison (*Western Medical Review*, August 15, 1898) reports the case of a baby, 34 days old, that had had vomiting, anuria, constipation, and a tender enlargement in the left inguinal region for 30 hours. On operation 8 inches of intestine were found constricted and dark in color. The circulation was slowly restored, under irrigation with warm salt-solution, sufficiently to warrant returning the intestine to the abdominal cavity and Bassini's radical operation was completed. The child made a good recovery.

**Predisposition to Hernia.**—Kocher (*Correspondenz-Blatt für Schweizer Ärzte*, June 15, 1898) describes three general conditions of the peritoneum and abdominal walls that predispose to hernia. In certain cases there may be only a lack of resistance of the fascia and muscles making up the walls and openings of the inguinal canal without any real sac-formation. With this condition hernia results frequently from heavy work, straining at stool, etc. In other cases there is a deep depression or out-pocketing in the parietal peritoneum. The abdominal contents include themselves into this depression in a cone-shaped form (the "pointe de hernie" of the French) and gradually force their way outward. This is believed to be the most common condition. Then there are the cases in which the opening between the cavity of the tunica vaginalis testis and the peritoneal cavity has not closed; in these cases hernia is almost inevitable in spite of trusses. In cases with well-developed hernial sac, Kocher advocates operation by his own well-known method, invaginating the sac in the inguinal canal. If a deep depression or out-pocketing of the parietal peritoneum be present, Bassini's method of splitting up the inguinal canal, transplanting the cord and tightly suturing the canal, is believed to be the best method of operation.

## Society Proceedings.

### CANADIAN MEDICAL ASSOCIATION.

Thirty-first Annual Meeting, held at Quebec, August 17, 18, 19, 1898.

SPECIAL REPORT OF THE PHILADELPHIA MEDICAL JOURNAL.

#### FIRST DAY—August 17th.

THE thirty-first annual convocation of the Canadian Medical Association began August 17th, under most auspicious circumstances.

It was in the historic city of Quebec that the Association first saw its birth, and it was particularly appropriate that it should again this year revisit the place of its birth, in view of the important matters to be brought before it, viz., inter-provincial registration, a subject of great importance to the medical profession in Canada. The meeting thus promised to be an epoch-making one in Canadian medical history.

The city of Quebec is one that, on account of many and varied associations, is always of interest to the traveler, but it is not without its special interest to the medical man. It is sufficiently supplied with hospitals, the Jeffery Hale, the Marine, and the Hotel Dieu, the last being, for Canada, of very ancient date, going back two centuries. Laval University, too, where the meetings were held, was founded, in embryo at least, by Mgr. de Laval, archbishop of Quebec, about the same time, and possesses one of the largest medical schools in Canada, the students being almost entirely of French-Canadian extraction, and the teaching based upon the Parisian model. The university has well-equipped chemical and physical laboratories, and a fair museum. Its glory, however, is its library, which, in some departments, is the best in Canada. It is particularly rich in books bearing upon the early history of Canada, many of the editions being unique and almost priceless.

The meeting was held in the Convocation Hall of Laval University, being called to order at 2.30 P.M. by DR. THORNBURN, of Toronto, in the room of the retiring president, DR. MOON, who was unavoidably absent. After addresses of welcome from Alderman Foley, acting-mayor; DRs. C. S. PARKE and A. M. AHERN, extended to the Association a hearty greeting on behalf of the city of Quebec and the University.

DR. F. N. G. STARR, of Toronto, read the minutes of the last meeting, and DR. J. M. BEAUSOLEIL, of Montreal, was then inducted into the presidential chair.

Owing to the large proportion of the local French-Canadian members present, the somewhat unique feature presented itself of papers being read in French as well as English.

Dr. Beausoleil, in his **presidential address**, thanked the Association for the great honor it had done him in electing him to the highest position in its gift, an honor that he regarded as conferred upon him, not so much on account of any particular merit of his own, as by way of compliment. He referred to the fact that the Association was founded at Quebec in 1867, the year of the Canadian Federation, the object being to promote medical science in Canada and to unite the profession. The first president was Dr., now Sir, Charles Tupper, recently Premier of Canada. The subject that he dwelt particularly upon was that of the **Inter-provincial Registration of Physicians**. It is deplorable that a physician in one province should not be able to practice his profession in a neighboring one, and if the Association could this year bring about the destruction of this anomaly, it would be a noteworthy year in the annals of the Society. It might be that a lawyer in Quebec could not practice in Ontario, in as much as the legal profession worked under different codes, but medicine is the same the world over, and the present restrictions should be done away with, so that a degree in medicine from any British or Colonial university should carry with it the right to practice anywhere in the queen's dominions. As it is now, owing to the provisions of the British North American Act, which confederated the provinces, each province has autonomy in the matter of education. However, there is now a majority in favor of uniting forces and forming a Dominion board. Ontario alone hesitates, as special legislation is necessary in her case. Still, it begins to look as if this difficulty might be overcome. In conclusion, Dr. Beausoleil expressed the hope that he



might, even if in a very small degree, have contributed to this very desirable end.

A vote of thanks to the president was moved by Dr. T. G. RODDICK, and seconded by Dr. MULLIN, of Hamilton.

The regular business was now proceeded with, a large number of new members being elected.

The first paper, by A. ROSEBRUGH, of Toronto, was in his absence read by title, **The Duty of the Medical Profession in the Question of the Treatment of the Inebriates**, and was referred to a committee consisting of Drs. ADANEE THORNBURN, and MUIR, with instructions to bring in a finding.

Dr. G. STERLING RYERSON, of Toronto, then read a paper on **Monocular Diplopia**, which, he said, deserves more attention, being only very inadequately referred to in the text-books. It is much more common, he thought, than was suspected. The overlapping of images was present in monocular astigmatism. He recognized three classes of cases; (1) those dependent upon diseases of the refractive media, such as astigmatism, facets on the cornea, opacities in the humors, punctures or dislocations of the lens; (2) those with traumatism about the zonule of Zinn, or disease of the ciliary body and iris; partial persistence of pupillary membrane is not often a cause; (3) disorders of the central nervous system. Dr. Ryerson recorded two cases. In the first, which he regarded as hysterical in character, there was diplopia of the right side, associated with right facial neuralgia, tinnitus aurium, augmentation and reduplication of the sounds heard. There was also hyperopic astigmatism. A course of potassium bromid and valerian relieved but did not cure. The second case was one of injury to the left side of the head, the patient remaining unconscious for several days. There was diplopia of the right eye and blurring of the discs. There was probably some protrusion of the posterior portion of the eye forward.

Dr. D. MARCEL then read a paper in French upon **Septic Peritonitis Consecutive to Appendicitis, and its Surgical Treatment**. He reviewed the history of operative interference and made the somewhat startling claim that the first operation was done in Paris in 1893. He thought that some patients might be saved by operation even after general peritonitis had set in.

Dr. SMITH then showed pathological specimens, among which was a gall-stone removed from a portion of intestine contained in an umbilical hernia; also a melanotic sarcoma from the leg of a horse. The latter in the horse usually occurs along the course of the short saphena vein and oftenest in gray horses.

Dr. FERD. C. VALENTINE, of New York, next read a paper on **The Genito-urinary Instruments Required by the General Practitioner**. He pointed out the great improvement in the treatment of gonorrhea that has taken place since the days when it was regarded as a skin-disease. From Ricard to Neisser is a great step in the right direction. The general practitioner was deterred from treating cases because of the elaborate armamentarium that was thought necessary, but Dr. Valentine pleaded for more zeal on the part of the general practitioner, as much could be done with simple means. The instruments necessary are a microscope, a centrifuge, an irrigator, syringes, and various sounds and catheters. He described his own irrigator, which consists of a glass reservoir that can be elevated on a wooden frame by a cord and pulley. To this is fastened a rubber tube with a glass nozzle, about which is a metallic saucer. He prefers Beneke's sounds, except in a few cases, when he uses Guyon's modification.

Dr. JAMES THORNBURN, of Toronto, then read an interesting paper on **The Physician and Life-Insurance**. He alluded to the phenomenal growth of insurance-companies in the past two or three years. The subject had, indeed, become so important that a special section had been made for it at the recent meeting of the British Medical Association in Edinburgh. In Canada and England, the amount of the policies was \$340,314,445, while in the United States it reached the fabulous sum of \$5,183,695,250. When such vast amounts are at stake, the utmost care and skill on the part of the physician should be exacted. He directed the attention of the younger practitioners to the following points in filling out a question-blank: All the questions asked should be answered completely and with discrimination. If a patient has had some disease mentioned, full

particulars of this should be given, with dates, duration, and probable effects. With reference to the health of relatives, the physician should not answer "don't know," but should take pains by careful questioning to get some idea of the state of the case. A history of pulmonary tuberculosis, syphilis, or insanity in the relatives, demanded particular care in the examination. His whole advice may be summed up in the statement that a full and careful examination should be made in every case, and no part of it slurred over. Drs. MULLIN, MUIR, DICKSON, GAUTHIER and VALENTINE took part in the discussion. Dr. Dickson advocated an attempt on the part of insurance-companies to bring their question-forms into uniformity.

#### SECOND DAY.—August 18th.

Dr. JAMES BELL, of Montreal, read a paper entitled **A Series of Cases of Calculous Obstruction of the Common Bile-duct, Treated by Incision and Removal of the Calculi**. He felt safe in saying that in no department of surgery has greater progress been made in recent years than in the treatment of gall-stone disease by operation upon the gall-bladder and ducts. Such operations are now followed by a low death-rate comparatively. The first successful cholecystotomy was done by Lawson Tait in 1879, and the first attempt to remove stones from the common duct by crushing was also done by Tait in 1884. Later, Thornton introduced needling. Cholecystotomy is an operation now frequently performed and generally with the most satisfactory results, and in ordinary cases it is almost devoid of danger. To-day, incision of the common duct has replaced the cruder operations of crushing and needling. Dr. Bell then gave an abstract of 6 cases upon which he had operated. The patients had varied in age from 33 to 61 years. In 2 there was but a solitary stone, in 3 there were stones in the gall-bladder as well as in the common duct, in 4 there was obliteration of the cystic duct and a contracted gall-bladder that contained no bile, in 2 a large calculus was impacted in the ampulla of the duct within the duodenum, and was removed through an incision in the duodenum. One case ended fatally from pneumonia after the sixth day; another patient was submitted to a second operation 5½ months after the first.

CASE I.—A man, aged 52, had his first attack of biliary colic in 1892, and it was associated with transient jaundice. Other attacks followed in 3 months, in 1893, in 1894, and in 1895. They became, then, more frequent, with steadily increasing jaundice, drowsiness, anorexia, and loss of weight. The patient was operated on in January, 1896. The conditions found were adhesions of the colon, duodenum, and omentum to the liver; the gall-bladder was contracted and empty; a calculus was found in the ampulla. This was removed by an incision along the line of the duct and obliquely across the duodenum at its posterior border. Drainage was employed. Recovery was excellent, without complications.

CASE II.—A woman, 56 years old, was admitted to the Royal Victoria Hospital, February 16, 1897, presenting pain and tenderness in the epigastrium, with deep jaundice. There was a history of biliary colic for 20 years, and an attack of acute cholecystitis at the end of 10 years. The last attack had occurred 2 months before admission. There was jaundice; the urine contained bile, and the stools were colorless. At the operation, the omentum was adherent to the under surface of the liver. The gall-bladder was contracted, and contained 12 stones, which were removed. No bile was present. A large stone was in the ampulla. As the gall-bladder could not be brought up to the abdominal wound, the cavity was packed around, and a drain was put into the bottom of the cavity. The patient died of pneumonia.

CASE III.—A woman, 47 years old, complained of pain in the epigastrium, and jaundice. Her first attack occurred in 1881. Until 1894 she had an attack every two years, each associated with jaundice. The stools were colorless. The gall-bladder was shrunken and empty, and a large stone was in the common duct. This was not readily movable, and was removed by incision. Recovery was uneventful.

CASE IV.—A woman, 61 years old, first presented symptoms in 1894, after a fall, in which she struck the right side. She had periodic attacks of pain on that side, but no jaundice until 1897. The liver was enlarged; the gall-bladder was shrunken, and contained five stones; the cystic duct was



obliterated; the common duct was dilated, and contained a fairly large stone, which was removed by simple incision.

**CASE V.**—A woman, 49 years old, came under observation after 2 months' illness. She suffered from pain in the epigastrium, followed by jaundice. The attacks occurred about twice a week, and the jaundice persisted. The stools were colorless. The duodenum was firmly adherent to a contracted gall bladder. A large stone was found in the common duct, which was dilated. On May 6th, almost three months after the operation, the patient had another attack of colic, with increase in the jaundice. The abdomen was reopened on July 21st; a movable stone was found in the common duct, and removed by longitudinal incision.

**CASE VI.**—A woman, 33 years old, came under observation May 6, 1898, with recurring colic and jaundice. Her first attack had occurred two years previously. Operation was performed on May 12th. The colon and the stomach were adherent to the liver. The gall-bladder was distended and the common duct was much dilated. A stone, impacted in the ampulla, was removed through an incision into the duodenum. The gall-bladder was then aspirated and three ounces of pus, which proved sterile, were removed. Six stones were removed from the gall-bladder and one from the cystic duct. In estimating the value of a surgical procedure the surgeon has to consider (1) the conditions calling for operation and the prognosis under other methods of treatment or under no treatment; (2) the gravity of the operation, and (3) the results that can reasonably be expected. In jaundice due to mechanical obstruction by stones there is but one ground of hope outside of operation, and that is by expulsion of the stone through the natural passages or ulceration into a neighboring viscus. Medicinal treatment is useless. Delay is attended with danger that septic peritonitis or carcinoma may develop. Therefore resort to operation is advisable. The operation is usually not a serious one. The deaths are about 1 in 4, 5, or 6 cases. The dangers are from shock from a prolonged operation; from hemorrhage; and from peritoneal infection. The operation Dr. Bell usually performs is to make an incision in the abdominal wall from the costal margin over the center of the rectus muscle to about the umbilicus. Through this the parts may be explored, and then a second incision is made from the upper end of the first one along the costal border toward the xiphoid for an inch or two. The separation of adhesions is generally the most difficult and important part of the operation. It is advisable to control the flow of bile by the thumb, and drainage was advocated.

DR. C. D. MARTIN, of Montreal, exhibited a series of forms in use in the Royal Victoria Hospital of Montreal for the accurate record of the particulars of disease for statistical purposes.

DR. V. P. GIBNEY, of New York, then read a paper on **The Treatment of Convalescent Club-foot**. He remarked that there is no more interesting condition in orthopedics than club-foot and none more difficult to bring to a successful issue, although knowledge of the anatomy and pathology of the part is indispensable to the orthopedist. The reduction of the deformity and the preservation of the induced condition in permanency are two different things, and the latter is often more difficult than the former. Relapses occur from various reasons. Among them is the failure of the surgeon to effect perfect reposition of the parts, or the corrected position may not be maintained for sufficient length of time. Sometimes the neglect of exercising the atrophic muscles or the use of too complicated boots is responsible. In operating Dr. Gibney aims at the production of an over-corrected position, but he thought it unwise to maintain this too long. He felt that it is best to endeavor to enlist the intelligent cooperation of the patient and friends and frankly tell them that the trouble is tedious and much depended on their effort. The child should be taught to walk properly, as this will correct the tendency to pigeon-toes. After operative procedures the foot should be put up in plaster for from three to six months. If there is obstinate projection of the cuboid, and head of the fifth metatarsal, a cuneiform incision should be made in the neck of the os calcis. If the foot still rolled Dr. Gibney advocated supra-malleolar osteotomy, placing the foot in the position of over-correction. He thought that the surgeon should himself supervise the construction of all appliances and should occasionally see the patient for months. DR. T. G. RODDICK, of Montreal, asked if Dr. Gibney had any method

of developing the stunted limb outside of those mentioned in the books, massage, etc. SIR WM. HINGSTON said that the cases are often very puzzling, *e. g.*, whether to do tenotomy or osteotomy, what tendons to cut, or which to choose, the open or the subcutaneous method. In his experience subluxation is not common, but he asked Dr. Gibney's experience on this point. DR. GIBNEY, in reply, said that he did not know of any other methods to improve a stunted limb, than massage, selected movements, and properly guided exercise. He advised the employment of an experienced masseur. In his experience subluxation is not common.

A discussion on **The Surgical Treatment of Empyema** was opened by DR. ELDER, of Montreal. He asked: Was any other treatment to be advocated than purely surgical? In his experience children, and strong adults in the country sometimes get well spontaneously or upon repeated aspiration. On the whole he thought that the old surgical rule was a good one that where there is pus the surgeon should cut down and evacuate it. With regard to the operation, resection of one or more ribs is much preferable to simple incision. Only in children is it justifiable to make a simple incision. With regard to the point of incision he thought that the rules of the text-books could not always be followed, but he advised, when there is a localized pus-collection, incision over the center of the region and drainage. He recommended also not placing the patient on the sound side, but to draw him somewhat over the edge of the table and operate from below. With regard to the anesthetic, chloroform or the A. C. E. mixture should be used. As to washing out the cavity most authorities discountenance this now. In slow, prolonged cases in which an external opening occurs spontaneously or there is rupture into a bronchus, should one operate? Dr. Elder thought, as a rule, not, and never in tuberculous cases. In cases in which the general health is obviously suffering, a second lower opening should be made, with an attempt at drainage, except in amyloid cases; or Eslander's operation might be tried. SIR WM. HINGSTON said that each case is to be treated on its merits, as no two cases are alike. Having been prejudiced for years against the operation of resection, he had been converted to it by experience. He is in the habit of washing out the cavity, using weak carbolic solution or plain boiled water. He thought that pneumonia is generally the result of empyema, rather than the cause, as is usually taught. DR. RODDICK preferred a dependent drain. With regard to washing out the cavity he held a mediate position. If the pus is very fetid, he always washes out. In those cases that hung fire for months he injected into the cavity weak iodine-solution or zinc sulphate, which, by their stimulating action, he thought, hastened a cure. If the pus has broken into the air-passages, he would still operate and could do a radical operation. He preferred a metal tube to a rubber drain. DR. MUIR thought that 99% of the cases were tuberculous. He preferred operation always in adults, and made his incision as near the backbone and as high up as possible. He also liked a metal drain, using a piece of flanged gas-pipe for the purpose. DR. DICKSON said that if he obtained more than twenty ounces of pus on aspiration, he concluded that the case would not be cured by this means alone. He would also wash out in fetid cases.

DR. W. H. DRUMMOND (of Montreal), the author of the "Habitant," then read an interesting historical paper on the **Pioneers of Medicine in the Province of Quebec**.

DR. ERNEST LAPLACE (Philadelphia) then described an ingenious **forceps** that he had contrived to replace the Murphy button in the operation of intestinal anastomosis. By its use the gut is held in position and can be readily sutured and the instrument be then removed in halves. He stated that the instrument is simple and possesses none of the disadvantages of the Murphy button, or Senn's plates.

SURG.-COL. NEILSON, the medical head of the Canadian Militia Service, then addressed the Association, asking for their support and counsel in the reforms that it was proposed to introduce in this service. In consequence of the reorganization of the medical service in the Imperial Army, something of the same kind is needed in the Canadian service, as the present system is antiquated. He had been desired by the Canadian Minister of Militia to bring the matter to the notice of the Association.



## THIRD DAY.—August 19th.

DR. T. D. REED, of Montreal, brought up the subject of the official recognition of the new British Pharmacopeia for the whole of Canada. He pointed out that owing to there being a different medical and pharmaceutical association in each province it is difficult to get concerted action on the subject, which is one of the greatest importance, and he thought that it would be proper for the Canadian Medical Association to make a pronouncement in the matter. It is important that some date be fixed for the coming into operation of the new book. By arrangement of the Province of Quebec Pharmaceutical Association and the Montreal Medico-Chirurgical Society it has been settled that October 1st should be taken as the date. He learned that in Ontario the new book is also official for the coming College Session. He therefore moved and it was seconded by DR. MULLIN, of Hamilton:

"Be it resolved that the Canadian Medical Association in annual meeting assembled recommends that October 1, 1898, be taken as the date on and after which, in the absence of instructions otherwise, physicians' prescriptions should be compounded with the preparations of the British Pharmacopeia of 1898."

DR. T. G. RODDICK then read a letter from DR. D. J. LEECH, of Manchester, the chairman of the British Committee in the revision of the Pharmacopeia, in which he pointed out that the adoption of the British Pharmacopeia seemed to be an act of grace on the part of the various provinces of the Dominion, while Canada as a unit did not accept it officially. He thought this should be remedied.

The Association decided then to appoint a committee consisting of Drs. BLACKADER, REED, SMALL, MAROIS, CAMERON, STARR, and MACCALLUM, to confer with the federal government, with a view to formally legalizing and appointing the British Pharmacopeia for Canada.

DR. A. DE MARTIGNY then read an account of two severe cases of furunculosis that he had treated with **Marmorek's antistreptococcic serum** with gratifying results. He used 20 cu. cm., and brought the matter to the attention of his hearers in order that the method might be further tested.

DR. C. R. DICKSON, of Toronto, contributed a paper on **Goiter**. He had had opportunity of observing about 300 cases of various forms and had made use of most of the methods of treatment usually advocated. He pointed out that swelling of the thyroid is the expression of several different pathologic conditions. For exophthalmic goiter he had found the best treatment to be absolute rest in bed, a rigid milk-diet, and the exhibition of calomel. Galvanism of the sympathetic is valuable in some cases. In fibrosis of the thyroid, if the ordinary methods failed, he employed electro-puncture. When suppuration resulted, the abscess was to be opened and drained. In cystic cases he inserted an insulated cannula, cleared out the contents and then filled the cyst with saline solution. He then passed in a current of electricity sufficiently strong to destroy the lining membrane, employing pressure and trusting to the subsequent inflammation to obliterate the cavity. If calcification ensues hydrochloric acid can be used to dissolve the lime. Removal is only necessary in malignant cases. Thyroid and thymus extracts he had found useless. In the discussion, DR. MUIR, of Truro, pointed out that exophthalmic goiter is very common in Nova Scotia, occurring chiefly in young females, particularly in blonds. As it occurs in young girls, he thought the pressure of school-work might have something to do with its production. He had not seen much benefit from electricity, but placed some reliance on intestinal antisepsis.

DR. F. X. DE MARTIGNY then read a paper on **Genital Prolapse and its Treatment**, contributed by PROF. DELAUNAY, of Paris, surgeon-in-chief to the Hospital Péan.

DR. W. J. GIBSON, of Belleville, detailed an interesting case in which a **bicornute uterus** had been mistaken for an ectopic gestation.

DR. D. CAMPBELL MYERS contributed a paper on **Neurasthenia**, confining his remarks mainly to spinal irritation and the relation of neurasthenia to insanity. Neurasthenia is a complex disease that will be found in time to be divisible into special groups. Spinal irritation bears a close analogy to hysteria and is clearly not due to an organic lesion of the cord, but to psychic disturbance. Dr. Myers thought that those forms of neurasthenia in which the higher centers

and emotions were affected sometimes passed over into insanity. Treatment in the early stages is very important. Special stress was laid upon the necessity for removing the patient from his surroundings and restricting the approach of friends. The Weir Mitchell treatment he used only in selected cases, but the underlying principles are of great value.

DR. A. GANDIER, of Sherbrooke, read a communication on **Tracheotomy versus Intubation in Diphtheria**. He pointed out that some cases of diphtheria do not yield to the antitoxin-treatment, and those in country-practice are very difficult to manage. He emphasized the necessity of vigorous local treatment as well as injections and the use of general supporting treatment. When it is a question of tracheotomy or intubation he prefers the former.

A number of other papers were read by title. The session was conspicuous for the important matters that came before it. Besides the question of the British Pharmacopeia for 1898 the matter of "Interprovincial Registration" of degrees was advanced very materially. Hitherto the possession of a degree in medicine in one province of the Dominion did not confer the right to practise in the others. This is an anomaly that is undesirable and for years attempts have been made to overcome the difficulty.

Last year all the provinces except Ontario signified their readiness to cooperate and decided upon a suitable curriculum satisfactory to them. Ontario, however, hung fire. This year, however, representatives from all the provinces except British Columbia met and have fortunately succeeded in reaching a common ground of agreement. They submitted to the Association a scheme of study for the entrance to and the practice of medicine, fixing the minimum requirements and adopting a course of 4 years of at least 8 months each. Twenty-four months of this time must be spent in hospital-work. A central board of examiners for the Dominion is to be appointed by the Medical Councils of the individual provinces to examine all candidates for the Dominion license. This Dominion license will bring with it recognition throughout Great Britain and the other colonies. This finding was signed by all the members of the committee, and is to be sent to the various provincial councils for adoption.

A committee to arrange the details of this scheme was appointed, consisting of Drs. McNeill (P. E. I.), Muir (N. S.), Walker (N. B.), Marsil (Q.), Thornton (Ont.), Bayne (N. W. T.), McKechnie (B. C.), and Williams (Ont.). Dr. T. G. Roddick, M. P., was also appointed to bring the scheme before the federal government, with a view to obtaining legislative sanction to the new board. This result is very gratifying, as it brings within measurable distance a reform that is of the utmost importance and benefit to the medical profession in Canada.

The usual complimentary votes of thanks to the officers and the local committee were passed unanimously.

The following officers were elected for the ensuing year:

President: Irving H. Cameron, Toronto. Vice-Presidents: Drs. James Bell, Montreal, Q.; J. A. Williams, Ingersoll, Ont.; J. MacLeod, Charlottetown, P. E. I.; Kirkpatrick, Halifax, N. S.; L. N. Bourque, Moncton, N. B.; R. S. Thompson, Deloraine, Man.; Lindsay, Calgary, N. W. T.; S. J. Tunstall, Vancouver, B. C. General Secretary: F. N. G. Starr, Toronto. Treasurer: H. B. Small, Ottawa. Local Secretaries: S. R. Jenkins, P. E. I.; W. G. Putnam, N. S.; T. D. Walker, N. B.; Hon. C. Marsil, Que.; C. R. Dickson, Ont.; George Clingan, Man.; Lowe, N. W. T.; R. E. Walker, B. C.

The publishing committee consists of Drs. A. D. Blackader, Davison, W. H. Young, F. N. G. Starr, and H. B. Small.

It was decided that the next meeting-place should be Toronto.

The following honorary members were elected: Drs. Eugène Delannay, Massé, Jullien, Foveau de Courmelle, Mesnard, Geupin, Paul Lozé, Glantenay, and Noury, all of France.

This concluded a most pleasant session. Many thanks are due to the local committee, who entertained the members royally. The visitors were taken on a much-enjoyed trip to Grosse Isle on the government cruiser, *Aberdeen*, for the purpose of seeing the Dominion quarantine-station. This is under the efficient control of Dr. Montizambert, and is most modern and effective. A drive was also organized to the far-famed falls of Montmorency, and the visitors left Quebec with most pleasant recollections of the quaint old city.



## The Latest Literature.

### British Medical Journal.

August 6, 1898. [No. 1962.]

1. Modern Conceptions of the Etiology of the Insanities. JOHN BATTY TUKE.
2. The Expansion of Laryngology and Otology. PETER MACBRIDE.
3. Introductory Remarks Delivered at the Opening of the Section of Diseases of Children. JOSEPH BELL.
4. The Application of Rest in the Treatment of Diseases of the Skin. W. ALLAN JAMIESON.
5. Medicine and Life-Assurance. CLAUD MUIRHEAD.
6. An Address Delivered at the Opening of the Section of Tropical Diseases. PATRICK MANSON.
7. Tone-Sensation with Reference to the Function of the Cochlea. WILLIAM RUTHERFORD.

1.—See this JOURNAL for July 30th, p. 213.

2.—See this JOURNAL for August 6th, p. 267.

4.—See this JOURNAL for August 6th, p. 268.

5.—See this JOURNAL for August 6th, p. 271.

6.—Manson refers to the backward condition of the educational system, which allows so many students to graduate without receiving the least instruction in those diseases prevalent in countries having tropical climates. This should be an important part of the curriculum for the British student, on account of the number of recent graduates who are employed in the Colonies.

7.—Rutherford brings forward again the **telephone-theory of hearing** already advanced by him. Briefly stated, this theory seeks to account for the phenomena of hearing by comparing the auditory apparatus to a telephone. The cochlea is not considered the seat of the analysis of sound; it is believed that all the hair-cells may be effected by every sound, simple or complex, and that through them the sound-waves are translated into nerve-vibrations of corresponding frequency, amplitude, and wave-form; and that in the sensorium the nerve-vibrations give rise to sensations varying in quality with that of the incoming impulses. This theory enables one to understand the production of sensations of harmony and discord, but it still leaves much that is obscure. It is not possible, by this theory, to explain the mechanism that permits the distinction of pitch or that which permits analysis of the constituents of complex auditory sensations. The opinion is expressed, however, that the power of discriminating the components of a complex tone-sensation is acquired by practice. Several experiments are detailed that have been made on animals and on human beings affected with various forms of deafness, and that seem to show conclusively that the cochlea is not responsible for the appreciation of sound.

### Lancet.

August 6, 1898. [No. 3910.]

1. Modern Conceptions of the Etiology of Insanity. JOHN BATTY TUKE.
2. The Effects of Drying of the Soil upon the Public Health of Buenos Ayres. JAMES T. R. DAVISON. (*Illustrated*.)
3. Dissecting Aneurysm. JAMES B. COLEMAN.
4. On a Mode of Stretching Some Urethral Strictures. REGINALD HARRISON. (*Illustrated*.)
5. On a Modification of Mr. Coxons' Method of Prolonging Nitrous-Oxid Anesthesia during Dental Operations—Namely by Means of Mouth-Tube and Closure of the Nares. W. J. MCCARDIE.
6. The Diagnosis of Hystero-epilepsy from Status Epilepticus. WILFRED R. KINGDON.
7. A Case of Pachydermia (Virchow). E. M. LIGHT.
8. Note on a Modification of the Weigert-Pal Method for Paraffin Sections. E. E. LASLETT.
9. Pregnancy Simulating Pendunculated Fibroid. E. PAGET THURSTAN. (*Illustrated*.)
10. Diphtheria of Throat, Nares, Conjunctivæ and Urethra. W. HERBERT GREGORY.
11. Expulsion of the Entire Uterine Contents at the Seventh Month. W. F. GARDENER.

12. Primary Menstruation and First Pregnancy in Middle Life. J. F. WOLFE.
13. A Case of Extreme Collapse Treated on Three Occasions by the Intravenous Injection of Saline Solution. (Under the care of BOYCE BARROW.)
14. Two Cases of Disease of the Spinal Cord Following Pregnancy and Labor. (Under the care of J. B. BRADBURY.)

1.—See this JOURNAL for July 30, 1898, p. 213.

2.—The municipal authorities of Buenos Ayres began, in 1874, the construction of a series of works designed to carry off the surface-water that had formerly remained in the city. These improvements were finished in two sections; one in 1877, and the other in 1885. The completion of this system of drains resulted in perceptible **drying of the soil** of the city. Davison notes a decrease in the mortality from tuberculosis and from tetanus and an increase in the mortality from the pneumonias following the conclusion of the sanitary operations.

3.—Coleman reports the case of a man, aged 65 years, who, while engaged in papering a room, was suddenly seized with severe pain in the back and loss of power in the legs. The arteries were everywhere atheromatous and the pulse of high tension, although there were no physical signs of aneurysm. A diagnosis of chronic plumbism, with chronic interstitial nephritis, was made, with the additional probability of the presence of spinal meningeal hemorrhage. Death occurred suddenly, and at necropsy a **dissecting aneurysm of the aorta** was found, which had ruptured into the right pleural cavity. The aneurysm extended from the origin of the innominate to the left femoral artery, a little below Poupart's ligament. The right renal artery was involved in the dissection. As a predisposing cause of aneurysm, the patient presented extensive atheroma of the aorta and hypertrophy of the left ventricle, with high arterial tension. The intense pain at the beginning of the attack is attributable to the primary rupture; the paraplegia to the interference with the arterial supply of the lumbar enlargement of the spinal cord, partly from thrombosis and partly from rupture of the lumbar arteries. The suddenness of death was due to the external rupture of the aneurysm and the consequent escape of blood into the right pleural cavity.

4.—Harrison recommends a special method of **rapid dilatation** in the treatment of certain cases of advanced **urethral stricture**, especially those complicated by some degree of retention of urine and calling for surgical aid. The instrument that he employs is constructed on the lines of a Holt's dilator, and is provided with a pilot-guide, as well as with a screw-top, in case the former proves useless. It contains a fine test-catheter on which the dilators run, and is fed with a series of 7 rods by which dilatation can be carried from a No. 3 to a No. 12 (English scale.) The dilatation is effected under anesthesia, and must be done deliberately, so as to stretch and not to lacerate the stricture, the operation usually lasting about from 10 to 20 minutes. When the stricture has been fully dilated the instrument is quietly withdrawn, and the urine that remains is evacuated with a full-sized silver catheter.

5.—The following is a modification of Coxons' **method of prolonging nitrous-oxid anesthesia** during dental operations. It consists essentially in closure of the nares by digital compression, thus preventing the escape of nitrous-oxid gas from the naso-pharynx, whence it escapes through an especially constructed tube. This oral tube, which has an internal diameter of about  $\frac{1}{2}$  inch, and is made to fit Hewitt's gas-apparatus, is substituted for the face-piece when once the patient is under the influence of the gas. By this procedure the patient may be kept under the effects of the anesthetic for 4 or 5 minutes. The advantages of the method are that it is extremely simple and adaptable, needs no complicated apparatus, and can be effectually applied to a large majority of patients who cannot take gas in the usual way, and doing away with many a second sitting for extraction.

6.—Kingdon reports 2 cases of **hystero-epilepsy**, in one of which he used gr.  $\frac{1}{2}$  of hyoscin hydrobromate hypodermically for the convulsions, with good results.

7.—Light reports a case of **pachydermia (Virchow)** in which cure was effected by the use of cold applications,



resting the voice, avoiding irritating particles of food, and the internal administration of potassium iodid in 5-grain doses. The etiology in this case was obscure, although it seemed highly probable that the condition followed a simple catarrhal ulcer.

8.—Laslett proposes the following method for **staining sections of the central nervous system** by the Weigert-Pal method, when the tissue has been embedded in paraffin: After the tissue has been hardened in Müller's fluid for about a fortnight, it is cut into pieces of about 2 mm. thickness and placed in Marchi's fluid for a week. The blocks are then washed and embedded in paraffin in the ordinary manner. Sections are cut, fixed to the slide by the warm-water method, freed from paraffin, and placed in the acetic-acid hematoxylin solution, in a warm oven, over night. They are then washed and placed in a solution of sodium carbonate or of lithium carbonate, and are finally differentiated by the Pal method, in which process it is advisable to use weak solutions.

9.—Thurston reports the case of a woman who sought relief from a severe pain in the back and groins. She believed herself to be four months pregnant, and had had a vaginal discharge throughout this period. There was milk in the breasts, but there had been no morning-sickness. Palpation revealed abdominal enlargement and a tumor of irregular outline. Three days after examination, following violent hemorrhage and severe pain, the patient was suddenly delivered of a fetus, with membranes, placenta and all in one mass. The case was probably one of elongated uterine cervix, with very thin walls, allowing the fetal head to be felt through the abdominal wall as a floating tumor.

10.—Gregory reports a case of **diphtheria of the throat, nares, conjunctiva, and urethra**, in which recovery followed the use of antitoxin.

11.—Gardener reports a case of miscarriage at seven months in which the entire product of conception escaped *en masse*. The patient was in the last stage of pulmonary tuberculosis and died the following night.

12.—Wolfe records the case of a married woman, aged 45 years, who menstruated for the first time 18 months previously. In her forty-third year, having had amenorrhea until then, she was seriously frightened by an idiot, whereupon menstruation commenced and lasted two or three days. From that time menstruation occurred irregularly until the woman conceived. She advanced to term, giving birth to a living child after a labor lasting only 13 hours.

13.—Barrow reports a case in which the **intravenous injection of saline solution** was used for marked **collapse** at three different times. The ordinary treatment for the condition seemed to have no effect, but the patient, a boy, aged 14 years, reacted promptly to the saline injections.

### New York Medical Journal.

August 20, 1898. [Vol. lxviii, No. 8.]

In what Conditions of the Nose, Pharynx, and Larynx the Galvano-cautery Should and Should Not be Employed.

CLARENCE C. RICE.

2. The Points of Distinction Between Cerebral Syphilis and General Paralysis of the Insane. Lecture I. HUGH T. PATRICK.

3. Radical Cure of Femoral Hernia, with Personal Experience of the Inguinal Method. HENRY MANN SILVER. (Concluded.)

4. Medical Examination for Life-Insurance in the Field. C. E. SKINNER. (Concluded.)

5. The Nonmalignant Neoplasm or So-called Polypus of the Rectum and Anus; Its Origin, Formation, Etiology, Pathology, Diagnosis, and Treatment. WILLIAM BODENHAMER. (Concluded.)

6. Report of a Few Clinical Cases of Infantile Diarrhea Treated by Eudoxin. M. ELEZARIAN.

1.—Properly used, in suitable cases, Rice believes that nothing can take the place of the **galvano-cautery in rhinology**. It can be used with greater precision than any of the acids, and its action is easily limited. As little mucous membrane as possible should be destroyed. In treating anterior turbinated hypertrophy a fine-pointed electrode should be used, which is introduced cold, and the current is

turned on two or three times, bringing the point to a red heat. Large ulcerations are to be avoided. If the cautery be used on cartilage or bone, a wound that heals with difficulty is likely to result, although small spurs may be satisfactorily removed. In troublesome cases of epistaxis from small ulcerations, which have resisted cure with astringents and alteratives, the cautery is also useful. Linear applications of the cautery are not approved of, because they cause too much destruction of the mucous membrane. Posterior nasal hypertrophies are better treated by applications of chromic acid because of the difficulty of applying the electrode bent at a right angle through the mouth up behind the soft palate. All adenoid enlargements are also better treated by other means. The galvano-cautery is a bad substitute for tonsillotomy, but it may be used in case there is strong objection to the latter, in case of severe hemorrhage after the cutting operation, and in case of congested fibroid tonsils not large enough to be grasped with the tonsillotome. Cases of lateral pharyngitis, with ridges running from the post-nasal space down the middle of the pharynx to the base of the tongue are best treated by three or four punctures  $\frac{1}{4}$  inch apart. Follicular enlargements of the posterior wall of the middle pharynx are also thoroughly effaced by galvano-cautery puncture. Enlargements of the lingual tonsil are most safely and satisfactorily treated by the use of the cautery; after thorough cocaineization the tongue is pulled well forward and the cautery is bent down  $1\frac{1}{2}$  inches at a right angle and placed at the most prominent portion of the lingual tonsil; great care should be observed not to scorch the epiglottis, as it heals very slowly. In the larynx, Rice has only used the cautery in case of interarytenoid thickenings composed of dense fibrous tissue and to touch the remnants of benign growths on the vocal bands, the main portion of which has been removed with forceps.

2.—Patrick deals with some general considerations on the distinction between **cerebral syphilis and general paralysis of the insane**, and states that in diagnosis the somatic and psychic groups of symptoms should be particularly studied. If the former are predominant, syphilis should be suspected, while the latter, if present in great number, indicate general paralysis. Cerebral syphilis is likely to appear soon after the infection, as compared with general paralysis, which, in syphilitics, usually comes on only after years, very few of them, only about 3%, showing their signs within five years after the initial lesion.

3.—Silver reports three additional cases of **femoral hernia** treated by the **inguinal method**. In two the intestine was strangulated, and in one of these, 3 inches of intestine were resected and a Murphy's button inserted. Two of the cases were operated on in April and one in June, and the results thus far have been satisfactory.

4.—Skinner continues with a general description of the methods necessary in the **examination of applicants for life-insurance**, particularly insisting upon a careful inquiry into small details of the history of previous diseases.

5.—Bodenhamer gives further divisions of the **tumors of benign nature** that occur in the **rectum**, adding teratomata, lipomata, cystomata, enchondromata, and the angiomata. All of these, excepting the lipoma and cystoma, are rare, and the occurrence of any of them is an indication for its excision.

6.—In 11 cases of **infantile diarrhea** in which Elezarian has used **eudoxin** he has noticed remarkable antiseptic effects, and the drug is preferable to bismuth subnitrate or carbonate because it causes no poisonous results.

### Medical Record.

August 20, 1898. [Vol. liv, No. 8.]

1. On Congenital Hypertrophic Stenosis of the Pylorus in Infants. S. J. MELTZER.

2. Is Retroflexion of the Uterus a Disease? THEODORE LANDAU.

3. The Value of Electrolysis in the Treatment of Urethritis Chronica Glandularis. GEORGE THEODORE MUNDORF.

4. The Control of Tuberculosis. H. H. SPIERS.

5. Division of the Sphincter Ani as a Therapeutic Agent. J. N. BAUGHMAN.

6. Myrrh in the Treatment of Malaria. AARON JEFFERY.

1.—There are on record in English and American medical



literature only four cases of **congenital stenosis of the pylorus** in children, and two of these are described by Ashby of England. Meltzer, however, believes that this affection is not so rare as it would seem to be. In the European medical literature of the last few years there has been a constant growth in the reports of these cases. Finkelstein collected 11 cases in 1896, and in 1897 Thomson gave a résumé of 16 cases; to these 4 new cases are to be added. The 22 cases of congenital stenosis in infants have all been discovered at autopsies, and only in 4 of these cases was a correct diagnosis made during life. No doubt, however, some of these cases not only survive infancy but even reach advanced age, and it is probable that an early recognition and proper treatment may be instrumental in saving the lives of some of these infants. Meltzer reports an additional case of pyloric stenosis in an infant of six weeks confirmed at autopsy. The diagnosis of the condition is based on the following points: Mere inspection reveals the contrast between the bulging of the upper part and the collapsed state of the lower part of the abdomen. Percussion of the stomach filled with air or water, palpation of the catheter within it, and auscultation of the gurgling sound produced by air blown into the partly filled stomach, will sufficiently demonstrate the presence of gastrectasis. In the second stage, one must rely upon the change in the area of percussion-dulness with the degree of filling of the stomach, the appearance of peristaltic waves over the region of the stomach, and palpation of the contracted stomach in an empty state. In both these stages, but especially in the stage of compensatory hypertrophy, frequent vomiting immediately after drinking, absence of vomiting at any other time, absence of bile from the vomit, and its non-catarhal appearance, are symptoms quite characteristic of stenosis of the pylorus. The treatment of the first and second stages consists mainly in two points: The proper regulation of the feeding and the frequent emptying and washing of the stomach. In the first stage the amount of food given at one time should slightly exceed the capacity of the stomach. The distention thus caused will bring out a better contraction of the muscular tissue, which will not only drive more food into the intestines, but may also serve to a degree as a means of gradual dilatation of the constricted pylorus. In the second stage a small amount only can be given, but the feeding must be carried on hourly. No attempt should be made to stop the vomiting by means of narcotics or bismuth. Bismuth might entirely obliterate the small opening of the pylorus. Heubner's method of washing out the stomach with 0.5% solution of Carlsbad salt should be employed. Massage of the stomach from left to right should also be practised, and the rectum should be utilized for additional nutrition. In the last two stages operative treatment may be brought into consideration. Loreta's operation is out of the question, as the lumen of the pylorus measures not even 1 mm. in diameter. Gastro-enterostomy may be adopted, but typical pylorotomy is the ideal operation for the relief of hypertrophic stenosis of the pylorus in infants. As to the etiology of this condition Thomson's theory is the only one accepted. It is that the primary lesion is a functional disorder of the nerves of the stomach and pylorus, leading to ill-coordinated and therefore antagonistic action of the muscular coat. The fault in the nervous mechanism is probably due in some way to delayed or imperfect development. The antagonistic spasm of the pylorus and stomach must be connected with the passage downward of the large quantity of liquor amnii which the fetus is believed to swallow during the later months of intrauterine life. The muscular hypertrophy of the walls of the pylorus and stomach is merely a secondary occurrence, being obviously due to abnormally increased activity, and this must have existed for a considerable period of intrauterine life. Meltzer would rather regard the congenital muscular hypertrophy of the pylorus not as a secondary occurrence due to some overaction, but as a primary lesion, simply as an embryologic malformation.

2.—Landau contends that uncomplicated **retroflexion of the uterus** is in itself no disease. It may possibly produce trouble during pregnancy, if the development of the gravid womb does not, as usually happens in the great majority of cases, lift the organ out of the pelvis. If it remains incarcerated there is material trouble in consequence of this imprisonment. The mobile retroflexion may be congenital, and in that case it has no importance at all; or it

may be acquired, when it produces trouble, but only one symptom of a more general disease—enteroptosis. Fixed retroflexion is never a disease *per se*. It is only a symptom of existing pelvic peritonitis or pelvic cellulitis. All the symptoms arise from the perimetritis or the inflammatory changes of the adnexa, the peritoneum, or the pelvic cellular tissue. Nearly all genital diseases are systematic. One organ may be specially affected in a greater or less degree, but disease exists in them all to some extent. This is due to the intimate anatomic relation of the genital organs.

3.—Mundorf has performed a series of experiments in the genito-urinary surgical clinic of Wossidlo, in Berlin, during the past year, for the purpose of determining the true value of **electrolysis** in the treatment of **chronic glandular urethritis**. Two forms of chronic urethritis exist, the infiltrating and the glandular, both of which may be readily differentiated with the urethroscope. Oberlaender in 1889 first suggested electricity to destroy chronically inflamed urethral glands. Mundorf believes that electrolysis is a valuable adjunct to the list of remedies for the treatment of the glandular form of chronic urethritis. Not more than 20 seconds are necessary to thoroughly destroy a gland by this means. If electrolysis be continued too long more destruction is produced than is really necessary for the complete obliteration of the gland, and a dense cicatrix results. If electrolysis fails, treatment by dilatation is indicated.

6.—Jeffery recommends **myrrh** in the treatment of **malaria** in the following formula: Quinin, 40 gr., pulverized myrrh, 20 gr., powdered licorice, 10 gr. Forty pills are made, one of which is to be taken every two hours. The myrrh increases the number of white blood-corpuscles, which are, it is claimed, scavengers of the blood, and therefore more easily eliminate the malarial plasmodium.

### Medical News.

August 20, 1898. [Vol. lxxiii, No. 8.]

1. The Education of the Sense of Smell. A. L. BENEDICT.
2. Amputation at the Shoulder-joint; a Series of Eight Cases without a Death. MANNING SIMONS.
3. Chronic Articular Rheumatism and Lumbago Treated by Cold over the Spine. BEVERLEY OLIVER KINNEAR.
4. The Use of Antitoxin. GEO. H. CATTERMOLE.
5. Caring for the Sick and Wounded at Camp Wikoff, Montauk Point, Long Island. J. H. BURTENSHAW.
6. Food and Raiment in the Philippines. JOSEPH EARLE STEVENS.
7. Ambulance-Drill with Sword-Signals—Distribution of Personnel and Material on Mobilization. HENRY I. RAYMOND.
8. A Case of Otitic Brain-Abscess (from Chronic Otorrhea); Optic Neuritis; Opening of the Mastoid and Skull; Recovery. FRANK S. MILBURY.

1.—Benedict believes that physicians in particular do not educate their **sense of smell** to the extent that it is their duty to do. As examples of the value of the education of this sense, he notes that the odor of ammoniacal urine is characteristic of decomposition in the bladder. The odor of bromidrosis and various other odors may point to some existing disease that might otherwise be unsuspected.

2.—Simons reports a series of eight cases of **amputation at the shoulder-joint**, in one of which Larrey's oval method was adopted and in the others dissection of interno-external flaps from without inward. This latter method is not commonly employed, but it obviates the difficulty in getting a wide-based, well-rounded external flap containing the entire deltoid that is met if Dupuytren's transfixion-method is employed. Esmarch's bandage and Wyeth's pins are preferred for the arrest of hemorrhage. The operation was undertaken because of compound fracture in four cases; of wounds inflicted by shotguns in two cases; of a severe burn, and a sloughing sarcoma in one case each. Uneventful recovery, with healing by first intention, followed in six cases; secondary hemorrhage, due to early softening of non-chromicized catgut occurred in one case and suppuration for four days followed in the case of sloughing sarcoma. Good recovery followed eventually in all.

3.—The use of **cold water over the spine** in the form of narrow ice-bags is said to have given useful results in the treatment of **rheumatism** of subacute or chronic course,



and in **lumbago**; it being believed to act by relieving the congestion of the nerve-centers, and thus causing cessation of the intense congestion of the joints.

4.—Cattermole states that each child entering the Charité Hospital in Berlin was given 500 units of **antitoxin** as a prophylactic, and this was repeated in three weeks. Only one case of diphtheria occurred in the children so treated, and this was already infected when admitted to the hospital. It is believed that the occurrence of an erythema retards convalescence and favors secondary invasion by the streptococcus.

6.—Stevens states that vegetables are extremely rare in **Manila**, as is meat, excepting poor beef, or fairly good chicken; chicken and eggs form the basis of all meals. There is plenty of good fruit, and living is extremely cheap. The water is good; the milk less so, as it comes from the water-buffalo; clothing costs about \$2.50 a suit, but one requires at least 18 suits for a wardrobe, as everyone indulges in the luxury of a complete change of costume at least once a day; the others being meanwhile sent to the laundry.

8.—Milbury reports the case of a married woman, 33 years old, who had had more or less discharge from her ear following an attack of scarlet fever in childhood. Violent, uncontrollable headache had continued several weeks and at the time of first examination there was a temperature of 100° F., a pulse of 115, amnesic aphasia, slight paralysis of the left side of the face and of the right arm and leg, excessive vomiting on the least movement of the head, great sensitiveness to pressure over the side of the head and edema and redness over the mastoid. Dead bone was perceived by the touch of a sound in the tympanum. The ophthalmoscope showed optic neuritis of the left eye. A diagnosis of **mastoid necrosis and suppuration** was made and operative intervention advised. At the operation nearly the entire mastoid was found involved, with foul pus in the antrum and mastoid cells. The carious bone was removed with a sharp spoon, and on extracting a large sequestrum from the posterior wall of the meatus a broad communication was opened between the tympanic cavity and the antrum. The lateral sinus when exposed looked healthy and was pulsating. The moment the brain-cavity was entered pus welled out in large quantities. The wound was enlarged with a rongeur and a probe was passed into the pus-cavity about 4½ inches in the direction of the temporo-sphenoidal lobe. The neurologist called in consultation believed the abscess to be between the dura and the arachnoid—a localized purulent meningitis limited by adhesions, pressing on the speech-centers. The right hemiplegia was explained by pressure on the adjacent capsule and the left facial paralysis was due to local involvement of the facial nerve as it passed through the petrous bone. The after-treatment was long and tedious. For twelve days the temperature ranged from 99.5° to 101° F.; and the pulse from 80 to 120, being at times weak and intermittent. Frequent vomiting made the employment of nutrient enemata necessary. The wound healed well and gradual improvement continued until complete restitution of mind and disappearance of paralysis resulted. The patient was about four months' pregnant at the time of operation, but did not abort.

#### Boston Medical and Surgical Journal.

August, 1898. [Vol. cxxxix, No. 7.]

1. Antitoxin in the Treatment of Diphtheria. J. H. McCOLLUM.
2. The Toxin of Diphtheria and Its Antitoxin. THEOBALD SMITH.
3. The Antitoxin-Treatment of Tetanus. FRED. B. LUND.
4. Sir Astley Cooper, Bart. An Estimate of His Character and Career. JAMES G. MUMFORD. (Concluded.)
5. Two Cases of Spasmodic Torticollis: One Cured, the Other Much Relieved by Mechanical Treatment. HERBERT J. HALL.

1.—The mortality from **diphtheria** in Boston from 1880 to 1894 was 30.75%, from 1895 to 1897, 12.61%. In the south department of the Boston City Hospital the mortality in the past three years has been 13.7%, maintaining about the same rate throughout each of these years. The mortality in the intubation-cases has fallen since 1895 from 83% to even as low as 28% in those cases intubated this year. There

have been 15 cases of diphtheria of the eye. In only one case was there destruction of the eye, and this organ was not in normal condition at the beginning of the attack; it is believed that there would have been a number of cases of blindness had it not been for the **antitoxin**. McCollum speaks with the utmost positiveness in regard to the effects of the antitoxin, insisting particularly upon large doses early in the disease. He has not found it to produce albuminuria or heart-complications.

2.—Smith expresses the belief that **abrasions of mucous membranes** not only give opportunity for infection by **diphtheria-bacilli**, but also favor their growth after infection. In 42 guinea-pigs that received injections of diphtheria-toxin, all grades of local changes were found. Of 146 animals that survived a mixture of toxin and antitoxin, the local lesion was in most cases absent; 8 animals became paralyzed, and in all of these there were local lesions indicating that the amount of antitoxin had been insufficient. The paralyzes were not observed from May to December, in consequence either of the kind of toxin employed or of the fact that cold weather had rendered the animals less resistant.

3.—After studying 43 cases of **tetanus** treated by **antitoxin** and considering the cases previously reported by Lambert, Lund comes to the conclusion that there is an apparent decrease in the mortality, but the number of reports and their exactness are insufficient to permit conclusions. It seems not evident that the antitoxin-treatment rather than the mild course of the disease has been responsible for the cures. There is, however, some evidence of good effects from its use, and no harm results from the injections. Probably most of the doses have been too small, and the treatment should be further continued. The preparation of the serum needs greater perfection. It should be used also for immunizing purposes. The treatment of tetanus should consist in disinfection of the primary focus, if necessary its removal; the application of efficient chemical antiseptics; the use of sedatives and diuretics; and an injection of serum containing at least 500 antitoxic units.

5.—Hall reports a case of **spasmodic torticollis** of five months' standing, occurring in a dressmaker of 38, in which the spasm was at once relieved by the use of spring-pressure over the cervical muscles, and has since remained under control. The appliance is made of light spring-steel, similar in form to the trouser-guards used by bicyclists, but broader. By this means gentle pressure is exerted on the back and sides of the neck as far forward as the anterior border of the sterno-mastoid muscles. A tail-piece runs from the middle of the spring about 6 inches down the back, and when the clothing is tightly buttoned over it, the tail-piece helps to keep the spring closely applied. Results were best when the collar was worn at about the level of the angle of the jaw. No drugs, exercises, massage, electricity, or other apparatus were used. A second severe case of five weeks' duration, occurring in a woman of 32, was somewhat relieved at once and in three months was practically cured by the spring-clamp, supplemented by a careful system of gymnastics designed to relax as well as to develop all the muscles, especially those of the neck. Little attention was given to the development of the muscles directly opposed to those involved in the spasms, but effort was directed to secure good muscular control throughout the body.

#### Journal of the American Medical Association.

August 20, 1898. [Vol. xxxi, No. 8.]

1. Pneumatocyst. H. A. KELLY and W. G. MACCALLUM.
2. The Aseptic Animal Suture: Its Place in Surgery. HENRY O. MARCY.
3. The Therapeutics and Surgery of the Cerebro-Spinal Axis. SAMUEL KNOX CRAWFORD.
4. An Inquiry into the Normal Angle of Junction of the Neck with Shaft of the Femur. M. H. SEARS.
5. The Treatment of Inoperable Sarcoma with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus. WILLIAM B. COLEY.
6. A Surgical Treatment for Hypertrophied Prostate and Hernia in Old Men, with a Report of Twenty-eight Cases. GEORGE W. JOHNSON.
7. Some Recent Observations upon Acute Inflammation of the Prostate Gland. LISTON HOMER MONTGOMERY.







other symptoms. There was no hardening of the radials, the temperature was usually subnormal, the pulse and respiration comparatively slow, and treatment had little effect. Death resulting, autopsy disclosed the aortic valves to be slightly insufficient, without distinct lesions, except some thickening and shortening of one of the segments. The left side of the heart was dilated and hypertrophied. The aorta presented circumscribed sclerosis at two points, one of which, in the ascending and transverse parts of the arch, was the seat of an aneurysmal dilatation. The aorta was free from this point until just above the diaphragm, where there was a second patch of sclerosis, with diffuse nodular elevations extending downward about 8 cm. Microscopically, there was considerable round-cell infiltration and degeneration of the media, with marked irregular thickening of the intima. In one section there was a suspicious nodule of epithelioid cells suggesting a gumma. The second case presented distinct evidence of syphilis. This patient also had signs of a weak heart, with a peculiar wiry systolic murmur in the mitral area, a flint murmur outside the nipple, and moderate sclerosis of the arteries. Death resulting, the heart was found enlarged upon autopsy, the aortic valve insufficient and diffusely thickened; and in the aorta, just above the valve, there was an irregular patch of atheroma, with slight dilatation of the aorta. There was also atheroma along the course of the coronaries. Microscopic examination disclosed conditions like those in the other case, but no definite gummatous nodule was found. The probable etiologic factor in these cases of localized sclerosis is syphilis, which first causes local changes in the neighborhood of the chancre always, and finally advances up to a general sclerosis. Cases like those reported here seem to represent conditions intermediate between these two. The peculiar characters of syphilitic sclerosis are that it is nodular and not diffuse; it tends to invade only portions of the vessel-walls; it is usually chronic (although it may come on acutely); it tends to obliterate vessels and to form aneurysms; and the parts usually affected are, in regard to frequency, the cerebral arteries, the aorta, the arteries of the heart, and those of the pericardium. It is analogous to tuberculosis in that it tends to obliterate arteries, to form aneurysms, and to remain localized.

5.—Cullen states that since June, 1896, three additional cases of **adenomyoma of the round ligament** have been reported: one by Pfannenstiel in an unmarried woman 39 years of age, one by v. Herff, and one by Blumer in a woman 47 years of age. Pfannenstiel and v. Herff say nothing as to any definite relation between menstruation and the tumor, but Blumer has stated that menstruation in no way affected the nodule in his case. Cullen, in reporting his case, draws attention to the excessive pain in the nodule at the menstrual period, suggesting some definite sympathetic relation between the uterus and the nodule in the round ligament. Two sources of origin for these tumors have been suggested, namely, from a displacement of a portion of the Wolffian body, and from a part of Müller's duct. Cullen is inclined to favor the Müllerian origin of the growth.

#### Münchener medicinische Wochenschrift.

July 5, 1898. [45. Jahrg., No. 27.]

1. Antisepsis and Technic. E. BUMM.
2. Femoral-Vein Bruit. RICHARD GEIGEL.
3. The Pathology of Caries of the Sphenoid Bone. SCHECH.
4. Direct Bronchoscopy. GUSTAV KILLIAN.
5. Dissecting Aneurysm. FLOCKMANN.
6. The X-rays in Osteomyelitis and Sequestrum-Formation. FLORIAN HAHN.
7. Concerning the Conduct of the Physician in the Treatment of Contagious Diseases. ALEX. SCHMIDT.

1.—In considering the **relation between antisepsis and surgical technic**, it must be remembered that it is almost or quite impossible to render the field of operation, the hands of the operator, and the air circulating in the room, absolutely germ-free. There are two explanations for the aseptic course of the process of repair in the union of wounds; in the first place the tissues are in such a condition as to be able to resist the microorganisms present, and secondly, it is probable that in consequence of careful preparation and technic the more virulent organisms of suppura-

tion do not come in contact with the wound. It is advantageous that the operation be as brief as possible, in order that the tissues may not be unduly exposed and their vitality thereby lowered, and that the tissues be subjected to as little mechanical injury as possible. The value of perfect hemostasis as a preventive of microorganismal growth is self-evident. In the field of gynecology the question of the choice of methods in attacking pelvic growths is one of importance. If the vaginal operation allows of free access to the growth and of complete hemostasis it should be preferred to celiotomy. The indications for drainage after celiotomy are not definitely agreed upon by all gynecologists; but in Bumm's opinion the indication for drainage after abdominal operations are quite as definite as they are in the treatment of wounds elsewhere.

3.—**Caries of the sphenoid bone** is due usually to syphilis and malignant neoplasms and may be followed by serious if not fatal consequences. From the proximity of the sphenoidal sinus to many of the fissures, it is easily understood how caries of this bone may lead to partial or total blindness, to erosion of the carotid, to thrombosis of the sinuses, to basilar meningitis, or to subdural or cerebral abscess. The lesson to be learned from the three cases recorded by Schech is the necessity for cautiousness in the treatment of caries of the sphenoid. The danger of opening up a communication between the vital adjacent structures by probing or irrigation at once suggests itself.

4.—The fact that the bronchial tubes are elastic, somewhat distensible, and movable, led Killian to attempt the introduction of straight tubes for the purpose of inspecting the bronchi themselves and their branches. He first tried inferior bronchoscopy, *i. e.* through a tracheotomy-wound. The parts having been anesthetized with a 10% solution of cocaine, a tubular speculum was introduced, the patient's head being bent backward and slightly turned to the side. With a tube 9 mm. in diameter the bifurcation was reached at a distance of 14 cm. from the tracheal wound. On pushing the tube 5 cm. further into the right bronchus, the division into the bronchi for the middle and lower lobes could be seen. The end of the instrument corresponded to about the fourth intercostal space. On the left side the tube could be pushed 4.5 cm. into the bronchus and the division into branches for the upper and lower lobes be seen. These branches could even be followed for some distance. Similar results were obtained in a boy of 6 years, with an instrument 7.5 mm. in diameter. Direct bronchoscopy from above was also successful. In a man 152 cm. tall the distance from the mouth to the bifurcation is 27 cm. The method did not interfere with respiration; the patient can breathe through the tube as well as past it. The speculum is illuminated with Kirstein's forehead-lamp or with Caspar's electric contrivance. Esophagoscopy is also possible with the aid of this method. The practical value of direct bronchoscopy can as yet not be postulated—apart from its use in the detection of foreign bodies and bronchial diseases. It is thought it may prove of service in the diagnosis and treatment of affections of the lungs.

5.—Flockmann reports two cases of **dissecting aneurysm**, one in a man, aged 39 years, in which its origin in a transverse tear of the intima and media  $2\frac{1}{2}$  cm. above the aortic valves. The aneurysm involved half the circumference of the vessel and extended along its posterior wall into the left common iliac artery, about 2 cm. beyond the bifurcation of the aorta. Below the diaphragm there was a small perforation of the adventitia, through which a large quantity of blood had escaped, with the sudden and fatal termination. The second case occurred in an apparently healthy man, 26 years old. The postmortem examination revealed a dissecting aneurysm of the ascending, transverse, and descending aorta, insufficiency of the aortic valves, and hypertrophy of the left ventricle. The aneurysm began about 1 cm. above the aortic valves, at a transverse tear of the intima, and extended to a point 4 cm. above the aortic orifice of the diaphragm. A perforation was found in the descending aorta, which accounted for the fatal termination. As to the etiology of dissecting aneurysms it is probable that neither trauma nor disease plays any part in the majority of instances. From the evidence accumulated it is more than likely that the initial tear in the inner coats is due to the distention of the lumen of the vessels in consequence of the increased action of an hypertrophied left



ventricle. That the intima and media, and not the adventitia, should be torn is explained by the fact that the adventitious coat is more elastic than the other two.

6.—Ordinarily **X-ray photography** is of less value in the diagnosis of diseases of the bone, *e. g.* osteomyelitis, caries, and the like, than in that of fractures and luxations. The photographs in the former instance are usually poorly defined, and indistinct. Hahn publishes two cases of osteomyelitis with the formation of sequestra, in which the skiagraphs enabled him to map out the size and situation of the cavities and sequestra and to plan his method of attack accordingly.

7.—Schmidt, evidently a loving father and an altruist, has made a study of the measures by which the physician can guard against carrying infection into his own household and to others. The diseases to be considered are principally typhoid fever, tuberculosis, diphtheria, and scarlet fever. In all cases it is advisable to have the patient to be examined lie as near to the edge of the bed as possible, in order that the physician may not have to stoop over very far and come in contact with the bedclothing. It is a good plan, moreover, to remove the coat and cuffs and turn up the shirt-sleeves, and to protect the trousers, which might become soiled with sputa or other excreta adhering to the bed, with an apron, towel, or handkerchief. The hands and arms are afterward scrubbed and washed with soap and water, and if necessary dipped in a disinfectant solution. In the case of scarlet fever or diphtheria the precautions should be greater. Overcoat, coat, and cuffs are left in a distant room; the shirt-sleeves are turned up and a long apron dipped in 1 to 1000 mercuric-chlorid solution and well wrung out is put on. The damp apron does not injure the clothing. At the end of the visit, the hands and arms are washed, the apron taken off, and the clothes put on in the room in which the physician divested himself of them. In malignant cases of scarlet fever it is advisable, in addition to the foregoing measures, to disinfect the clothing on returning home. For this purpose Schmidt has had constructed an apparatus resembling a cupboard, in which the clothes are hung and disinfected with formalin-vapor. The apparatus is cheap and can be made by any carpenter. It is connected with the flue, which promptly removes the disagreeable smell of the formalin. The bedclothes and the clothing of the patient are thrown into a 1% solution of lysol. The obtaining of books, etc., from circulating libraries is prohibited. Before the door of the sick-room a mat strongly impregnated with a disinfectant is laid. This prevents the carrying of germs through the house. It is thought that the use of such a mat might perhaps also lessen the danger of infection through the mouth among children in the play-room, who unavoidably touch the floor with their hands.

### Berliner klinische Wochenschrift.

July 4, 1898. [35. Jahrg., No. 27.]

1. The Latest Attack Upon the Antitoxin-Serum of Diphtheria. ADOLF BAGINSKY.
2. Concerning Esophagoscopy. KIRSTEIN.
3. Should Prostitutes be Examined and Treated for Gonorrhea? A. BLASCHKO.
4. The Diagnosis of Gonorrhea in the Female. P. BROESE and H. SCHILLER.

1.—Baginsky presents a strong answer to Kassowitz's objection to the use of **antitoxin in diphtheria**. He shows that the statement that milder cases only have been sent to hospitals since the serum-treatment has been used is entirely a mistake, as the number of cases has been largely increasing constantly from 1890, and the mortality remained at just about the same point up to the time that the serum was put in use, when it dropped with the greatest suddenness, so that the next year it was only 10.6%, while previously it had been as high as 50%. The statement of Kassowitz that the mortality has remained the same in London is a boomerang in Baginsky's hands, as he proves from the results of the investigations of the *Lancet* that a large percentage of the serum used in London was worthless in the doses in which it was given; hence, this is of itself direct proof that Kassowitz is wrong in saying that the epidemics have been milder since the serum was used, for the mortality in London with bad serum has remained just as high as it ever

was. In regard to the quotations from Winters that Kassowitz uses in support of his contentions, Baginsky states that Winters has entirely misrepresented the conditions existing in the Kaiser and Kaiserin Friedrich Children's Hospital in Berlin.

2.—Kirstein has found that the difficulties likely to occur in the use of the **esophagoscope** may to a considerable extent be previously determined by observing what occurs during depression of the tongue. When there is a good broad groove formed in the tongue upon its depression, the instrument will commonly be readily admitted, but if the groove is but imperfectly formed, it will be difficult to introduce the esophagoscope. Kirstein has no faith in lateral esophagocopy, nor does he favor it when the central method is not successful.

3.—Blaschko questions the legality, under the present statutes in Prussia, of compulsory examination and treatment of **gonorrheic prostitutes**. That the enforced examination is indispensable for the protection of the public is not disputed; but that a woman should be subjected to such examination before it has been shown that she is a prostitute, dependent upon prostitution for her existence, is unjustifiable. Yet such instances often arise.

4.—The intracellular arrangement of the cocci should not be considered pathognomonic of acute **gonorrhea in the female**; quite as frequently the gonococci are found outside the cells. The diagnosis of chronic gonorrhea may be established upon the shape and size characteristic of the gonococci and upon their peculiar reaction to the Pick-Jacobson method of staining. In acute urethritis the evidence derived from microscopic examination is unnecessary; a differential diagnosis can be made with greater accuracy by observing the clinical course. If the urethritis be non-specific the objective and subjective manifestations disappear spontaneously and with comparative rapidity, and the adjacent portion of the genital tract will not be involved. Too much reliance must not be placed upon the absence of gonococci from the secretion from the cervix, as their presence in the secretion is most irregular. In the secretion from Bartholin's glands, on the contrary, gonococci will always be found if the patient has gonorrhea, but the involvement of these glands is exceedingly rare. In 36 cases of acute gonorrhea, in all of which gonococci were found, the cervix was, next to the urethra, the most common seat of the disease. The vulva and the vagina rarely present evidences of gonorrheal disease, although they frequently exhibit signs of inflammation from the irritation of the secretion from the urethra.

July 11, 1898. [35. Jahrg., No. 28.]

1. A Case of Puerperal Tetanus, with a Contribution to the Etiology and Symptomatology of Tetanus-Infection. W. KÜHNAU.
2. Medical Gymnastics in the Treatment of Genito-Urinary Diseases of Men. RICHARD HULDSCHNER.
3. Psoriasis and Arthropathies. ARTHUR STRAUSS.
4. Should Prostitutes be Examined and Treated for Gonorrhea? A. BLASCHKO.
5. The Diagnosis of Gonorrhea in the Female. P. BROESE and H. SCHILLER.

1.—Kühnau reports a case of **puerperal tetanus** and reviews the literature of the subject up to date. (The paper is to be concluded.)

2.—Huldschiner has been experimenting with the effect of **gymnastics and massage in the treatment of genito-urinary diseases**. The cases selected for this treatment included atony of the bladder-walls following urethral stricture, vesical diverticulum, chronic cystitis, periurethral infiltration following gonorrhea, chronic prostatitis, vesiculitis with spermatorrhea, and impotence following inflammation of the prostate and seminal vesicles. In summing up the results, it may be claimed that this method should be of distinct therapeutic value, especially in cases in which other methods of treatment have been tried for some months and have failed to yield satisfactory results.

4.—Referring to the **enforced treatment of gonorrhea in prostitutes**, Blaschko condemns the method as practised in Berlin, as statistics prove that a large proportion of gonorrheic prostitutes escape public surveillance altogether. Furthermore, it is a well-known fact that it is almost



impossible in no mean proportion of cases, especially the chronic ones, to effect an absolute cure, and the detention of these women in hospitals for an indefinite period is not only expensive to the municipality, but an unnecessary proceeding. All cases of acute gonorrhea should undoubtedly be kept under enforced treatment in institutions, but the chronic cases should simply be instructed to use vaginal douches before and after coitus. As the student-body is largely responsible for the spread of the contagion, the propriety of placing upon them certain restrictions demands careful consideration.

5.—The diagnosis of chronic gonorrhea in females is attended with no little difficulty. The subjective symptoms of the acute attack are often so mild that the patient is unconscious of the existence of such a condition, and does not consult a physician. Therefore when she comes under observation at a later period, it is difficult to obtain any positive information from the previous history. The principal symptom of chronic gonorrhea is a catarrhal process, involving some portion of the genito-urinary tract. The difficulty in diagnosis lies in differentiating the catarrh of gonorrheal origin from that due to other causes. Neisser claims that the diagnosis may be based positively upon the presence or absence of gonococci, but statistics seem to prove that little reliance can be placed upon this view. Thus, Broese and Schiller have made careful examinations in 235 cases presenting chronic catarrhal manifestations, and the clinical process bespoke chronic gonorrhea. Excluding 25 cases of cervical catarrh, in but 3 of which gonococci were found, there were but 48 of the remaining 210 cases in which the presence of gonococci could be shown. Neisser may be more expert in detecting gonococci than the average physician, but if the latter with moderate experience is unable to demonstrate the presence of the gonococci, then it is useless for him to place reliance upon this test. To that class of cases in which it has been impossible to demonstrate the presence of gonococci, Snger applies the term "residual" gonorrhea. In this class gonococci will be found neither in the secretion nor in the tissues, and the diagnosis must be made upon the pathologic-anatomic changes in the tissues and organs. The inability to prove the presence of the gonococci may depend upon the fact that they have assumed a form that is not recognizable under the microscope. As the pus of a pyosalpinx due to gonorrheal infection is oftentimes found sterile, it is not difficult to understand that gonococci may be absent altogether from the secretion and tissues of other portions of the genito-urinary tract.

### Deutsche medicinische Wochenschrift.

July 7, 1898. [24. Jahrg., No. 27.]

1. Comparative Chemie Investigations with Normal Serum from Horses, and with Diphtheria-Antitoxic Serum. FELIX V. SZONTAGH and OSCAR WELLMANN.
2. A Non-operable Brain-Tumor. H. FISCHER.
3. Bacteriologic Results in Pneumonias in Negroes. W. KOLLE.
4. A Case of Hysteria with Unusual Symptoms Influenced by Hypnotic Suggestion. A. LILIENFELD.
5. Concerning Pertussis; Saccharated Extract of Thyme. ERNST FISCHER.
6. The Development and the Present Status of Appendicitis and Perityphlitis. K. DOLL.
7. A Further Communication Concerning the Treatment of Lupus with TR. W. VAN HOORN.

1.—Szontagh and Wellmann have compared the amount of nucleo-albumin in horses' blood and in diphtheria-serum, and have found that there is no distinct difference in the amount of this substance in the two, so that it cannot have any distinct therapeutic effect in diphtheria-serum. Their investigations as to the comparative amount of albumin and globulin are not finished, but it seems probable that there is a difference in the amount present. The amount of albumin was investigated by means of precipitation and by determining the amount of nitrogen. The latter gave as good results as the former, indicating that during immunization the albuminous bodies in the blood-serum did not suffer any important modification. The antitoxin contains somewhat more albumin than normal horse-serum. Determination of the freezing-point with Beckmann's appa-

ratus showed that this was less lowered by the antitoxic serum. The ash was about the same in the two sera, while the amount of chlorids was somewhat less in the diphtheria-serum. The electric conductivity was much less in the diphtheria-serum than in normal serum, so that the lowering of the freezing-point and the electric conductivity seemed to be the most distinct points of difference. The variations in the freezing-point do not depend upon the presence of carbolic acid, as that substance in solution gave very varying results in this regard.

2.—Fischer reports a massive gliosarcoma involving the whole of the left cerebral hemisphere. It had caused pronounced pressure-symptoms, and was clinically thus not a tyroma, as this form of growth does not usually give rise to marked pressure-symptoms. The first symptoms referable to the tumor were increase in the intracranial pressure, marked widening of the skull, with exophthalmos of severe degree and rapid advance, loss of sight, mydriasis, and loss of the intellectual powers. There was marked incoordination, without motor paralysis, in the lower extremities, so that the patient could move his legs entirely well lying in bed, but if he attempted to walk, his movements at first resembled those of a drunkard, and subsequently he became absolutely unable to walk. There was also severe vertigo and pronounced vomiting. These signs made strong the suspicion of a cerebellar tumor, but they were proved at the autopsy to be evidently due to pressure. Speech remained unaffected for a long time, but hearing was lost. There was no obvious effect upon the sphincters.

3.—Kolle has endeavored to determine whether those individuals are right who consider that the pneumonia that occurs in negroes in South Africa is of a different variety from that which occurs in whites. Examination of the sputum has shown that the cases in negroes belong to two classes: those presenting typical influenza-bacilli, and those with typical pneumococci, both upon culture and in morphology. The diplococcus was cultivated 11 times, from 15 lungs, the influenza-bacillus 4 times. In 18 specimens of sputum the influenza-bacillus was found twice, the diplococcus 16 times. It is concluded, therefore, that the disease is in all probability due to the same cause as is the disease in whites. The mortality was high, ranging between 60% and 70%.

4.—Lilienfeld reports the case of a school-mistress, 47 years of age, who exhibited marked hysterical symptoms, among the most interesting of which was inability to walk, by reason of the slightest interference in any way, as by striking her feet against a small stone, or any other object near by, or in hearing any loud noise, etc. Under any of these conditions she was at once seized with spasms in one, or more frequently, in both calves, so that the feet were fixed in an equino-varus position, and active movements were impossible. Other muscles were sometimes affected, sometimes the shoulder-joint muscles or those of individual fingers. The contraction could be overcome by gentle opposed movements or by faradization. Hypnotic suggestion proved, likewise, a perfect method of treating it. The handwriting was peculiarly modified, and was entirely illegible to Lilienfeld, although the patient said that her family were so familiar with her writing that they could readily read it. After she was hypnotized she wrote a beautiful, clear script. She became much better, and left the institution with the disturbance in locomotion entirely gone and with her handwriting normal; but she soon grew worse again and came back with disturbance of speech. She had the greatest difficulty in articulating certain letters, and after careful observation it was found that these were C, D, L, T, S, Z of the German alphabet, all of which require pressure of the tongue against the teeth with a somewhat explosive articulation. She said that she felt as if her tongue suddenly got stiff and hard as she was about to articulate, so that it was with the greatest difficulty that she could do it. This symptom was also subject to temporary improvement under hypnosis. It is suggested that this disturbance of speech, the disturbance in writing, and a tendency to diarrhea were all due to the same tendency to contraction as was exhibited in the calf-muscles. The tendency to diarrhea would be explained by accepting an increase in peristalsis caused by spasmodic contractions.

5.—Fischer has used a saccharated extract of thyme in the treatment of pertussis, first in his own children, and subsequently in a considerable number of other cases, with most successful results. The paroxysms diminished in inten-



sity and frequency and almost disappeared at once. The drug was also used in cases of emphysema, causing a decrease in the oppression of breathing in dyspnea.

7.—Van Hoorn makes a further report upon certain cases treated with **T R.** The patients improved considerably for some time, but then there came a stationary period, so that it seemed that the immunity which had been temporarily produced had vanished. The dose was increased in the endeavor to augment the degree of immunity, but after such injections, new nodules appeared and, although doses as large as 60 mg. were employed, success did not follow. Twelve patients were thus treated. The greatest amount that any one patient received was 1232 mg. Different preparations had most variable value, and the reactions also were variable. In the patients that came under the treatment late, more improvement was seen than with the old tuberculin, until a dose of 20 mg. was reached, after which there was little advance, and often the patients grew worse.

July 14, 1898. [24. Jahrg., No. 28.]

1. Concerning the Spread of the Bubonic Plague. ROBERT KOCH.
2. Diffuse Scleroderma. MOSLER.
3. Tumors of the Membranes of the Spinal Cord. A. FRAENKEL.
4. Experience with Primary Tuberculosis of the Kidney. J. ISRAEL.
5. Recent Advances in Physiology. H. BORUTTAU.
6. An Unusual Injury to the Male Urethra. THEODOR FLORAS.

1.—There are in Asia three endemic plague-foci—Mesopotamia, Thibet and Assir, a mountainous country south of Mecca, on the west coast of Arabia. In addition to these three well-established centers of endemicity, the plague has another focus, hitherto unsuspected, namely, in Africa. During his recent journey through German East Africa, Koch was informed of the existence of a disease resembling the pest in Kisiba, in the extreme northwest of the colony. Through the aid of a government medical officer he was enabled to examine tissues from those dead of the disease and succeeded in finding the plague-bacillus. The disease, known to the authorities as Rubwunga, is excessively fatal. It is curious that rats are extremely plentiful in the pest-stricken district; the relation of those animals to the plague is strongly emphasized by Koch. Rats die in large numbers just before the outbreak of an epidemic, and the bacilli have been found in their bodies. The source of the disease, however, is not Kisiba, but the adjacent English territory of Uganda. This hitherto-overlooked focus may become of sinister importance when the contemplated railroad that is to connect Mombassa on the east coast with Uganda is completed. Much fear need, however, not be entertained, for the plague is constantly receding before advancing civilization.

2.—Mosler reports a case of diffuse scleroderma of the usual type in a woman of 48 years. There are three forms of the disease: (1) circumscribed, or partial scleroderma—morphea; (2) diffuse scleroderma (*a*) of certain parts, (*b*) universal; (3) sclerodactyly. Cases may be acute or chronic. Prodromal states, such as from edema, have been observed. Pigmentation may be present—in the case reported it was symmetric on both sides of the chest; its origin is hematogenic. Anesthesia and absence of sweating and of sebaceous secretion have been noted. The mammary glands are often atrophied, although they were not in the present instance. Regarding the etiology, the disease has been attributed to rheumatism, to trauma, to neuroses, to infectious diseases, etc. The disease, in its essence, has a nervous basis, and is a trophoneurosis. The treatment consists in nutritious diet, iron and codliver-oil in ascending doses (the latter up to 10 tablespoonfuls per day); sodium salicylate; externally, steam-baths, mud-baths; mercury; galvanism; massage. The most recent remedy is thyroid gland. In the present case it was proposed to try hot baths (39° C.) for from 15 to 20 minutes, thrice weekly. To the water is added 60 gm. ichthyol-ammonium. After the bath the patient is wrapped for from one to two hours in blankets. Internally tablets of calcium sulph-ichthyolate, 0.1 gram, are given 3 times a day. The arm most affected is wrapped in 10% ichthyol-vaselin.

3.—Spinal tumors may be divided into those arising from the vertebral column and those arising from the cord

or its membranes. The intravertebral tumors springing from the membranes are further divisible into extradural and intradural, *i. e.*, those arising from the arachnoid and pia. Among the former the lipomata and tuberculous tumors are important. Among the latter are discussed in the present paper especially those that develop as diffuse growths immediately on the surface of the cord. The most important of these are the gummata, which generally can be diagnosed without much difficulty. Sarcomata are next in frequency, and have the peculiarity of occasionally appearing in the form of multiple growths scattered over the entire central nervous system, even the brain. Still rarer are neuromata of the roots and other neoplasms. Tubercles also may at times cause pressure and tumor-like symptoms. The clinical features of spinal tumors vary according as the neoplasm affects a greater or lesser extent of surface of the cord, or is in the form of circumscribed nodes. Root-symptoms constitute in both an early phenomenon, but are likely to be referred to many nerves, and to be often marked by diffuse pain of the entire spine in the first, while in the second they are limited to single root-territories. The pains in the latter are often excruciating and intensified by the least bodily jar. Motor symptoms are often rare—they may take the form of cramps or, exceptionally, of tetanic spasms. The stage of limitation is after months or years, followed by paralytic phenomena, which may be of the Brown-Sequard type. Even then so-called segment-symptoms may aid in the localization. With the diffuse growths, barring gummataous meningitis, the symptom-complex, on account of the involvement of so many nerves, is very indefinite, and a diagnosis is scarcely possible. Fraenkel reports the case of a shoemaker, 33 years of age, in which the first symptoms were stabbing pains in the neck and then in shoulder and back, followed by weakness in the muscles of the back and arms, and later of the legs, and atrophy of the shoulder-girdle. The patellar reflex was increased, and ankle-clonus was present, while the abdominal and cremasteric reflexes were absent. The serratus-muscles of both sides were paralyzed, and movements of the hands and fingers were impaired; gait was uncertain, but there was no ataxia. Sensation was not much disturbed. The symptoms became worse, urination was difficult, faradic excitability was lost in places; decubitus developed, and death resulted. At the autopsy the spinal dura bulged anteriorly, on division a tumor-mass of medullary consistence and springing from the pia was found. The growth had greatly compressed the cord, especially in the cervical region. The nerve-roots, especially of the cauda equina, were dotted here and there with nodular growths. The tumor proved to be a gliosarcoma. At one point, in the dorsal region, the cord itself was invaded by a tumor-nodule. The course of the case was exceedingly rapid. A diagnosis of tumor was not possible, as a myelitis readily explained all the symptoms. (The paper is to be continued.)

4.—Primary tuberculosis of the kidney is not an uncommon affection, having been found in 10% of all of Israel's operations upon the kidney. It is relatively more common than secondary renal tuberculosis. The ratio in Israel's experience has been 16:5. Women are more commonly victims of primary tuberculosis than men, although the latter, owing to the connection between tuberculosis of the genital with that of the urinary apparatus, are more prone to have secondary renal tuberculosis. As all acute cases are but manifestations of miliary tuberculosis, it is only the chronic form that presents itself for surgical treatment. Israel recognizes three varieties of chronic renal tuberculosis, differing both clinically and pathologically. The first and most common, constituting 81% of his cases, is the cheesy, cavernous variety, which yields the best surgical results; the second, a comparatively rare form, is a tuberculous ulceration of the free papilla, projecting into the calyx, and is characterized clinically in the initial stages by profuse hematuria; the third is the nodular form, in which the entire organ is studded with numerous nodes and infiltrated areas, which do not progress to softening or cavity-formation. Renal tuberculosis exceptionally extends through the ureters to the bladder. If the ureter is involved, the diagnosis may be made by rectal or vaginal examination (revealing a thickened ureter), or by the cystoscopic picture. According to statistics, in 45% of those patients who have died of renal tuberculosis, both kidneys have been the seat of the disease.



In addition to tuberculosis of the second kidney, amyloid changes or chronic nephritis must be considered. Tuberculosis of the genital and of the urinary apparatus may and frequently does occur in the same case, entirely independently of each other, as was illustrated in one of Israel's cases, which presented tuberculosis of the testicles and kidney, but an entirely healthy ureter and bladder. In the recognition of primary tuberculosis in its early stages, most reliance must be placed upon the frequency of micturition and the initial hemorrhage, which was the first and only symptom in 16 of Israel's cases. With the exception of the presence of tubercle-bacilli, the urine furnishes nothing that is pathognomonic, and in some cases tubercle-bacilli will not be found. The effect of renal tuberculosis upon the general system is manifested by loss of weight, fever, and diminution of red blood-corpuscles and of hemoglobin. As for Israel's operative results, the mortality was 14.2%, while that of recent statistics from various sources is 29%. Nephrotomy should be regarded generally as an unjustifiable procedure, being reserved, as a palliative measure, for bilateral cases or that in which the question of time must be considered. The final results in the operative cases have on the whole been excellent.

5.—In a concise résumé of **physiologic progress** in recent years, Boruttau notes that the trend of physiologic theory is toward a physiochemic, or, to use Ostwald's term, an "energetic," interpretation of the phenomena of life. Incidentally he deals a blow to the psychologists who "anthropomorphize" every living thing, down to the smallest clump of protoplasm.

6.—Floras reports the case of a man, 55 years old, who, while intoxicated, inserted his penis through a tightly fitting ring. On attempting later on to withdraw the ring he failed and he consulted a physician after the lapse of 36 hours. The penis was pendulous and resembled an enormous sausage; the skin was markedly infiltrated and several gangenous areas had formed. A mechanic was consulted, and with the aid of chisel and hammer, the iron ring was severed and removed.

#### Centralblatt für Gynäkologie.

July 2, 1898. [22. Jahrg., No. 26.]

1. Gloves in Obstetrics. A. DÖDERLEIN.
2. Syncytium and Malignant Deciduoma. HERMANN W. FREUND.
3. The Presence of Germs in the Uterus in the Normal Puerperium. OTTO BURCKHARDT.
4. The Production of Sterility with Preservation of Menstruation. H. ROSE.
5. A Contribution to Myomotomy. L. WEILL.
6. Concerning Germ-free Tamponade of the Cavity of the Uterus. KARL OETKER.

1.—Döderlein reviews the various methods of **disinfection of the hands** that have been recommended, and describes in full the rubber gloves of Friedrich for use in abdominal surgery. These are impermeable, light, capable of being used in boiled water or steam, or in disinfectant solutions without being injured, and when dipped in a 1% solution of lysol become as smooth as the hand itself, and are not unduly expensive. They may also be used for the purpose of performing version as readily as the unprotected hand.

2.—Freund again discusses the disputed question as to the origin of the **malignant deciduoma** or **syncytium**. He endorses the position taken by Turner (*Philos. Transact. of the Royal Soc.*, vol. 169, p. 556). The origin of the syncytium from the maternal endothelium, and the ultimate development therefrom of the deciduoma as an endothelioma, is still merely an hypothesis.

3.—It has been generally believed that the **puerperal uterine cavity** under normal conditions remains sterile. As a result of a study of the lochia caught as it escaped from the cervical canal on the eleventh or twelfth day of the puerperium and submitted to close bacteriologic examination, Burckhardt states that in normal, healthy puerperal women numerous bacilli may be found in the uterine cavity. Very frequently diplococci were discovered. It is believed that the puerperal uterus becomes in reality an open wound. During the first few days of the puerperium the cavity is sterile, but sooner or later infection takes place through the cervical canal.

4.—Rose reviews the various methods of inducing **sterility** without abolition of menstruation, such as resection of the tube, or the use of the cautery after splitting the tube. The procedure is indicated when absolute sterility is desirable on account of malformation or tumors of the pelvis that would necessitate Cesarean section in the event of pregnancy, or when there is such chronic disease of the lung, heart, or kidneys that in the event of pregnancy dangerous complications might result.

6.—Oetker has devised an ingenious method of **antiseptically tamponing the uterine cavity**. He uses a pyramidal tube of metal 27 cm. long, with a 2 mm. thick round metallic stopper, and attached to which is a glass jar, with a capacity of 100 cu. cm. Into this jar is placed the gauze, one end being carried up into the tube, where it is caught by the rod and pressed through the tube into the uterine cavity. This prevents soiling by the vaginal and cervical secretions.

July 9, 1898. [22. Jahrg., No. 27.]

1. Peritoneal Adhesions. P. RISSMANN.
2. Instrumental Rupture of the Uterus during Supposed Pregnancy; Celiotomy; Recovery. H. A. VON GUÉRARD.
3. Instrumental Perforation of the Uterus. H. QUEISNER.
4. The Relation between the Thyroid Gland and the Female Generative Organs. G. N. DE VOOGT.

1.—Rissman has performed experimental abdominal section upon animals, reopening the incision in from 24 to 48 hours, to note whether or not adhesions had formed between the peritoneal surfaces, and what relation micrococci bore to such adhesions. While in many cases slight adhesions had formed, although the field was absolutely sterile as shown by careful cultivation of the secretions, in some cases with firmer adhesions microorganisms were found.

2.—Von Guérard records an interesting case of **instrumental laceration of the uterus** in a pseudo-pregnancy necessitating abdominal section. The patient was 27 years of age and presumably in her second pregnancy. Her condition was such as to indicate the necessity for the performance of Cesarean section unless labor could be terminated promptly by other means. Two years before, the patient had passed through a normal labor and puerperium. The last menstruation had taken place nine months previously, and the first fetal movements had been noted at the beginning of the fifth month of pregnancy. The attendant, having found her in an urgent condition, had rather forcibly introduced a bougie into the uterus to institute labor. The patient at once suffered from severe labor-pains, which continued for two days and were aggravated by every movement. When seen by von Guérard her temperature was 39.1° C., and her pulse 120. The abdomen yielded what appeared to be fluctuation, and was much distended. There was no swelling of the legs or eyelids. The vagina presented the appearances of a normal pregnancy, being soft and succulent. The cervix was hard, badly torn, and markedly projecting into the vagina. There was no marked lividity of the vaginal mucosa. In order to clear the diagnosis a sound was next introduced into the uterus. It did not meet with the usual degree of resistance, but passed for an indefinite distance, and yielding the characteristic sensation experienced in the presence of uterine perforation. Abdominal section revealed on the left side of the uterus a ragged tear surrounded by an area of pelvic inflammation. The tissues were glued together by inflammatory exudate, which, when examined microscopically, disclosed the presence of tubercle-bacilli. The fluctuation was explained by the presence of ascitic fluid. The operation was well borne, and the patient left her bed on the sixteenth day. The perforation had occurred when the first instrument had been passed, and resulted from a morbid softening of the uterine tissue, a sequel of an old localized tuberculous process in the pelvic tissues.

3.—Queisner reports a case of **instrumental perforation of the uterus** in a woman, 42 years of age, who had not given birth to a child for six years. The uterus was retroflexed and subinvolved and strongly adherent to the posterior pelvic wall. The patient suffered from profuse metrorrhagia for which curetment was advised, and it was in the course of this procedure that the uterine wall was perforated. The instrument was immediately withdrawn and the uterine cavity packed with iodoform-gauze. No bad symptoms followed and the patient left her bed 5 days later.



## Original Articles.

A PLEA FOR POSTERITY.<sup>1</sup>

By A. L. RUSSELL, M.D.,  
of Midway, Pa.

Although the terms "anthropology" and "sociology" are of modern origin, the problems that gave these sciences birth have confronted every race and nation in history. The idolatrous Greek, recognizing these conditions, sought to solve them by consigning his physically defective offspring to the tender care of Pluto by way of the nearest stream. Thus, he reared a race marvelous in its physical perfection; but because he failed to challenge the right of a defective mind to existence, his perfect manhood in time went down before and found oblivion through his deficient mental power. The same problem confronts us that baffled the Greek: What shall be done with the defective classes? The lapse of centuries has only served to augment its gravity. There are those who advocate the method of the Greek; as this calamity has come upon us through a law of nature, the rational plan of deliverance must be through an alteration of our relations to this law, as the law itself we can never change.

The law of heredity is omnipresent and constantly acting; "the continuity of the race is a grim reality." From the isolated cases of a century ago have sprung the three great classes of mental, moral, and physical defectives that threaten us to-day; and since the cycles of history are the chariot-wheels of destiny, if we would shape their course to our ultimate advantage, we must make a path for them to the solution of the problem that the Greek failed to solve. If the increase of the defectives only kept pace with the increase in population, the situation would not be alarming; and we might in time hope to find relief through the "survival of the fittest;" but the fact is that the increase in the defective classes is out of reasonable proportion to the increase in population. In 1870 the population of the United States was 38,000,000, with 37,000 insane; in 1880 the population was 50,000,000, with 92,000 insane. While the increase in population was 30%, the increase in insanity was 155%. In 1890 the population was 65,000,000, with 106,500 insane; thus maintaining the ratio of 170 insane to every 100,000 of the population. Alienists ascribe the disproportionate increase in insanity to the sharper struggle for existence. What will be the figures as the contest becomes keener and the competition still more stern?

There were in the United States, in 1897, 95,000 idiots and 50,000 feeble-minded children. Sixteen States were maintaining 19 institutions for the care of feeble-minded children. Epileptics far outnumber the insane, feeble-minded, and idiots combined; almost every family furnishes a tuberculous subject, and every village

contributes a score of syphilitics and a like number of alcoholics.

The factors impelling such appalling increase we know well; first of all in importance is the law of heredity. The defective conforms to it in common with the race, for the law is universal in its sway, and from its penalties there is no appeal. Conformation of form and feature, as well as inclination and disposition, are inherent and inherited properties derived from the primordial cell. "Every candidate for immortality" passes beneath the public arch with a disposition well formed and a personality distinct. Stern necessity or powerful moral suasion may modify, but can never entirely overcome the trend of that character whose every act and impulse have behind them the weight of centuries.

Alienists have easily defined the boundaries separating the individual that is mentally deficient from the type of normal man. Anthropologists have proved that the physically defective individual differs from normal man in conformation of skull, expression of eye, cast of feature, form and weight of brain, extending even to its smaller convolutions and gyri. Then, since the deficiencies of the defective have progressed far enough to mold both mind and body in a cast at variance with, and antagonistic to, the remainder of the race, is it not time that the limitations of his privileges be defined?

Some would deny him the right of existence, claiming that this right has been forfeited by the inferior mental, moral, or physical status of himself or his ancestors. As the existing order of things involves the visiting of the father's sins upon the children, even the most conservative must admit that *the defective has no right, either natural, moral, or legal, to produce a posterity cursed with his affliction, to be a danger and a burden to your posterity and mine.* There are, however, other fountains feeding this stream of corruption, and we can never hope to stay the tide until they are controlled through heredity itself, by *denying* to the defective the right to propagate his tainted species. These founts are alcoholism, syphilis, tuberculosis, epilepsy, insanity, and gonorrhea.

The pulpit is ignorant, the legislator is silent, and we, who stand on the watch-towers guarding humanity, hold our peace. The vital statistics in such matters should be to us the "handwriting on the wall."

Taking alcoholism first; we hasten to admit that "no one will claim that intemperance itself is transmissible, but the feeble resisting-power of both mind and body is transmitted and renders intemperate habits easy, and if environment be favorable, almost certain."<sup>2</sup> Elam, a writer of authority, says: "The most startling problem connected with intemperance is that not only does it affect the health, morals and intelligence of its votaries, but unfortunately it descends to the children, who in-

<sup>1</sup> Read before the Washington County, Pa. Medical Society, May 10, 1898.

<sup>2</sup> Walker, Heredity, p. 100, M. J., February, 1898.

herit that fatal tendency and craving for the very beverage that has poisoned their being from its commencement, thus planting in the individual life of generations yet unborn seeds of misery and death that no facts in the history of life can account for, pointing the gaunt finger of blame from individual to individual, from family to family, and from generation to generation." Morrell, another writer, says, "I have never known a patient permanently cured of his propensity for drink whose tendencies were derived from the hereditary predisposition given him by his parents." Moreover, the dipsomaniac not only tends to produce a drunken posterity, but also a criminal one. Just as the syphilitic begets epileptic, neurasthenic and idiotic progeny, whose defects are aggravated by the further specific taint, so does the drunkard beget descendants whose palms itch until they are steeped in other crimes. Pellman, after vast research, presents statistics bearing upon the relation of drunkenness to the criminal tendencies of posterity. He has traced the careers of the children, grandchildren, and great-grandchildren of drunkards, and has gathered together hundreds of biographies of persons descended from the same drunkard. The last individual he has made notorious is Frau Jurke, born in 1740, who died at the age of 60 with 834 descendants of whom 125 could not be traced; the remaining 709 were classified as follows: 106 were of illegitimate birth; 142 were beggars; and 64 were dependent upon the State for support; 181 females were prostitutes; 69 were convicted of crime, and 7 suffered the penalty for murder. During 75 years the descendants of this one woman cost the State \$1,250,000.

According to Legrain, among 814 children of alcoholic parentage 322 were degenerates, and 174 had not sufficient vitality to live. Of the survivors 17% were epileptic, and 14% were hysterical.

Forel, in a study of 400 cases of alcoholism, says: "The fact of heredity is emphasized. All the cases showed physical, mental and moral alterations. Forty-three per cent. had one or both parents alcoholic, and 40% had nervous antecedents. Alcoholism is most frequent between the ages of 20 and 60 years (the child-bearing period). Below that age a case is almost sure to be direct heredity. Fourteen per cent. of these cases were also epileptic." Diller, of Pittsburg, says: "The inebriate is a degenerate, along with the epileptic and hysterical."

Of syphilis little need be said; every one of us has been personal witness to the horrors it entails, and know that its transmission is unerring and inevitable. We would hesitate to follow the New York professor in declaring: "Syphilis blasts a man throughout life, and destroys him throughout eternity," but we do insist that the syphilitic has forfeited all his marital prerogatives, and should not be allowed to bring into the world beings who can only be a source of anguish to themselves and of expense to the State.

"The higher our people advance in civilization, the more complete has become their syphilization," was the statement made by Krafft-Ebing before the Moscow Congress. He continues further, saying: "While neurasthenia and progressive paralysis were scarcely known by name a hundred years ago, and till recently the average age was 40 years, now it is frequent and is observed even in the young." "Syphilis has been established as the *sine qua non* of the disease, and prophylactic measures against syphilis are the means to combat it."

Williams has found: "In 70% of cases of general paresis in which no evidences of primary syphilitic infection could be found, there were evidences of hereditary syphilis in the teeth;" and again he says: "It is definitely established that at least 75% of all cases of general paresis have had primary syphilitic infection."

Fournier has said: "Nothing is so dangerous to its surroundings as a syphilitic child."

Tuberculosis is an infectious and a preventable disease. Its mortality is greater than that of any other disease, and cases amenable to treatment are exceptional. From the very nature of the disease it is plain that advanced or severe cases are incurable, and always will be; hence, the therapeutics of the malady are of small importance as compared with prophylaxis. Even if the science of the future should discover a "specific," prevention will always be better than cure. The profession knows this, and yet it has hesitated to raise a voice of warning, because it fears this vast army would object to the limitation of their "right" to continue the distribution of the seeds of death. We know that quarantine would be effective, but we are silent. Should this immense host of slow-decaying, rapidly infecting, and surely depopulating defectives be permitted to longer continue this work? We are horrified at the death-record from cholera in the East, and are amazed at the lax methods of attempting to deal with the disease, and yet more people die in the United States in a year from tuberculosis than from cholera in any like population in the East.

While science has proved that direct transmission of tuberculosis does occur, it is not generally believed that many cases arise in this way. It is not the transmission of the disease itself that is decried, but the transmission of feeble vital powers that invite the invasion not only of tuberculosis, but of every other disease. "The State has banished leprosy and robbed smallpox of its terrors, but tuberculosis still claims one-fourth of all deaths." Banford says: "I have found phthisis and insanity frequently coexisting in the same family." Stearns says: "We often see a consumptive having a child which, instead of developing consumption develops insanity, and vice versa." Clouston observes that "both diseases are very common among different members of the same family," and that "heredity toward tuberculosis may determine insanity, and heredity



toward insanity often determines tuberculosis." Mays says: "Such facts brand the consumptive as a degenerate, and unfit to survive the struggle for existence." The statement is made in an editorial in the *Medical Record* for July 25, 1886, that "It is to be regretted that we cannot have laws preventing the marriage of consumptives; that those to whom the moral side of the question would not appeal might still be controlled." Irwell says: "A real decrease in tuberculosis will come when persons of the phthisical type are sufficiently educated to realize that they ought not to marry." The words of the report on insanity: "There is no agreement as to the character or degree of mental unsoundness which constitutes insanity, and even the most complete census fails to return as insane a number of persons who would be considered as insane by experts," are ominous; showing that only those markedly deranged have been counted in our census. The milder cases are more dangerous, both as to marriage and the production of tainted children, and to the commission of crime. Not being reported insane, they are free to marry others defective in like degree. Not being under surveillance, their opportunities for overt criminal acts are unbounded.

During the last 25 years 459 murderers have been apprehended in the State of New York. Thirty per cent. were insane at the time of the commission of their crimes, and 20%, long before their crimes were committed, should have been confined where they could do no harm, their mental aberrations being so pronounced.<sup>2</sup>

These had aberrations "so pronounced"; but what of those who are mildly deranged? Nothing prevents their marrying, or doing any other act that they may will, although we know well not only that they are tainted through heredity, but also that they may break out into the most violent form of insanity at any moment. As in tuberculosis, it is the transmission of feeble vital powers, and a predisposition to the disease that is deplored. So in insanity it is the transmission of the tendency that is as greatly to be feared as if the disease in all its virulence were transmitted.

While gonorrhea is not a great factor in the production of defectives by heredity, it exerts a momentous influence in the production of invalidism and pauperism. Though total blindness from gonorrheal infection during birth is not so common as in years past, such cases are by no means rare curiosities. The victims, commonly derived from the poorer and more ignorant classes, become State burdens during their life. It is the horrible sequelæ of gonorrhea in the infected female that should lead the State to place a ban upon opportunity for its transmission by marriage. It is by no means essential to inoculation of the female that the male be suffering with an acute or even an active form of gonorrhea. The virulent power of infection persists oftentimes long after the cessation of the discharge, and the patient believes himself well.

<sup>2</sup> Williams—*Medical Record*, April 9, 1898.

At a meeting of the Berlin Medical Association, July 14, 1897, it was demonstrated that gonorrheal infection of the female often occurred long after the disappearance of the gonococci from the male organs concerned in the inoculation. Such infection was said to be due to toxins that had been developed by the gonococci while present in the genital tract, and that had persisted after the entire disappearance of the gonococci themselves. The existence of this toxin was proved by allowing cultures of the gonococci to grow for three days in serum to which had been added Salkowski's nutrose and peptone bouillon, after which inoculation by the liquid in which the cocci had been nourished produced true attacks of gonorrhea in individuals who had not been previously sufferers from the disease.

Næggerath says: "The wife of many a man, who at any time before marriage contracted gonorrhea, becomes infected with latent gonorrhea, which sooner or later makes itself known through some of the following diseases: Vulvitis, Bartholinitis, urethritis, vaginitis, metritis, perimetritis, parametritis, salpingitis, oophoritis, peritonitis, cystitis, ureteritis, nephritis, proctitis, arthritis, phlebitis, endocarditis, pleuritis, meningomyelitis, and conjunctivitis." Senger affirms that 12% of all women applying for gynecologic treatment suffer from gonorrhea. Neisser found uterine gonorrhea in 61% of his gonorrheal cases, and Bumm found it in 74% of his cases.

A mere thought as to the method of infection in the female is enough to make clear all the complicated pathologic processes that so frequently follow in the wake of an attack. Dudley says: "We must also bear in mind the fact that the same infected semen which has inoculated the external genitals has also bathed the cervical portion of the uterus and mingled with its secretions. We all know the susceptibility of the uterine mucous membrane to the action of the gonococcus, and its beautifully arranged rugæ within the cervical portion of the uterus, upon and behind which the germs can secrete themselves and do their deadly work unmolested by almost any form of medication." This, then, is the effect of gonorrhea upon our females, making of them feeble, diseased, pain-racked physical defectives, surely incapable of producing a progeny to be desired by the State.

The almost universal prevalence of gonorrhea is not known to the laity. Gynecologists know that a large percentage of their work is the result of gonorrheal infection; practitioners of general medicine know that gonorrhea has become merely an incident of boyhood; yet thousands of pure young girls on the eve of marriage do not know that there is such a thing as venereal disease. The wedding-night opens for them a life-time of misery—a living grave, a sacrifice on the altar of their love; and who is responsible? How familiar the wail: "Dry it up quick, Doctor; I am to be married next

week." Are such men fit to become the heads of families and the fathers of children?"

In proposing the enactment of the following bill by our Legislature, I do not claim originality, and while errors would occur under its administration, and some guilty ones might evade its provisions, I feel sure that it would prove efficient in checking the avalanche of woe, disease, and crime, that is rushing upon us to-day.

Be it enacted by the General Assembly of the State of Pennsylvania that within 30 days after the passage of this act it shall be the duty of the senior law-judge in each county in this State, to appoint three persons, as hereinafter provided who shall be reputable practising physicians, residents of such county, whose duty it shall be to pass upon all applications for license to marry, now made by Clerk of Courts, and no license shall be granted to any person contemplating marriage unless he or she shall have received from the persons so appointed a certificate setting forth that such applicants are free from the following diseases, any of which shall be deemed sufficient cause for refusing a license: Syphilis, gonorrhea, dipsomania, hereditary insanity, true insanity, or insanity resulting from vice, epilepsy, hereditary consumption or tuberculosis.

SEC. 2.—Such persons shall be appointed from the full list of the County Medical Society; which list shall on or before the first day of January 1899, and annually thereafter, be transmitted by the secretary of the Society so nominating, to the senior law-judge, under the seal and signed by the secretary of said Society. In case of failure on the part of the secretary of the Medical Society to transmit such list on or before the first day of January, the senior law-judge shall without further delay make the necessary appointments.

The senior law-judge shall fill vacancies by death or otherwise upon notification by the secretary of the County Medical Society that such vacancy exists, together with the list of members made out as before provided. The senior law-judge may remove any member of such board for continued neglect of the duties required by this act or upon recommendation of the County Medical Society for unprofessional or dishonorable conduct. Such persons shall be appointed for a term of 5 years, and shall hold their office for that time unless sooner removed as before provided.

SEC. 3.—Each person whose name shall appear on the application asking for license to marry shall pay an examination fee of \$2.50 to the Treasurer of the county. Out of the moneys so received each person so appointed shall be paid as compensation for his services the sum of \$1,000 per annum and the surplus, if any, shall remain to the credit of the general fund. The persons so appointed shall meet once each week at the county seat in a suitable place, which shall be provided by the county-commissioners. It is hereby made the duty of the clerk of courts in each county to designate one of his deputies, who shall act as clerk to the persons so appointed and without extra compensation.

SEC. 4.—All acts or parts of acts inconsistent herewith are hereby repealed, and this act shall take effect and be in force from and after its passage.

The diseases named are those that have made the nearest approach to total defiance of medical skill. They are diseases that tend to aggregate in the same individual or family; the existence of one (over and above the constant danger of inoculation in the cases of tuberculosis, syphilis, and gonorrhea) of which predisposes the victim to attack from some of the others.

They are diseases whose victims refuse to permit any abrogation of what they deem their "rights." The tuberculous is notoriously prolific in offspring, and the syphilitic scorns the idea of any restraint upon sexual indulgence. The diseases under discussion are those that render men unfit to discharge the duties of good citizenship, and that now morally, and should legally,

debar the sufferer from the crime of transmitting his curse to his descendants. The only rational solution of the problem is to deny the right of marriage to these defectives. If the disease be curable, they have no right to remain a source of danger to mankind, and, when cured, the law will no longer restrict them: if they be incurable, they can have no right to perpetuate their infamy or weakness. This is in accordance with justice to the taxpayer, who is already burdened with unreasonable expense in the maintenance of the defectives. It is in accordance with good statesmanship, which seeks to shield the Commonwealth from elements prejudicial to her welfare. It is in accord with the spirit of medicine, which forever strives to lessen and ameliorate the pain and diseases of suffering humanity. It is not paternalism; *it is self-defence*. Nor is precept wanting. The State of Texas prohibits the marriage of epileptics. Massachusetts denies conjugal bliss to the syphilitic, the epileptic, and the alcoholic. Ohio has passed the law (in substance) that I have read; and the same bill has been introduced in the General Assembly of the State of Maryland.

The Paris court of appeals has decided that the fact of marrying while suffering from any venereal disease is sufficient cause alone on which to grant divorce. A bill is now before the German Reichstag providing heavy penalties for the transmission of any venereal disease in any form or manner whatsoever. When other nations are taking this matter up, shall America lag in the march of the world's progress? When other States are taking it up, shall Pennsylvania be in the rear? Every honest practitioner's heart has ached as he has been a silent, helpless witness to this fiendish crime against humanity. We have seen good, pure, healthy women crippled for life in both body and soul to satiate the lust (we cannot think of love in such a connection) of defectives, and to produce in turn hapless babes, to be forever but a curse to themselves and to their families and to the State. Can we longer afford to be silent participants in this insult to humanity; this blot upon our civilization; this peril to our Commonwealth?

## GALLOP-RHYTHM AND DIVISION OF THE PULMONIC SECOND TONE.

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THE subject of reduplication of the heart-sounds has been sparingly discussed in books on physical diagnosis, not so fully, indeed, as the discussions of the subject scattered through medical literature would justify. At the present time one finds, outside of the school of Potain, only an occasional writer who ventures upon a discussion of the subject; so that the prevalent view is still that of



Bouillaud, who, in 1840, gave a partial description of cases in which reduplication of the first and second sounds occurred, and concluded his account of the cases with the remark that the study of the phenomena is only a diagnostic refinement or *luxus* that has no practical value. Since the time of Bouillaud, however, the study of gallop-rhythm and division of the second sound of the heart has been the incentive to a large proportion of the more valuable clinical and experimental studies of the cardiac cycle, and has thrown much light upon the differential diagnosis of the diseases of the heart.

The term reduplication is not descriptive of the phenomena that occur in the case of either the first or second phase of the cardiac cycle. The term gallop-rhythm and divided tone are descriptive so far as our positive knowledge will permit, and their general use would avoid much confusion in the discussion of the subject. By gallop-rhythm or reduplication of the first sound of the heart (which is generally heard most distinctly at the apex or over the body of the left ventricle) is meant the presence of three tones instead of two during each heart-cycle. The first tone is always lower in pitch, having much less of the valvular quality and less intensity than the second tone. The third tone, the diastolic tone, does not sustain any constant relation to the second tone so far as its quality is concerned, but it may vary in different cases with the quality of the aortic closure. The aortic closure is distinctly heard because under the conditions commonly present, viz., dilatation, the left ventricle is in close contact with the anterior thoracic wall. The accent is nearly always on the second tone, though sometimes the third tone may exceed the second in intensity. The second element of gallop-rhythm, however, is always louder than the first element. Gallop-rhythm is always palpable when audible. It is only by palpation in some cases that we can conclude definitely with what cardiac phase the several tones are connected. It is very often the case that gallop-rhythm is more plainly palpable than audible. The gallop is often visible, that is, two impulses at the apex are visible for every aortic pulse, and there are two impulses visible for every diastolic tone. That the aortic pulse is always synchronous with the second element of the gallop and that the second element accompanies the expulsive phase of the left ventricle is the common experience of all observers. With what phase of the cardiac cycle the first element is connected is a question that has offered some difficulty of solution. Potain and his pupils, Barié, Vaquez and Teissier, have offered more observations on the subject than any other school of medicine. Potain credits Bouillaud with the first description of gallop-rhythm. Fraentzel<sup>1</sup> questions Bouillaud's appreciation of gallop-rhythm, and says that though he has searched diligently all of the works of Bouillaud he has found only

an account of the "bruit de rappel," by which Bouillaud meant a reduplication of the pulmonic second, or rather a divided pulmonic diastolic tone. In the second edition of his book on *Diseases of the Heart*, published in 1841, Bouillaud says:

"I have only found the first sound of the heart in cases of organic valvular lesions. . . . In the cases of stenosis of the aortic orifice, following . . ."

There follows, however, the description of a case that at autopsy proved to be one of marked stenosis and valvular insufficiency at the aortic orifice. During life there was a double systolic impulse, both parts of which were attended with a murmur, and also a diastolic murmur at the apex. The pulse from the description was a *pulsus bisferiens*, though the relation between the *pulsus bisferiens* and the two impulses at the apex is not discussed.

Hope, in his book on *Diseases of the Heart*, says that Bouillaud claims to have heard doubling of the first sound due to audible contractions of the auricle. Charles J. B. Williams,<sup>2</sup> says:

"Sometimes the systolic sound, without being longer than usual, seems broken into two by something like a flop in the middle, or to emanate it, instead of a *lubb* as usual, the first and second sounds are *lubb-lubb*."

Williams believed this could be due to irregularity or hesitancy in tightening the auriculo-ventricular valves; or that perhaps the first element could have arisen from the auricle, as he states that in experiments on an ass he heard a tone over an auricle that was alone contracting, and that some similar examinations have been made in America.

The first satisfactory explanations of gallop-rhythm that have appeared, and the most careful clinical studies, have emanated from Potain and his pupils. It is their explanation that seems to me the most rational, and in support of which I wish to offer some additional clinical observation.

The first patient, a man 24 years old, was admitted to the City Hospital October 2, 1895, with marked dyspnea, edema of the legs, face and eyelids, bleeding from the nose; persistent vomiting, headache, restlessness, confusion of ideas, marked papillitis and abnormative retinitis, with many fresh hemorrhages into the retina. The urine, too, showed marked evidences of nephritis. Other than moderate hypertrophy and dilatation of the left ventricle, there were no other observations of interest with regard to the vascular system at that time. Five days later the following notes were made: The pulse is rapid, rhythmic and regular; its volume is fair, and it is of rather short duration, and easily compressed. There is no thickening of the arterial walls. The precordial area of dulness begins above at the third rib in the left parasternal line; to the left in the mammillary line; the right border is one finger's breadth to the right of the sternum. The precordial area of activity is rather large, extending as high upward as the fourth rib. Over this area and over it alone are visible two impulses for every carotid pulse, which accompanies sharply the second impulse. Three phases of the cardiac cycle are palpable over the left ventricle. The first impulse is of moderate intensity and slightly roughened, and is followed directly by an impulse more intense, accompanied by a pronounced thrill. The diastolic impact from the closure of the aortic valves is distinctly palpable. Over the second interspace to the right of the sternum there is nothing of the

<sup>1</sup> *Zeitschrift für innere Medizin*, vol. 3.

<sup>2</sup> *Diseases of the Heart*, 1890.

has cycle palpable. Over the second interspace to the left of the sternum a faint thrill is palpable during the systole and an impact during the diastole. Auscultation shows a gallop-rhythm at the apex. The first element is muffled in character, and accompanied by a soft murmur. The second element of the systole is more valvular in character, more intense than the first and accompanied by a loud, blowing murmur. The diastolic sound is sharply defined. The same sounds are audible over the ensiform cartilage, but the intensity is much diminished. Over the second interspace to the right of the sternum there are audible only sharply defined systolic and diastolic tones. Over the second interspace to the left of the sternum the reduplication is faintly audible; the murmur with the second element is heard faintly; the pulmonic second is accentuated.

Unfortunately no observations on the venous pulses were recorded. If we were to confine our observations to the left ventricle alone, inspection, palpation, and auscultation all would give the impression that we had before us two contractions of the left ventricle to one of the right, the first contraction being ineffectual, the aortic valves not being opened.

Another view, which was held by d'Espine, of Geneva, was that gallop-rhythm is due to the resolution of the normal systole into its two component parts, the mitral and aortic phases. He calls attention to the fact that Traube described the systole as occurring "absatzweise," and characterizes the systole of the left ventricle as being a polysystole. This view of the apex-impulse coincides essentially with the view of Martius. In d'Espine's publication there are cardiographic tracings of the normal impulse from the left ventricle of a horse, and also from the heart of a dog in which gallop-rhythm had been induced by artificial means, showing the pronounced polysystolic character of the impulse in both instances. The activity of the auricles and the venous phenomena are, however, entirely ignored in his work.

Another explanation of reduplication of the systolic sound, viz., that the two tones are due to the asynchronous closure of the auriculo-ventricular valves, is plainly inconsistent with the findings in any well-marked case in which the doubling is limited to the one ventricle or the other.

Both of the foregoing explanations depend upon the possibility of hemisystole, a phenomenon that rests on weak clinical observations. It is common to find a double impulse over the left ventricle accompanied by a division and accentuation of the pulmonic second tone, that is, the pulmonary valve closes later than the aortic valve. If the systole of the left ventricle were prolonged, as it necessarily must be if d'Espine's explanation were accepted, then there is all the more reason why the aortic and not the pulmonic closure should be retarded, as is invariably the case when the second sound is divided.

The following case was observed recently at the City Hospital in Cleveland:

A colored girl, 22 years of age, entered the hospital on account of a mild febrile attack accompanying some inflammatory process in the uterine adnexa, from which she re-

covered in a short time. Her development was gracile, as she was a small member in a family of large people. She menstruated at 15 years. The notes read: The brachial, carotid and femoral arteries are very small. The pulse is rapid (90), rhythmic, regular, of moderate volume, and short duration, and easily compressed. There are no signs whatever of nephritis or arterial disease other than hypoplasia of the aortic system. A negative venous pulse in the external jugular is plainly visible. The precordial area of dullness begins above at the second interspace in the left parasternal line; the apex is in the mammillary line in the fifth interspace; the left border is nearly two fingers' breadth external to the mammillary line; the right border is slightly to the right of the left sternal border. The precordial area of activity is large, involving the entire mesocordial area to the left of the sternum and the apex-region. The activity is most marked in the fourth and fifth interspaces. With every cardiac cycle one can see two impulses over the region of the left ventricle, the second one being greater than the first. There is systolic retraction at the left border of the heart and in the left of the epigastrium, accompanied by a marked impulse in the fourth and fifth spaces. One can see the diminution in the transverse and increase in the anteroposterior diameters of the heart during the systole. During the diastole the recession of the heart occurs in the form of a radiating, undulatory movement from the fourth and fifth interspaces toward the left border of the heart and toward the left epigastrium. The diastolic relaxation of the myocardium is apparently exaggerated. The negative venous pulse accompanies the first element and the carotid pulse accompanies the second element of the gallop-rhythm. The two impulses are distinctly palpable, but only over the area in which they are seen. The closure of the pulmonic valve is distinctly palpable. Over the area of the left ventricle only, are there two sharply defined systolic tones, the second of which is more intense and more valvular in character than the first. The diastolic tone is loud and high-pitched and sharply defined. The gallop is not audible over the right ventricle, nor over the base of the heart. The pulmonic second is much accentuated and divided. The patient died subsequently, and the diagnosis of hypoplasia of the aortic system was confirmed on autopsy. The aorta measured 5 cm. in circumference at its origin. The endocardium was free from pathologic change.

We have before us a double impulse and a double tone, limited to the left ventricle, the first element being synchronous with the negative venous pulse and the second element synchronous with the carotid pulse; also a retarded and accentuated closure of the pulmonary valves. The negative venous pulse is a centrifugal wave, presystolic in time and auricular in origin. The first element of the gallop-rhythm occurs during the auricular systole and cannot therefore be due to a systolic movement in the ventricle, but must be a purely passive presystolic distention of the ventricle due to the systole of the auricle. Because the gallop-rhythm has its origin in the systole of the auricle, as well as in the ventricular systole, it is preferable to use the term gallop-rhythm instead of systolic reduplication in referring to this phenomenon. The essential conditions for its existence are a dilatation of the ventricle accompanied by an increased relaxation of its muscle during the diastole. These very conditions demand an increased amount of work of the auricle, so that we have increased activity on the part of the auricle working against diminished resistance on the part of the ventricle during its diastole. The gallop-rhythm may be heard over the right as well as over the left ventricle, but it is heard much less frequently over the right side of the heart.



Associating the first element of a gallop-rhythm with the auricular systole will (at the first glance) not meet the approval of most clinicians. In support of this argument permit me to offer some additional clinical and experimental evidence.

The following observations are taken from the report of an examination of the body of Magee, a criminal hung in Boston in 1858. The observations were made by Clark, Ellis and Shaw, and are reported in the *Boston Medical and Surgical Journal* for 1858, vol. 58, p. 480.

The hanging occurred at 10 A.M. At the end of 7 minutes the heart-rate was 100, at 12 minutes 60, and at 10.14 the sounds had ceased. At 10.25 the body was lowered and a careful examination of the chest revealed no heart-sounds and no impulse.

"At 11.30 a slight but regular pulsatory movement was observed in the right subclavian vein. Upon applying the ear to the chest this was ascertained to proceed from the heart itself, which gave a distinct and regular single beat, with a slight impulse 80 times in a minute. The chest was then opened and the heart exposed, without in any way arresting the pulsatory movements. The right auricle was in full and regular motion, contracting and dilating with beautiful distinctness and energy."

The contractions of the auricle persisted with the aid of stimuli until 1.45 P.M., 2 hours after the chest had been opened. This observation is not as complete as could be wished, though as full in this relation as is likely to be found when the function of the auricle is not being especially studied.

While making some cardiographic tracings from the exposed heart of a dog I have used the opportunity to make observations on the dying heart. Observing the right auricle during its last struggles and auscultating over the right heart at the same time. There were a number of active contractions of the right auricle, which were attended by a globular distention of the right ventricle, without any active contraction of the ventricular wall. Each contraction of the auricle under such conditions was attended with a distinct tone audible over the right ventricle, and having the same character as one attending an active contraction of the ventricle.

The division of the pulmonic second sound is due to the asynchronous closure of the valves at the pulmonary and aortic orifices. The pulmonary valve closes later than the aortic because of the lower tension in the pulmonary artery. Unless there is more than  $\frac{1}{10}$  second difference in the time of closure the ear cannot detect the difference in time and we hear the diastolic sounds as a single tone. There is abundance of experimental evidence to show that the pulmonary valve does close later than the aortic under normal conditions; and also that during inspiration the difference in time of closure is lengthened. When the left heart becomes insufficient because of any defect in either the valves or the myocardium there is increased work thrown upon the right side of the heart by the stasis in the pulmonary circulation. The difference in time between the closure of the aortic and the pulmonary valves will be in-

creased and the pulmonary closure will be accentuated. The closure of the pulmonary valve may be retarded in two ways: First, by increasing the resistance to the work of the right heart, so that it will complete its systole a little later than the left heart; second, by increasing the negative pressure in the thorax, so that the right heart will be retarded in its systole, thus delaying the pulmonic closure. In the first instance there are audible with every cardiac cycle three tones over the second interspace to the left of the sternum, the accent always being on the last tone, which is the retarded and accentuated closure of the pulmonary valves. In the second instance (during inspiration) we have three tones, but the third is not accentuated, because the delay in closure of the pulmonary valves is not due to increased tension in the pulmonary circulation, but to negative tension in the thorax, to which the weaker side of the heart responds, thus prolonging the systole of the right heart, although the resistance in the pulmonary artery may be diminished. When the pulmonic second sound is divided because of stasis in the pulmonary circulation, the accentuated pulmonary closure is retarded because the right ventricle requires a longer time to complete its systole against the increased tension offered by its respective artery. It is only the second instance that requires any discussion.

A boy, 12 years of age, first seen two months after an empyema of the left thorax had been drained, presented marked retraction of the left thorax with all of the physical signs usually accompanying thickening of the pleura and retraction of the lung. The sinus was still discharging. The heart's apex was at the left border of the sternum in the fourth interspace. Before the evacuation of the pus the apex had been in the right parasternal line. The patient was anemic, and dyspnea followed moderate physical exercise. During prolonged and strong inspiratory effort the pulse became much smaller in volume, arrhythmic, and the rate was diminished 40%. The diminution in volume and rate and the arrhythmia were so marked as to cause some anxiety on the part of the observer for the safety of the patient. The division of the pulmonic second sound maintained a direct relation to the degree of the pulsus paradoxus without any accentuation of the pulmonary closure. Several months later the same patient presented a symmetrical thorax, with the heart's apex in the fifth interspace slightly internal to the nipple-line. There was no pulsus paradoxus and no division of the pulmonic second on deep inspiration. The patient was no longer anemic; dyspnea had entirely disappeared.

I have noticed the same phenomena in cases of pulmonary tuberculosis on first entering the hospital. After rest in bed, with proper nourishment, though the pulmonary signs remain the same the division of the pulmonic second and the pulsus paradoxus disappear. Typhoid-fever cases, with weakened heart during convalescence, present the same phenomena, which disappear after improvement of the myocardial strength. Even in patients in whom there are no evidences of cardiac or pulmonary involvement there is a constant relation between the pulsus paradoxus and prolongation of the difference in time of closure of the aortic and pulmonary valves.

The deductions of physiologists from animal experiment estimate the intra-aortic pressure in man at about 200 mm. of mercury; the pressure in the pulmonary artery at about 60 mm. The intrathoracic negative pressure on forced inspiration may reach 40 mm. of mercury or more. In the cases under consideration mediastinitis and cardiac adhesions are eliminated. The retarded excursion of the lung, owing to thickened and retracted pulmonary pleura, may play a minor role, but the essential conditions are two sides of the heart contracting under a negative pressure. The weaker side will be the first to respond to the negative tension, and this is the right ventricle. Under forced inspiration the left heart contracts against a negative tension equal to only one-fifth of the arterial tension that it produces with every systole. The same negative tension nearly equals the arterial tension produced by the right side of the heart with each systole. The intra-auricular tension is so slight that I think it must be eliminated from playing any role in the cardiac cycle during the forced inspiratory effort. Heitler, of Vienna, claims to be able to demonstrate by percussion enlargement of the right side of the heart following prolonged and forced inspiratory effort. Joannovich, in a thesis from Lyons, in 1896, calls attention to the presence of the pulsus paradoxus in association with stenosis of the larynx complicating diphtheria, and regards its presence as a safe indication for tracheotomy. He unfortunately does not make any observations on the pulmonic second sound in this relation.

That the displacement of the intra-thoracic viscera during the inspiratory effort cannot cause the pulsus paradoxus and the division of the pulmonic second I believe can be disproved by an experiment like the following: A patient with extensive pulmonary tuberculous infiltration in whom the strength of the muscles involved in respiration are relatively better preserved than the strength of the myocardium, is directed to take a deep breath and maintain the phase of deep inspiration. There is marked division of the pulmonic second sound, without accentuation of the pulmonic element. The brachial pulse becomes much smaller and slower. The subject is then directed to hold the thorax in the position of forced inspiration, then to close the glottis firmly to prevent the escape of air from the lungs, and to make a strong expiratory effort. Immediately the division of the pulmonic second disappears. The pulse becomes more rapid than under the usual respiratory conditions, but slightly larger than during the forced inspiratory effort. With the thorax in the position of forced inspiration and the glottis closed and expiratory effort made, the intra-thoracic viscera would maintain their position. The only change is from a negative tension to a positive pressure in the pleural cavity. The objection may be raised that the heart is capable of performing several times its usual work on short demand; but in all of

these conditions the intra-arterial tension of either the aortic or pulmonary artery is increased, thus giving increased stimuli to the endocardium, to which the heart readily responds. Under the forced inspiration, however, the demand upon the right side of the heart is almost doubled, but there is no added stimulus to the endocardium calling upon the heart for increase in the force of its systole.

To summarize the argument: There is a constant relation during forced inspiration between division of the pulmonic second (without accentuation) and the pulsus paradoxus. Both phenomena are due to a retardation of the systole of the right heart because of the negative tension in the thorax, which demands an increase in the force of the systole without offering any direct added stimulus to the cardiac nerve-terminations. The problem is always one of contention between the strength of the muscles involved in inspiration and the strength of the myocardium.

### ACUTE HEMORRHAGIC ENCEPHALITIS.\*

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THE term encephalitis is a very old one, and as originally used meant a general inflammation of the brain, inflammation of the meninges not being excluded. Under it brain-abscess and all processes leading to cerebral softening were included. There was no attempt to separate a nonsuppurative form, or to confine the meaning of the word to inflammation of the brain-substance proper, until 1868, when Hayem<sup>1</sup> published his classic "*Studies on the Different Forms of Encephalitis*," dividing the disease into three varieties, suppurative, hyperplastic, and sclerosing, the second form running a subacute course and never proceeding to suppuration.

In 1872 Elam<sup>2</sup> described a disease that he defined as "a spontaneous acute general inflammation of the substance of the brain, uncomplicated with meningitis," for which he proposed the name "cerebria," and his description of both the symptoms and the course of the disease, and of the lesions found in the brain, agree quite well with that given by writers of the present day for acute encephalitis. Elam's patients all died within 12 days, and on autopsy there were found scattered throughout the brain hemorrhagic foci surrounded by areas of softening. He suggests, however, the possibility of recovery taking place, and mentions 2 cases that presented the same initial symptoms as the fatal ones, yet recovered in a few days.

The subject does not seem, however, to have attracted much attention, until in 1881, Wernicke<sup>3</sup> described a disease, occurring chiefly in alcoholic subjects, and consisting of small hemorrhages with surrounding in-

\* Read before the Medical Society of the District of Columbia, May 4, 1898.



flammation, affecting the gray matter about the aqueduct of Sylvius, with resulting paralysis of the ocular muscles, and to which he gave the name of "poliencephalitis acuta hemorrhagica superior." It was soon found that the same process often involved also the gray matter of the floor of the fourth ventricle, and produced paralysis of the muscles supplied by the other cranial nerves. To this latter form the name "poliencephalitis inferior" has been applied.

In 1884 Strümpell<sup>4</sup> showed that the hemorrhagic process could also affect the gray matter of the cortex—"poliencephalitis corticalis"—and he expressed the opinion that certain cases of cerebral palsy in children were due to acute encephalitis of the motor region of the cortex. He later modified his views to the extent of admitting that the process was not always in the cortex, and proposed for it the name of "acute encephalitis of childhood." The matter was much discussed, and in 1890 Strümpell<sup>4</sup> published new observations showing that the same process occurred also in adults.

During the influenza-epidemic of 1890-92, Leichtenstern<sup>5</sup> reported a number of cases occurring usually as sequelæ of that disease, and presenting symptoms similar to those described by Strümpell. Those that came to autopsy showed the lesions of acute hemorrhagic encephalitis, located most generally either in the cortex, or in the neighborhood of the basal ganglia. It appeared then that there were two types of acute hemorrhagic encephalitis, that of Wernicke, in which the gray matter about the aqueduct and the fourth ventricle was involved, and that of Strümpell and Leichtenstern, in which the gray matter of the cortex and the region of the central ganglia was affected by a hemorrhagic process, the first being due to intoxication, the second to infection. It was soon found, however, that cases of the Wernicke type occurred in connection with influenza and other infectious diseases, while others presenting symptoms of both types were observed. Hence it is now conceded, that while perhaps the majority of cases fall symptomatically into one or the other type, the hemorrhagic foci may be distributed anywhere throughout the brain, and the difference is not in the character of the pathologic process but merely in its location. Further, the disease may affect both brain and spinal cord, "poliencephalomyelitis."

While acute hemorrhagic encephalitis was formerly regarded as rare, and certainly fatal, a number of cases have been reported in the past few years, and in a good many of these recovery has taken place. Now that attention has been called to the subject the affection will probably be found to be far from uncommon. Of course, in a disease in which the symptoms are variable and often obscure, the diagnosis must, in the absence of an autopsy, often be doubtful, but the cases in which recovery has taken place have resembled so closely, in course and symptoms, other cases in which the diagnosis has been confirmed at autopsy, that there seems

good reason for assuming, especially in the absence of indications of any other disease that might explain the symptoms, that they were examples of the same process going on to recovery. This is further confirmed by the fact that in brains of persons who have recovered from attacks presenting the symptoms of acute encephalitis, but have later succumbed to some other disease, the lesions of the old encephalitic process have been found.<sup>6,7</sup>

Considering the etiology of acute hemorrhagic encephalitis, we find that the great majority of cases are due either to intoxication or to infection. Especially is Wernicke's form connected with chronic alcoholism, while in that of Strümpell and Leichtenstern, acute infection is the chief etiologic factor. Among poisons other than alcohol, sulphuric acid and the ptomains derived from decayed fish, meat, and sausage, have been mentioned. Lead-poisoning does not seem to produce the acute form of encephalitis. Cases have been attributed to many of the acute infectious diseases. Among these may be mentioned cerebrospinal meningitis, scarlet fever, measles, diphtheria, pneumonia, mumps, pertussis, hydrophobia, gonorrhea, erysipelas, and last, but not least, influenza. Probably a majority of the cases reported have occurred either in the course of or as a sequel of influenza. In these cases bacteriologic examination of the hemorrhagic foci has resulted negatively, except in one instance reported by Nauwerck, in which a bacillus resembling that of Pfeiffer, and possibly identical with it, was found. More recently Cantani<sup>8</sup> has shown that the injection of cultures of the influenza-bacillus into the brains or beneath the dura of rabbits produces meningitis and encephalitis, and that the same effect can be produced by dead cultures as by living ones. Hence, it is generally believed that the encephalitis is due to the action upon the brain of the toxins produced by the bacilli. Lastly, trauma without infection seems sometimes to play a role in the causation. Perhaps a slight contusion of the brain produces a point of lessened resistance. In some of the cases observed in young women, chlorosis has been present, and has been thought to have been at least a contributing cause.

Pathologically, acute hemorrhagic encephalitis is characterized by hyperemia, hemorrhage, serous exudation, and round-cell infiltration, but never by suppuration. The affected areas vary greatly in size, and are distributed throughout the brain, particularly in the gray matter, though any part may be involved. On section, they appear as red or yellow points that have been compared to flea-bites, and are surrounded by zones of swelling and softening. When the lesion is in the cortex, the neighboring pia is usually injected, and may be adherent. The larger bloodvessels are unaffected, while the very small arteries and capillaries are swollen; their walls are fatty, they contain thrombi, are often ruptured and are surrounded by heaps of red

corpuscles and an area of round-cell infiltration. The nerve-cells are swollen and may eventually degenerate. There is sometimes an increase in number of the neuroglia-cells. All evidence points to the small vessels as the starting-point of the process. If the nerve-cells have not undergone degeneration their complete recovery seems possible. When cicatrices result, it is suggested that they may serve as the starting-point for a new attack. The special seats of predilection are the gray matter about the aqueduct and the fourth ventricle, the neighborhood of the basal ganglia, and the cortex, but the hemorrhagic areas may occur in any part of the brain.

In many cases there appears to be a symmetry in their distribution. The cerebellum is rarely affected. In Wernicke's form, the lesion is not always sharply confined to the gray matter about the aqueduct and fourth ventricle, but it may involve, to a greater or less extent, the adjacent tegmentum, more rarely the crusta. When the process extends also to the spinal cord the region affected is the anterior horn, and the changes do not differ from those found in acute poliomyelitis, between which and the disease under discussion there is a close relationship.

While acute encephalitis is not limited to any age, in the cases due to infection children and young people seem specially liable. Its general symptoms are as follows:—The disease is likely to begin suddenly, but in some cases there is a prodromal stage of prostration and general malaise, with headache and vertigo. One of the earliest symptoms is vomiting. There may be at the outset great restlessness, but the patient has early some clouding of consciousness, which passes sooner or later into sopor, though there is seldom deep coma, except in fatal cases. Slight stiffness of the neck is often present, but it is not as marked as with meningitis. The temperature may, during the whole course of the disease, vary little from normal, but in fatal cases it usually rises toward the end and just before death it may be very high.

In other cases there is an initial rigor followed by high fever. The rapidity of the pulse is usually increased, but not always, and in the later stages, when there is increased intracranial pressure, it may be diminished. Respiration is usually rapid, even when there is no fever, and in fatal cases it often assumes the Cheyne-Stokes type before death. In addition there may be the usual symptoms of an infectious disease, such as coated tongue, gastric disturbance, enlarged spleen, and sometimes a petechial eruption.

Considering the focal symptoms, it must be remembered that the hemorrhagic process may affect any portion of the brain, and it may even involve the anterior horns of the cord; hence the picture depends upon the extent of the lesions, and upon their location. But, though there may be mixed forms, most cases are either of the Wernicke or of the Strümpell-Leichtenstern type.

The former, as has been said, occurs most commonly in alcoholic subjects. It usually begins suddenly, with the general symptoms already mentioned. The headache and vertigo are marked, and psychic depression and somnolence occur early. The temperature may remain normal or be subnormal. There is rapidly developing, and generally associated, paralysis of the eye-muscles, but the sphincter of the iris and the levator palpebrae usually escape. In many cases there is optic neuritis. The pupils may be little or not at all affected, though reaction to light is usually sluggish. Speech is tremulous, indistinct, slow and hesitating. There is usually incoordination in both arms and legs, and occasionally choreiform movements or tremor. The gait is unsteady, ataxic or spastic-ataxic. The reflexes may or may not be altered. Hemiparesis and hemianesthesia have been observed, all these latter symptoms being due to involvement of the adjacent tracts in the pons and midbrain. If the disease-process extends to the nuclei of the medulla, "poliencephalitis inferior," the muscles of the face, palate, and tongue, are also paralyzed, though the upper facial muscles generally escape. There may be delirium in some cases, but this is possibly to be attributed to the alcoholic poisoning.

The Strümpell-Leichtenstern type, as has been said, is usually dependent upon infection, and occurs either during the course, or as a sequel of acute infectious diseases. Its connection with influenza is so close that it has sometimes been called "influenza encephalitis." In it, the special location of the hemorrhagic process is in the hemispheres, but it may occur diffused in any portion of the brain. It generally does not come on until the patient is convalescent or has entirely recovered from the influenza, perhaps days or weeks after the initial disease. In some cases the influenzal attack has been so slight as to have attracted little or no attention. The disease may begin with a chill, followed by fever, but this is not the rule. General symptoms, *viz.*, headache, vertigo, nausea, and vomiting, slight stiffness of the neck, and dulness passing to sopor, are usually present. Psychic and motor unrest are more common than in Wernicke's form, and there may be convulsions, especially when the hemorrhagic areas are in, or near, the cortex. The temperature may be elevated, but it is not usually high until near the end in fatal cases. The pulse may be normal, slow, or rapid. Respiration is usually quickened. In the majority of cases there are present, sooner or later, focal symptoms, which of course vary very much, in accordance with the location of the lesions. They usually develop gradually, and more or less irregularly, differing in this respect from those due to apoplexy. For instance choreiform movements, contractures, or sensory disturbance may precede the development of paralysis in a limb. These focal symptoms usually take the form of hemiplegia or monoplegia, but conjugate



deviation of the eyes, forced movements, ataxia or hemiataxia, and hemianesthesia also occur. The tendon-reflexes vary, but they are usually exaggerated on the paralyzed side, while the skin-reflexes may be lost. Aphasia has often been noticed. In some cases there are few or no focal symptoms. When the midbrain, pons, and medulla are involved, the picture may closely resemble that of Wernicke's type, but the symmetry of lesions found in this latter is usually wanting.

Such symptoms as staggering, incoordination of movement, deviation of the eyes, slow and scanning speech, crossed hemiplegia or hemiparesis, hemianesthesia, and irregular cranial-nerve paralysis are likely to be present. Probably certain of the cases described by Leyden<sup>9</sup> as "acute ataxia of central origin," belong to this class. In cases of poli-encephalomyelitis, the symptoms of involvement of the anterior horns of the spinal cord are added to those already mentioned.

As illustrating some of the symptoms of the disease, I am kindly permitted by Dr. S. S. Adams to relate the following case, which will be reported more fully by him in another connection:

The patient is a white boy, 3½ years old, whose father is a general practitioner, while two other children of the family of 7 have died of "internal spasms." The patient has had measles, and diphtheria. There is no evidence of hereditary syphilis. About January 20, 1897, the child was seized with fever and restlessness, without cough or other symptom of lung-trouble. The fever subsided in a few days, and the child was able to be up and about, but the mother says he dragged the left leg a little and the left foot was everted. It was next observed that he had some difficulty in speaking and was growing dull, and as his condition grew steadily worse he was brought to the Children's Hospital on January 30th. On admission, the patient was in a condition of profound sopor; there was slight retraction of the head; the eyes were immovable, the left turned in a little, and the pupils even but not reactive to light. The temperature was 99.5° F., the pulse 118, respirations 26. The sopor gradually began to clear up and by February 4th the patient seemed to understand when spoken to, and noticed external objects. The knee-jerks were exaggerated, the skin-reflexes normal. The child was restless at night and sometimes screamed. Upon examination on February 13th, I found a well-nourished boy, who lay quiet in bed, evidently conscious, and tried to answer when spoken to, but could not. An occasional word was enunciated, but very slowly and indistinctly, speech being thick, and scanning. There was no paralysis, except of the left internal rectus muscle; but there was weakness and incoordination of movements in all four extremities, and diminished sensibility of the skin over them. The skin-reflexes were normal, the knee-jerks diminished, and greater on the right than on the left. On February 19th the boy was improving; the ataxia was marked; when supported under the arms he attempted to walk; there was also great incoordination of the movements of the arms in attempting to grasp objects, etc. The child could sit up in bed; his temperature had not been above 99.5°. About the middle of March he had an attack of fever, apparently malarial, which delayed his recovery somewhat, but he was able to leave the hospital on July 1st, and he could then walk and talk, though imperfectly. I saw him April 27, 1898, and found him apparently quite well, except for slight unsteadiness of the hands and slowness of speech.

This case seems to have been one of encephalitis of Strümpell-Leichtenstern type, and it resembles quite closely some of the cases of "acute ataxia of central origin" described by Leyden.

A patient seen with Dr. M. Griffith presented the following symptoms:

A girl, 5 years old, who had been ailing for several days, became restless and fretful, rolled her head on the pillow a great deal, developed moderate fever, and passed into a condition of sopor. She could be roused, however, and then complained of headache and dimness of vision. There was no incoordination of the movements of the eye-muscles, but no distinct paralysis, and the reflexes were normal. These symptoms gradually passed away, and there was complete recovery in about ten days.

The diagnosis in this case is, of course, uncertain, but as after careful examination no definite symptoms of any other disease could be discovered, it seems not unlikely that it was a mild and abortive attack of acute encephalitis.

Probably both of these cases may be attributed to influenzal infection.

The duration of acute hemorrhagic encephalitis varies. In the most acute and fatal cases, death may occur within 24 hours; but they usually last from 4 to 14 days. In the cases in which recovery takes place, convalescence may be rapid; but it is usually months before the patient is well again. Recovery may be complete, or with some defect, as hemiplegia or monoplegia. That recovery is possible, and even probable, in many cases, has been brought out very strikingly by Oppenheim<sup>10</sup> and others. The amount of defect depends upon the location of the morbid process, and how far it has proceeded. When the nerve-cells have been destroyed, recovery is imperfect. Death may occur through invasion of important centers, or from complications, as sinus-thrombosis, acute hydrocephalus, etc.

The prognosis, while always grave, is better in the cases following infectious diseases. When there is invasion of the bulb one-half the patients die. There is some evidence that the hemorrhagic foci sometimes serve as starting-points for multiple sclerosis. The severity of the symptoms with which the disease begins is hardly a criterion as to the result, but unfavorable signs are a small, rapid, and weak pulse, rapid and irregular respiration, and deep coma. The diagnosis is often difficult, and sometimes it cannot be made with certainty. Wernicke's form is most likely to be confounded with neuritis of the cranial nerves, and with bulbar paralysis without discoverable lesion. From the latter the differential may be impossible. As regards the former, ophthalmoplegia is very rarely, if ever, of peripheral origin. Hemorrhage into the pons and medulla, syphilis, and tumors, have also to be considered. Poli-encephalitis is never attended with such profound coma, and the paralysis does not occur so suddenly as with hemorrhage. The history of the case may give a clue to its etiology, and there is generally no evidence of cardiac and vascular disease. With syphilis, the history and the presence of other evidences of that disease are important, and the symptoms seldom come on as acutely as in poli-encephalitis. The last remark

applies also to tumors of the pons and medulla, and mid-brain. The differentiation of the Strümpell-Leichtenstern type from meningitis presents often great difficulty, and may at times be impossible. In fact, some leptomeningitis is usually present when the lesions are in the cortex. Meningitis is usually attended with more hyperesthesia of the sense-organs, while stiffness of the neck and of the extremities is more marked, and there may be retraction of the abdomen; and the focal symptoms of encephalitis are wanting. In some cases the fluid obtained by lumbar puncture may show the tubercle-bacillus or the micrococcus of cerebrospinal meningitis. The differentiation of this form of encephalitis from apoplexy, tumors, and syphilis, must be based on the principles already stated. Sinus-thrombosis, when occurring in an acute form, may closely simulate acute encephalitis, and the differentiation may at times be impossible. The presence of a possible source of infection, the swelling of veins in the neck, etc., would speak for thrombosis. Cerebral abscess usually runs a totally different course than acute nonsuppurative encephalitis, and is not likely to be confounded with this. From cerebral symptoms due to acute disease or to blood-states, and from hysteria, encephalitis is to be differentiated by a process of exclusion after careful examination.

The treatment of acute hemorrhagic encephalitis is not very satisfactory. In the cases in which recovery has taken place, free purgation with calomel, or with croton-oil, seems to have played the chief role. In plethoric cases moderate bleeding, preferably by cupping the temples, and, in all, the application of cold to the shaved head is advisable. For the restlessness and headache, sedatives such as bromids, and small doses of phenacetin or antipyrin, may be used. Debilitated subjects may require stimulants. If there be symptoms of great intracranial pressure, lumbar puncture may give at least temporary relief. In the later stages of the cases going on to recovery, potassium iodid as an alterative, and tonics may be in order. For the atrophic paralysis of the muscles of the eye, face and tongue that occurs when their nuclei are affected, electricity—both galvanism and faradism—may be used, after the acute process is over, in the same way as it is applicable for chronic bulbar paralysis.

## REFERENCES.

- <sup>1</sup> Hayem, *Études sur les divers formes d'Encephalite*, Paris, 1868.
- <sup>2</sup> Ekm, *Cerebria*, London, 1872.
- <sup>3</sup> Wernicke, *Gehirnkrankheiten*, Cassel, 1881.
- <sup>4</sup> Strümpell, *Die acute Encephalitis der Kinder*, *Archiv für Kinderheilkunde*, BLXXXI, 1881, also, *Deutsche Klinik. Med.*, 1891, Bd. XLVI, S. 300.
- <sup>5</sup> Leichtenstern, *Mittheilungen über die Influenza-Epidemie in Köln*, *Deutsche med. Wochenschr.*, 1890, S. 509, also, *Acute primäre hämorrhagische Encephalitis*, *Deutsche med. Wochenschrift*, 1892, No. 2.
- <sup>6</sup> Wiener, *Journal of Nervous and Mental Disease*, 1897, p. 398.
- <sup>7</sup> Oppenheim, *Encephalitis, Nothnagel's Special Pathology*, Leipzig, Bd. ix, Th. i, Abth. iii, Lief. iii, 1897.
- <sup>8</sup> Cantani, *Zeitschrift f. Hygiene und Infektionskrankheiten*, Bd. xxiii, 1896.
- <sup>9</sup> Leyden, *Über acute Ataxie*, *Zeitschrift f. klin. Med.*, 1890, Bd. XXVI, S. 376.
- <sup>10</sup> Oppenheim, *Die Prognose der acuten nichttrügerischen Encephalitis*, *Deutsche f. Nervenheilk.*, 1895, Bd. vi, S. 375.

## A RAPID METHOD OF RIDDING THE THROAT OF DIPHThERIA-BACILLI AFTER DISAPPEARANCE OF THE FALSE MEMBRANE.<sup>1</sup>

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THE wise regulation of the Board of Health that any house containing a case of certain of the infectious diseases is to have posted on it in a conspicuous place a notice to that effect, is one of the culminating points of modern rational hygiene, which also demands that the notice shall remain until the house be no longer a focus of infection. It does not require a long memory to recall the time when the disappearance of the false membrane in diphtheria was believed to indicate the termination of possible infection, but we can only look back with pity on those conscientious physicians of that time, who, while convinced of the fallacy of such a belief, yet had no means of determining when the period of infection really was at an end. If the Klebs-Löffler bacillus is granted any etiologic significance in diphtheria, then any individual harboring that germ must be looked upon both as a potential case of diphtheria in himself and as a certain source of danger to the community. Forbidding such an individual to roam at will cuts off, to a large extent, the danger to the community. If the individual has just passed through an attack of diphtheria the danger of a relapse is known to be slight, and it is only necessary then to continue isolation until the germs cannot be obtained from the site that was affected. So many factors are at work in this stage that it is not surprising to see it last a few days in some cases, a few weeks in others, and sometimes months yet in others. It is the possibility that his case may be in the last category that makes almost every physician look upon the yellow placard with a certain amount of dread. Two and a half years ago it was my experience to have a house, in which were two patients with diphtheria, quarantined for two weeks after recovery was complete, because the return from every culture would be "Diphtheria-bacilli present." A certain antiseptic was then used, after two applications of which in each case the cultures were negative and the quarantine was raised. Since then I have used the method with unvarying success in a sufficient number of cases to test it fully, and it is partly at the request of Dr. A. C. Abbott, Director of the Bacteriological Laboratory of the Board of Health, that I make this report. In brief, the method is the thorough application, once daily, to the parts that have been affected, of a solution of 60 grains of silver nitrate to the ounce of water. Two applications are usually sufficient, but occasionally a third is necessary. There has been no untoward result in any case and no great amount of discomfort. In fact, the reason for selecting

<sup>1</sup> Read before the Philadelphia Pediatric Society, June 14, 1898.



a solution of this strength rather than a weaker one was because the weaker solutions are found to be more painful. It would seem well, however, to avoid any direct application to the larynx, as spasm might thus be excited.

The following case illustrates well both the success of the plan and, when combined with the use of diphtheria-antitoxin, the brief duration of an average case of diphtheria:

O. S., Jr., a boy 11 years old, was referred to me by Dr. H. R. Wharton on May 30th at 10 p.m. During the day the child had complained of headache, pain in swallowing and some nausea. The tongue was coated, the breath foul, the glands at the angle of the jaw swollen, especially on the left, and the tonsils reddened and swollen nearly to meet in the middle line. On the left tonsil were two patches of dirty grey membrane, the upper and larger extending behind the anterior pillar; on the right tonsil was one small patch. The pulse was 110 and rather weak and the axillary temperature 102°. Iron and potassium chlorate were given internally and applied locally and a culture was taken which, when examined the next morning, showed a luxuriant growth of Klebs-Löffler bacilli. At 11 a.m. on May 31st, the temperature had risen to 102.5°, the pulse to 120, and there had been a decided spread of the membrane, the two patches on the left tonsil having coalesced. Two thousand units of Mulford's extra-potent antitoxin were injected in the interscapular region, the iron continued, two grains of quinin and a milk-punch every four hours added; and the throat was sprayed with equal parts of listerine, hydrogen dioxide and water. The culture sent to the Board of Health was reported "positive" and the placard affixed to the house June 1st. On June 2d, 48 hours after the injection, the throat was entirely clear of false membrane and the tonsils had returned nearly to their normal size. The applications of silver nitrate were immediately begun and a culture was taken on June 4th. The report on June 6th was that an exact diagnosis could not be made because the culture was contaminated, and another one was requested. The report from this on June 7th was "negative" and the house was disinfected on the following day, the quarantine having been in force just one week.

During the past two years I have examined cultures from the cases of angina that arise from time to time in the Children's Hospital. In two cases associated with the presence of Klebs-Löffler bacilli, the germs persisted for weeks after recovery (6 in one, 3 in the other), until applications of the strong silver-nitrate solution made succeeding cultures negative.

*Addendum.*—Since the foregoing communication was read inquiry has come from several sources as to the effect of the solution upon the false membrane. In pre-antitoxin days I saw even weaker solutions (20 grains to the ounce) hasten the exfoliation of the membrane after it had itself begun to curl up at the edges. I once tried such a solution early in a severe case of diphtheria, hoping to abort the attack, and have often wondered since then whether it did not contribute to the unhappy termination, destroying only the most superficially located of the germs and, by the dense coagulum it produced, protecting the more deeply situated bacilli from the subsequent local antiseptic treatment, which, in those days, was of some importance. With the use of the antitoxin local treatment is so entirely secondary that I have not hesitated to abandon it in cases in which the struggles of the children against it are so

great as nearly to exhaust them, and the longest time that I have seen a membrane persist, even in such cases, was 5 days. The average duration of the membrane, in my experience, is 48 hours, while, in two cases injected in the first 12 hours, the membrane has disappeared by the end of the next 12 hours. The bacilli then are left on the mucous membrane and are practically unprotected against the silver-solution, which destroys them, while it causes the formation of a thin coagulum of mucus.

## A BRACE FOR FLAT FEET AND INFANTILE PARALYSIS.

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of Philadelphia.

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THE apparatus here illustrated was devised for a variety of uses, mainly, however, for flat-foot and cases of infantile paralysis in which toe-drop is a prominent symptom. It consists essentially of a steel sole-plate and an upright bar fastened to a band immediately below the knee, and it is intended to be worn inside the shoe. Special construction or alteration of the shoe is not necessary. This is a desirable feature, because it allows the patient to buy shoes ready-made, thus lessening not only the first cost, but also subsequent expense for repairs. The sole-plate is made of steel, nickel-plated and covered with leather. At the back it is cut so as to fit the counter of the shoe, and it extends forward to the ball of the foot. It is raised on its inner edge so as to support the instep. To this raised portion the upright bar is attached. In certain cases of flat-foot, or in others in which it is especially desired to hold the foot firm, a projection of from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch high, and from 1 inch to  $1\frac{1}{4}$  inches long, is added to its outer edge, as in the flat-foot sole-piece of Royal Whitman. This projection presses on the outer side of the foot immediately behind the projection of the fifth metatarsal bone. The sole-plate is prevented from turning laterally by means of the upright bar. This is hinged to the sole-plate immediately below the internal malleolus. From this point it curves backward and upward between the tibia and the tendo Achillis, and thence proceeds up the leg to immediately below the knee, where it is confined by a band. It is preferably covered with black leather, so as to render it inconspicuous, especially for females. It can also be lacquered black, or nickel-plated, if desired. In certain cases of paralyzed feet, the difficulty of holding the foot is so great that a strap is added, which passes from the outside over the instep, to be fastened to a flat stud below and in front of the joint. In cases of infantile paralysis with toe-drop the upright bar is prolonged slightly below the joint. In front of this projection is a screw. This arrangement allows the foot to be flexed to any

desired extent, but prevents extension beyond a right angle. If so desired, the brace can be fixed permanently in the shoe by means of a screw passed through the plate into the heel. This is usually unnecessary, because the sole-plate is so firmly grasped by the planar arch that it does not have much tendency to move backward or forward. The sole-plate is fashioned over an iron last. It is not necessary to have a new one

plate alone may be all that is desired. In cases in which the tendency to valgus is pronounced, I usually use the side bar in addition. When the brace is fastened into the shoe, of course the instep-strap is omitted, because it is impossible to fasten it. The use of the stop-joint avoids entirely the necessity of using elastic straps, and these unsightly appliances are thus done away with, while locomotion is improved. The brace can not only be used alone, as is here shown, but it will be found to be very satisfactory in forming the lower portion of any apparatus that may extend above the knee. It is made by D. W. Kolbe & Son, mechanists to the Orthopedic Hospital.

**The Effect of Closure of the Pancreatic Duct on Digestion.**—P. Deucher (*Correspondenz Blatt für Schweizer Ärzte*, June 1 and 15, 1898) gives the results of a series of careful and extensive investigations into the changes produced in the stools and urine by complete closure of the pancreatic duct in three patients that came under his care. The cause of the occlusion was diagnosed as duodenal ulcer with closure by cicatricial contraction in one case and carcinoma in the remaining two cases. The diagnosis of complete closure was confirmed by the necropsy in one of the two latter cases and at the operation of cholecystenterostomy in the other. Foods containing large proportions of the proteids, carbohydrates and fats were given, at different times, and the amounts of urobilin, ethereal sulphates, etc., contained in the urine, and the fatty acids, lecithin, cholesterolin, etc., in the stools determined. The most important results, briefly summarized, were: A decided disturbance in the assimilation of nitrogenous foods; greatly lessened resorption of fats, but complete assimilation of the carbohydrates. The fats that were not assimilated were found in the stools for the most part (about 62%) split into fatty acids; only a small part (about 9%) appeared as soap. These results were confirmed by experiments on animals. The emulsified fats, cream and milk were, for the most part, absorbed. Although the assimilation of the proteids was interfered with, nutrition was not decidedly disturbed. By giving large amounts of the carbohydrates it was easy to produce alimentary glycosuria.

**Successful Operation for Typhoid Cholecystitis.** Imhofer (*Prager med. Wochenschrift*, April 14, 1898) reports the case of a man 40 years old, who had passed through a typical attack of typhoid fever in which the diagnosis had been confirmed by Vidal's test, and who had been dismissed after his temperature had remained normal for two weeks. For a month he remained in excellent health, but on lifting a heavy weight he suddenly felt severe pain in the right side as if something internal had ruptured, and he vomited bilious material. The abdomen at once became distended, neither feces nor flatus passed by the bowel and the pain continued severe. It was suspected that a partially healed typhoid ulcer had perforated and preparations were immediately made for operation. On opening the abdomen by an incision below the umbilicus and at the right side of the rectus muscle, thin but not offensive gray pus escaped, and the intestines were found distended and covered with plastic lymph. The large and small bowel and the vermiform appendix were carefully examined for a perforation, but none was discovered. In the region of the gall-bladder, however, a large tumor was felt. The incision was extended upward to the right costal arch, the lower portion being closed. The gall-bladder was found distended and on aspiration a considerable amount of thick pus escaped. Suture of the gall-bladder to the parietal peritoneum was then effected and more pus and bile and a small stone were evacuated. The abdominal cavity was carefully sponged with moist compresses and the wound closed with the exception of a small opening into the gall-bladder, in which were left a tube and a gauze wick. Recovery was interrupted by thrombosis of the veins of the lower extremity. An operation was later undertaken to close the biliary fistula, and the patient was discharged from the hospital soon afterward. Examination of the pus from the gall-bladder demonstrated the presence of Eberth's bacillus.



made for each case. If the instrument-maker has three or four sizes on hand, one of them will usually suffice. The side-iron is to be so bent with wrenches as to be made to lie flat on the leg. The band that encircles the leg is placed high up so as to avoid any compression of the muscles of the calf. The exact form in which the brace may be ordered depends, of course, on the individual case. In moderate cases of flat-foot the sole-



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**The Original Game of Football** was called "Camping." It was played by from 12 to 100 or more players on a side, and the ball was kicked, thrown, carried, or forced to the opposite goal. When played with hobnailed shoes it was called "savage camp." An old English chronicler says:—

"These contests were not infrequently fatal to many of the combatants. I have heard old persons speak of a celebrated camping, Norfolk against Suffolk, on Diss Common, with 300 on a side. Before the ball was thrown up, the Norfolk men inquired tauntingly of the Suffolk men if they had brought their coffins! The Suffolk men, after 14 hours, were the victors. Nine deaths were the result of the conflict in two weeks."

**Queen Victoria and Vaccination.**—In the speech of Queen Victoria formally dissolving Parliament, in which it is usual for her Majesty to summarize briefly the legislation of the dying session, no reference whatever is made to the new English Vaccination-Act, whose vicissitudes we have several times chronicled in the JOURNAL. This omission is very significant, for Queen Victoria's addresses to her Parliament—particularly to the Commons—upon dissolution are, as is well known, no mere formal utterance of words put into her mouth by her ministers, but, as far as the limits of her monarchy permit, register her personal opinions. In England her Majesty's silence regarding this luckless Act is taken as a sign that she shares in the apprehension that the more thoughtful and better instructed section of her subjects feel at the abolition of compulsory vaccination.

**The Difference between Medical and Lay Journalism** consists essentially in the fact that the medical variety is of permanent use, to be frequently consulted for all time, whilst the newspaper-kind is for the ephemeral need of the day. There is hardly any newspaper that is of any service (except a possible antiquarian one) in a week after it is issued. It disappears as if by magic. A recent attempt to secure by every available means a copy of a popular daily newspaper three days after it was circulating all about us by the thousands, proved futile. But all except the most worthless of medical journals may, as we well know, contain at least one item of transcendent value to the investigator, and so to the whole profession. There is not a number of a really reputable medical journal that should be allowed to pass beyond reference-possibility

by students. Hence the profound importance of establishing medical libraries in every center where it is possible, and of keeping perfect files of all the best journals.

**Hated Reformers.**—There is a class that thinks it has settled the question by saying with a sneer: "O, he's a reformer—he'll get enough of it pretty soon!" In his heart the sneerer knows he is pronouncing his own condemnation, and that all medical progress is conditional upon the existence of the "reformer." Of course there are distinctions to be made; there are reformers, and reformers. Reform, *e. g.*, is sometimes but another name for egotism, using a public movement as a tool to attract attention to self. That in such cases the ass's ears are plainly visible through the lion's skin is no reason for refusing aid to endeavors that are really sincere and helpful. One who is earnest in reform can see as plainly the egotist's long furry ears, as he can the twinkle of the pig-eyes of selfishness in one who pretends scorn of all reform and of all reformers. Those, for instance, interested in the perpetuation of hospital-abuses, or in a low standard of medical education, may always be trusted to sneer at reform of these things. The editors of commercial medical journals will logically affect to scorn journals managed for and by the profession. The secret advertiser thinks the reformer is also a secret advertiser, and more of a hypocrite than himself. When city-jealousy is a dominating motive the establisher of medical libraries is such a "reformer." The one who profits by medical politics, naturally despises the "reformer," who tries to eliminate both politics and the politician from our medical societies,—and so on.

**Ignorance and Crime.**—There are few more convincing proofs of the value of the inductive method, *i. e.*, science, as a necessary prerequisite of action than the wasted effort that has attended the enthusiastic acceptance of the theory that education is a preventive of crime. The theory was clutched out of the air, and peoples and nations began by laws and institutions to act upon the theory as if it were a necessary truth. General education may be advisable—is, of course, advisable—but it does not lessen crime, bears little or no causal relation to it, and the fact of action upon the theory blinds people and lawmakers and educators to

the real causes of crime. All scientific investigators—Guerry, Yvernes, Haussonville, Lombroso, Garolfo, Ferri, Quatelet, Van Oettingen, Valesini, Starcke—are agreed that the popular belief is fallacious. The volumes of the criminal statistics of England, including 1897, show the truth more conclusively. We have heard much about the decrease in crimes of late years, both against the person and against property, but the sad fact, apart from all prejudice, is that, both absolutely and relatively to the population, crime is on the increase, and sadder still, the crime of the educated and the young is relatively more frequent. It is not the so-called education, reading, writing, etc., that is preventive, but the kind of education. It is to this aspect that humanitarians should direct their attention. To the medical as well as to the religious pessimist might be said:—

"That nothing worthy proving can be proven,  
Nor yet disproven. Wherefore be thou wise,  
Cleave ever to the sunnier side of doubt,  
And cling to faith beyond the forms of faith."

**The Proposed Monopoly in Diphtheria-antitoxin** has not yet been set up in London, and a frequent correspondent writes to us his belief that no such attempt will be made, either by Professor Behring or by the Höchst-Farbwerke, who manufacture the serum and act as assignees of the profits. It would, probably, be easy for Professor Behring to obtain a patent in England, but his difficulties would not begin until after he had secured his patent-right. To get a grant of a patent, he would merely have to make an application, with the proper fees, and accompanied by an *affidavit stating that he has made a certain discovery, and that he is the first inventor*. But no one would pay any attention to such a patent. All the present manufacturers would continue to prepare and sell the serum as heretofore, defying him to go to law, and prove that any invention of his is being infringed. Pasteur, Roux and Kitasato, to mention three names only, would be quoted as every whit as much the inventors of antitoxin-serum as Behring, who would thus lose the public honor that has been so universally given him, without gaining the pecuniary reward at which he is aiming. The conjoint Board of the Royal College of Surgeons of England and the Royal College of Physicians of London are at the present moment manufacturers of antitoxin-serum, and it is to the last degree unlikely that they would cease their scientific work for the public good, because of any affidavit from Professor Behring. The German savant, or his assignees, would be driven to legal procedure if he desired to enforce his rights, and if, in such legal procedure, he could not prove (what he certainly would be unable to prove) that he is the genuine and sole inventor, his patent would be revoked. To put the situation briefly, a patent of monopoly, in England, for the manufacture of antitoxin-serum could be gotten on the strength of an affidavit

in a few minutes at the cost of a few dollars, but no one would regard the patent, and on the first attempt to enforce its rights, it would be annulled.

**A Country-Doctor** has been described by many, but we know of no sketch more simple and strong and unaffectedly true than that of Dr. Thomas Hall Shastid, first published in the *Journal of the American Medical Association* for February 27, 1897, and since reprinted in a dainty little volume. Other pictures of the country-doctor, *e. g.*, Dr. Watson's famous one, may be more dramatic, but for that reason not more faithful to reality. And Dr. Shastid's description of his father's life and character has some points of peculiar American interest. The desire to perfect himself in his art and science, the love of nature, the love of children, not as patients only but for their own sakes, the faithful plodding work of life, kept up to the last—how true of thousands!

"And yet, if I err not, there are practising in the length and breadth of this country many hundreds, nay, possibly thousands of country-doctors, who in skill and in judgment, in geniality and kindness, and tenderness and sympathy, and ready response to calls, and dogged, never-ending pertinacity in the fight with our old and common enemy—disease—are almost the equals of my father. What more could I say for them?"

Is the character of these men changing under modern conditions? Perhaps the intellectual fiber is being more toned, the scientific demand is more exacting, the ambition is more spurred, and life is somewhat more concentrated, as it were. But it is the great compensation of our work that science can never wholly drive out the need of art and of sympathy. Disease and suffering are inseparable; to save life means to love life, and especially the young life of children. The very work we do keeps us, even we harder city-men, in touch with the feelings both of our patients and ourselves. He who feels the pulse feels the heart that beats at the center of all pulses.

**War's Aftermath.**—The American people present the curious spectacle of quarreling among themselves about who were responsible for the faults of victory. For a people who are so resentful of foreign criticism we display an extraordinary eagerness to do our laundry-work in public. The situation would not be to our credit if it really arose from a genuine, widespread public sentiment; but evidently there is little public sentiment in it. Most of the clamor of criticism at present directed against the War Department, and especially the medical service of the army, is obviously led by a few malevolent journals, which have taken the cue to be abusive and will not be quieted.

We regard it as exceedingly unfortunate that so much intemperate speech is allowed for a time to confuse the real points at issue. The administration of medical affairs in the army, we can assure the critics,



will continue to be in the hands of the Surgeon-General's Department, and not in those of disaffected newspapers and their reporters. The latter may raise a cloud that may temporarily confuse the truth, but the Medical Department will doubtless continue to do its duty undeterred by misrepresentation. The final judgment will be reached and registered in good time.

That there are some real issues to be explained and adjudicated, no one, evidently least of all Surgeon-General Sternberg, cares to deny. The latter has already asked for an investigation, as becomes a high public officer who is conscious of his own record and rectitude. The immediate thing, it seems to us, for both the medical and the general public to do is to keep quiet and let the U. S. army-surgeons attend to their business.

Let it be recalled that a victorious campaign in a foreign country in the midst of hardships and pestilence could not have been conducted to a finish in four months without an immense crop of wounds, diseases and deaths—especially by an army of 25,000 men that had to be suddenly enlarged to one of more than 200,000. These facts and figures speak eloquently for the display of a reserved and temperate judgment.

The *Army and Navy Journal*, which ought to know, says in a recent number that the difficulties at the front before Santiago were largely of the kind that have always existed in war and always will exist, especially under the conditions of a gallant and rapid advance such as was made at Santiago; and the whole subject, now that the war is over, is valuable, not for supplying items to a carping press, but as a means for avoiding errors in the future and for improving the service. This is a sensible view and a just judgment.

The American public will have to adjust itself to a new condition, with its many consequences, that has arisen from what has really been a great war of conquest. The well-known common sense and adaptability of our people will no doubt bring them in time to a just estimate of the inevitable aftermath of war.

**Scurvy at Camp Wikoff.**—Dr. M. S. French, of Philadelphia, who has just returned from a visit to the hospital-camp at Montauk Point, L. I., says, in a newspaper-interview, that many of the men there are suffering with scurvy. This is not surprising, but rather to be expected from the circumstances that existed during the Cuban campaign.

Scurvy has long been recognized as a disease especially of the barracks and the camp. The historic instances are numerous in which it has wrought havoc among troops. Next to mariners on long voyages, soldiers have doubtless furnished the most striking examples. During twenty-seven months of the Crimean war the French army, numbering about 86,740 men, reported 23,250 cases of scorbutus, or about 26% of the whole force, with 645 deaths. This list did not include the cases that occurred among the troops sent

home for treatment. The annual rate of prevalence amounted to 119 cases per thousand, or one man in every squad of 8.4 men. The English army in the same campaign gave a rate of 55 cases per thousand men, equivalent to one man with marked scorbutic symptoms in every squad of 10.6 men. These figures are authentic, and show that in a campaign made under much more favorable circumstances than existed in our late Cuban war, and by two of the most enlightened and fully equipped nations in Europe, scurvy prevailed almost as a pestilence. The official reports of our own civil war contain many references to scurvy among the troops. Altogether, 30,714 cases were reported, and yet in the face of this large number the writer of the report thought that the authorities had reason to feel gratified, from a comparison with the results obtained in the Crimea, with the success of the efforts to control scurvy in the ranks. The disease in our army, from 1861 to 1865, was much more prevalent and fatal among the colored than among the white troops. The rate among the former rose at one time to as high as 33.9 per thousand men.

In estimating the comparative figures among the French, English, and American troops in those two wars it is necessary to avoid an error that might arise from the different methods of reporting the disease. Thus, it is said that the English army-surgeons did not admit cases of scurvy on the sick-reports until the disease was far advanced, and that in reality many of the sick soldiers treated for other diseases had a marked scorbutic taint. This fact shows clearly that the disease was even more prevalent in the Crimea than the reports indicate.

Other instances might be given of the prevalence of scurvy in modern armies, but the facts cited from two comparatively recent wars, one a foreign and the other a civil war, demonstrate well enough that scurvy is almost necessarily an accompaniment of large armies in the field.

In military practice scurvy has long been recognized as a possible complication of other diseases and of wounds, and this is often a serious matter.

The causation of scurvy, whether in civil or in military practice, has very generally been attributed to a defective and deficient food-supply. This seems like a simple and satisfactory explanation; yet it probably does not cover the whole ground. STRUMPELL even goes so far as to say that a bad food-supply, with the other accessories of over-crowding, bad hygiene and insalubrious climate, is not sufficient to account for the disease; and he suggests very plausibly that, after all, scurvy may be due to some form of infection. The fact cannot be gainsaid, however, that bad food and bad hygiene are powerful predisposing factors in its causation. The use of the vegetable acids, and of fresh fruits, vegetables and meats, is certainly the measure indicated for cure.

At Camp Wikoff the control and even rapid eradication of scurvy may be confidently expected. The disease is usually not difficult of recognition, and the remedies, now that the affected soldiers are restored to their country, are within easy reach. That the disease has prevailed among the troops, however, is not a cause for astonishment, but is, as we have pointed out, strictly in accord with historic precedent.

**To a Sectarian who Complained of Bigotry and Dogmatism.**—The following letter was recently sent to one who grumbled much at "allopathic" bigotry and dogmatism:—

"Your kind letter but repeats the burthen of very many I have received in its charge of 'dogmatism.' In looking over the journals published by your 'school' one also finds the same reiterated objection. This, then, must be set down as your sincere belief, and however chronic the complaint, however unreasonable it may seem upon our part, it must evidently be reasoned with and treated with a genuine purpose of cure.

"My first answer to the charge is that it is to some extent, even to a large extent, and generally speaking, true. It is with most people a habit to decide matters before scientifically and dispassionately examining the facts and conditions entirely necessary to form a judicial opinion. To this sin humanity before the bar of a true logic must plead quite guilty. Specifically those whom you term 'allopaths' are doubtless, nay, are certainly, frequently to be blamed for this historic and judicial sin. They undoubtedly decide upon the merits of the doctrines you uphold without examination of the historic origins and evolution of your sect, and without scientific provings of its theses. I must in frankness add, however, that those who thus sin have several fair excuses. In the first place, life is short, art is long, and the time at the disposal of hard-pressed physicians, for such historical, laboratory, and clinical tests, is hard to find. In the second place (pardon the seeming bluntness—it is necessary in the interest of brevity), it appears to me true that the more thorough the examination of the history, the more intelligent the scrutiny of your text-books, the more scientific the testing of the tenets of your sect, the more ironical and disgusted becomes the student as to the truth, worth, or dignity of its claims. Thousands of good men, with sound and logical minds, have made such examinations, and their decision has been against you, they have remained unconvinced. Can this be said of members of your school? Can you match one going over to your faith to a dozen coming from you to us? What do the statistics show of the relative growth of the two schools as compared to the growth in population? What is the standing and condition of your sect to-day in Germany, the home both of scientific medicine and of your founder? Can a rational man with good common sense, who has caught the spirit of science, believe, or give time to examine and argue such assertions as these: That disease is immaterial? That the itch is the origin of most of our diseases? That the more a drug is diluted the stronger it becomes? That a disease is curable by a drug which in health produces the same or a similar disease? Sometimes these things may be each and all true, but to found a school of medicine upon them, to accept them as always true—is such action not simply childish? Nay, is it not 'dogmatism' of the clearest kind? Dogmatism is to believe dogmas, is it not? A personal word in this connection may also help to clarify the question at issue. I have been charged by name in your journals, and in hundreds of letters, with 'bigotry,' and most rancorously abused for my 'dogmatism.' I could fill pages with the personal epithets and insults heaped upon me; more will doubtless be evoked by this letter. Hundreds, as I am told, have brutally refused to look at a book bearing my name, saying, 'If it were the only book in the world they would not have it in their offices, etc., etc.' And yet, all this was in answer to writings in no line of which was mentioned the name of any living person of your sect, and least of all with disrespect. Now,

the point of this personal allusion is this:—What is more indicative of the very quintessence of dogmatism and bigotry than to answer impersonal statements and arguments with personal vituperation and abuse?

"This brings me to the place for adding that, if we have been guilty of bigotry and dogmatism you (as a school) are more guilty of it. For every line in our writings so characterizable there are surely two in yours. All of which, of course, is but the old pot-and-kettle controversy as to blackness, and is here repeated only to show that that controversy, and that way of carrying it on, are wholly useless, resultless, and silly. Should we not make an end of it, and proceed to more vivifying and general questions? Such, for example, as these:—

"(1) Be so kind as to carefully examine the state of mind which makes you call us 'allopathists,' when there is not a man of us who would for an instant confess belief in allopathy as any guiding principle or fixed tenet. Is this not discourteous and unjust? Could not even harsher adjectives be truthfully used of this custom? Do you not continue doing so because it justifies, or seems to do so, your own exclusive belief in another peculiar—pathy? But is that a sufficient reason for misrepresenting us and wrongfully charging us with a peculiar method of treatment? Just at present we seem in certain ways to be trending distinctly toward a philosophy of some diseases and a method of therapeutics bearing not a little resemblance to the principle expressed in the sectarian adage, *similia similibus curantur*. Should we, therefore, be stigmatized, *e. g.*, by the eclectics or the osteopaths, as homeopaths? Would not such a naming be rejected by ourselves? Would you think it fair? Does the practice of the Brand method in typhoid fever make us hydropathists? Could dogmatism and bigotry be more plainly revealed than in calling us by a name we dislike and that expresses a method of therapeutics we may, in some cases, believe in, in others not believe in, and which by none is a general rule of practice? We call you by the name you choose and honor; if we used another misrepresenting you, would you not blame us? To apply the word 'school' to us is in the same way repugnant to us, and especially when you unwarrantably stick in the sneer *old*. Truth may be new, or it may be old, but to seek to arouse popular prejudice by the terms *new school*, *old school*, is clearly quackish, and most particularly when scientific medicine has utterly supplanted all schools and sects and—pathies.

"(2) You ask me if, as editor, I would accept and print articles by members of your school. (You use the word of yourselves.) I answer, most assuredly, yes. I have repeatedly done so. In adding to medical knowledge, or rather in judging as to the value of such proposed additions, I know nothing of schools, or bigots, or sects. The article must depend solely on what is, according to editorial judgment, its value in and of itself, its truth, and its service to the profession.

"(3) I introduce this allusion here to emphasize the fundamental and all-decisive criterion that as sectarians you are wrong, and place yourselves out of the line of historic and scientific evolution. We do not criticise you, or should not, for your errors, because a scientifically minded man knows well enough his present opinions may be proved errors to-morrow. We criticise you and believe that you have ruined yourselves by your sectarianism, that is by your medieval belief in the absoluteness of your dogmas. These dogmas were not reached by induction, the scientific method; what human right have you to pronounce them absolute truth? Your tragedy lies in the fact of shutting yourselves out from progress; not in your lack of truth, but in your preventing new therapeutic truth from coming to you. You have side-tracked yourselves, and complain that the through-express is bigoted. By sectarianizing your literature, you have also side-tracked it. Do you not see that the convention in the City of the Future will be held before the arrival of the delegates you sent on the sectarian train? For the sake of argument let us suppose the articles in your sectarian journals as scientific and as true as those in ours; is it not clear that the whole world, because they are addressed to a class, must pass them by? Are they collated in the great *Jahrbücher*, abstracted in the international hand-books, epitomized in the great medical text-books? Are they corollary and ancillary to the vast body of systematic biologic science the great intellects of the world are beating into unity and certainty



for the acceptance and government of the civilization of the future. The foundations are laid and much of the superstructure of that splendid edifice is already built. Has a single stone been contributed by or rather accepted from a medical sectarian?

"(4) The pity of this class segregation—your conscious and still-persisted-in act—is that it was and is wholly unnecessary. There is nothing in our code, our laws, or even our customs preventing you as individuals from holding whatever opinions as to disease you wish, or from giving any drugs you please, in any strength or weakness you deem fitting. We differ as much among ourselves as we do generally from you. We aim to cure disease in any way and by any system our individual judgments dictate, and as a matter of fact we treat our patients allopathically, homeopathically, hydropathically, eclectically, etc. But when you say they must all and only be treated by one method you cut yourselves off from the common scientific brotherhood, switch your train, and we, with the world, must on! We do not say we have discovered any infallible rule of treatment and philosophy of disease. You do say so of yourselves—and which, in the axiomatic fallibility of the human mind, and the rapid progress of modern science, is the more modest and the more probably right position?

"(5) Another pathetic result of your sectarianism is that a large number (would you deny that they are the vast majority?) find themselves in the thick of life in a false position, and that they cannot rigidly, or even as a rule, follow the sectarian principles. Do you honestly believe that there are a hundred of your school who strictly follow school-rules, and who do not violate them every day, and do not treat precisely as we do, regardless of all -pathies or sectarian theories?<sup>1</sup> To be frank, I believe it is this widespread but hidden consciousness of the frightful contradiction between theoretic dogma and daily practice which moves you as with one voice to cry out so painfully against us as dogmatists. It is the endeavor to shut the fact below the threshold of your own perception. The dogmatism is on your side, and the tragedy consequent upon acknowledgment and logical action is too great to be met. It is easy and natural—all history shows it—to cry, 'Devil, Devil!' instead of looking into one's own tempting weakness.

"(6) But the objectification of evil by no means ends it, or helps much in conquering it. The pathos of a false position in life, or finding in the midst of the war that one has enlisted in the wrong army, is indeed poignant, and brings the severest suffering not only in actual war, but equally so in the battles of silent sociologic evolution. In real political war-time one is accounted a coward who deserts the chosen side,—but even then not so if he afterward fight heroically and fearlessly with the other army. In the struggles of the intellectual life the cowardice is in not renouncing the ill-chosen party. Courage is required to will and carry out the change demanded by the conscience. But that courage brings its own reward. Some of the best physicians I know are 'come-outers' from your school. They were stung by the haunting sense that as sectarians they were not in the army of science whose

victories are inevitably destined to conquer all error and establish the free government of Truth. In a personal sense medical sectarianism is a sin against oneself; in a sociologic sense it is a crime against science and humanity."

## Reviews.

**Notes on Massage, Including Elementary Anatomy and Physiology.** By JESSE M. WARD, Philadelphia, P. Blakiston, Son & Co., 1898. Price, \$1.00.

Like all the small manuals on massage this book attempts too much, but, more modest than most, it is only entitled "Notes." We can find no fault with it in execution, except that it is folly to attempt to cover the necessary knowledge of anatomy, physiology and the technic of massage in 97 small pages, even if the intention be that it shall only be used as a syllabus to aid in following a course of lectures. The descriptions of massage-procedures are too brief to be either clear or exact; the routine use of percussion in all cases is objectionable, the procedure being most annoying to many patients and of very small service to any.

**Pathologic Technic.** A Practical Manual for the Pathological Laboratory. By FRANK BURR MALLORY, A.M., M.D., and JAMES HOMER WRIGHT, A.M., M.D. 8vo, pp. 397. Philadelphia: W. B. Saunders, 1897.

This book is designed to supply the pathologist of a hospital that is provided with laboratory-facilities, with sufficient information to enable him properly to fulfil his duties. The information given, although practically all of it can be obtained in one form or another from other books, is so intelligibly and conveniently classified that it enables the user to obtain the facts he may happen to need with a minimum of delay. Of course any one familiar with a text-book is able to find the things he wants with very little trouble; but for the purposes of referring a resident physician or an assistant to particular laboratory-methods, the present work is almost invaluable. A certain amount of the information conveyed will impress one familiar with the subject as being needlessly elementary. This, however, is a doubtful criticism, and probably beginners will differ with the view expressed. The first part deals with postmortem examination. In the introductory section, the suggestions to beginners seem to be made with curious abruptness; and, for beginners, they are decidedly out of place. For those who have already had some experience in postmortem work, they are of course interesting and useful. The section on the technic of the examination of the body is clear and concise. The order of the removal of the abdominal organs is the one that has been found most convenient and practical, and is to be strongly recommended; that is, first the spleen, next the intestines, then the appendages of the gastro-intestinal tract, and finally, the genito-urinary organs. Hardly enough attention has been directed to the methods of examining the organs in situ without removal. This, particularly in private autopsies, is often sufficient and exceedingly convenient; indeed, a thorough autopsy may be made in this way. A quick method for the removal of the brain, by sawing directly through the skull and the brain at the same time, is not noticed, although this is usually satisfactory in cases of recent apoplexy. No mention is made of the method for removing the spinal cord from the ventral surface of the body, although it is sometimes the only way in which the prejudice against more than one incision may be overcome, and the cord obtained. A statement on page 65 makes it appear as if the ductus arteriosus opened into the pulmonary vein, but this is probably an oversight in the proof-reading. The second section discusses the various methods employed in bacteriologic examinations. The description of the preparation of agar-agar is that usually given, but the method is so tedious and exasperating that the employment of glass-wool instead of filter-paper is to be recommended; the former yields a medium, which, if not perfectly clear, is at least sufficiently so for ordinary cultures, and, indeed, it may be rendered almost as perfect as the most carefully filtered preparations if the bouillon is first prepared, neutralized,

<sup>1</sup> A partial answer to my question will be found in the significant utterance of a homeopathic practitioner at the recent convention in Omaha:

The homeopathic practitioner of the quarter of the century preceding the one in which we are now working was not only not instructed in any method of prescribing drugs but the homeopathy, but he was taught to abhor all aid that could not be traced to alleged homeopathy and to homeopathy alone. As a result the practitioner either became a hypocrite—secretly adopting other methods than the homeopathy—or he became a fanatic exclusivist, or he openly and honestly acknowledged his application of all things which appealed to his judgment, and thereby earned from his fanatical brethren the unjust stigma of "mongrel." At the present time, owing to the general tolerance, the practitioners of the last kind far outnumber the others.

We have outgrown sectarianism. We have at last reached a high ethical plane from which we can proclaim the fact that we are physicians who reserve to ourselves the right to draw from every field of mental achievement that which will aid in the healing of the sick, whether these contributions are from mechanics, from chemistry, from bacteriology, or from the charmed circle of homeopathy. We believe in allopathy, in antipathy, and in homeopathy, each in its own place, and with a scientific reason for our beliefs, and we want the whole world to know it.

The progressive physician of to-day is not an exclusivist; common sense forbids, science forbids. He can ignore nothing; he must keep everlastingly at it, hunting for some "soul of good." This good he finds in empiricism, in rationalism, and in the law of similars. This progressivism is not orthodoxy, but it is truth, and is it not truth of which we are all in search? What if in following truth we are led away from homeopathy? It matters not. Every practitioner of experience knows there are cases which demand at times certain other measures than those prescribed by homeopathy. He knows he is at all times compelled to resort to these other methods. He should, therefore, be prepared to accept such facts and be properly qualified to meet them by a studied familiarity with the circumstances and conditions of the application of all the useful methods known to therapeutics.

filtered, and then has the agar added to it. A valuable table of the microorganisms stained or not stained by Gram's method is found on page 92. Curiously, in the section on sterilization, no mention is made of the use of the autoclave, a piece of apparatus that is almost indispensable. Brief but thoroughly satisfactory descriptions are given of the more important pathogenic microorganisms. The final section deals with the methods employed in histologic research. The valuable contributions of Mallory to the methods of staining nervous tissue are sufficient guarantee that this department is on a par with the best hitherto published, and it is, in fact, complete; the descriptions of the various methods are concise, and thorough. After a description of the methods for preparing and staining tissues, there is a section upon the examination of blood, one upon special methods for special tissues or substances, and finally, a brief section upon clinical pathology. This might well have been made complete, but the subject belongs to a separate department and is best treated of in an independent work. A more complete bibliography would have been acceptable.

**Conservative Gynecology and Electrotherapeutics.** A Practical Treatise on the Diseases of Women and their Treatment by Electricity. Third Edition, Revised, Rewritten, and Greatly Enlarged. By G. BETTON MASSEY, M.D., Physician to the Gynecic Department of Howard Hospital, Philadelphia, etc. Illustrated with Twelve Full-Page Original Chromo-lithographic Plates in Twelve Colors, Numerous Full-Page Original Half-tone Plates of Photographs taken from Nature, and many other Engravings in the Text. Royal Octavo. 400 pages. Extra Cloth, Beveled Edges. Philadelphia: The F. A. Davis Co., 1898. Price, \$3.50 net.

This book holds a unique place in gynecologic literature in that it makes no attempt to cover the ground in the usual way, that is with the ultimate object of surgical intervention in view. It treats only of the subjects that are of more interest to the general practitioner, that is, those that are amenable to treatment with drugs and remedies, or that offer especially a field for the use of electricity. In this, third, edition the volume has been enlarged from what was originally a mere treatise on the use of electricity for fibroid tumors and certain other affections into a treatise on the medical and surgical diseases of women, with special reference to the therapeutic use of electricity. While we are inclined to believe that, like the surgical specialist, the author has viewed his subject too exclusively from his own standpoint and has therefore given a biased opinion on many important points, we can truthfully say that he has at the same time presented an able treatise on electricity and the medical electrician. Thus, we most heartily condemn the use of electricity for ectopic pregnancy under any condition, whether to kill the fetus or to favor its absorption, and we feel that the book is, so far as it deals with extrauterine gestation, materially weakened. Many lives have been sacrificed to this worse than useless treatment. Again, we believe that it is nothing more than tampering with human life to attempt to stem the progress of carcinoma and other malignant growths by the use of electrolysis or electricity in any form. Early extirpation is the only justifiable course to pursue, relegating the use of electricity and other palliative measures to those inoperable cases that are only too frequently encountered. In the other conditions treated of we can see no reason why electricity might not serve its purpose as well as any other remedy in safe hands. We trust that the author may in subsequent editions of his book see fit to eliminate these truly objectionable features, as just noted, and thereby, we believe, radically improve its quality.

**The Paderstein Stipendium for 1898** has been conferred by the Medical Faculty of the University of Berlin on Dr. Max Koch, of Magdeburg, a recent graduate of the University of Berlin. His graduation-thesis, which forms the main ground for this grant, was on atrophy of gastric and intestinal glands in the course of pernicious anemia, with a discussion of its causal relation to this disease.

## Correspondence.

### A LITTLE TRICK IN NEEDLE-THREADING.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

THE following little manipulation is easy of execution, useful, and practical, and will save both temper and nerves. Let the needle (straight, curved, or cervix) be held with the ring and little fingers of the left hand, instead of with the thumb and the forefinger as usual, leaving the latter free, as shown in the accompanying illustration, to grasp the



smallest bit of silk, etc., introduced through the eye, and pull it through. By the old method, when the silk was introduced into the eye and the needle changed from the left hand to the right in order to pull the suture through, it invariably slipped back. Respectfully,

JOSEPH M. JACKSON.

(College of Physicians and Surgeons, New York, '99.)  
Pittsburg, Pa.

### THE RELATION OF STREPTOCOCCOUS SORE THROAT TO ERYSIPELAS.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

THE apparent identity of the microorganisms believed to be the principal etiologic factor in erysipelas and in many cases of sore throat is an interesting fact. Streptococcal throats are now known to be very common, the staphylococcus being quite usually found in the cases of follicular tonsillitis that are sometimes so hard to differentiate from diphtheria of the tonsils.

Identity of etiology would mean that many cases of tonsillitis are in reality local manifestations of erysipelas, and this possibility is of great practical interest to the surgeon and accoucheur, as well as to the bacteriologist; for if tonsillitis, due to the streptococcus, is identical with erysipelas, certainly a physician or nurse suffering from this form of angina should not do surgical or obstetric work, any more than if he or she had facial erysipelas.

The fact that no definite clinical connection has been established between tonsillitis and cutaneous erysipelas



while at first sight seeming to discredit any real etiologic identity, may, after all, be no harder to explain than the reason why facial erysipelas usually confines itself to the head instead of extending to other parts of the body.

These considerations have made me look with special interest upon a case that occurred in my practice last winter, and of which, while I kept no complete notes, the following is a brief account:

I was called on March 21st to see Mrs. L., aged about 57, and her daughter, Miss S. L., aged about 30. Both were suffering from attacks of acute tonsillitis, which I diagnosed clinically as of streptococcal origin. The inflammation affected the tonsils, the pillars of the fauces, and, to some extent, the soft palate, and appeared to be of a more intense grade than usual.

On March 24th, Mrs. L. was seized with violent pain in the left side of her head, centering about the ear. On the 26th the ear discharged seropurulent matter externally, and my attention was called to an inflammation of the skin about the external auditory meatus and within the canal. In another 24 hours the entire ear was inflamed and swollen, manifestly from erysipelas. The disease spread in its characteristic manner over the face and scalp down to about the level of the clavicle in front and down the back to the lumbar region. The attack was attended with much prostration, and lasted about a month.

In the case of Miss S. L., while there was some earache in the late stage of the attack, there was no erysipelas externally.

It is a matter for regret that cultures were not taken from the throats at the beginning of the attacks, but even without a complete clinical record, the case seemed of sufficient interest to report as one in which, to all appearances, a tonsillitis spread by continuity of surface through the pharynx, Eustachian tube, middle ear, and external auditory canal, to manifest itself as erysipelas on the skin of the head and body.

Respectfully,

EDWARD G. RHODES.

Germantown, Phila.

## THE DISCOVERY OF THE LAW AND POWER THAT PROPELS THE BLOOD.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

Under the foregoing heading in your issue dated August 27, 1898, are some misleading editorial statements. In justice will you kindly publish the following facts:

(1) The American Institute of Homeopathy did not meet at Omaha, June 21, 22, and 23, 1898.

(2) M. J. Rodermund, M.D., Appleton, Wis., is not a member of the American Institute of Homeopathy.

(3) The paper mentioned was not read before the American Institute of Homeopathy.

Truly yours,

Philadelphia.

WM. W. VAN BARN.

**Shellacked Paper for Air-cushions Versus Rubber.**—In the manufacture of air-cushions and the like for the sick very tough paper heavily shellacked and varnished in the Japanese fashion is becoming very popular among German physicians. Such articles resist moisture and the deteriorating action of body-secretions much better than does rubber; they stand quite as rough usage, are generally as durable, do not become so hot and uncomfortable and are less than half as costly.

## American News and Notes.

**The College of Physicians and Surgeons of Kansas City, Mo.,** was recently incorporated.

**Wounded from Manila.**—In a cablegram from Manila it was stated that 200 soldiers, invalided on account of illness or wounds, were to leave Manila August 30th.

**Christian Scientists.**—The Appellate Court of Rhode Island has handed down an opinion in which it is held that Christian scientists are not medical practitioners in the legal sense of the term. This will constitute a precedent for the escape of all kinds of quacks.

**University of California.**—Dr. W. E. Taylor, for many years professor of surgery in the medical department, resigned recently, and at a special meeting of the faculty, held on August 18th, Dr. John M. Williamson, professor of anatomy, was appointed lecturer in surgery for the coming term.

**Hospital-ships at Boston.**—The United States hospital-ship *Solace*, having on board 74 sick soldiers and marines, arrived at Boston, August 29th, from Santiago de Cuba. The Massachusetts hospital-ship *Bay State*, having on board 101 sick soldiers from Santiago, arrived at Boston quarantine August 30th.

**Negress Admitted to Practice.**—At a recent examination before the Medical Board of Louisiana, Dr. Emma Wakefield, a young negress, passed a successful examination. She is the first woman in the State of Louisiana to study medicine, and the first negress in America to receive a medical diploma.

**Niagara Medical College.**—A short time ago Niagara Medical College of Buffalo consolidated with the University of Buffalo. Before all the books and laboratory-appliances had been removed from the Niagara Medical School the rejected faculty got together, reorganized, and are preparing to reopen the Niagara Medical College.

**Hospital-Corps for Manila.**—General Miller designated Major W. O. Owen, who has been in charge of the field-hospital at San Francisco, as chief surgeon and chief medical officer of the transport *Scandia*, which sailed for Honolulu and Manila August 27th. With Dr. Owen go also 14 medical officers and 139 privates of the Hospital Corps, and 4 Red Cross nurses.

**Typhoid Fever Epidemic at Reading, Pa.**—Up to August 25th 60 typhoid-fever cases had been reported in one small neighborhood in East Reading, with 3 deaths. It is thought that the dumping of garbage nearby contaminated the spring from which some of the families obtained their water. Samples of this water were sent to Philadelphia for analysis.

**A Board of Health for Texas.**—The last annual session of the State Medical Association, held at Houston, adopted a resolution appointing "Drs. R. H. Harrison, M. M. Smith, Bacon Saunders, J. D. Osborne and S. C. Red to prepare a bill for the creation of a State board of health in Texas, with such power of collecting vital statistics, analyzing articles of commerce offered for sale in Texas for the consumption of her citizens as medicines, food and drink; and for all other duties belonging to a State board of health; and that said committee shall be known as 'legislative committee No. 2,' to urge upon the State legislature the importance of enacting such law for the general welfare of the

people of Texas, not only in protecting the public health against preventable or infectious diseases, but also the hurtful effects of articles of medicine and food offered for sale to the public under false or fraudulent claims that should be exposed or condemned."

**Mosquito-proof Tents** are to be added to the soldiers' outfit in Cuba, Porto Rico, and Manila. The tent is made of fine white cheese-cloth, weighs  $1\frac{1}{2}$  pounds, and can be carried in a knapsack. When opened for service it is 5 feet high, 6 feet long, and 3 feet wide. This will afford most valuable protection against mosquitos, flies, and insects of all kinds, and dew.—[*Medical Review*.]

**A Woman in the Medical Corps of the United States Army.**—Dr. Anita Newcomb McGee, wife of Professor W. J. McGee, of Washington, and daughter of Professor Simon Newcomb, formerly of the Naval Observatory, was regularly sworn in as an acting assistant surgeon on August 29th. Dr. McGee has throughout the war been in charge of the selection of the women-nurses, and of the 500 or more now in the field most have passed muster at her hands. Assistant Surgeon McGee sailed on the transport *Seneca* from New York for San Juan on August 31st, with 22 women-nurses and 12 men-nurses.

**Death-rate in New York State.**—The bulletin of the State Board of Health for July shows that there were 11,441 deaths during that month. Discussing the experience of the month, the bulletin says: Following the month of almost the lowest mortality, July is always the month of largest mortality in the year. The present reported mortality is 2,800 in excess of that of the month preceding. This increase is chiefly in deaths from diarrheal diseases, from which 2,000 more deaths occurred than in June, and in deaths credited to other diseases of the digestive organs.

**Obituary.**—DR. CLEON M. HIBBARD, of St. Louis, house-physician at the Planters' Hotel, and formerly Assistant Superintendent of the South Department of the Boston City Hospital, fell through the passenger elevator-shaft from the seventh floor, August 22d, and was almost instantly killed.—DR. W. J. CANNON, Lambert, Tenn., August 14th.—DR. GEORGE E. CATLIN, Lake Geneva, Wis., aged 58 years.—DR. HARLOW P. GAMWELL, Westfield, Mass., August 12th, aged 74 years.—DR. EDWIN GIBBS, Washington, D. C., August 15th, at Lynnhwood, Va.—DR. BENJAMIN F. WRIGHT, Youngs, Ga., August 10th.—DR. OWEN J. WARD died at his home in New York City, August 17th, aged 58 years. He served on the visiting staff of the Gouverneur Street Hospital from the date of its establishment until his death.—DR. WILLIAM C. OTTERSON, of Brooklyn, N. Y., died at his summer-home in Long Branch, N. J., August 17th, aged 70 years.—DR. FOSTER PRATT, Kalamazoo, Mich., August 12th, aged 75 years.—DR. EGAR M. CLINGER, of Milton, Pa., 26 years old, August 31st, in consequence of a bicycle-accident. He was graduated from Jefferson Medical College in 1897, and has been a resident physician in St. Joseph's Hospital at Lancaster, Pa.

**Sickness at Ponce.**—About 1,000 of the 16,000 men are said to have been on the sick-list August 22d. There was a large number of typhoid cases, but this disease was not on the increase—a fact that indicates that the malady had been carried from the camps at home and is not indigenous to Porto Rico. However, there was a very large increase in diarrhea, dysentery, dengue, and malarial disorders, due to the hot, unhealthy rainy season, just commencing. All medical authorities in the army in Porto Rico agree that

the sick-list is increasing and that an alarming condition may be expected unless the War Department promptly arranges barracks for the army of occupation, and immediately provides additional transports (the hospital-ship *Relief* being insufficient) to remove such of the sick as can be safely transferred home, the convalescents and those enervated by climatic conditions. It is impossible for men from a northern climate to recuperate in a tropical country during its most unhealthful season.

**The Sanitary Conditions at Camp Wikoff.**—Assistant Surgeon-General Nicholas Senn is quoted as predicting that unless Camp Wikoff is broken up within six weeks it will become a "horror-camp" instead of a "recuperation-camp." Among other things he said that almost none of the sickness among the soldiers up to the present time and none of the deaths have been due to the conditions prevailing now or in the past. Sickness has been almost entirely limited to fevers contracted in the South, and the death-rate would have been much higher had the men remained in the South instead of being brought to Montauk. The change of climate lessened the effects of the fevers and improved the condition of the men. As a consequence, the only sickness that can be attributed to the camp is dysentery or lesser troubles, which may have been caused by the change of diet or water. So far none of the fevers has been indigenous to camp; but if the men remain they certainly will be attacked with typhoid fever, from the contamination of the water-supply. What is required is an adequate system of drainage.

**The Surgeon-General of the Army and the American National Red Cross.**—Surgeon-General Sternberg denies the statements that he is hostile to the American National Red Cross, and that he has refused to accept its assistance, and that as a result of this refusal there has been unnecessary suffering. He admits that he did object to the sending of female nurses with troops in the field engaged in active operations. There is a Red Cross Hospital-Corps in the Army, of enlisted men, whose duty it is to render first aid to the wounded upon the field of battle and to care for the sick in division field-hospitals, and Dr. Sternberg believed that female nurses would be an incumbrance to troops during active operations; but so soon as serious sickness developed in the camps and it became necessary to treat typhoid fever cases in the field-hospitals, he gladly accepted the services of trained female nurses for the division field-hospitals; and in the general hospitals they have been employed from the first. The general testimony from the surgeons in charge of these hospitals has been that their services have been of great value. Very many of these trained nurses have been obtained through the assistance of the Red Cross Society for Maintenance of Trained Nurses, Auxilliary No. 3, and Dr. Sternberg expresses his high appreciation of the valuable services rendered to the Medical Department of the Army by this organization.

**Yellow Fever in the South.**—Dr. Wyman, supervising Surgeon-General of the Marine-Hospital Service, received official information, August 26th, that there was a case of suspected yellow fever at the artillery post at Fort Point, near Galveston, Tex. A difference of opinion existed among the physicians as to whether the case was one of yellow fever, the marine-hospital surgeon believing it was, while the Galveston health-office took a contrary view. On August 27th three additional fever-cases regarded as somewhat suspicious were isolated and the precaution was taken to burn their clothing and bedding.



A few new cases of uncertain nature were reported from Key West.

A case reported at Franklin, La., August 26th was regarded as one of genuine yellow fever. The Louisiana State Board of Health was enforcing quarantine-regulations there very strictly.

Houston declared quarantine against Galveston on August 26th, and on August 29th the Mobile Board of Health quarantined against Galveston, Tex., and Franklin, La., and also wired Governor Johnson to enforce the State quarantine.

Several cases of yellow fever were reported August 27th at Vera Cruz, and strict sanitary measures were taken to prevent a spread of the disease. The State authorities adopted precautions against the importation of the fever into the Gulf ports within their jurisdiction.

According to later reports there have been no new cases at either Key West or Galveston and the quarantine against the latter has been raised, although it continues against Fort Point, where the troops are quartered.

**Movements of Transports.**—Three transports arrived in Fort Pond Bay, Montauk Point, L. I., August 23d. They were the auxiliary cruisers *Resolute* and *Budger* and the transport *Arcadia*. The *Resolute* brought 61 men sick with contagious diseases; the *Budger* brought 82 sick, and the *Arcadia* 27. The transport *Montauk* arrived at Montauk on August 24th with 173 sick aboard. There were no deaths during the voyage from Cuba, and there was no contagious disease aboard. Fourteen sick volunteers were landed at Fort Wordsworth from the *Rio Grande* on August 24th, all suffering from malaria, dysentery, or lack of food. The men on the *Yale* were unloaded, August 25th, and 178 sick were taken to the detention-hospital. The *D. H. Miller* arrived at Montauk Point, August 26th, with 20 sick, and no deaths to report. The *Harvard* with 620 men of the Thirty-third Michigan arrived, August 26th, with several cases of diphtheria on board. The *Chatham* also arrived. The same day the *Yucatan* arrived with 486 of the Seventh Regular Infantry, 200 sick; the *Hudson*, with 514 of the First Regiment District of Columbia Volunteers; the *Catania*, with 401 sick men of various regiments from the Siboney hospital; 9 deaths occurred during the voyage; and the *Prairie*, with about 600 of the Seventh Regular Infantry, about 10% of whom were sick. The United States transport *Minnewaska* arrived at Camp Wikoff on August 29th, with 49 hospital-cases, typhoid and dysentery being the prevailing diseases. One hundred and fifty-six sick and wounded men on the *San Marcos* arrived at New York on August 29th, from the General Hospital at Key West, many of them from Santiago. The wounded men are not in a serious condition, and, with the exception of a few of the men, the sick are all convalescent. Ten men were taken to the New York Hospital, one to Governor's Island, and the remainder to Fort Hamilton and Fort Wadsworth.

**Hospital-Trains.**—The MISSOURI STATE HOSPITAL-TRAIN left Camp Meade August 28th with 80 sick soldiers, and was joined at Harrisburg by the hospital-train from Dunn Loring.

THE IOWA HOSPITAL-TRAIN of ten Wagner sleeping cars left Chickamauga August 24th, carrying home 136 sick soldiers from the Fifty-second Iowa Regiment. There were also on this train 86 men from Ohio and Indiana regiments.

THE ILLINOIS HOSPITAL-TRAIN, provided for the First Regiment of Illinois Cavalry, arrived at Fort Sheridan, August 26th, bearing 154 troopers. Of the patients aboard only 11

were down with typhoid fever. The remainder were sick with malarial and camp fever.

THE MASSACHUSETTS HOSPITAL-TRAIN arrived in Springfield August 27th. When the regiment left for Tampa its total strength was 943,—47 officers and 896 men. There came home on the train 485 soldiers, 24 officers and 461 men, barely half the number that started out. The rest were dead, sick or on detail for the sick in Cuba, home on furloughs, sick in the general hospital at Camp Wikoff or in the hospitals to which they have been transferred.

**NEW YORK-HOSPITAL TRAINS.**—A hospital-train of two Pullman cars arrived in Jersey City August 29th carrying 40 sick soldiers of the Fourteenth New York Volunteers, on furlough from Camp Thomas, to recuperate.

The Eighth New York Regiment sent 260 sick and convalescent soldiers from Camp Thomas August 26th, to their homes in New York on a train chartered for the purpose. The train arrived August 30th. Various city hospitals sent ambulances to remove those of the soldiers who might be too ill to leave the station in ordinary conveyance.

One hundred and eight fever-stricken soldiers of the 65th New York Regiment reached Buffalo August 30th on a special hospital-train from Dunn Loring, Va. Most of the men were taken to hospitals, but 40 of them were taken to their homes, a few of them being able to walk.

**OHIO HOSPITAL-TRAIN.**—A train of 14 coaches and sleeper and baggage-cars was to have started on September 2d from Columbus for Lakeland, Fla., to bring home 65 men of the First Ohio Cavalry; about the same number of infantry men from Fernandina, and others from Huntsville, Ala.

**The American Association of Obstetricians and Gynecologists** will hold its eleventh annual meeting in the banquet hall of the Monongahela House at Pittsburg, Pa., September 20, 21 and 22, 1898. The following papers are announced: President's address, Charles A. L. Reed, Cincinnati; Septic Infection of Ovarian Cystoma, Charles Greene Cumston, Boston; Recent Experiences with the Alexander Operation, H. E. Hayd, Buffalo; Nursing in Abdominal Surgery, Joseph Price, Philadelphia; Carcinoma of the Breast, W. F. Westmoreland, Atlanta; Operative Technic for Intraligamentous Ovarian Cystoma, D. Tod Gilliam, Columbus; Organization of Major Operations in Private Practice, W. G. MacDonald, Albany; Explanation of the Character of the Temperature in Appendicitis, Robert T. Morris, New York; Pathological and Clinical Phases of Gallstone, A. H. Cordier, Kansas City; Some Facts in Regard to Uterine Fibroids, H. D. Ingraham, Buffalo; Albuminuria Complicating Gynecological Operations, Rufus B. Hall, Cincinnati; Extrauterine Pregnancy with Specimen—mature fetus borne twelve years, W. J. Asdale, Pittsburg; Surgical Treatment of Morbid Conditions Involving the Broad Ligaments, A. P. Clarke, Cambridge; A Second Paper on the Surgical Treatment of Intussusception in Infants, with Cases, H. Howitt, Guelph, Ontario; Relation of Nervous Affections to Diseases of Female Pelvic Organs, B. Sherwood Dunn, Boston; Ureteral Anastomosis, Geo. H. Noble, Atlanta; The Graver Forms of Nerve-Disturbance, Due to Organic Changes in the Genital Organs, W. H. Humiston, Cleveland; Some of the Complications Following Vaginal Hystero-salpingo-oophorectomy in Pelvic Suppuration, F. Blume, Allegheny; The Question of Intra-abdominal Drainage, Edwin Walker, Evansville; Report of a Case of Double Uterus and Vagina with Pregnancy in One Horn; Excision of Vaginal Septum, F. Blume, Pittsburg; Some Clinical Observations Based on Over 100 Abdominal Sections for Ovariectomy, X. O. Werder, Pitts-

burg; Remarks on Methods of Hemostasis, with Demonstration, Walter B. Chase, Brooklyn; Past and Present Surgery of the Gall-bladder and Bile-ducts, William H. Myers, Fort Wayne; Treatment of Granular Erosion of the Cervix by Ligature of the Cervical Vessels, D. Tod Gilliam, Columbus; Relation of Rectal to Pelvic Disease and to Nervous Disorders in Women, Joseph M. Mathews, Louisville; Treatment of Endometritis, William A. B. Sellman, Baltimore; Tuberculous Peritonitis, J. B. Murphy, Chicago.

**The Mississippi Valley Medical Association** will hold its annual meeting at Nashville, October 11-14, 1898. The following is the preliminary program: Why I have Abandoned the General Practice of Vaginal Hysterectomy, B. Sherwood Dunn, Boston, Mass.; Tonsillitis or Quinsy, Causes and Treatment, J. A. Stucky, Lexington, Ky.; Pichi, H. W. Whitaker, Columbus, O.; A Few Practical Points in the Treatment of Posterior Urethritis, A. Ravogli, Cincinnati, O.; The Neuro-Hypothesis of Rheumatoid Arthritis, Frank Parsons Norbury, Jacksonville, Ill.; Diphtheria and its Logical Treatment, A. M. Osness, Dayton, O.; Varicocele, F. E. Kelly, La Moille, Ill.; A Plea for Pelvic Peritonitis and Cellulitis, F. F. Bryan, Georgetown, Ky.; Syphilis, John M. Batten, Pittsburg, Pa.; Gonangiectomy and Orchidectomy for Hypertrophied Prostate in Old Men, Geo. W. Johnson, Dunning, Ill.; Wounds of the Lacrimal Apparatus, Report of Operation for Restoration of Canaliculi Obliterated by Traumatism, Geo. F. Keiper, Lafayette, Ind.; A Consideration of the Limit to Operative Gynecology, Shelby C. Carson, Greensboro, Ala.; The Relations of the Gynecologist and the Neurologist, W. H. Humiston, Cleveland, O.; Intermingling and Changing of Type in Diseases, W. Gaston McFadden, Shelbyville, Ind.; Mercury and Its Action, William F. Barclay, Pittsburg, Pa.; The Diagnosis of Gonorrhea in Women, J. Rilus Eastman, Indianapolis, Ind.; Subperiosteal Removal of Caries from the Pelvic Basin with the Report of Cases, S. E. Milliken, Dallas, Tex.; Complete Inspection of the Rectum by Means of Newer Mechanical Appliances, Thos. Chas. Martin, Cleveland, O.; Hydrotherapy in Stomach-Diseases, Geo. D. Kahlo, Indianapolis, Ind.; Surgical Treatment of Infantile Paralysis, Alex. C. Wiener, Chicago, Ill.; Suprapubic Cystotomy vs. Perineal Section, James M. M. Parrot, Kingston, N. C.; Report of Cases in Obstetrics with Complications, R. C. Pratt, McKenzie, Tenn.; The Relationship Between the Genito-urinary Tract and Rectum, with Special Reference to the Female, John L. Jelks, Memphis, Tenn.; How Should We Treat Typhoid Fever, T. Virgil Hubbard, Atlanta, Ga.; A Clinical Contribution to Ectopic Gestation, W. W. Taylor, Memphis, Tenn.; Interesting Surgical Cases, M. Goltman, Memphis, Tenn.; The Bicycle from the Medical Standpoint, I. N. Love, St. Louis, Mo.; Surgical Treatment of Pus in the Pelvis, Jos. Price, Philadelphia, Pa.; Operations on the Mastoid, When and How Performed, Andrew Timberman, Columbus, O.; Arthritic Diathesis, R. A. Bate, Louisville, Ky.; Diagnostic and Therapeutic Uses of Tuberculin, Chas. W. Aitken, Flemmingsburg, Ky.; Some Pathological Conditions of the Ovaries and Adnexa Causing Pain, G. W. Halley, Kansas City, Mo.

**Health of the Camps.**—GUAYAMA, Porto Rico.—Several cases of sickness are reported, mostly malaria and dysentery.

**CAMP MERRIAM.**—Dr. Joseph Matthews, surgeon in charge of the division-hospital at the Presidio, says that since the removal of the troops to Camp Merriam the health of the men has steadily improved. Surgeon Major J. A. Rafter, of the 20th Kansas, calls attention to the fact that there are

only 49 sick in the regiment now, against 261 on July 16th, when the men were at Camp Merritt.

**CAMP ALGER.**—Although more than 100 patients were sent from the camp-hospital, August 25th, on the relief-train from Philadelphia and an equal number of convalescent patients have been given thirty days' furloughs and sent to their homes, yet the report for August 27th showed that there were now 318 sick soldiers on the hospital-roll. Of this number 70 were members of the 65th New York Regiment and 17 belong to the First New Jersey. Fifteen additional cases of fever were reported in the 65th New York Regiment on August 30th and 25 more on August 31st. More than half of the patients in the hospital were suffering from typhoid fever.

**CAMP THOMAS.**—The conditions in the hospitals at Camp Thomas are rapidly improving. More than half of the sick have been sent away. The surgeons and nurses are now able to give good attention to all here, and a decided change for the better is everywhere noticeable. A number of Sisters of Charity arrived August 27th to assist in the hospital-work. There were 5 deaths from fever on August 31st. After an investigation into the condition of affairs in Camp Thomas, Chickamauga Park, General H. V. Boynton, in a report to Secretary Alger, expresses the opinion that much of the sickness was caused by the filth that too many regimental officers permitted to dominate their camps, contrary to orders. The hospitals, as a whole, he found to be well equipped, with an abundance of supplies, and faithful, hard-working doctors and nurses in attendance. When the sickness was greatest there was much inconvenience. The stories of insufficiency of food General Boynton declares to have originated in the refusal of the nurses to give convalescents all they called for.

**CAMP MEADE.**—Colonel Girard, Chief Medical Officer of the Second Army Corps, stated on August 28th, that the health of the camp had continued good. At that time there were only 15 typhoid-fever cases in the general hospital, and these were brought from the camps in the South. These patients were turned over to the trained female nurses in the Red Cross hospitals. There were 160 cases in the general hospital and all were of minor type. Dr. Girard expressed his ability to take care of 300 patients with the greatest facility. The brigade-surgeons reported the men to be feeling much better since they arrived, and that there was 40% less sickness in Camp Meade than in the Southern camps.

**FORT MYER.**—About 400 cases of sickness—typhoid fever, malaria, etc.—were under treatment at the military post at Fort Myer on August 24th, the military post opposite Washington, in Virginia. The patients came mostly from the camp at Falls Church, and taxed the accommodations of the post to the utmost. Three deaths from typhoid fever were reported.

**CAMP WIKOFF, MONTAUK POINT.**—There were on August 29th 1,630 patients in the general hospital, 125 of whom were sick with typhoid fever. There were 530 men in the detention-hospital. The hospital was enlarged on August 30th to accommodate 750 more patients. While the condition in the hospitals has been somewhat improved, 300 sick soldiers were still sleeping on the floor, but these men were to be put on cots in the new wing as soon as it was finished. The force at the general hospital included 77 Red Cross nurses and 40 sisters of charity.

**U. S. Marine-Hospital Service.**—A board of officers will be convened at Washington on November 9, 1898, for the purpose of examining candidates for admission to the grade of Assistant Surgeon.



and Surgeon in the U. S. Marine Hospital Service. It is desired that application for this examination be made before November 1st.

Candidates must be between 21 and 30 years of age, graduates of a respectable medical college, and must furnish testimonials from respectable persons as to character.

The following is the usual order of the examination: 1, Physical; 2, Written; 3, Oral; 4, Clinical.

In addition to the physical examination candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercises consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on the cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as candidates on the list.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After five years' service Assistant Surgeons are entitled to examination for promotion to the grade of Passed Assistant Surgeon.

Promotion to the grade of Surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant Surgeons receive \$1,600, Passed Assistant Surgeons \$2,000, and Surgeons \$2,500 per year. When quarters are not provided commutation at the rate of \$30, \$40 or \$50 a month, according to grade, is allowed.

All grades above that of Assistant Surgeon receive longevity-pay, 10 per cent. in addition to the regular salary for every five years' service up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information or for invitation to appear before the Board of Examiners, communications should be addressed to Dr. Walter Wyman, Supervising Surgeon-General, U. S. Marine-Hospital Service, Washington, D. C.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending August 27, 1898:

#### SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
ALABAMA:			
Mobile,	Aug. 3-Aug. 17 . . .	5	
NEW MEXICO:			
Albuquerque,	Aug. 13 . . .	1	

#### SMALLPOX—FOREIGN.

AUSTRALIA:			
Sydney,	July 6-10 . . .	1	
BELEGIUM:			
Liege,	July 23-30 . . .	1	
FRANCE:			
Nantes,	July 1-31 . . .	1	
Paris,	July 31-Aug. 6 . . .	1	
HONDURAS:			
Tegucigalpa,	July 16-23 . . .	1	
INDIA:			
Calcutta,	July 9-16 . . .	1	
M. Tris,		1	
RUSSIA:			
Odessa,	July 23-30 . . .	1	
S. Petersburg,			
Warsaw,	Aug. 1-8 . . .	6	
SWEDEN:			
Christiana,	July 23-30 . . .	1	
URUGUAY:			
Montevideo,	July 8-16 . . .	2	

#### YELLOW FEVER—UNITED STATES.

FLORIDA:			
Tortugas Quarantine,	Aug. 18 . . .	1	
GEORGIA:			
South Atlantic Quarantine,	Aug. 21 . . .	1 (Revenue Cutter "Woodbury.")	
LOUISIANA:			
Franklin,	Aug. 23 . . .	1	

#### YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro,	July 1-8 . . .	20	20
COLUMBIA:			
Cartagena,	July 1-31 . . .	5	4
MEXICO:			
Tampico,	Aug. 7-14 . . .	3	17
Vera Cruz,	Aug. 16 . . .	1	
SAN SALVADOR:			
San Salvador,	July 10-16 . . .	8	2
	July 17-23 . . .	4	1

#### PLAGUE.

INDIA:		
Bombay,	July 19-26 . . .	64
Calcutta,	July 8-16 . . .	12

#### CHOLERA.

INDIA:		
Bombay,	July 19-26 . . .	1
Calcutta,	July 9-16 . . .	6
Madras,	July 9 . . .	13
		7

**Some of the Difficulties of the Campaign in Cuba.**—In a communication to Surgeon-General Sternberg from Santiago de Cuba, on July 28, 1898, First Lieut. Guy C. M. Godfrey, Assistant Surgeon, U. S. Army, made the following report in his capacity of commanding officer of the Hospital-Corps Company of the First Division, 5th Army Corps:

"This Company was organized at Tampa, Fla., on June 5, 1898, just two days previous to the departure of the troops of the First Division for the transports at Port Tampa, Fla. On the day of organization the strength of the Company was eighteen (18) privates. No non-commissioned officer was assigned to it until June 7, 1898, when Acting Hospital-Steward McGuire reported for duty. He was at once detailed as First Sergeant of the Company, which place he has held up to the present date. A cook and an assistant cook, orderlies for the medical officers and a clerk were at once detailed.

"When the order came to move, the men of the Company performed the work necessary thereto, and the enthusiasm and esprit-de-corps with which they labored added greatly to the celerity and facility with which the task was accomplished. The personnel and supplies of the Division-Hospital, as well as the Hospital-Company, were placed on board the transport "Santiago" and arrived off the coast of Cuba near Santiago on June 20, 1898. The day before landing, all of the material was brought up from the hold by the men of the Company, and stored on the main deck of the ship near the forward starboard port. This was done by direction of Major M. W. Wood, chief surgeon of this Division, and proved a wise and efficient measure.

"We landed on June 25th at Siboney, Cuba, and pitched camp on the beach. On this day 13 of the privates of the Hospital-Corps of the 71st New York Volunteers joined the Company. During the night of June 25th, Acting Hospital-Steward McGuire and five of the men worked all night unloading the material for the hospital, and storing it upon the beach under canvas. This was done by using small boats drawn by steam launches, and, owing to the high swell, it was at times quite dangerous. I remember several occasions where the men narrowly missed injury from falling boxes.

"On June 26th the men were given a short drill to perfect organization. Hurried preparations were made for a forward movement, and as absolutely no transportation could be obtained from the Quartermaster's Department, these preparations consisted principally in selecting such necessary dressings and drugs as the men could carry on their backs and litters. On June 27th the First Division moved forward, and the Hospital-Company followed in the rear of the Third Brigade, taking the ridge road towards Seville. Owing to the possibility of an immediate skirmish or battle, none of the medical officers rode their horses, but made pack-mules of them, and carried as large a number of dressings, etc., as they could. The Division camped in column of Brigades, and the Hospital-Company and Division-Hospital pitched camp near the headquarters of the Division Commander. On the following morning 20 men and the steward and two medical officers returned to Siboney, and brought up 4 litters, and as many medical supplies as possible, returning about 2 p.m.; after a soaking rain the Company broke camp, and was ordered to move forward two miles. This they did, marching over a rocky, yet muddy road, carrying the hospital-supplies with them. They pitched their shelter-tents on the soaking ground, while the officers, who had no shelter, slept in the open air exposed to dampness and poisoning. On June 29th the Company moved forward a quarter of a mile further to a beautiful spot with the Aquadores River on one side, and the Siboney road on the other. Here on the 29th the Division-Hospital was established, and here it remained all through the terrible carnage that followed. On this day six wagon-loads of our supplies were brought up from the beach at Siboney, and tent-flies were pitched and everything arranged for the coming battle. On the 30th of June the work of establishing the Division-Hospital continued and more of our supplies were brought from Siboney.

"On the morning of July 1st, the writer rode in the direction of the firing towards El Caney, and while searching for an ambulance rode to the extreme right and visited the firing line of the 12th Infantry. He then returned and reported to Major Wood, who directed an ambulance to be sent at once in that direction. Owing to the very small number of Hospital-Corps men present with the Division, and as the number of ambulances for the entire army was limited to three, it was impossible to expect them to convey the total number of wounded from the collecting stations to the First Division-Hospital. It was soon apparent that the entire force of the Hospital-Corps would have to be used to man the hospital, but about

noon Acting Hospital Steward McGuire, two litter-squads, and an ambulance went forward up the San Juan road. As the Spanish shrapnel were bursting around the battery on El Paso hill, near the road, it was not deemed prudent to take the ambulance beyond that point. Therefore it remained, while the two litter-squads pushed forward up the San Juan road. One wounded man was found, who was not able to walk, about 400 yards before reaching the furthest crossing of the Aquadores River. He was at once dressed and conveyed to the rear by a litter-squad. The other litter and the Steward advanced about 400 yards further to the east bank of the Aquadores, and there found a wounded man who could not walk. At this time the 6th and 16th Infantry were immediately in front, and were making their advance towards San Juan hill. It can therefore be seen that the hospital litter-squad in the rear was under the hottest kind of fire, and the bullets were cutting the leaves all around, but not one of these men faltered, or showed the least sign of fear.

At this time the wounded were getting back in a constant stream, and such as needed stimulation or dressing were at once attended to by the roadside. Many of them returned alone, others walked supported by the arm of some comrade, while the more seriously wounded were borne upon litters of various kinds. A few of those who returned had not received medical attention, but the majority of them were dressed with first-aid packages by the regimental surgeons, and their hospital-corps men.

"At about 1 p.m. Major Valery Havard, Chief Surgeon of the Cavalry-division, established an ambulance-station on the east bank of the Aquadores near El Paso. At this station many dressings were readjusted, and a few patients were dressed for the first time. Stimulants, medicines and dressings constituted the stock at this station, which was about a mile in advance of the First Division Hospital. No point further to the front was safe from the enemy's fire. The ambulances were worked constantly, and, considering their number, did remarkably well. Late in the afternoon ambulances were taken forward to near the furthest crossing of the Aquadores, but it was rather dangerous at all times, as the enemy kept the San Juan road enfiladed all day long. It was also very dangerous on account of Spanish guerrillas, who were located in trees overlooking the road. Several men carrying wounded were shot, and, indeed, in a few cases the patients themselves were hit.

"Later in the afternoon a dressing-station was established at the furthest point where the San Juan road crossed the Aquadores. At this place there was a vertical bank about four feet high, beneath which was a gravel beach. Here a certain amount of shelter was obtained, but bullets frequently cut through the bushes, or splashed up the water in the creek. At one time it was enfiladed by Spanish sharpshooters in trees up the creek. Several horses were killed here, but no patients, surgeons or attendants were injured that afternoon. It was at this place on the following morning that Dr. Danforth was killed. Late in the afternoon several escort-wagons, having carried ammunition to the front, were turned over to the writer by Lieutenant J. D. Miley, General Shafter's aide-de-camp. These were taken to this station and filled with the wounded who were transported to the First Division-hospital. Empty army-wagons that could be found were used for this purpose, and the wounded kept coming into the hospital all night. On the following morning an ambulance and two wagons were taken to the dressing-station just described, and the wounded brought in—among them being A. A. Surgeon Danforth, who was shot through the head. Major S. Q. Robinson had assumed command of this station on the previous afternoon, but at this time he, with Captain W. D. McCaw, rejoined their regiments, and left the station in charge of Captain George J. Newgarden. Major V. Havard arrived later, and established an ambulance-station at this point, which was then comparatively safe. It was customary during the battle for the writer to send litters and dressings to the front in the empty ambulances. During and after the battle, the men of the Hospital-corps Company did much of the work in the First Division Hospital. They assisted in operations, helped in applying dressings, made soup and coffee, carried patients to and from the operating tables, and acted as nurses to the wounded. With but few exceptions they worked all day, all night, all the following day, and most of the next night. They were assisted by members of the bands of the regiments, and by some of the hospital-corps men of the regiments.

"During the battle the first-aid work was very effective, and was done mostly by regimental surgeons and their hospital-squads. Many dressings were applied by the line-officers, and soldiers on the firing line, and in some instances by the wounded men themselves. Major S. Q. Robinson, who commanded the Aquadores dressing-station on July 1st, says that only about ten patients came there who had not been dressed by first-aid packets. Words can hardly express the appreciation which the officers and men of the line have for the first-aid packets. They realize now, as never before, the value and importance of instruction in first-aid work. The very small number of suppurating wounds can readily be accounted for by the prompt applications of these dressings."

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Captain W. W. ROBLEE, A. S., Seventh California Vol. Infantry, is relieved from further duty with the Third Battalion Twenty-third Infantry. Aug. 13.

Acting Asst. Surgeons HERBERT W. HATCH, H. J. SCHLAGETER and HARRY PARTRIDGE, are assigned to duty in Alaska, and will

report to Second Lieutenant George H. McManus, Third Artillery, at the Presidio, for instructions. Aug. 16.

First Lieutenant LOTIS P. SMITH, A. S., will proceed from Fort Hamilton to Governor's Island, for temporary duty at Bedloe's Island. Aug. 18.

Acting Asst. Surgeons GEORGE B. LAURASON and G. H. FOUDE will proceed to Montauk Point for duty. Aug. 18.

Acting Asst. Surgeons HENRY BAK and WALTER K. JOHNSON will proceed to Camp at Lithia Springs, Ga., for duty. Aug. 18.

Acting Asst. Surgeon THOMAS C. LONGINO will proceed to Fort Point, Tex., for duty. Aug. 18.

Acting Asst. Surgeon F. A. E. DISNEY is relieved from duty at Camp Eagle Pass, and will proceed to Fort Ringgold for duty. Aug. 18.

The board of medical officers appointed Aug. 18, this office, will proceed to the following specified camps, in the order named, to make inspections: Camp Alger, Va.; Fernandina, Fla.; Jacksonville, Fla.; Huntsville, Ala.; Camp George H. Thomas, Ga.; Camp Meade, Pa., and Camp Wikoff, N. Y. Aug. 19.

So much of S. O. 182, Aug. 4, this office, as directs Major DANIEL M. APPEL, surgeon, to proceed to Chickamauga Park, is revoked, and he will proceed from Fort Monroe to Governors' Island for assignment to duty pertaining to the distribution and supervision of enlisted men in the hospitals in New York City and vicinity. Aug. 19.

Major JUNIUS L. POWELL, surgeon, will proceed to Montauk Point for duty. Aug. 19.

Major GEORGE H. TORREY, surgeon, will repair to this city on business pertaining to the Medical Department. Aug. 19.

So much of S. O. 194, Aug. 18, this office, as directs Captain WILLIAM F. LEWIS, A. S., to report to the commanding officer Fifth Infantry, to accompany that regiment to Santiago, is revoked, and he will proceed to Fernandina, Fla., for duty. Aug. 19.

Acting Asst. Surgeon EDWARD LYON, JR., will proceed to Middletown, Pa., for duty. Aug. 19.

Acting Asst. Surgeon WILLIAM L. STEVENS will proceed from Orange, Va., to Middletown, Pa., for duty. Aug. 19.

Acting Asst. Surgeon GEORGE D. RAMSAY will proceed to Fort Hamilton for duty. Aug. 19.

Lieutenant-Colonel NICHOLAS SENN, Chief Surgeon, will proceed to Montauk Point for duty. Aug. 20.

Major CHARLES M. GANDY, brigade-surgeon, is relieved from duty as medical-supply officer at Tampa, Fla., with the Fourth Army Corps, and will proceed to Fort Monroe for assignment to duty in the Josiah Simpson U. S. General Hospital. Aug. 20.

Major D. M. APPEL, surgeon, is assigned to duty pertaining to the distribution and supervision of men in hospitals in New York City and vicinity, with station in New York City. Aug. 20.

Acting Asst. Surgeon JOHN J. CANNON will proceed from Williamsport, Pa., to Montauk Point for duty. Aug. 20.

Acting Asst. Surgeon CLARENCE M. SPAULDING will proceed from Rochester, N. Y., to New York City to await transportation to Ponce, Porto Rico, for duty. Aug. 20.

The following-named brigade-surgeons will report at Montauk Point for duty: Major IRA C. BROWN, SIMON P. KRAMER, and SAMUEL W. KELLEY. Aug. 22.

The following-named brigade-surgeons will proceed from the places designated to Santiago de Cuba for duty: Major JOHN G. DAVIS, Jefferson Barracks, Mo.; Major JOHN J. ARCHINARD, Jacksonville, Fla. Aug. 22.

The following-named brigade-surgeons will report to the Commanding General Third Army Corps, Chickamauga Park, for duty: Majors CHARLES ADAMS, OSCAR LE STUR, JOHN L. MACMURR, BIAL T. BRADBURY, HENRY H. LEE. Aug. 22.

Major JOHN E. WOODBRIDGE, brigade-surgeon, will report at the U. S. General Hospital, Fort Meyer, for duty. Aug. 22.

Major DAVID C. PEYTON, brigade-surgeon, will proceed to Middletown, Pa., for duty. Aug. 22.

Captain EDWARD L. MUNSON, A. S., is relieved from duty in command of the reserve ambulance-company of the Fourth Army Corps, and will report to the Surgeon-General of the Army for duty in his office. Aug. 22.

Acting Asst. Surgeon AMES will report to the Surgeon-General of the Army for instructions. Aug. 22.

Acting Asst. Surgeon AZEL AMES will proceed to New York City for transportation to Ponce, Porto Rico. Aug. 22.

Acting Asst. Surgeon A. R. BOOTH will report to the Surgeon-General of the Army. Aug. 22.

The following-named acting assistant surgeons will proceed from the places designated to Middletown, Pa., for duty: D. N. GREALISH, Buffalo, N. Y.; FREDERICK H. MILLS, Buffalo, N. Y.; H. M. MILEY, Chambersburg, Pa. Aug. 22.

Acting Asst. Surgeon D. H. LAMB will proceed from Owosso, Mich., to Fort Myer for duty in U. S. General Hospital. Aug. 22.

Acting Asst. Surgeon FRANCIS R. PERCIVAL will proceed to Camp Alger, Va., for duty. Aug. 22.

Acting Asst. Surgeon WILLIAM P. HARBIN will proceed to camp at Waco, Ga., for duty. Aug. 22.

Leave for seven days, from the 18th inst., is granted Major B. W. COINER, Add. P. M. Aug. 17.

Acting Asst. Surgeon MILTON D. NORRIS will proceed from Baltimore, Md., to Chickamauga Park for duty. Aug. 23.

Acting Asst. Surgeon FRANK A. ROBERTS will proceed from Camden, N. J., to Chickamauga Park for duty. Aug. 23.

Acting Asst. Surgeon WILLIAM G. YOUNG will proceed from Grand Rapids, Mich., to Chickamauga Park for duty. Aug. 23.

Major JOHN W. BAYNE, brigade-surgeon, is relieved from duty at the Leiter U. S. General Hospital, Chickamauga, Ga., and will



report to the Surgeon-General of the Army for instructions. Aug. 24.

Major NATHAN S. DAVIS, brigade surgeon, is detailed as a member of the examining board convened at the Army Building, New York City, Aug. Major JOHN D. HAY, surgeon, relieved. Aug. 24.

Acting Asst. Surgeon CHARLES A. CANTERMORE will proceed from Lansing, Mich., to Chickamauga Park for duty. Aug. 24.

The following-named acting assistant surgeons will proceed from the places designated to Chickamauga Park, Ga., for duty: WILLIAM F. LARK, from Hicksville, N. Y.; JESSE W. RICHARDS, from Slatington, Pa. Aug. 24.

The following-named acting assistant surgeons will proceed from the places designated to Huntsville, Ala., for duty: CHARLES C. JOHNSON, from New York City; GEORGE C. TALLENT, from Baltimore. Aug. 24.

Acting Asst. Surgeon GEORGE F. JENNEMAN will proceed to Huntsville, Ala., for duty. Aug. 24.

Acting Asst. Surgeon JAMES A. KEOWN will proceed from Lyell, Mass., to Chickamauga Park, for duty. Aug. 24.

Acting Asst. Surgeon HALSEY L. WOOD will report for transportation to Ponce, Porto Rico, for duty. Aug. 24.

Hospital Steward JOHN B. ANIELSON, appointed Aug. 20, Fort Columbus, is assigned to duty at that post.

Hosp. Steward MERION F. ESTLINE, appointed Aug. 20, Fort Apache, is assigned to duty at that post.

Hosp. Steward FRANCOIS L. OLTMANS (appointed Aug. 23), Fort Sam Houston, will be sent to Fort McPherson for duty. Aug. 24.

Hosp. Steward OTTO SCHIMMANN, appointed Aug. 20, Montauk Point, is assigned to duty at that station. Aug. 24.

Acting Asst. Surgeon LAWRENCE A. FELDER, will proceed to Camp at Newman, Ga., for duty. Aug. 24.

Major WM. O. OWEN, brigade surgeon, is assigned as surgeon in charge of the "Scandia." Aug. 13.

The following-named acting assistant surgeons will report for duty as assistants on the "Scandia": F. TAYLOR, MALABY, ERNEST KINTON, JOHNSON, HENRY DE R. PHILLAN. Aug. 13.

Major CHARLES M. GANDY, brigade surgeon, will proceed to Huntsville, Ala., for duty with the Fourth Army Corps. Aug. 25.

The following-named acting assistant surgeons will proceed from the places designated to Middletown, Pa., for duty: H. M. COHEN, from Baltimore, Md.; E. W. KARMANN, from North Woodbury, Conn. Aug. 25.

The following-named acting assistant surgeons will proceed from the places designated to Huntsville, Ala., for duty: CHARLES H. ANDREWS, from Buffalo, N. Y.; J. FREDERICK HALLER, from Providence, R. I. Aug. 25.

The following-named acting assistant surgeons will proceed from the places designated to Chickamauga Park for duty: ALBERT N. JACOB, from Philadelphia, Pa.; DWIGHT B. TAYLOR, from Norwalk, O.; CHARLES H. STODDARD, from Milwaukee, Wis.; ANDREW GODFREY, from Ambler, Pa.; CHANCEY T. SCUDDER, from Baltimore, Md.; CHARLES I. WOODFORD, from Baltimore, Md. Aug. 25.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon L. G. HINTERBERGER, detached from the "St. Paul" and ordered home to await orders.

Passed Asst. Surgeon L. L. VON WEDERKIND, detached from the "Minneapolis" and ordered to the Pensacola Navy Yard.

Passed Asst. Surgeon C. F. PECKAM, detached from the "Manhattan" and ordered to the "Minnesota" immediately.

Asst. Surgeon A. HEGER, detached from the "St. Paul" and ordered home to wait orders.

Asst. Surgeon L. B. BALDWIN, detached from the "Ajax" and ordered home to wait orders.

Surgeon J. W. ROSS, retired, detached from the Pensacola Navy Yard and ordered to duty with the Marine Guard, Key West Naval Station.

Asst. Surgeon J. M. WARD, detached from the "Nantucket" and ordered to the Sixth District, Auxiliary Naval Force, immediately.

Asst. Surgeon L. B. BALDWIN, honorably discharged.

Surgeon P. LEACH, ordered to the "Yosemite."

Asst. Surgeon J. M. WARD, detached from duty in connection with the Sixth District, Auxiliary Naval Force, and ordered home.

## Foreign News and Notes.

**Dr. Malapert** has been appointed Professor of Surgical Pathology and of Operative Medicine at the Medical School of Poitiers.

**Typhoid Epidemic at Belfast.**—A rapidly spreading epidemic of typhoid fever is reported at Belfast, Ireland. Six hundred cases have been reported in three weeks, and every hospital is filled to overflowing.

**Corsets Prohibited.**—The Russian Minister of Public Instruction has issued a decree, prohibiting the use of corsets by women.

**University College, Liverpool, England,** has opened a school and museum devoted exclusively to the training of sanitary inspectors.

**The Cholera at Madras.**—The first official report on the outbreak of cholera at Madras shows that from July 9th to August 5th, 117 persons succumbed to the disease, and that 55 fatal cases occurred between August 8th and 12th.

**Plague Ravages in Bombay.**—It is officially announced that there were 2,300 deaths from the plague during the week ending August 27th in the Bombay presidency. The epidemic is spreading, and there has been a fresh outbreak in the State of Hyderabad.

**The Resignation of Prof. von Rosthorn** from the chair of surgery in the German University of Prague at the end of the semester is attributed to the political difficulties of the University in the midst of the Czechish agitation. It is understood that he is to have a Docentship at the University of Gratz.

**Compulsory Vaccination in France.**—At the recent meeting of the French Association for the Advancement of Science a resolution was adopted, on the motion of M. Brouardel, to the effect that vaccination ought to be rendered compulsory in France and in the French Colonies and Protectorates at as early a date as possible.

**Professor Koch at Milan.**—It is reported that Professor Koch, with Professors Pfeiffer and Kossel of the Institute for Infectious Diseases at Berlin, has gone to Italy for several months to study malaria, and is at present working in the Milan hospitals. The results of his investigations will be awaited with much interest, for it must be confessed that some of his recent utterances on this subject have caused no little surprise, as they appear to have been founded upon a somewhat hasty inquiry.

**Beer-flasks for Unhygienic Liquids.**—The Brewers' and Bottlers' Association of Berlin has applied to the Police Department for the enactment of an ordinance forbidding the use of beer-flasks for other than their original purposes. All sorts of noxious liquids, from alkalies and acids at the apothecaries, and shellac and turpentine at the paint-shop, to urine for examination at the dispensaries, find their way into bottles that are afterward returned to the bottling establishment to be refilled with beer. The Brewers' and Bottlers' Association asks that the introduction into such bottles of any substance liable to injure the health be made a punishable offence.

**Prince Bismarck, M.D.**—That Prince Bismarck was a Doctor of Medicine may not be generally known. The degree was bestowed on him—*honoris causa*—by the Jena University late in the seventies. It cannot be doubted that Prince Bismarck took a deep interest in the aims of modern medical science and public hygiene. Witness the great medical and sanitary institutions established during the ten years following the foundation of the German Empire, such as the *Pharmacopœia Germanica* in 1872, the Imperial Board of Health in 1876, the Imperial Vaccination-Law (1874), the Imperial Law on the sale of food (1879), the Imperial Law for the prevention of cattle-diseases (1880), and later, in 1887, the establishment of a perpetual commission for the revision of the *Pharmacopœia*.—[*British Medical Journal*.]

**A New Hemostat.**—Successful demonstrations are reported to have been given in London by Lawson Tait, with an electric hemostat. A platinum wire, arranged to carry a current, is enclosed in the blades of a pair of steel forceps or any other requisite utensil, the wire being insulated by a bed of burnt pipe-clay. In practice, a current of suitable voltage is turned on, the artery seized and compressed and in a few seconds the tissues and arterial walls are so agglutinated that the passage of blood is rendered impossible. The temperature employed is about 180° F., showing a great difference between this and the electrical cauterizing instruments, and the necessity for a ligature is removed.

**Berlin Physicians and Street Privileges.**—Berlin physicians have applied to the Police Commissioners of the city for permission in responding to urgent calls to ride bicycles on the streets of the city ordinarily closed to bicyclists, because of their crowded condition and the danger involved in riding on them. They have also applied for permission in responding to calls to ride on street-cars that have their full complement of passengers and under ordinary circumstances are forbidden by law to carry more. One of these privileges was not accorded when sought some time ago, but there seems to be good reason to think that both will be granted now.

**Medicine a Trade or a Profession.**—The recent Austrian tax-law classes the practice of medicine under the head of trades and assesses physicians accordingly. The Medical Council (*Erztekammer*) of Moravia now sends a petition to the authorities asking them to repeal the law requiring physicians to render services when called upon to do so. They state very properly that no tradesman is bound to do anything in his trade unless he wishes to. If, then, physicians are to be classed and taxed as tradesmen they should have the privilege of refusing to render services whenever they think it advisable, or whenever for any reason it is not convenient so to do.

**Reform in the Management of the Insane in Finland.**—An agitation is going on to bring about a reform in certain Finnish customs as to the insane, paupers, etc. Up to the present it has been the custom to consign such of these charges upon the Government as were not dangerous and were able to work to persons that were willing to undertake their care and support for the work they would be able to do. The system, as every such system must be, is open to serious abuses, as the employers are given the right to inflict corporal punishment. It is thought that the present movement will do away with this system of farming out, at some additional expense to the Government, but the cause of humanity will gain by it.

**A Municipal Chemical Laboratory for Berlin.**—Berlin has decided to have a chemical laboratory of her own and not be dependent on the chemical laboratory of the University. In many of the German cities where no University exists independent laboratories for bacteriology, hygiene and physiological chemistry have been established and have given excellent satisfaction, without adding materially to what the city would have to pay for the use of a University laboratory when everything is taken into account. An absolutely independent laboratory is thought to foster a spirit of initiative in the matter of the city's protection, while otherwise investigations are likely to be done perfunctorily as a task set by the city authorities or board of health.

**Sudden Drowning of Good Swimmers.**—Instead of attributing the sudden drowning of strong, good swimmers always to cramps, as has been the custom mostly heretofore, German medical men are now discussing the possibility of injury to the middle ear in such cases, with consequent sudden loss of consciousness. The possibility of such an injury can be easily understood, a wave striking the side of the head, or a sudden turn of the head bringing it more or less violently in contact with the water, or as a result of the difference in pressure in the vessels of the trunk immersed in water and those of the head outside, any one of the conditions being attended with hemorrhage and symptoms of Ménière's disease. Thus far but few autopsies have been made from this point of view, but the subject seems well worth thorough investigation.

**Russian Health-Resorts.**—The Russian Society for the Preservation of National Health has arranged a congress of climatologists, hydrologists, and balneologists for the middle of December (old style). The meeting is to take place in St. Petersburg. In a circular letter sent to the members of the medical profession, the Organizing Committee state that while Western European watering-places are widely known and well-conducted, the same cannot be said about the watering-places and climatic stations in Russia. The latter possess many natural advantages, and only require to be better organized and better known to attract the numerous searchers after health, who now leave Russia for the West European countries. It will be the object of the Congress to discuss measures for the development and encouragement of the native health-resorts.—[*British Medical Journal*]

**Obituary.**—DR. EVERT JULIUS BONSORFF, formerly Professor of Anatomy and Physiology in the University of Helsingfors, died at Ericksberg at the age of 88 years.—WILLIAM AUGUSTUS DOBBYN, L.A.H. Dublin, M.R.C.S. England, resident surgeon of the Ovens District Hospital, died at Beechworth, Vic., June 10th, aged 68 years.—DR. K. N. BAHADURJI, who took an active part in the agitation which was raised some years ago with regard to the position of native practitioners in India, and who more recently has won honorable distinction by his excellent services rendered during the epidemics of plague in Bombay, died at Bombay, August 16th.—Deputy Surgeon-General JOHN RIGGS MILLER LEWIS died at Kingston-on-Thames, England, August 13th, aged 77.—DR. DE VRY, of The Hague, well known as a physiologist, and also for his researches on the pharmacology of quinin.—DR. FRANK SHEARER, of Paisley, visiting physician to the Paisley Infirmary, died at sea on June 29th.

**A New English Medical Journal** made its appearance in August, entitled the *Journal of Tropical Medicine*. It is a monthly journal and is to be devoted to recording the progress of medical, surgical, and gynecological work in the tropics. The joint editors are Dr. James Cantlie, who was for years in Government employ in China, and Dr. W. J. Simpson, who was a highly successful medical officer of health in Calcutta. We notice that the first leading article contains a eulogy of Mr. Chamberlain, the present English colonial minister, for allowing the colonial office to be associated with the foundation of a school for the study of tropical medicine in England. The idea of such a school is creditable to the patriotism of the Colonial office, for its foundation will be a very practical recognition of the responsibilities of Great Britain toward her numerous colonies; but those who are not carried away by the Imperialistic notion of sending out from London young men equipped



with a knowledge of the diseases endemic in the rest of the world will ask what is the good of a medical school where clinical practice will be almost absent owing to scarcity of patients. The school is to be attached to the Branch Seamen's Hospital at Greenwich. How many cases of tropical abscess—say—have been admitted to that hospital during the last ten years? We doubt if the cases average more than one a year.

**The Earnings of Medical Men in France.**—According to M. Henri Béranger in the *Revue des Revues* there are in the whole of France, inclusive of Corsica, but excluding Algeria, between 12,000 and 13,000 practising medical men, of whom 2,500 live in Paris, the remainder being distributed throughout the provinces. Among the metropolitan practitioners the following is the approximate scale of earnings: 5 or 6 earn between \$40,000 and \$60,000 per annum; from 10 to 15 earn about \$30,000; 100 earn \$10,000; 300 earn between \$3,000 and \$6,000; 800 earn between \$1,600 and \$3,000; 1200 earn less than \$1,600. Of the 10,000 provincial practitioners not more than half make a decent livelihood. Every year the various universities turn out about 1200 qualified doctors of medicine. The average duration of a practice may be set down as between 20 and 25 years; it follows, therefore, that the production is twice as great as the demand.

**The Congress of Public Health in Dublin.**—The Annual Congress of the Royal Institute of Public Health was opened on Thursday, August 18th, in the Examination Hall of Trinity College, Dublin. The Presidential Address was delivered by Sir Charles Cameron, M.D., the Medical Officer of Health for the City of Dublin, whose highly practical words were the direct outcome of his peculiar knowledge. He began by treating his audience to a well-constructed *résumé* of the common knowledge of sanitarians with regard to the causes of high urban mortality, and showed that the appalling death-rates in towns all over the world, which prevailed up till the close of the eighteenth century and later, had considerably decreased in the present century, the improvement being due partly to greater attention to personal hygiene, partly to a higher standard of popular comfort—the masses being nowadays better fed, working less hours, receiving a higher rate of pay, and obtaining some brief spells of holiday—but principally to an increasing knowledge of the value and resources of public sanitation. Then, taking Ireland as an example, he showed that there was plenty of work still to do for those in charge of the public health of towns. In Ireland, he said, the death-rate for the whole country is very low. In the decade ending 1896 it was only 18 per 1,000, during which period the rate was, for example, in Hungary 35. But this low rate he showed to be entirely due to the fact that the greater proportion of the Irish population live in the open country, for Irish urban bills of mortality are high. In the decade ending 1897 the death-rate in the twenty-three largest towns of the island was 24.65 per 1,000. In Dublin the death-rate from 1886 to 1890, inclusive, was 26.8, and from 1891 to 1895, inclusive, 26.1; since which time—owing to epidemics of measles, whooping-cough, and scarlet fever—it has risen to 27. In spite of these somewhat depressing figures Sir Charles Cameron was able to look forward hopefully to a better future, basing his optimism largely on the organized attempt being made in Dublin to secure for the working-classes better habitations. Since 1879 more than 3,000 houses—representing the homes of at least 20,000 persons—have been closed on account of their unsanitary condition. As yet, the full benefit of this drastic measure is

not felt by the city, for better tenements to hold so large a population have not been built, so that overcrowding still takes place to an alarming extent; but public and private generosity, and the munificence of, among others, Peabody and Lord Iveagh, are providing healthy shelters in various parts of the city at low rents, so that Sir Charles Cameron could show justification for his belief that the account of the public health of Dublin would soon make a prettier story for its medical officers to narrate.

**The Vossische Zeitung and Women as Physicians and State Officials.**—"Tante Voss" is the somewhat familiar name that certain not over-respectful people have for the official organ of the Prussian government. The name is derived from the fact that in certain people's eyes extreme conservatism is sometimes equivalent to old-fog-ism, which may or may not be the case, according to the point of view. The official government organ waited for some time until the last official details of the discussion on the admission of women to the practice of medicine at the German Doctors' day at Wiesbaden, as reported some time ago in these columns, were all in, and then proceeded to calmly discuss the position taken by the participants in the meeting. The editor condescends very courteously to approve the physicians' first demand that women shall not be admitted to the study of medicine except under the same conditions and with the same preliminary education as men; and also the second demand that they shall not be admitted to the practice of any specialty connected with medicine without a full medical training. Officialdom is aroused to its center, however, by the suggestion that the medical profession should only be thrown open to women simultaneously with the other professions, and that the government offices should at the same time be made accessible to them. The editor goes on to say that such a demand is preposterous. The question as to whether a woman is as suitable for the exercise of official functions as for the practice of medicine is one that can only be decided in an arbitrary matter and not from any real relationship of the facts in the case.

Two points are evident from the spirit of the editorial: (1) that there is no official opposition to the admission of women to the practice of medicine. In this German officials would seem to be in advance of their German contemporaries, generally, in accepting the inevitable. (2) The other point is the well-known ease with which most people can bear the burdens of others, while groaning under their own. There are those who have been ungenerous enough in their appreciation of what masculine officialdom has done for them in Germany to suggest that woman is eminently suited for the more or less formal occupations of bureaucracy, involving as they do certain social obligations, a modicum of responsibility and a certain amount of not too severe physical and mental labor. This is of course rank heresy in official ears, but there is no more manifest self-deception than to lay the flattering unction to their souls that the present woman's movement will cease with the invasion of one or more of the professions. Official posts are too tempting to be long untried, and it might be suggested to our friends the bureaucrats in the spirit of their own German proverb, that after having so kindly swept before the physicians' doors, they turn their attention to their own, in order to prepare a suitable reception for the ladies.

**The Horrors of War.**—We are all ready in times of peace to talk glibly of the "horrors of war," but when it

comes to the point we are too apt to expect to have the "pride, pomp, and circumstance of glorious war" without its horrors. When the horrors come the sentiment of a civilized community is shocked, and the public asks for a scapegoat. Some of the horrors cannot be prevented by foresight, for war is irrational, but others can. The severe losses of the American army in Cuba from yellow fever and malaria, and the sufferings endured by the wounded immediately after the fighting, have led to acrimonious attacks upon the medical service of the United States Army. This will not surprise anyone who is acquainted with the history of the British Army Medical Service. It was only by very bitter experience that our politicians learnt that an adequate war-service cannot be improvised from a service undermanned even on a peace-footing, and still more experience was needed to convince commanding officers, if indeed they have even yet learnt the lesson, that the best military dispositions may be completely compromised by a failure to understand that sanitary precautions are a necessary part of successful warfare. Napoleon is generally admitted to have been the greatest military commander of modern days, and no one who will read his letters and orders during his successful years can fail to be struck by the immense personal interest which he took in transport and in its organization. The memoirs, too, are full of it, Bourienne, the most intimate of all, in particular. The public is apt to assume that war means fighting, whereas the greater part is organization and preparation for the fights, which were never numerous in any campaign, and are fewer than ever nowadays. Statements made by Dr. Nicholas Senn, of Chicago, chief of the operating staff of the army at Santiago, appear to prove that the precautions against yellow fever recommended by Colonel Greenleaf, chief surgeon of the army in the field, "were entirely ignored by the commander of the invading force." "It required," he adds, "only the usual time for the disease to make its appearance, and when it did so it was not in a single place, but all along the line, from our entrenchments to Siboney." Transport was deficient, and on certain important occasions was refused. Yet in spite of the obstacles placed in the way of the medical department, Dr. Senn is able, after experience of operating in all the hospitals, to state that he "was always able to find the essential antiseptics and dressing material required in military practice," and that there was no lack at any time of stimulants and anesthetics.—[*British Medical Journal*.]

## Philadelphia News and Notes.

**Detained at Quarantine-station.**—The German steamer *Anrum*, from Port de Paix, Hayti, was detained at Reedy Island quarantine for several days for disinfection, because her captain had died of yellow fever in the West Indies.

### Vital Statistics for the week ending August 27th :

DISEASES.	CASES.	DEATHS.
Diphtheria.....	56	8
Scarlet fever .....	17	2
Typhoid fever.....	118	9
Pulmonary tuberculosis.....	0	54
Total number of deaths .....		429

The increase in the number of new cases of typhoid fever is due, in a great measure, to the sick soldiers who came to the hospitals for treatment.

**The Yacht "May"** returned to Philadelphia on August 30th with 4 men from Porto Rico, 16 others having disembarked at Newport News. The boat started at once for Montauk with supplies for the soldiers there, and will bring back as many Pennsylvanians as possible.

**Obituary.**—DR. JOSHUA P. ARTHUR, of Frankford, Philadelphia, died at Laredo, Tex., August 19th.—DR. RICHARD HOLMES TOWNSEND died at his home, August 28th, of heart-disease and old age. Dr. Townsend was born at Cape May Court House in February, 1817, and was graduated from Jefferson Medical College. He continued in practice until about twenty years ago, when he retired because of ill health. For a number of years Dr. Townsend was President of the Philadelphia Fountain Society, and also an active member of the College of Physicians.

**Patients at the Naval Hospital.**—The Naval Hospital, which has heretofore been called upon to deal only with the ordinary cases of illness and accidents occurring in the quiet routine of naval life during a period of peace, finds itself now, in consequence of the recent arrival at this port of vessels chiefly from the scene of war, face to face with the extra labor that war imposes upon every branch of the naval service. The *Minneapolis*, the *St. Paul*, the *Fish-Hawk*, and the *Columbia* have successively contributed their quota of sick to the list of hospital-patients, and the *St. Louis* has brought from Southern waters 5 men from the auxiliary cruiser *Dixie* and one from the monitor *Terror*. Of the 26 patients now in the hospital, 10 are suffering from typhoid fever, having been brought by the cruiser *Columbia*.

**Hospital-Trains.**—The second Philadelphia hospital-train arrived from the Southern camps, August 26th, with 94 sick soldiers and convalescents from Camp Alger for the Medico-Chirurgical Hospital. As there were not enough Pennsylvania patients to fill the train, some men were taken from other State organizations.—A third train brought 51 sick soldiers of the Third Pennsylvania Regiment, from Camp Fernandina, Fla., on August 27th. Thirteen of the men were taken to St. Agnes' Hospital; 10 each to Jefferson Medical College Hospital and the Methodist Hospital, and 2 each to the Samaritan Hospital and St. Joseph's Hospital. Thirteen convalescents went directly to their homes.—A fourth train brought 112 sick soldiers on August 29th from Camp Meade at Middletown. The men were distributed between St. Agnes' and St. Mary's Hospitals.—A fifth train, with 75 sick soldiers from Chickamauga, arrived August 30th. Of this number 11 were sent to the German Hospital, 13 to the University Hospital, 14 to the Episcopal Hospital, 2 to the Presbyterian Hospital and 1 to St. Agnes' Hospital.—The Medico-Chirurgical Hospital chartered a second train to carry sick soldiers from Camp Alger, which was expected to bring back about 60 men on August 31st.

**Infantile Scurvy.**—A. Money (*Australasian Medical Gazette*, June 20, 1898) reports a case of scurvy occurring in a girl, 8 months old, that had been fed on an artificial infants' food from birth. There was paralysis of both legs, with screaming if the members were touched. The symptoms had been present for four months and disappeared within ten days on the administration of orange-juice. A second case is reported by W. H. Crago in the same journal. A girl, 14 months old, had been unable to move her legs for several weeks; both legs were painful and presented bruised-looking spots. The gums were not swollen, but there was marked purplish-red discoloration of the mucous membrane. The child had been fed on an artificial infants' food and boiled cow's milk. Rapid improvement followed the use of beef-juice, orange-juice, unboiled milk and the same food.



## The Latest Literature.

### British Medical Journal.

August 13, 1898. [No. 1963.]

1. Address on the Sanitation of Edinburgh. H. D. LITTLE JOHN.
2. A Discussion on Rivers-pollution; with Special Reference to the Present Condition of Scottish Rivers. H. M'LEAN WILSON, JOHN GLAISTER, GEORGE REID, R. BRUCE LOW, JOHN C. MCVAIL, ALFRED HILL, and FRANCIS T. BOND.
3. The Value of the Present Method of Estimating the Populations of the Great Towns in England. E. W. HOPE.
4. Surface-wells as a Source of Water-supply. R. W. D. MACMARTIN CAMERON.
5. A Discussion on the Hygienic Control of the Milk-supply. T. G. NASMYTH, A. K. CHALMERS, J. SPOTTISWOODE CAMERON, FORSTER, CHARLES A. CAMERON, DEWAR, SALTET, J. MAXWELL ROSS, and A. P. AITKEN.
6. A Discussion on Vaccination; with Special Reference to Prospective Legislation. FRANCIS T. BOND, JOHN C. MCVAIL, S. MONCKTON COPEMAN, ARTHUR NEWSHOLME, C. R. DRYSDALE, CAMPBELL MUNRO, and G. C. H. FULTON.
7. Soil as a Factor in the Spread of Certain Diseases. JOHN ROBERTSON.
8. Typhoid Fever in an Australian Rural District. JOHN MCNAUGHTON.
9. Note on Filaria Strongylus or False Tubercle in the Pig, Sheep, and Goat. R. SYDNEY MARSDEN.
10. Experiments with Gaseous Disinfectants. FRANCIS J. ALLAN and CECIL H. CRIBB.
11. The Water-supply of Venice. E. H. VAN SOMEREN.

1.—Littlejohn discusses the great changes that have been effected in the **sanitation of Edinburgh** since 1875. The housing of the poor, for example, has reduced the death-rate from 28 to 17 per 1,000.

2.—In a discussion of **rivers-pollution** Wilson propounded five questions for consideration: (1) Who should administer the laws for the prevention of pollution of rivers? (2) Are the present laws sufficient? (3) Is the treatment of sewage on land to be required in all cases? (4) Should manufacturers' refuse be purified by the manufacturers themselves or by the sanitary authorities? (5) Should any standard of purity be adopted for effluents from sewage-works or purified trade-refuse? In answer to these questions he expresses himself as believing: (1) That the laws regulating the pollution of rivers should be relegated to a joint committee for every large river or group of rivers; (2) that the present laws operative in Great Britain and in Scotland are far from sufficient to prevent the pollution of rivers; (3) that while provision for the treatment of sewage on land should generally be insisted upon, it must come to be recognized that, in special cases, far better results are likely to be obtained by artificial filtration by biologic methods; (4) that no hard and fast rules can be laid down concerning the treatment of manufacturers' refuse; (5) that the establishment of a standard of purity seems to be impracticable. Glaister, in an address delivered in 1896, was able to show that the result of 20 years' experience of the Rivers-Pollution Act was absolutely negative and that the condition of the rivers was as bad at that time as it had been in 1868. It seems that if any improvement is to be effected in the condition of the Scottish rivers, it can be accomplished only by amended legislation. Reid maintained that numerous overlapping local authorities with differing interests interfere with the best results in preventing the pollution of rivers. Low considered the need of joint committees to protect the rivers from pollution as very evident. McVail said that for the purpose of purification of rivers the administrative area should be very large. He suggested that the authority in charge of this branch of sanitary administration should be appointed by special election. A central authority should have ample power to compel the sanitary authorities to do their duty. Hill holds the view that no single method of purification can cope with the

difficulty. Taken singly, some methods are suitable, while others are unsuitable; in other cases a combination of methods is necessary. Bond referred to the success of the recent installation of the combined septic tank and aerating filters at Exeter. He thinks that the needful element is the increased facility of procedure at common law by aggrieved riparian occupiers. He suggested methods by which this need might be realized.

3.—Hope calls attention to the fact that the present method of **estimating the population** in large cities is defective and that, as a result, the birth-rate and the death-rate are inaccurately expressed. He thinks that a quinquennial census is demanded in order to abate this error. In the discussion that followed, Cameron agreed with the statement and hoped that the British Medical Association would send a strong presentation to the Government as to the necessity for a quinquennial census. Saltet, of Amsterdam, spoke of the biennial census of the Netherlands. In a population of 9,000,000 there was an error of only 3,700 as estimated by the register.

4.—In the sixth report of the Rivers-Pollution-Commissioners surface-water from cultivated land is classed as suspicious, though palatable. Cameron makes a plea for **surface-wells as a source of water-supply**, holding that the position given them in the report of the Commission, fifth in the order of wholesomeness, is a wrong one. If the surface-wells are kept clean and are surrounded by  $\frac{1}{2}$  or  $\frac{1}{4}$  acre of grass land, ordinary agricultural operations may go on beyond this without affecting the character of the water. In the case of surface-wells for village use the ground containing the well should be surrounded by an unclimbable fence, outside of which the pump should be situated.

5.—Nasmyth reviews the law in Scotland regulating the sale of milk and refers to the regulations governing the supply in Continental countries. Chalmers calls attention to two aspects of the **hygienic control of milk-supplies**: (1) the office machinery necessary for discovering when milk-supplies become infected, and for the prevention of its further sale; (2) the question of compensating the owner of the dairy or dairy-farm whose business has been summarily suspended owing to the presence of disease associated with his milk-distribution. In the discovery of milk-infection attention should be paid to the diseased conditions of the dairy-animals and of the employes of the dairy-farm. It is also necessary to distinguish between the conditions created by the infectious diseases before the milk has become infected and those created when the consumers of the milk are attacked. The simple notification of disease will be of no avail in the discovery and prevention of milk-infection; the medical officer should have sufficient inspectors to enable him to trace the source of the infection and when the authorities are notified of the existence of such infection they should act promptly. In the hygienic control of milk-supplies the physical conditions under which the cattle are housed and the healthiness of the cattle themselves should be taken into account. Whenever infectious disease exists in connection with milk-production or distribution and the local authority undertakes its responsibility as to hospital-provision there is little need for interrupting the dairyman's business. S. Cameron considered the control of milk supplied to large towns as very unsatisfactory and that the medical officers of such towns need a sort of right of search outside their own boroughs. Forster called attention to the fact that all bacteria could be killed by temperatures below the boiling-point, provided that the application of heat was kept up for a sufficient length of time. C. A. Cameron said that there could be no doubt as to milk being frequently the vehicle by which enteric fever, as well as other diseases, is diffused. Dewar thinks that all breeds of cattle are equally healthy and that disease depends upon the hygienic surroundings of the animals. Saltet made some remarks upon the control of milk in Amsterdam. Ross holds that when scarlet fever is prevalent in a district no person having a sore throat should be permitted to engage in dairy-work. Aitkin said that it seemed to him that some of the large cubic space demanded for cows might be utilized in providing milking stalls where the cows might be milked in full light and under conditions of perfect cleanliness. The general adoption of the milking machine would be still better, as it would allow the milk to be obtained from the cow without contact with the hands.



6.—In a discussion on **vaccination** Bond outlined the position of the vaccinator clearly by stating that, apart from the absolute separation of the infected person from all who are likely to take the disease, there are no other means of protection against smallpox that are approximately comparable with vaccination. The declaration of over 1100 medical officers of health that, in their opinion, vaccination is the only trustworthy protection against smallpox, for both the individual and the community, would seem to be sufficient answer to the cries of the antivaccinationist. The explanation of the enthusiasm of the antivaccinationist is to be found in the tendency that all individuals have, in matters of opinion, to exaggerate everything that lends support to their own beliefs. This tendency seems to be consistent with the highest degree of mental training and originality. Bond reviews the composition of the British Vaccination-Bill. Many of its sections have only a local interest; other sections, on the contrary, have an international interest, as dealing with conditions existing in countries other than Great Britain. The English bill seeks to do away with the prejudice against vaccination, among other measures, by compelling the use of glycerinated calf-lymph. The real value of glycerinated calf lymph is that it reduces to a minimum the dangers of vaccination; but upon the great majority of defaulters, as those who refuse to present their children for vaccination are called, the bill will have no appreciable effect. These people will bring their children to be vaccinated because the vaccination-officer with a summons stands behind the public vaccinator with the glycerinated calf-lymph. There is great need for the diffusion of knowledge relating to the subject, so as to dispel the darkness of indifference and indolence by the light of reason. The bill ignores revaccination and the private vaccinator entirely. One explanation of the inefficiency of the vaccination-law is that vaccination is not in the hands of those men charged with the administration of other sanitary measures. McVail said that the new Vaccination-Act should endeavor to promote vaccination and to remove, as far as possible, the opposition to it. Copeman pointed out that much of the glycerinated calf-lymph in use at present by no means conforms to the required conditions. Newsholme introduced a resolution recommending the withdrawal of the bill, which was seconded by Drysdale, and was subsequently adopted. Drysdale referred to the German experiments that have shown conclusively that vaccination in infancy followed by revaccination at the age of 12 years, if rigorously carried out, is capable of putting an end to the most terrible of European plagues. Fulton insisted on the essential importance of revaccination by law and gave some interesting statistics bearing on the subject. Bond said that the future of vaccination largely depends on the efforts made to neutralize the anti-vaccination propaganda. He thought that it was the duty of medical officers of health to enlighten the people on the subject.

7.—The term soil is used by Robertson in the sense of a medium for the growth of organisms. It includes, therefore, the surface of a paved court or street, the soil of a grass field, a privy-mildew, and the filth in and around a sewer or drain. His experiments with the typhoid bacillus go to show that that organism tends to grow upward to the surface rather than downward, and this upward growth would seem to have a most important bearing on the **spread of disease by soils**. The organism tends to disappear from the surface-soil during the winter-months, long before it has disappeared from the subjacent strata. It would seem, therefore, as though the deeper layers of the soil acted as a sort of shelter for the organism during this period. Diseases that are due to soil-contamination may be classed as (1) those in which the specific organisms have a wide distribution, such as tetanus, malignant edema, and the pyogenic diseases; (2) those in which the organisms have a local distribution, such as typhoid fever, epidemic diarrhea, cholera, swine fever, and anthrax. Tuberculosis, leprosy, pneumonia, glanders, rabies, and scarlet fever do not appear to be dependent upon the soil for their transmission. Experiments seem to have demonstrated that about 10% of cases of typhoid fever are due to direct infection, about 10% to infection from water or milk, and 80% possibly to infection from the soil. Areas in which the ground-water level is near the surface are more liable to endemic typhoid fever than are areas in which the ground-water level is low. Other experi-

ments have shown that the bacillus typhosus quickly dies out in grass-covered areas. Under certain conditions, dust is the chief agency in the transference of the typhoid poison from the soil to the subject. In this connection, experiments have shown that infectious particles in the atmosphere are heavy and quickly subside if the air is allowed to remain still. In the discussion of this paper Cameron said that the facts just recorded confirm the opinion that, in Dublin at least, enteric fever is a semi-miasmatic disease. Thorne referred to the experiments of Martin and Huston. The former observer had shown that the vitality of the typhoid bacillus is retained at temperatures of from 9° to 24° C. (48.2° to 75.2° F.), but that its power to spread is diminished. The second observer had shown that the bacillus enteritidis sporogenes is a much clearer indicator of the safety of water from a soil than the bacillus coli communis or than chemical investigation. Scurfield said that for two years he had been strongly of the opinion that typhoid infection had the power of living in the soil for long periods. Chalmers cited an instance of a typhoid epidemic due to soil-infection. The paper includes some interesting maps showing the distribution of typhoid fever in Great Britain for periods of 5 years.

9.—Marsden calls attention to the fact that the **filaria strongylus** in the lungs of lower animals gives rise to a process that bears a close resemblance to tuberculosis.

10.—Allan and Cribb have experimented with **sulphur dioxide** and **formic aldehyd** as gaseous disinfectants and have found the former serviceable in disinfection after diphtheria, but not to be depended upon after typhoid fever. On the other hand, formic aldehyd will kill diphtheria and typhoid organisms either in a dry or a moist state. It will also kill the staphylococcus pyogenes aureus in a moist state. Formic aldehyd diffuses better than sulphur dioxide and does not affect colors or metallic substances. The Alformant lamp is recommended. In the discussion Kenwood recommended a watery solution of formalin as a spray to the exclusion of the gas.

### Lancet.

August 13, 1898. [No. 3911.]

1. Tone-Sensation with Reference to the Function of the Cochlea. WILLIAM RUTHERFORD.
2. The Occurrence of Cartilaginous and Bony Nodules in the Tonsil. HUGH WALSHAM. (*Illustrated.*)
3. The Bacteriology of Progressive Cirrhosis of the Liver. (*With Illustrative Plate.*) J. G. ADAMI.
4. Diabetic Coma successfully treated by Saline Transfusion; no Relapse Four Weeks Afterwards. THOMAS OLIVER.
5. The Occurrence of Erythromelalgia in Disease of the Spinal Cord; an Account of Ten Cases. JAMES COLLIER.
6. Vitality: an Appeal, an Apology, and a Challenge addressed to Brother Practitioners. LIONEL S. BEALE. (*Continued.*)
7. A Case of Compound Fracture: Acute Traumatic Gangrene; Amputation; Injection of Antistreptococcic Serum; Recovery. W. SOUTHEY WRIGHT.
8. Excision of the Cecum for Tuberculous Disease. H. A. LEDIARD.
9. Notes on a Case of Angina Ludovici; Operation; Recovery. ARTHUR E. PHILLIPS.
10. A Case of Membranous Tracheitis and Laryngitis without the Presence of Diphtheritic Bacilli. L. A. GRIMES.
11. A Clinical Aspect of the Origin of Typho-malaria and Typhoid Fever. OWEN F. PAGET.
12. Two Cases of Ovariectomy in which the Bowel was Torn; Recovery. (Under the care of DR. LEWERS.)
13. A Case of Richter's Hernia; Sloughing of Bowel; Suture; Recovery. (Under the care of STANMORE BISHOP.)

2.—In the case of a man, 50 years old, who died of pulmonary tuberculosis, small **masses of bone**, in the form of trabeculae, rings and solid nodules, were found after death, scattered throughout the somewhat atrophied **tonsil**. The condition was at first believed to be due to the presence of enchondromata, but it was finally concluded that they were analogous to the cartilaginous growths that develop in the lines of the bronchial clefts, and that are found in the neigh-



borhood of the ear, or lower down on the neck. A search through the literature resulted in the discovery of but three similar cases.

3.—In 1894 and 1895 Adami made extensive observations on animals dead of Pictou cattle-disease, which resulted in the isolation of a small microorganism from the liver-juice and the lymph from the abdominal lymph-glands. This organism appeared at times as a diplococcus and again as a stumpy bacillus or diplobacillus. It proved pathogenic for rabbits, guinea-pigs, and mice. Later, the organism was found in the affected tissues and seemed to be the cause of the disease, which is characterized by an extensive periportal and pericellular cirrhosis. There is also a constant follicular ulceration of the true stomach in these cases. The demonstration of this microorganism in connection with cirrhosis of the liver in animals has led to the study of the **bacteriology of progressive cirrhosis of the liver in man**. Adami has thus studied a series of more than 26 cases of hepatic cirrhosis of varying degree and has found, constantly, in the tissues one characteristic form of microorganism. This organism is best shown by staining the tissue with carbolized fuchsin and partially bleaching in the sunlight. Satisfactory demonstration requires an  $\frac{1}{8}$  or  $\frac{1}{16}$  inch oil-immersion lens. It is impossible to affirm at present whether the microorganisms from the human and those from the bovine liver are identical. The paper contains, as an appendix, the report of a case of atrophic cirrhosis of the liver in a woman aged 56 years, who had been more or less addicted to the use of alcohol and had died suddenly of cardiac failure. At autopsy the liver was small, weighing 1,045 gm., the abdominal lymph-nodes were reddened and succulent, and the retroperitoneal lymph-nodes, particularly in the region of the portal fissure and the pancreas, were markedly enlarged. On section, the liver appeared more fatty than fibroid. Microscopic study showed fibroid thickening of the portal sheaths and a somewhat diffuse cirrhosis, the bands of fibrous tissue being infiltrated with small round cells. Further study of the liver showed the same diplococcus that had been previously found in cirrhotic livers. Ascitic and pleural fluid from this body, after having been centrifuged and treated with caustic potash, showed rather rare, minute diplococci. These forms were also obtained in coverglass preparations from the liver, lymph from the mesentery, ascitic fluid, heart-blood, left kidney, and mesenteric glands. The culture-experiments do not appear to be altogether satisfactory as yet; but Adami has succeeded in obtaining from this case a polymorphous microorganism similar to that obtained from the organs of animals dead of Pictou cattle-disease. This organism is a diplococcus when grown in broth, and a bacillus of variable length when grown upon agar.

4.—Oliver reports a case of **diabetic coma** successfully treated by saline transfusion. The patient has remained perfectly intelligent for 28 days.

5.—Collier reports 10 cases in which disease of the spinal cord was associated with **erythromelalgia**. In this group the vasomotor phenomena accompanied 5 cases of disseminated sclerosis, 2 cases of tabes dorsalis, 1 case of neurasthenia, with disseminated sclerosis, 1 case of traumatic neurasthenia, and 1 case of myelitis. The occurrence of these 10 cases within a short period of time argues that erythromelalgia is not a rare symptom of spinal-cord disease.

7.—A girl, 10 years of age, fell from a swing near a disused fowl-run, fracturing both bones of the forearm. The wound through which both bones projected was treated antiseptically within half an hour of the accident, covered with an antiseptic dressing and put up with dorsal and palmar splints in the extended and supine position. The temperature on the following morning was 102° F., but the wound was found apparently healthy. In the evening a bad-smelling discharge was noticed, so that the wound was thoroughly cleansed and the splints reapplied. On the morning of the second day the hand and wrist were cold, black and crackling with gas and the arm was reddened to the axillary fold. The arm was amputated near the shoulder, the flaps were drawn loosely together and an iodoform-dressing was applied. During the succeeding night the reddened line had advanced beyond the point of the shoulder, although the temperature had fallen to 99° F., and the patient was rational. Ten cu. cm. of antistreptococcic serum were now injected. On the following morning the line of advance was irregular, blotchy and ill-defined, but as the serum seemed effective in

checking the process, 10 cu. cm. more were injected, and this was repeated until in all 50 cu. cm. were used. The further progress of the case was most favorable. The cause of the **acute spreading gangrene** in this case was attributed to the bacillus of malignant edema, but bacteriologic examination revealed only the presence of the streptococcus longus.

8.—A man, 63 years old, came under observation on account of a hard, immobile tumor in the right inguinal and hypogastric regions situated beneath the parietes. He had been ill for eight months and had suffered from looseness of the bowels. A reddened patch and a rise of temperature indicated that the tumor was probably not malignant. An incision was made, some pus evacuated, and a piece of the abdominal wall excised, but microscopic examination failed to throw light on the nature of the disease. A sinus formed, leading from the right of the umbilicus toward the anterior superior spine, from which pus and occasionally feces were discharged. After the lapse of some five months the sinus was laid open and traced to the cecum, which was found thickened and adherent. This part of the bowel was removed and, because of the weakened condition of the patient, it was thought best to stitch the end of the ileum in the wound and to close the colon. Marked collapse followed the operation, but the patient lived about two months, his feeble condition never justifying an operation to anastomose the large and small intestines. Microscopic examination showed the disease to be **tuberculosis of the cecum**.

9.—A man, 45 years old, had been troubled for some time with "jaws-ache" and had noticed a rapidly growing swelling in the left submaxillary region, which had extended to the median line anteriorly, to the malar bone superiorly, and to beyond the sternomastoid muscle posteriorly. There was pitting on pressure, and great difficulty in swallowing and speaking. Incisions were made in the submaxillary region, along the anterior border of the sternomastoid muscle and in the median line and from these thin, dark serum exuded. The wounds were packed with gauze and antiseptic fomentations were applied. Twenty days later the tissues about the submaxillary incision had broken down and a large quantity of pus was discharged. The other incisions had closed. Twenty-nine days after the operation the patient returned to work.

10.—Grimes reports a case of **membranous tracheitis** in a boy, aged 4 years and 9 months, for which tracheotomy was necessary in order to bring relief. Bacteriologic examination of the membrane failed to show the presence of diphtheria-bacilli, although other bacilli were found in abundance.

11.—Observations made in Western Australia and in the Sandwich Islands lead Paget to the following conclusions concerning **typho-malaria and typhoid fever**. (1) The typhoid bacillus exists in virgin soil; (2) it requires educating, *i. e.*, transference through a series of hosts before it produces typhoid fever; (3) so-called typho-malaria is due to an uneducated bacillus.

12.—Lewers regards as the most dangerous complication of the operation of **ovariotomy the wounding of the bowel**, and this most commonly occurs in the separation of adhesions. The presence of an adhesion to a piece of bowel is in itself sometimes sufficient to weaken the bowel-wall at the point of attachment, for it tends to limit the action of the muscular fibers in the wall at that spot, and thus may lead to their partial degeneration. Lewers reports two cases in which recovery resulted after suturing of the torn intestine.

13.—A man, 47 years old, was admitted to the hospital because of swelling of the scrotum. There was no nausea or vomiting, and the bowels had acted several times during the week that the condition had existed. On the eighth day following the sudden pain that had preceded the enlargement a black slough was found at the lower extremity of the scrotum posteriorly. On the next day this gave way and feces escaped. Poultries were applied for nine days until all the slough had separated. An incision was then made, which opened into a cavity at the base of the scrotum; and another, continuous with the right side of the scrotum; both cavities contained feces, and were lined with granulation-tissue. In the situation of the internal inguinal ring were two openings, representing the proximal and distal portions of a loop of intestine. The two limbs of the loop were continuous



behind, but there was a gap of two inches in front. The two were united with mattress-sutures so applied as to bring the serous surfaces together. The granulating surfaces of the scrotum were cureted, and a gauze-drain was placed in the upper part of the incision. The patient made a slow but satisfactory recovery.

### New York Medical Journal.

August 27, 1898. [Vol. lxviii, No. 9.]

1. Repression-treatment and Differential Test for Visual Nerve-strain. CHALMERS PRENTICE.
2. The Points of Distinction Between Cerebral Syphilis and General Paralysis of the Insane. HUGH T. PATRICK. Lecture I. (Continued.)
3. A Case of Early Spinal Syphilis with Brown-Séquard's Paralysis. HENRY BARTON JACOBS.
4. A Preliminary Report of Experiments with Heated Blood in the Treatment of Croupous Pneumonia and Tuberculosis Pulmonalis. CARL E. ELFSTROM. With Some Clinical Observations by AXEL V. GRAFSTROM.

1.—Prentice attaches great importance to **eye-strain** as cause of **nervous diseases**. He reports the case of a woman, 40 years old, who was passing 24 pints of urine per day, was very anemic and weak, had much pain and tenderness in the region of one ovary, and a pulse of 120. Vision was found normal in each eye, but there was excessive exophoria at the near point. The patient was provided with a 24° prism, base in, combined with 2 D. spherical correction, which she wore constantly. At the end of two weeks the pulse was 80; there was considerable improvement in general health, and the amount of urine was lessened to 12 pints. Complete division of the external rectus muscle of the right eye was performed and a month later the left external rectus was divided. The vertical muscles were then tested and prisms base down were used, gradually increasing the number of degrees until the patient was wearing 20°. The nervous dyspepsia and pelvic tenderness almost entirely disappeared, the pulse fell to 70, and the patient passed only 8 pints of urine per day. The right superior rectus was then divided. After four years the patient remains in good health, without any return of her former symptoms. Two other similar cases of this radical treatment are reported as illustrating the value of this procedure in cases of nervous disease.

2.—In a consideration of the clinical history in connection with the differentiation between **cerebral syphilis and general paralysis of the insane**, Patrick states that in the latter the changes are in the form of added psychic symptoms, while in the former there is something of a somatic rather than psychic character added. General paralysis is insidious and progressive. Syphilis is much more rapid and is often arrested. Headache is a constant symptom of syphilis, exhibiting a peculiar character, though Patrick finds that it is often most severe in the latter part of the afternoon instead of at night, as is usually taught. The severity and the persistence of the headache are its chief characteristics. Headache is not common in parietic dementia, though a feeling of distress in the head often does occur. Neuralgic pains in the head point to syphilis, unless *tabes dorsalis* is combined with general paralysis. Any involvement of the cranial nerves below the third is uncommon in general paralysis, though common in syphilis. The Argyll-Robertson pupil is usually an indication of general paralysis. Nystagmus and strabismus both point toward syphilis. Simple optic atrophy usually means general paresis, while optic neuritis means syphilis. Transient or recurring amblyopia, hemiopia, or other segmental defect in the visual field points toward syphilis. Hippus indicates syphilis as a rule, as it is extremely rare in general paresis. Either of the three types of crossed paralysis may occur in syphilis, but practically never in general paralysis. Chiasmus or persistent yawning, without signs of bulbar paralysis, indicates general paralysis, as does also ptialism. With a combination of Argyll-Robertson pupil and lost knee-jerk, syphilis is almost excluded; while if symptoms of brain-disease are well marked and the pupils respond to light, the case is probably syphilis. Single or multiple paralyzes of the cranial nerves, with headache, stupor, or vomiting, point almost conclusively to syphilis.

3.—Jacobs reports the case of a man, 40 years old, who had contracted **syphilis** a year before, and had had but slight treatment. His first symptom was diminished sexual power, followed by weakness in the right leg, with twitching of the toes of the right foot. Control over the sphincters was poor. The left leg felt numb. The gait was spastic and hemiplegic on the right side. The flexors of the right leg were very weak. Over the left leg there was entire absence of pain and temperature-sense, and some lessening of the sense of touch. Much improvement followed specific treatment, but after four years the man still had imperfect sexual power, with occasional twitching of the toes of both feet, and there persisted a syphilitic pharyngitis. The whole right leg was still somewhat weak, and there was a little rigidity in both legs and in both arms. There was no disturbance of sensation. The case is notable for the rapidity with which the symptoms of central syphilis came on after the primary sore. There seems to have been a specific process present first, and this was followed by a parasymphilitic process. The location of the lesion would seem to be limited above by the level of the first lumbar vertebra, below by the level of the genito-urinary nucleus. The case differs from Erb's syphilitic spinal paralysis in that there was never any distinct involvement of the bladder.

4.—Elfstrom has noted that in the work of the Klemperer's on **pneumonia-serum** the potency of the filtered culture was increased by subjecting it to a temperature of from 41° to 42° C. Acting on this suggestion he has taken blood from patients with infectious diseases, heated it to a temperature of 60° C., and re-injected the patients' own serum, believing in this way to have increased the potency of any antitoxin produced in the patients' blood during the course of the disease. Four cases of pneumonia were treated in this way with their own serum, with results that seemed doubtful though encouraging, and Grafstrom gives the history of several cases of tuberculosis of the lungs from his own, Mahnken's and Stewart's practice, in which there seemed to have been improvement with regard to sweating, respiration and local signs.

### Medical Record.

August 27, 1898. [Vol. liv, No. 9.]

1. The Delirium of Insanity. HIRAM ELLIOTT.
2. The Treatment of Inoperable Sarcoma with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus; Immediate and Final Results in 140 Cases. WILLIAM B. COLEY.
3. The Rights of the Expert Witness. Personal Experience with the Dixon Decision. DENSLOW LEWIS.
4. First Hour with the Mother and the Newborn Baby. R. OSGOOD MASON.
5. The Rods and Epithelial Pigment Layer of the Human Retina Considered as a Photo-Chemical or Sensitive Plate. FRANK P. PRATT.
6. A Modified Hutton's Apparatus for Valvular Drainage of Pleural Empyema. R. VAN SANTVOORD.
7. An Epileptic Fit Lasting 45 Minutes. L. PIERCE CLARK.
8. Hernia of the Bladder. T. E. SCHUMPERT.
9. Hydronephrosis Caused by Enlarged Proapsed Leukemic Spleen. CHARLES C. ALLISON.
10. A Case of Hodgkin's Disease. J. J. MORRISSEY.
11. Filaria Osleri. ERNEST B. SANGREE.
12. Sudden Death after Confinement. R. S. JOYCE.
13. A Patent Urachus. WALTON PRESTON.
14. A Case of Fungus Cerebri. T. S. McMULLAN.

1.—Elliot enters upon a general discussion of the types of **delirium** that are likely to occur in cases of **insanity**, mentioning that delusions of sight and hearing are the most frequent, and next to these delusions of taste and smell, though the other senses may be disturbed. He also discusses the differences between hallucinations, illusions, and delusions.

2.—See this JOURNAL, Vol. I, p. 1090.

4.—Mason prefers for the **newborn babe**, instead of the ordinary clothes, a simple wrapper of ample size made of cheese-cloth, muslin, fine flannel or silk, according to the fancy of the mother, and this well lined throughout with absorbent cotton and lightly tufted to keep it in place. A pound-package of the cotton is more than sufficient for the



lining. Diaper and a light belly-band are adjusted, and then this warm, soft garment, and over all the usual soft flannel blanket is wrapped. From its resemblance (fanciful) to a feather-lined nest, he calls this the bird's-nest baby-dress.

5.—Pratt calls attention to the fact that it is fairly well recognized that there is a photochemical visual substance in the **retina** which is the visual purple or rhodopsin of Ball, and without this in the rod-ends no photograms can be made. From his study of the work of other authors, he decides that the retina is a sensitive plate, which, when excluded from the influence of light, becomes saturated; the activity of the cells becomes latent, and the pigment recedes toward their bases. This is the condition of rest. When light is thrown upon the retina, the visual purple becomes decomposed and at the same time constantly degenerated. The authority of a number of authors is adduced to support these views.

6.—The principal difference between the modification here described and Hutton's original apparatus is in the substitution of a glass tube for the rubber tube, which was capable of being compressed by granulations. The advantage claimed for the drainage-tube provided with a valve is that the patient evacuates air from the pleural cavity in coughing and the valve prevents the air from returning, thus aiding the lung to expand. Three cases are reported: in one it was impossible to estimate the value of the apparatus; in a second case death occurred from sepsis, probably in consequence of the lung expanding too rapidly and preventing drainage. It is admitted that a free tube would have probably answered better in this case. In a third case recovery followed, and the tube was removed at the end of 16 days, but Hutton's apparatus was discontinued after two days because of its becoming obstructed by coagula and because of the discomfort to which it gave rise. Thirteen days after the operation the modified apparatus was used, however. [Although Santvoord expresses his satisfaction with the efficiency of the apparatus, the cases reported seem to illustrate perfectly the danger of sepsis from lack of free drainage and the ease with which the apparatus becomes clogged with coagula, which has been pointed out by several surgeons who have used it.]

7.—Clark reports the case of a boy, 13 years old, who had epilepsy from the age of 6 months. In one attack there was a continuous clonic spasm, which resisted treatment and persisted for 45 minutes, when inhalation of chloroform caused a cessation. The pulse-rate was by this time 146, and the temperature 103° F., the latter reaching normal only at the end of 48 hours.

8.—Schumpert reports a case of **hernia of the bladder**, occurring in a man with unusually thick abdominal walls, in which an opening was made into the bladder during operation. The first thing to call attention to the unusual contents of the sac was the escape of urine. The bladder was dissected clear and the incision in it sutured to the cutaneous incision. Urine escaped copiously, but the abdominal wound healed primarily. On the tenth day the fistulous tract was dissected out under cocaine-anesthesia, and closed with deep catgut sutures. Healing followed promptly and the patient was soon discharged, cured.

9.—Allison reports the case of a woman, 42 years of age, who had borne 8 children, and presented abdominal distention, and at times anuria; sometimes sudden polyuria occurred, when the abdomen diminished in size. The spleen was very large. The red corpuscles numbered 3,680,000 per cu. mm., the white, 9,000, and 50% of the leukocytes were eosinophiles. The explanation of the series of clinical phenomena is that the enlarged spleen pressed upon the ureter, and caused **hydronephrosis** and abdominal enlargement.

11.—Sangree found the **filaria Osleri** in some sections of a dog's lung. Prof. Klebs thought it a strongylus, though he did not have an opportunity of examining the whole worm. Salmon stated that from examination of the incomplete specimen he believed it an example of *filaria Osleri*.

12.—Joyce records a case of **sudden death** immediately after **childbirth**. The newborn babe, which was dead, weighed 18 pounds and looked like a child a year old. The mother was a nonipara. Her death was probably due to pulmonary thrombosis.

14.—A lad of 14 was accidentally shot by his companions, the .32-caliber bullet striking just over the left frontal convolution, and making a depressed fracture about 1½ by ¾ inches in extent. The ball was found imbedded in the inner

lamina, but pieces of bone had lacerated the dura and were embedded in the brain-substance. Compression was evident from aphasia and right facial paralysis. The depressed fragments were elevated, the impacted pieces were removed, the wound was flushed with hydrogen dioxid and packed with iodoform-gauze. All went well for ten days; then a small mass, the color and feel of cartilage, was noticed growing from the underlying tissues. This continued to grow, taking on the form of granulations, for five weeks; the temperature meantime ranging from 1° to 3° above normal and pus discharging from two sinuses in the fungus. Daily irrigations with hydrogen dioxid and dressings of iodoform-gauze were used, and systematic compression was adjusted. After the first week diminution in the size of the tumor was noticeable, and at the end of ten weeks there was no evidence of any abnormal growth.

### Medical News.

August 27, 1898. [Vol. lxiii, No. 9.]

1. The Morphin-Habit; Its Treatment and the Possibility of its Cure. JOHN W. ROBERTSON.
2. The Symptoms and Treatment of Zoster. ELLICE ALGER.
3. Practical versus Theoretical Examinations. HENRY W. CATTELL.
4. The Physiologic and Therapeutic Action of Extract of the Mammary Gland. JOHN B. SHOBER.
5. The Health of Sampson's Fleet. RAYMOND SPEAR.
6. Sanitary Notes on Chickamauga Park. HENRY I. RAYMOND.
7. Fevers That Accompany an Army. STANLEY WARREN.
8. Sarcoma of the Orbit. DAVID WEBSTER.
9. Middle Meningeal Hemorrhage Due to Skull-fracture; Operation; Recovery. EDGAR P. COOK, JR.

1.—Robertson draws a graphic picture of **morphinism**, which is a comprehensive term for the somatic symptoms, and of **morphinomania**, which comprises the psychic manifestations of addiction to opium or its derivatives. Among the latter the obfuscation of the moral sense is the most striking; true insanity, characterized by hallucinations and delusions, Robertson has never observed in a large experience. In hospital-practice opium or its preparations may be withdrawn at once absolutely, but in private practice this is impossible, as the patient will not bear the consequent agony outside of an institution. Under the latter conditions the drug is withdrawn gradually and strychnin in large doses is given hypodermically, and equal parts of red cinchona and fluid extract of coca—one dram of this—are administered by the mouth. If the nervous paroxysms are marked, potassium bromid must be added. The patient should be kept in ignorance of the amount of the opiate taken and of its final discontinuance. By the end of the second month he presents every evidence of physical health, but by the third month he becomes restless, irritable, and his neurotic longings return. This is the critical time. If the patient is dismissed, he invariably relapses. The shortest time for which Robertson receives patients in his sanatorium is six months. A shorter time invariably results in relapses, and even in mild cases the treatment must be at least of six months' duration.

2.—Alger discusses the symptoms and varieties of **herpes zoster** on the accepted lines. He does not commit himself as to the cause, whether it is neurogenic or infectious. The treatment recommended consists in opening the vesicles and sopping the affected regions with the following: Picric acid 3 iss, citric acid 3 iij, distilled water f 3 ij. On the face this solution should not be used, on account of its staining properties, which, however, are not permanent. For the pain, nothing can be compared to galvanism. Phenacetin, in 5-grain doses, may also be used, and is better than morphin.

3.—As a result of a nonedifying experience as one of the examiners for resident physician in a hospital, Cattell makes a plea for more practical medical teaching and for practical examinations in medical schools and hospitals and in State-board examinations. Some glaring instances of ignorance on the part of students and hospital-candidates are cited, and a long table is given, showing the answers received from thirty candidates who were shown a slide of



malarial blood, one of hemin-crystals, one of pus-cells and of granular and pus-casts.

4.—Shober, from a study of the literature of the subject, has arrived at the following conclusions in regard to the physiologic and therapeutic action of **extract of thyroid gland**: (1) That when employed in the usual doses, *e. g.*, the equivalent of from 15 to 20 grains daily of the desiccated powder, it acts as a powerful and dangerous depressant to the heart and produces extreme nervous prostration; (2) that it should not be employed for any extended period of time in larger doses than the equivalent of from 3 to 6 grains daily of the desiccated powder. Shober has employed the powder in four cases of uterine fibroid with gratifying results, the symptoms being ameliorated and the tumors materially reduced in size.

5.—The **health of the navy** during its stay in Southern waters has been remarkably good, as compared with that of the army. The principal diseases that threatened the ships were yellow fever, dysentery and malaria. The first was kept out by quarantine and disinfectant measures, the second by the exclusive use of distilled water for drinking-purposes, the third by the careful selection of places for anchorage, and by not allowing men to go ashore. The health of the divers who were compelled to work in the foulest possible water while exploring the *Maine* was good. The men, as well as their diving-suits, were disinfected after each day's work, and the men themselves were given quinin and whisky. Intercourse with the Cubans was reduced to a minimum. When the army landed at Siboney, yellow fever made its appearance in its ranks, and quarantine was established by the navy against the army. All wrecking and prize crews were disinfected when they returned to their ships. Influenza was observed on some of the ships. A diarrheal affection of mild type made its appearance in Santiago Bay, probably in consequence of carelessness on the part of the men in not protecting themselves during the cold nights. Only three deaths have occurred on the ships stationed about Santiago, not counting men killed in battle; two of these were suicides, one an accident. An average daily health-report gives a sick-list of 3% to the ships and 2½% to the marine battalion.

6.—One of the problems at **Chickamauga Park** was the improvement of the water-supply. Filters of the Magnon and Berkefeld type proved insufficient. The water was then obtained from a spring 6 miles distant, but this proved a most unsatisfactory method, and now it is proposed to boil the water in iron kettles. Typhoid and malarial fevers and diarrheal diseases are very prevalent. There are now 600 cases in the division-hospital. The opening of the George M. Sternberg General Hospital promises to give some relief. The establishment of the regimental camps on the hillsides and the flooring of the tents with lumber will likewise limit the spread of malarial and diarrheal diseases.

7.—Warren admits that medical supplies, nurses, tentage and ambulances have not been sufficient for our army during the past, but the authorities are making herculean efforts to correct these omissions. The prevailing fever, and the one that is often incorrectly diagnosed, is the so-called sun-fever, common in the Southern States, which resembles malarial and yellow fevers. All three present similar symptoms. In yellow fever and sun-fever, the conjunctivæ are injected, but the injection is of a different color, and this is a valuable point in differential diagnosis. In the course of a month, during two weeks of which Warren saw as many as 120 of these fever-cases daily, he met with only four true instances of yellow fever. He considers the ocular injection in this disease an infallible sign. It is of a pale-yellow color, generally diffused, giving the eye a vacant look and the appearance of a sightless one. In sun-fever the injection is bright red, and the expression is that so often seen in the eyes of fever-patients. Vomiting occurs in both, but it has no special relation to the ingestion of food in yellow fever, while in sun-fever it always follows the taking of food or even the drinking of water. The two common symptoms of malaria and sun-fever are high temperature and chills. In malaria, however, there will be a little morning and evening elevation of temperature, while in sun-fever the morning rise is rarely noted, and the evening temperature is perhaps 1.5° or 2° higher than in malarial fever. There is also a difference in the chill-phenomena. In malaria there is the usual rise of temperature followed by the chill, and then sweating; while in sun-fever the chill

accompanies the fever and there is no distinct sweating-stage. The fever has been improperly called the "acclimating fever," but apparently the natives are as frequently attacked as foreign troops. The natives, however, either from their experience or from their antipathy to work, are to a certain extent immune, because they expose themselves less to the midday sun. Sun-fever has incapacitated our troops more than anything else in Cuba. The treatment recommended is a full bath or a sponge-bath given immediately, followed by the administration of magnesium sulphate in half-ounce doses every hour until copious watery stools are passed; calomel in from ½ to 1 grain doses every hour until from four to six doses have been taken; oil of turpentine given in doses of 20 or 30 minims three times daily; water in large amounts, with lime-juice. Phenacetin, salol, and acetanilid would have been of much value, but were not to be had. The ideal treatment after the acute stage is a change of climate. This in the case of an army of sick men seems rather absurd and impracticable, but it is apparently the only solution of the question. Up to the present Warren has not seen a case of enteric fever in his service, and it is probably not an indigenous disease. Both yellow fever and enteritis will doubtless become epidemic in Santiago, as the city is in a very unsanitary condition and is overcrowded, but of all fevers that accompany the army in a tropical country, sun-fever is the most to be dreaded and is necessarily unavoidable.

8.—A patient with a **tumor of the orbit**, thought possibly to be syphilitic, was treated with heroic doses of potassium iodid and mercury, without avail. The growth was removed piecemeal, leaving an apparently sound eye. Panophthalmitis set in and the patient was discharged six weeks after the operation, with a sunken and sightless eyeball. The tumor removed was believed to be a sarcoma, but the patient died about a year later from carcinoma of the throat.

9.—Cook reports the case of a man, 22 years old, who, about four hours after having received a blow on the side of the head in a quarrel, developed typical symptoms of cerebral compression from **middle meningeal hemorrhage**. On trephining the skull a comminuted fracture the size of a half-dollar was found, the fragments of bone and a clot the size of a teacup were removed, the spurting artery was tied, loose iodoform-gauze packing was inserted and the wound was closed. Prompt recovery followed.

### Boston Medical and Surgical Journal.

August 25, 1898. [Vol. cxxxix, No. 8.]

1. Talks on the History of Medicine. No. 1.—Prefatory; To the Renascence. DAVID HUNT.
2. The Question of the Curability of Cancer of the Breast. J. C. WARREN.
3. Congenital Defect of the Fibula. F. J. COTTON and A. L. CHUTE.
4. The Toxin of Diphtheria and its Antitoxin. (Concluded.) THEOBALD SMITH.
5. Protargol as a Substitute for Silver Nitrate in Ophthalmia Neonatorum and other Conjunctival Diseases. FREDERICK E. CHENEY.

2.—Warren reports the results of an interesting and valuable statistical study, based on 72 **operations for carcinoma of the breast** performed during the past 15 years. Twenty-six of the patients are now living, 3 with recurrent growths, 4 remaining well after operation for recurrent growths, and 2 having died from causes other than carcinoma. In only 4 cases was there recurrence more than three years after operation; 17 cases have passed the 3 year limit and are regarded as cured; one patient has lived 12 years without recurrence. Of the cases regarded as cured 9 are reported as "cancer," 6 as "scirrhus," one as medullary and one as colloid carcinoma. These statistics are not as good as those in Rotter's 15 cases, with 50% cured, and those in Cheyne's 33 cases, with 57% cured, but the high mortality is believed to be partly due to the fact that many of the operations were performed before the present extensive, radical operations were undertaken and some were desperate cases. It seems a more humane policy to sacrifice statistics for the sake of saving an occasional desperate case, and even a palliative operation often prolongs life and relieves suffering.



Warren emphasizes the importance of extensive operation, removing a large margin of the cutaneous covering of the breast, carefully deflecting the edges of the wound and removing the subcutaneous fat for a considerable distance; removal of the pectoral muscles; painstaking dissection around the sheath of the axillary vessels; and at present he always explores the posterior cervical triangle. It is believed that a surgical operation can save, as a rule, those cases coming under the head of "scirrhus," and even of "cancer;" that in the case of "medullary cancer" an earlier interference may claim a fair proportion. Before, however, the percentages of success are to be permanently placed so high as to justify the hope of saving over one-half of the cases, the professional public must be educated to send their patients to the surgeon early, and not wait until the case has become hopeless.

3.—A boy, 7 years old, who had suffered no injury before or after birth, was noticed to limp when he began to walk, and the disability had rather increased with age. The left leg was  $2\frac{1}{2}$  inches shorter than the right; the tibia was bent forward, and the foot had but 4 toes. An X-ray photograph showed no trace of a fibula, and the astragalus, os calcis, and probably the cuboid were fused into an irregular mass. There had never been any pain. A high sole was the only treatment ordered. In a second case there was  $2\frac{3}{8}$  inches shortening; the affected fibula measured three-fifths as much in length as the sound one; the astragalus and os calcis were fused; and one toe was wanting. With a view to correcting the scoliosis that existed, division of the tendo Achillis was performed, and a high sole was applied, which somewhat improved the gait. In a third case, in a child, 2 years of age, the right leg was  $1\frac{1}{2}$  inches shorter than the left, and radiographs showed the fibula to be rudimentary, about 2 inches in length. There were three toes, with fusion of the astragalus and os calcis.

4.—The essential nature of the lesions produced by the toxin of diphtheria cannot be expressed in simple morphologic terms. Smith thinks, however, that the injury to the vessel-walls, especially those of the capillaries, is the source and origin of the whole set of pathologic changes. This view does not in any way stand opposed to the one that the diphtheria-toxin is essentially a cell-poison, with special affinity for the nucleus. The action of the antitoxin upon the toxin is still in dispute, but a direct action upon the toxins by their specific antitoxins has been demonstrated for two substances, for ricin, and for the toxin in the blood-serum of eels. Ehrlich's or the so-called lateral-chain theory of immunity is clearly stated and seems to find favor with Smith, although he does not commit himself. Investigations along the lines of this theory in tetanus have yielded satisfactory results; in the case of diphtheria the cell-territories that have a special affinity for the diphtheria-toxin have not yet been discovered. The antitoxins are much more stable than the toxins, but disappear rather rapidly from the blood of animals into which they have been injected. This explains the restricted period of passive immunity induced by the antitoxin. The toxic action of antitoxin serum occasionally observed must be ascribed to a peculiar personal idiosyncrasy to horses' serum. The rashes and joint-affections are also referable to the serum and not to the antitoxin. A continued scientific study of toxin and antitoxin would be valuable, and would probably lead to better practical results in combating diseases.

5.—Cheney has used protargol in 25 cases of ophthalmia neonatorum and in several cases of gonorrheal and non-specific conjunctivitis and he believes it to possess all the advantages of silver nitrate and none of its disadvantages. It is slightly irritating and it causes but little pain. It was used in from a 2% to a 4% solution in cases in which a 1 or 2% solution of silver nitrate would be used, and it was applied on absorbent cotton or one-quarter of a dropperful was emptied over the conjunctiva.

#### Journal of the American Medical Association.

August 27, 1898. [Vol. xxxi, No. 9.]

1. A Contribution to the Study of the Symptoms of Chronic Urethritis. FERD. C. VALENTINE.
2. Chronic Prostatitis and Its Treatment. H. R. WOSSIDLO.
3. A New Simplest Proctoscopy. THOS. CHARLES MARTIN.
4. Primary Carcinoma of the Axilla. D. W. GRAHAM.

5. Post-operative Insanity. R. HARVEY REED.
6. Questions in the Treatment of Congenital Dislocations of the Hip. HARRY M. SHERMAN.
7. The Time to Operate in Appendicitis. H. D. NILES.
8. The Treatment of Inoperable Sarcoma with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus. WILLIAM B. COLEY. (Continued.)
9. A Surgical Treatment for Hypertrophied Prostate and Hernia in Old Men, with a Report of Twenty-eight Cases. GEORGE W. JOHNSTON. (Concluded.)

1.—See this JOURNAL, Vol. I, p. 1144.

2.—Although sexual excess, masturbation, gout, etc., may be etiologic factors in chronic prostatitis, gonorrhea is the principal cause. The most characteristic symptom is constant or periodic oozing of prostatic fluid from the urethra. In addition tickling or burning in the urethra or glans, aching and stabbing pains in the anus, perineum or sacrum, and pains in the legs, and suprapubic and lumbar regions are well-known symptoms. Dribbling of urine occurs only after micturition, and arises from impaired function of the compressor urethræ muscle, and not from the overflow of the bladder, as in hypertrophy. Nervous symptoms of neurasthenic origin are very common. The diagnosis is made by examination of the prostate by the rectum and by microscopic examination of the prostatic secretion. The prostatic lobes are irregularly enlarged and often nodular to touch, and hard. Pain on pressure is variable. In cases without urethral or vesical complication prostatic fluid is obtained for examination by massage of the gland after urination. In case of urethritis and cystitis the urethra is irrigated, the bladder emptied and irrigated with sterilized water until it becomes clear and then the prostate is squeezed. The prognosis in the early stages is not unfavorable. In the treatment of this affection a hip-bath and rectal injection of one pint of warm water (35° C.) retained as long as possible are advised twice daily. After the rectum is emptied a suppository containing  $\frac{1}{2}$  grain of iodoform is inserted, combined with  $\frac{1}{2}$  grain of opium in case of pain. In established chronic cases massage of the prostate every second or third day, with rectal irrigations of hot and cold water alternately, using about two liters of each, is recommended. If chronic gonorrheal urethritis exists it must be treated.

3.—Martin recommends the use of the index-fingers as the simplest form of proctoscope. The patient is anesthetized and held in the knee-chest posture by an assistant; the hands of the operator are placed back to back, with the wrists crossed; the lubricated fingers are then inserted into the rectum and separated.

4.—See this JOURNAL, Vol. I, p. 1089.

5. " " " " I, p. 1144.

6. " " " " I, p. 1145.

7. " " " " I, p. 1091.

8. " " " " I, p. 1091.

9. " " " " I, p. 1144.

#### American Journal of Obstetrics.

July, 1898. [Vol. xxxviii, No. 247.]

1. Puerperal Sepsis. PAUL F. MUNDÉ.
2. An Improvement in the Technic of the After-treatment of Peritoneal Section. HENRY T. BYFORD.
3. The Surgical Treatment of Irreducible Retroflexion of the Pregnant Uterus. MATTHEW D. MANN.
4. Pus in the Pelvis. JOSEPH TABER JOHNSON.
5. Congenital Pelvic Kidneys Obstructing the Parturient Canal, with the Report of a Case of Vaginal Nephrectomy. EDWIN B. CRAGIN.
6. The Porro Operation Versus Total Hysterectomy. H. J. BOLIT. (With one illustration.)
7. Surgery of the Uterus and Adnexa per Vaginam. WILLIAM H. WATHEN.
8. Patency of the Stump After Salpingectomy. J. WESLEY BOVÉE.
9. Pregnancy Following Ventrofixation, With Improvements in the Technic of the Operation. A. LAPHORN SMITH.
10. Absence of Uterus and Vagina, With Sarcoma of One Ovary and Adenocarcinoma of the Other. L. J. LADINSKI. (With five illustrations.)
11. Criminal Abortion. JOHN T. WINTER.



1.—Mundé states that there are recognized 3 forms of puerperal sepsis: (1) *Sapremia*, or the variety in which the septic focus remains localized, and the microbe or germ, the staphylococcus, does not enter the general circulation. This form produces its systemic results, not through transmigration of its germs into the general system, but through the local irritation that causes a general elevation of temperature and acceleration of pulse, precisely as a local inflammation or an abscess in any part of the body may do. (2) *Septicemia*, in which the germs (streptococci) find their way into the general system, and, by invading the blood, produce general systemic infection. While in the sapremic form the products of decomposition are usually putrid and their odor is exceedingly characteristic and offensive, in septicemia there ordinarily is no distinctive odor and not necessarily any peculiar pathognomonic discharge from the genital organs. (3) *Pyemia*, or the variety of septicemia in which deposits of streptococci take place in different distant portions of the body and these produce decomposition and abscesses. The first two varieties, sapremia and septicemia, are nowadays by far the most common, particularly sapremia; while pyemia is comparatively rare. The first indication for treatment is the removal of all foreign substances from the endometrium that may be or evidently are the source of the infection. This can be done either with the finger or with a large, long blunt curet. In very bad cases of septic endometritis, with much inflammatory hypertrophy of the uterine wall, the curet should not be used. When the uterine cavity is entirely empty of anything capable of producing sepsis there is no use in practising intrauterine irrigation. Infected vaginal or perineal wounds should be touched with a saturated solution of potassium permanganate or a 25% solution of zinc chlorid. Uterovaginal drainage should be maintained by thin strips of iodoform-gauze gently passed through the internal os as required. The medicinal treatment of puerperal sepsis is unfortunately not at all satisfactory. Mundé doubts the value of antistreptococcic serum in influencing the course of sepsis.

2.—Byford, the day before a peritoneal section, diets the patient and purges sufficiently to reduce the gaseous distention of the intestinal coils to the end that they may be kept out of the way during the operation. In vaginal sections, and in abdominal sections for large tumors, the intestines are not so liable to be in the way as in abdominal sections upon small pelvic growths or diseased organs. Two hours before the time set for the operation a mild but efficient cathartic is given, such as two teaspoonfuls of the fluid extract of cascara. As soon as the patient awakes from the anesthetic a dram of magnesium sulphate in an ounce of water, or an equivalent dose of some mineral water, or 1½ ounces of the liquid magnesium citrate, is given every hour and repeated immediately whenever vomited. About 6 hours after the operation is completed a stimulating enema, consisting usually of 2 ounces of glycerin and 4 of water, or from ½ to 1 dram of inspissated ox-gall in half a pint of water (without glycerin), is thrown into the upper rectum and repeated every 2 or 3 hours until flatus passes freely. When this occurs the saline is also stopped. The object of this treatment is to prevent intestinal adhesions.

3.—Mann contends that in cases of **retroversion of the gravid uterus with incarceration**, if it be found impossible by the most improved methods, including the use of an anesthetic, to replace the uterus, the abdomen should be opened and the fundus pulled up by the hand introduced behind it. If the fundus be so large as to completely fill the pelvis, efforts at replacement through the vagina will fail, not because the uterus is too large to be forced through the pelvic brim, but because, filling completely the pelvic cavity, when it is pushed up nothing can enter from above to take its place, so that its progress is limited; and the moment pressure is withdrawn from below, atmospheric pressure forces the uterus down again into its old false position. Mann reports 2 cases operated upon through the abdomen with good results.

4.—Johnson gives the following summary of the **advantages of vaginal over abdominal section** in the presence of **pus** in the pelvis: (1) vaginal is much more quickly done than abdominal section, and convalescence is much shorter; (2) there is little or no shock; (3) the peritoneal cavity being seldom opened in these cases, except when hysterectomy is performed also, much less traumatism

is inflicted upon the intestines, bladder, ureters, omentum, or abdominal wall, to greatly prolong difficult and dangerous operations; (4) drainage, being down-hill, is not opposed by the laws of gravity, and is more natural, safe, and copious; (5) there is no ugly scar to annoy the eye and develop a painful keloid or permit ventral hernia; (6) the mortality of the vaginal operation for pus in the pelvis is vastly less than is that of enucleation of tubo-ovarian abscesses from above in the badly adherent and complicated cases; (7) experience has abundantly proved in more than a sufficient number of cases that the removal of the abscessed organs is not necessary to a symptomatic cure, and that permanent and complete restoration to health is the rule, while a secondary operation later is the exception; (8) should a secondary operation from above become necessary, its performance would be much easier and safer on account of the freedom from pus and the improved condition of the patient; (9) the perfection of the operation for draining double pus-tubes through the vagina has opened the way for many other beneficial operations from below, including anterior and posterior colpotomy, explorations, hysterectomy, etc.; (10) many patients who fear and will not consent to celiotomy, with its possible accidents, including intestinal injuries, post-operative sequelæ and scars, stitches, bandages, the troublesome supporter for from 6 to 12 months, and the possible hernia, will readily consent to vaginal incision and drainage, and vaginal hysterectomy when necessary; (11) vaginal hysterectomy with the ovaries left *in situ* is followed by much less nervous and physical disturbance than when the ovaries are removed and the uterus left, or than when they are all removed at the same time.

5.—Cragin records a case of **congenital pelvic kidneys obstructing the parturient canal**, and he reviews the histories of 5 other cases reported in the literature. The three features that mark the misplacement as congenital are: (1) The lack of mobility; (2) the shortness of the ureter; (3) the arrangement of the bloodvessels. The frequency of the conditions is about 1 in 1000 cases. Cragin concludes that: (1) Pelvic kidneys may cause dystocia; (2) as a rule, induction of premature labor, timed according to the degree of obstruction of the parturient canal, is the procedure indicated; (3) in rare, exceptional cases, when the pelvic kidney is in a condition of hydronephrosis, vaginal nephrectomy may be advisable. The patient reported by Cragin was cured by vaginal nephrectomy.

6.—Boldt claims that in suitable cases **total hysterectomy** should be performed in preference to supravaginal hysterectomy with extraperitoneal treatment of the pedicle. The operation, however, should never be performed unless absolute indications are present. The difference in time consumed between a Porro and an ideal total hysterectomy is not more than a few minutes, because the elastic ligature is dispensed with, and the proper attachment of the cervix in the lesser angle of the wound nearly equals the time consumed in ligating the vessels and suturing the peritoneum after removal of the uterus. When the child is dead *in utero* the organ should not be opened for the purpose of first delivering it, but the uterus should be removed *in toto* unopened. The advantages of total hysterectomy over the Porro operation are: (1) Less danger of infection; (2) practically no danger from secondary hemorrhage; (3) less danger of intestinal obstruction; (4) a shorter period of convalescence; (5) less danger of ventral hernia.

7.—According to Wathen, **pelvic surgery through the vagina** is probably indicated in the presence of extrauterine pregnancy before the end of the third month in a relatively greater number of cases than in any other form of disease. During the last 3 years he has operated for extrauterine pregnancy through the vagina about 25 times, each operation being completed without complication or subsequent trouble. Vaginal incision without the removal of the uterus, ovaries, or tubes is often preferable to the suprapubic method in many cases of accumulation of pus in the pelvis.

8.—Bové calls attention to the frequency of **patency of the stump of the oviduct after salpingectomy**. The consequences of the permeability of the canals of these stumps are pregnancy and peritoneal or stump infection. Of the former Bovée has found but 4 cases reported, though probably others have occurred. By far the most serious danger is that of infection spreading from the uterus to the peritoneum by this avenue. There is practically no barrier



between the peritoneum and a gonorrheal or other death-dealing germ. To overcome this danger Bovée suggests the following method, which consists simply in cutting out the oviduct with a wedge-shaped piece of the uterus deep into the uterine wall, by two perpendicular incisions about an inch long in front of and behind the tubouterine junction, and approximating muscle and peritoneum by suture.

9.—Smith states that so far as curing retrodisplacement, either retroflexion or retroversion or antelexion with retroversion, is concerned, **ventrofixation** with two buried silk stitches through the peritoneum and fascia gives the most reliable results. Ventrofixation should be reserved for cases in which abdominal section is necessary for other reasons, such as the detachment of adhesions and the removal of the diseased tubes that cause the adhesions. When the uterus is firmly attached to the abdominal wall and pregnancy follows, trouble of some kind is likely to occur. When suspension of the uterus is effected no trouble of this kind need be expected. Alexander's operation should be preferred whenever the uterus and appendages are free from adhesions.

10.—Ladinski records an interesting case of **congenital absence of the uterus and vagina** associated with sarcoma of one ovary and adenocarcinoma of the other—operation was followed by a cure.

### Practitioner.

July, 1898. [Vol. lxi, No. 1.]

1. On Normal Abnormalities. JAMES F. GOODHART.
2. The Treatment of Ruptured Uterus by Means of Gauze Packing. A. W. MAYO ROBSON.
3. The Care and Feeding of Premature Infants. G. F. BLACKER.
4. On Chalybeate Waters. CARL GENTH.

1.—Goodhart speaks of a number of **abnormalities**, such as mild constipation, which are only too often subjected to treatment when, perhaps, they are normal to the individual in whom they occur.

2.—Robson advocates the use of **gauze packing** in cases of **uterine rupture**. The edges of the laceration should be held apart by an assistant, and after cureting and washing out the fundus of the uterus, and compressing the abdomen so as to force all the free blood possible out, the laceration should be packed very thoroughly with long strips of iodoform-gauze, the packing filling, if need be, Douglas' pouch, as well as the whole of the laceration and the upper part of the vagina. A firm pad should then be applied above the pubes, and be kept in place by an abdominal bandage. The packing should be changed on the third day, and after that every second day.

3.—In speaking of the **care and feeding of premature infants** Blacker remarks that the results obtained by the use of the incubator in recent years are far better than were anticipated. The question of the child's weight at birth is of much more importance than its actual age, as the possibility of rearing it depends most of all upon its size and degree of development. The child must be protected from impure air and strong light, be carefully guarded from cold, be kept at an equable temperature, and be supplied with nourishment in an easily digestible form. As soon as the premature baby is born it should be placed in the incubator, if one be available; if not, it must be placed in a cradle surrounded by hot-water bottles, and be kept in a room at a temperature of from 85 to 90° F. Every premature baby should be carefully weighed once daily, unless its general condition is so grave as to contraindicate this, as only in this way can a safe guide be obtained as to whether or not the child is thriving. The average daily increase in weight varies with the total weight of the child, and amounts to only from  $\frac{1}{4}$  oz. to  $\frac{1}{2}$  oz. The baby should not be bathed until it can be taken permanently out of the apparatus. In all cases in which the baby is very premature it is best not to put it to the breast. Lavage may be practised in some cases. Very premature children must at first be fed every hour, and as the stomach is exceedingly small not more than one or two drams should be given at a time.

4.—Genth has found that a number of the **chalybeate waters**, among them Schwalbach and Weinbrunnen, are diuretic, and that Schwalbach increased the urea. In prescribing chalybeate waters, those containing free carbonic

acid are important for external use, and the elevation of the springs is a general consideration of importance; those of from 1,000 to 1,200 feet elevation being suited to the greatest number of cases. Anemic cases usually do best at simple chalybeate springs, or at those where the water contains some chlorids. People with hyperacidity of the gastric juice should seek alkaline chalybeate waters. If constipation exist the saline chalybeate should of course be used.

### Edinburgh Medical Journal.

July, 1898. [N. S. Vol. iv, No. 1.]

1. The Clinical Aspects of Arterial Pressure. GEORGE OLIVER.
2. The Army Medical Staff—Its Past Services and Its Present Needs. P. A. YOUNG.
3. Prolapse of the Mucous Membrane of the Vermiform Appendix into the Cecum. H. D. ROLLESTON.
4. Infant-Feeding. GEORGE CARPENTER.
5. On Defective Articulation of the Consonant R. JOHN BENJAMIN HELLIER.
6. The Frequency of the Occurrence of Gall-Stones in the Patients of a General Hospital, and Especially in the Subjects of Mitral Stenosis. E. M. BROCKBANK.
7. A Case of Hemiplegia with Convulsions. JOHN M. MAC-CORMAC.

1.—Oliver describes his **hemodynamometer**, in which he uses a fluid instead of solid pad. He considers this more accurate, believing that the reason the finger cannot fully appreciate changes in arterial pressure is because it is a solid pad. The instrument is very accurate, and is applied directly over the artery with or without a rest.

3.—Rolleston reports the case of a man 32 years old who was seized with sudden abdominal pain and anuria. The abdomen was distended, and the liver-dulness absent. The man was collapsed, and death occurred. After death there was found a ruptured duodenal ulcer, while the vermiform appendix was curved and fixed by old adhesions below the cecum. Upon opening the cecum, the prolapsed mucosa of the appendix was found projecting stiffly into the cecum for about  $\frac{1}{2}$  inch, the distention and firmness being due to the presence of a concretion inside. Microscopic examination of the appendix showed that all the tissues down to the muscular coat, but not the muscular coat itself, were projected into the cecum. The explanation of this occurrence is, in Rolleston's belief, that the fecal concretion had caused irritation, as a result of which the mucous membrane had projected and unfolded itself with the aid of the contraction of the muscular walls of the appendix.

4.—In a general lecture upon infant-feeding, Carpenter states that he has made arrangements to have percentage-milk furnished in London, and he specially recommends this method of infant-feeding as superior to all others.

5.—Hellier notes specially that the consonant R is the most frequent subject of defective articulation, more especially when it occurs in the middle of a word, as it is much easier of enunciation when it is the initial letter. It is especially difficult, too, when it is preceded by a very short vowel. It is more easily articulated in singing and in shouting than in ordinary speaking. The reason for all this is that articulation is a muscular acquirement, and muscular acquirements, to be well learned, must be learned in early years. R is the most difficult letter to learn, and is frequently learned improperly. As to the question of cure, it is stated that if the condition is recognized and treated early in life, it is quite possible and probable that it will be cured. It should then be treated by elimination of any anatomic defects so far as possible, and by the institution of regular exercise in speaking. In older persons, it is improbable that the defect can be cured at all. As to the frequency of this speech-defect, Hellier states that among 4,906 children, the failures with the letter R were 43, with S 41, with L 30, and with all the remaining consonants collectively, 39. But the number of defects with R would have been far greater, had the slight defects been included. Among the things that will aid in the cure of this condition are mentioned: singing, reading aloud, and recitation, the practice of speaking letters akin to R in the muscular movements necessary, such as T and D, and instruction by a teacher who is perfect in his articulation.



6.—Brockbank has investigated the records of the Manchester Royal Infirmary, and among 13,047 completed post-mortem records he finds that gall-stones were found in 7.4% of all subjects; in 4% of the males, and in 15% of the females. Comparison of these cases according to ages showed that the disease was much more frequent in women at any age, but it occurred oftener after 40 years of age. Brockbank has previously expressed the opinion that heart-disease increases the liability to the formation of gall-stones, and upon investigation he found that with mitral stenosis the percentage of gall-stones was 21.8; with cardiac enlargement secondary to chronic nephritis, it was 5.6%; with cardiac enlargement secondary to chronic endocarditis, it was 10%; and with cardiac enlargement secondary to alcoholism it was 7.1%; so that total of 10.9% of all cases of heart-disease showed gall-stones, while only 5.4% of cases without heart-affections showed them. This is thought to be due to the lowered general vitality of the system and to the passive congestion of the mucous membrane of the gall-bladder, which result in the presence of an amount of cholesterin in the biliary passages and, as the patient is necessarily inactive, there is tendency to the precipitation in the gall-bladder of a considerable amount of this.

7.—MacCormac reports the case of a boy, 7 years of age, who, when he was 3 months old, had an attack of convulsions after vaccination. He was paralyzed afterward, and had a series of convulsions occurring at irregular times. The right arm and leg were much wasted, and there was almost entire loss of voluntary power in the arm, while the leg was not much stronger. Under treatment the convulsions disappeared entirely, and power in the limbs was almost completely restored. It is believed that vaccination was the original cause of the convulsions, and that these were cortical in origin.

#### Wiener klinische Wochenschrift.

July 7, 1898. [11. Jahrg., No. 27.]

1. Examination of the Eyes in Cretinism and Related Conditions. RICHARD HITSCHMANN.
2. A Contribution to the Knowledge of the Incubation-Period of Typhoid Fever. EMIL JAUCHEN.
3. The Question of Ammoniaemia. HEINRICH WINTERBERG.

1.—Hitschmann has made a series of observations upon the conditions of the eyes in cretins and dwarfs, and he publishes an exhaustive table recording the condition found in the eyes of 58 patients of one or the other class. He found epicanthus relatively more common among cretins, and he explained its presence by the pathologic peculiarity of the skin and the conformation of the nose. Deformity of the eyelids, especially the upper eyelid, was another peculiarity observed, due probably to swelling and thickening of the conjunctiva, the appearance being not dissimilar to the picture of "ptosis adiposa." The space between the lids was quite narrow, and the ability to elevate the lid present only in a moderate degree. In many cases the conjunctiva was the seat of a chronic catarrhal condition, probably the result of those disturbances in the tear-ducts to which people with saddle-nose are more or less disposed. Anomalous positions of the eye, such as divergent strabismus, were seldom observed. A careful study was made of the conditions of the eyeground as revealed with the ophthalmoscope. In addition to the detailed record of the cases examined the article includes a general review of the subject of the text.

2.—Of an infantry regiment just returned from the autumn maneuvers 36 men became ill with typhoid fever, the onset in all being acute. Investigation showed that the regiment had in its homeward march drunk freely of the water of a typhoid-infected village, and, knowing the day when this occurred, Jauchen was able, in view of the acute onset of the fever, to determine the exact period of incubation. In 3 cases it was only two days, in 7, three days, in 6, four, in 4, five, in 4, six, and in 5, seven days; in only 7 cases did the disease begin in the second week. The disease was mild in all, and the short period of incubation is explained on the ground that the soldiers were exhausted from the march and the heat when they drank the contaminated water.

3.—The existence of ammoniaemia, as postulated by the elder Jaksch, and maintained by von Jaksch, jun., is denied categorically by Winterberg, who holds that what von Jaksch considers ammoniaemia is a form of septicemia.

#### Centralblatt für Gynäkologie.

July 16, 1898. [22. Jahrg., No. 28.]

1. A Contribution to the Treatment of Injuries of the Ureter. R. FÜTH.
2. An Intrauterine Speculum and the Indications for its Use. G. ZEPLER.

1.—Füth reviews the history of operative injury of the ureter, pointing out that this accident is especially frequent after vaginal hysterectomy by the clamp-method. After ligation of the right ureter by himself he first noticed a large tumor forming near the region of the right kidney 12 hours after the operation—a rapid accumulation of the imprisoned urine. In cases in which the ureter has been cut through, the proper treatment consists in implantation of the proximal end of the ureter into the bladder. The technic of this operation has been described by B. Bayer (Inaug. Diss., Strassburg, Graepner, 1897.) When this is not possible, owing to the high situation of the injury, as occasionally happens, the next resort is extirpation of the kidney on that side. Füth reports the case of a woman, 49½ years old, who had for 19 years noticed a tumor in the abdomen. She had passed through the hands of many physicians and finally was for two months under the care of Füth. She did not desire an operation because of the approaching climacteric and the danger of the surgical procedure. The body was colossal on account of the presence of an immense fibroid. With the exception of the menorrhagia there were no severe symptoms. Finally, there developed so much interference with respiration that operation became necessary and was performed under chloroform-anesthesia. The myoma was raised through a long abdominal incision, when there was discovered behind it and to the right an ovarian cyst twice the size of a man's head. This was grasped at its pedicle by two large clamps and excised. The fibroma had burrowed so under the peritoneum that the entire parietal peritoneum was stripped up by its growth. This was incised over the bladder and as far back as the cecum. Posteriorly the tumor was surrounded by immense veins as thick as one's finger. These were ligated and severed, and in doing this the right ureter was also ligated. The tumor was then removed, when the injured ureter was discovered. The central end was in plain view, but the peripheral end could not be discovered at first, although it was later found near the bladder under the stripped-up peritoneum. Anastomosis was performed and the abdomen closed.

2.—Zepler describes a new intrauterine speculum and gives the indications for its use. The instrument is solid at the outer end to which the handle is attached, while the half is a skeleton merely, so that a clear view of the uterine mucosa can be obtained. Another form of the instrument is skeleton throughout. It is claimed that by means of this instrument it is possible to sound the oviducts and thereby drain off tubal collections, or to make injections of medicinal substances into the tubal orifices. Beginning malignant degeneration of the uterine mucosa may also be diagnosed by direct visual inspection through this instrument, while the treatment of chronic metritis can be greatly simplified through its use. Uterine polypi can be located and removed, and spots of local bleeding cauterized. The contraindications for the use of the speculum are those that exist for any intrauterine treatment.

July 23, 1898. [22. Jahrg., No. 29.]

1. Two Cases of Incision of the Fundus in Conservative Cesarean Section. RIEDINGER.
2. Hydrocele in the Female. FERD. NOLL.

1.—Riedinger reports two cases of conservative Cesarean section performed through the fundal incision. The first patient was 23 years old, a primipara, 4 weeks before term. She was rachitic, with a pelvic diameter of 8.5 cm. She was desirous of having a living child and willingly submitted to the operation, which was performed 5 hours after the beginning of her pains, the child presenting by the head. Under chloroform-anesthesia the incision was made from a point 7 cm. above down to the umbilicus; the uterus was lifted out; and an incision was made in the fundus 12 cm. long. This was followed by but slight hemorrhage, and the easy extraction of a fetus weighing 3,600 grams and having a length of 50 cm. The placenta and membranes followed spontaneously.



Ten deep and as many superficial stitches closed the uterine wound. A normal convalescence followed. The second case was in a woman, 33 years of age, in her fifth pregnancy. The first labor had been complicated by prolapse of the cord, and turning was performed, with perforation of the after-coming head. The child weighed, without the brain, 3,400 grams and measured 50 cm. The second labor was induced prematurely and the child was turned and extracted but was dead. It weighed 2,900 grams and measured 48 cm. The third pregnancy ended in version and perforation of the after-coming head, the child weighing, without the brain, 3,930 grams and measuring 56 cm. The next pregnancy was terminated in the same manner as the third, the child weighing, without the brain, 4,100 grams and measuring 52 cm. The patient had a rachitic pelvis with a true conjugate of 7 cm. The child presented by the head and as the woman wished a living child it was decided to perform Cesarean section. The incision, made under chloroform-anesthesia, was 20 cm. long, with the umbilicus as the middle point. The uterus was lifted out and an incision made between the tubes 15 cm. long. An adherent placenta was discovered on the posterior uterine wall. The child was quickly extracted and the placenta detached, the adhesions extending down to the internal uterine os. Very slight bleeding followed the incision into the uterine tissue, a slight artery spurring near the left tubal orifice. The child, a girl, was living and weighed 3,980 grams and measured 50 cm. Eight deep and 9 superficial sutures were required to close the uterine incision. Normal convalescence followed.

2.—Noll records 3 cases of **hydrocele of the round ligament** upon which he has operated during the last 5 years. The operations were all successful.

July 30, 1898. [22. Jahrg., No. 30.]

1. Ectopic Gestation Going Nearly to Term; Celiotomy; Extraction of a Living Child; Recovery of the Mother. FRANZ NEUGEBAUER.
2. The Treatment of Brow-Presentations. GEORG SOLOWIEFF.
3. Concerning the Easy Removal of Stitches Placed in the Depths of the Vagina. L. CONITZER.

1.—Neugebauer reports an interesting case of late **extra-uterine pregnancy** with extraction of a living child that lay free in the abdominal cavity. The patient was 36 years of age, had menstruated first in her fourteenth year, and had always been regular. She had been married 5 years and had given birth to two children, and aborted once. The last menstrual period was shorter than usual (3 days instead of 6 or 7). Several days later she commenced to bleed again, and so continued to do for 6 weeks. The hemorrhage was accompanied by labor-like pains. The abdomen commenced to increase in size, and in the course of 4 months the woman felt the first fetal movements. These produced such severe pains that she was compelled to consult a physician. In the last 3 months her sufferings were so great that twice daily she received an injection of morphia. She ultimately entered the hospital. She had no fever; the lungs and heart were normal, and the urine did not contain sugar or albumin. The abdomen was irregularly enlarged, being the more voluminous on the left side. Palpation detected the fetus lying with its back anteriorly and to the right, the buttocks directed to the left, and the head out of reach low down in the pelvis to the right. The fetal heart sounds were normal. On vaginal examination the uterus was found to lie to the right and to be retroverted; it admitted a sound to the depth of 11 cm.; the vagina was normal; the pelvis also; and colostrum could be expressed from the breasts. The Röntgen rays were used without any practical results. The diagnosis was plain—extrauterine pregnancy with a living child, which lay directly under the thinned-out abdominal wall. The operation was performed when the duration of pregnancy was estimated as 256 days. The patient was placed in Trendelenburg's position under chloroform-anesthesia. The incision began 3 cm. above the umbilicus and ended about 3 cm. above the symphysis. As soon as the peritoneum was opened the buttocks of the child projected, and the child was quickly extracted. The cord was caught between two Péan forceps and divided. The child cried and was placed in a couveuse. The placenta was attached to the posterior wall of the bladder. There was marginal insertion of the cord, and it was encircled once around the neck of the child,

and once around its left arm. The placenta was not very large, and at the beginning of the abdominal incision it had commenced to separate, the hemorrhage being profuse. This was controlled by tamponing with Tavel's solution. A small part of the placenta was attached to the anterior uterine wall. After its removal the excavation was tamponed with iodoform-gauze, the free end protruding through the abdominal incision. The child was 47 cm. long and weighed 2,950 grams. The patient made an uninterrupted recovery.

2.—In simple **face-presentation**, when the chin is anterior and no other complication exists, Solowieff says that the labor may advance without any unfortunate occurrence, but when the **brow** presents and the mento-occipital diameter of the fetal head attempts to engage, it is impossible for the labor to terminate spontaneously, and, unless assistance is given, both mother and child will perish. The causes of this presentation are slight pelvic contraction, slight displacement of the womb, or some deformity of the fetal skull. In the 10 years from 1887 to 1897 there were in the Moscow obstetric clinic among 8,330 labors 21 face-presentations and 18 brow-presentations. In the face-presentations forceps were used twice and craniotomy was performed twice; the mother survived in each instance. The mortality among the children was 14.3%, and was due to pelvic contraction rather than to the face-presentation. Of the 18 brow-presentations version was performed in 10 cases with extraction by the feet. Of these cases one child perished and one mother died of endoparametritis. In 1 case forceps was applied at the inferior strait, the labor-pains being insufficient to expel the head farther. In 1 case of twin labor the child was born spontaneously, its weight being 2,430 grams. In 1 case the brow-presentation was converted into a posterior occipital presentation; in 5 cases the brow-presentation was converted into a face-presentation, all the children and mothers surviving. Solowieff reports in full 5 cases of brow-presentation.

3.—Conitzer describes a **needle** for making deep sutures in the vagina and around the portio.

### Centralblatt für innere Medicin.

July 2, 1898. [19. Jahrg., No. 26.]

1. Bolognini's Symptom of Measles. A. KÖPPEN.

1.—Köppen has investigated **Bolognini's symptom of measles** in 316 cases. The symptom is elicited by having the patient lie upon his back with the legs flexed, then placing both hands upon the abdomen and making gentle pressure and lateral movements with the tips of the fingers. The pressure being gradually increased, one receives the impression of a slight friction which, in Bolognini's belief, is due to the presence of the eruption on the peritoneum and the friction of the two roughened surfaces when rubbed against each other. Among the total of 343 examinations upon 316 children, the symptom was felt 154 times and was missed 189 times, but this frequency is, in Köppen's view, not proof of its value as a symptom of measles, as he has found it in a number of other affections in which the contents of the bowel were liquid, and he found it only in those cases of measles that were attended with diarrhea. Therefore he believes it is nothing more than the transmission to the hand of the vibrations produced by agitation of air and liquid in the bowel during the examination.

July 9, 1898. [19. Jahrg., No. 27.]

1. Concerning the Influence of Temperature upon the Formation and Solution of Spheres of Urates. C. MORDHORST.

1.—Mordhorst shares in a large measure the views of Haig as to the importance of uric acid (or urates) in the causation of disease, and has studied the influence of temperature on the solubility of urate-spheres, the deposit of which he considers responsible for rheumatic attacks. His conclusions are as follows: (1) Urate-spheres are precipitated from a soda-solution saturated with uric acid the less easily the warmer the solution; (2) the higher the temperature of the soda-solution the more neutral or less alkaline salts must be added to cause precipitation of urate-spheres; and (3) vice versa; (4) if a warm soda-solution not com-



pletely saturated with uric acid be exposed to a lower temperature, urate-spheres are soon precipitated; (5) urate-spheres precipitated from a soda-solution at room-temperature are again dissolved in part or entirely at blood-heat; (6) a protracted, but not necessarily intense cooling of the skin can, under certain conditions, induce, even in healthy persons, localized rheumatism; (7) this results from precipitation in fibrous and other connective tissues of urate-spheres which coalesce and, by their accumulation in lymph-spaces, occlude the radicles and thus give rise to circulatory disturbances and to pain; (8) an elevation of the body-temperature induced by hot baths, bodily exercise, or fever exerts a favorable influence on the rheumatic symptoms, the swelling and the pain, because the precipitated spheres are in part dissolved and removed from the affected tissues; (9) the partly dissolved urate-globules are carried finally to the blood-capillaries, where they are arrested by the narrowness of the channels. If in a short time a considerable amount of such imperfectly dissolved spheres reach the blood-stream, stasis in the afferent arteries is produced and thereby increase in blood-pressure, which gives rise to varied disturbances, especially to headache; (10) the state—increased pulse-tension, headache, etc., induced by this obstruction, Haig terms *collemia*; (11) the administration of antipyrin, antifebrin, etc., may remove the rheumatic pains produced by the cooling of the skin, as the dilatation of the capillaries that they induce leads to acceleration of the lymph-stream in the affected tissues and to warming of the juices; (12) the difference between the alkalescence of the blood and that of the lymph varies within such wide limits that the latter, even with normal blood-alkalescence, can, under unfavorable circumstances, be transformed into acidity and thus bring on an attack of acute gout.

July 16, 1898. [19. Jahrg., No. 28.]

1. Concerning the Probable Occurrence of Carbonic Acid in Eclampsia. K. B. HOFMANN.

1.—Hofmann has examined the **cerebrospinal fluid** of an **eclamptic** for the purpose of ascertaining its **toxicity**. The fluid was colorless, clear as water, and on standing for 24 hours precipitated only a slight deposit. The reaction was alkaline, and the specific gravity at 15°, 1009. The quantity of albumin was so small that no accurate result could be obtained with the tests employed. The characteristic biuret-reaction could not be obtained. Examination with Nylander's reagent yielded a negative result. Other tests, including Drechsel's reagent, proved that in place of the alkaline carbonate that is always present in the cerebrospinal fluid there was to be found an ammonium-salt, probably the carbamate. It is reasonable to conclude, therefore, that in the cerebrospinal fluid of eclamptics there is present an abnormal quantity of ammonium-salts, mainly the ureate. This must also be present in the blood and other fluids of the patient, and a condition of systemic poisoning from ammonia ureate must be considered as existing in such a patient. Before more positive conclusions can be arrived at a more extensive analysis of the cerebrospinal fluid of eclamptics will be necessary.

July 23, 1898. [19. Jahrg., No. 29.]

1. Some Cases of Disease of the Digestive Tract. GEORG ROSENFELD.

1.—Rosenfeld records 2 cases, both of which exhibited marked constipation, vomiting, inanition, and depression. In one there was besides some tendency to stupor. In both, acetone and diacetic acid were present in the urine in considerable quantities, and the phenylhydrazin reaction was obtained; but in neither was there diabetes or alimentary glycosuria. In both cases the only diagnosis that could be maintained was **auto-intoxication** from the **gastro-intestinal tract**. In a further case, there was a widening of the esophagus, and the cause of this, whether a diverticulum or not, was in doubt. The diagnosis was attempted by introducing a tube to which was attached a condom filled with bismuth-solution. The resulting shadow, as seen in a radiograph, lay directly behind that due to the heart. When the bismuth was washed out and the condom was blown up

with air, thus filling the cavity, a bright area resulted that showed the difficulty to be dependent upon a diverticulum. Rosenfeld advises the use of radiography in the diagnosis also of carcinoma of the stomach, introducing a tube filled with shot, and therefore readily radiographed, to occupy the position of the greater curvature. In this way tumors that are very movable can be better seen to be connected with the stomach; and even before a tumor is palpable there can be seen a deep shadow along the right side and above the tube. The positive demonstration of the fact that the stomach is small when there is at the same time marked stagnation of food speaks strongly for carcinoma.

Centralblatt für Chirurgie.

July 30, 1898. [25. Jahrg., No. 30.]

1. A New Method of Operative Treatment for Extensive Defects of the Urethra by Suprapubic Implantation of the Urethra and Penis in the Bladder. HANS WAGNER.

1.—Wagner reports the case of a boy, 16 years old, who, whilst on a hunting expedition, was bending over, making his way through the brush, when he was accidentally shot by another hunter just above the anus. The entire perineum was lacerated and there was considerable hemorrhage. The injury was followed by suppuration, and fifty-two shot, two bits of paper wadding, and three pieces of bone, escaped from the wound. Feces were passed from the lacerated anus and from the wound; urine escaped from the wound and by the rectum. At the time of entrance into the hospital the perineum was crossed by numerous irregular scars, and there were many fistulae, discharging feces and urine. No urine passed from the urethra and it was impossible to pass a sound or bougie into the bladder. The obstruction seemed to be located at the end of the bulbous urethra. The testicles appeared to be normal and erection had taken place after the injury. To provide for free escape of urine the fistulae and scar-tissue were divided up to the neck of the bladder, after which it was possible to pass a catheter into the viscus; by this means the urine and feces were passed separately. No further operative measures were undertaken until about 2 months later, when the rectum and the cicatricial tissue about it were dissected free for a distance of 6 cm., amputated according to the usual method, and the freely movable upper portion was drawn down and sutured to the skin. After this the scar-tissue in the region of the urethra was extirpated, and it was seen that the entire canal had been injured from the bulb to the neck of the bladder, the prostate having been almost completely destroyed. A catheter was passed from the wound to the bladder and another out through the urethra. The rectal portion of the wound healed readily, but abscesses formed subsequently and several shots were discharged. Urine passed through the catheter, by its side and from the wound, and if the catheter was removed for a short time, cicatricial contraction followed, so that it became impossible to pass the catheter. With the object of relieving this condition a third operation was decided upon. The extent of the defect (8 or 9 cm.) made it impossible to unite the ends of the urethra, and it was thought impracticable to transplant mucous membrane from another part of the body; therefore a new method was devised. About a month after the second operation an incision was made, extending from 5 cm. above the symphysis to the dorsum penis, down to the bone. The pubis was freed from tissue, and after separating the suspensory ligament, the roots of the corpora cavernosa were cut off, the corpora spongiosa remaining uninjured. The dorsal vein and artery had to be ligated. The bladder was exposed and a deep groove was made in the upper border of the symphysis, affording sufficient room for the corpora spongiosa. The bladder was then opened and the urethra sutured to the opening in the region of the bulb. The patient made a good recovery from the operation and four months afterward passed the greater part of his urine through the penis, although the perineal fistula still remained open and drops of urine escaped from it. He was able to retain his urine for two hours. The result is considered on the whole highly satisfactory, and the method is thought worthy of further application in similar cases.



## Original Articles.

### OLD AND MODERN THEORIES OF INFLAMMATION: ITS NATURE AND PURPOSE.<sup>1</sup>

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THE exact significance of the word inflammation has been greatly modified since its first introduction by Celsus at the beginning of the Christian era. Celsus applied the term to certain local changes observed in the external parts of the body and characterized by the presence of heat, redness, pain and swelling (*calor, rubor, dolor, tumor*). The regularity with which these phenomena appeared in consequence of various injuries and irritants applied to the superficial parts of the body led Celsus to call these manifestations the cardinal symptoms of inflammation. This teaching was accepted by Galen (131–201) and in the course of time a fifth symptom was added, namely the functional disorder (*functio laesa*) caused by the inflammatory process.

Gradually the term inflammation came to be applied to a number of morbid processes in the internal organs, which, from analogy, were thought to be of inflammatory nature. In the meantime the word soon lost its exact original meaning, as defined by the enumeration of the four cardinal or Galenic signs; it was applied to conditions from which one or more of the cardinal signs were absent, and finally inflammation was employed to designate morbid processes in which none of the cardinal symptoms could be said to be present. In other words, inflammation lost the purely symptomatic significance at first attached to it. This inexact use of the designation undoubtedly depended to a large extent upon indistinct notions as to the original real meaning of the word, but perhaps also, to some degree, upon the belief that the various processes it gradually came to include were of essentially the same nature and manifestations of disturbances of similar kind and origin.

Attempts were soon made by scientific men to discover the real essence and nature of inflammation by studying the finer changes in the organs and tissues the seat of inflammation, and by the production of experimental inflammation in animals. It was hoped in this way to disclose some change or phenomenon that would be so constant and so momentous that it would afford some explanation of inflammation at the same time as it would furnish the test by means of which the inflammatory could be separated precisely from all other morbid processes.

One of the earlier attempts of this kind was made by Boerhaave, about the year 1700; who came to the conclusion that inflammation was the result of an arrest of the circulation in the affected area and of the consequences of this stasis. This teaching was followed

by the formulation of a number of theories by such men as Magendie, Cruveilhier, Brücke, von Henle and others, that were aimed at accounting for the cause of the stasis and circulatory disorders of inflammation; but stasis did not explain even the cardinal symptoms of inflammation.

Rokitansky laid special stress upon the dilatation of the capillary vessels, the slowing of the current and the exudation of serum. In attempting to come a little closer to the nature of inflammation, Virchow, in 1854, founded the cellular theory of inflammation, the theory of the inflammatory stimulus. According to this conception inflammation depends on causes that stimulate the functional, nutritive and formative irritability of the cells. The circulatory disturbances were regarded by this theory as secondary to the changes in the perivascular tissue inaugurated by the inflammatory stimulus, and the pus-cells characteristic of so many inflammations as derived from proliferation of the fixed cells. Cloudy swelling was a "parenchymatous" inflammation due to excessive nutrition of the cells from stimulation. Virchow did not formulate an exact definition of inflammation, because he was not able to delimit the inflammatory changes from other morbid processes. Inflammation was conceived as more or less directly dangerous to the organism.

Cohnheim was the first to study inflammation in the living animal under the microscope. By direct observation of the phenomena of acute inflammation he could point out that the essential changes are due to disturbances of the circulation followed by emigration of leukocytes through the vessel-walls, exudation of serum, and diapedesis of red cells. At first he regarded the leukocytic emigration as an active process, but subsequently he fell in with Schklarewsky and Hering in regarding this phenomenon as wholly passive, due to intravascular pressure, in conjunction with increased porosity of the venous and capillary walls. According to Cohnheim, inflammation was due to a molecular, passive lesion of the vessel-wall allowing the constituents of the blood to pass out. He demonstrated conclusively that the cells in the exudate are emigrated leukocytes. Cohnheim failed to see anything salutary in inflammation; it was merely a primary lesion of the vessels.

The demonstration by Bütschli, Fleming, J. Arnold and others that cells divide by karyomitosis, and the perfection of histo-chemic methods soon established the fact that in almost all inflammatory lesions there does occur an actual, more or less well marked proliferation of the fixed cells. This new cell-growth came to be regarded as regenerative in its nature, intended to repair the damage and destruction of tissue during the height of the inflammation.

For quite a long time, and quite into our own days, Cohnheim's theory of a local, passive alteration of the vessel-wall has been upheld as the most satisfactory

<sup>1</sup>Read before the University Hospital Alumni Association, December 28, 1897, and before the Chicago Medical Society, April 27, 1898.

explanation of inflammation. Ziegler, in his well-known text-book, speaks of inflammation as due to any cause that gives rise to local degeneration of tissue accompanied by pathologic exudation from the blood-vessels and followed sooner or later by proliferation of tissue, leading either to regeneration or hypertrophy. Such definitions are essentially anatomic; they are more or less incomplete statements of the phenomena that occur. A mere description of the changes that follow the alterations in the vessel-wall does not lead to a broad view of inflammation. Cohnheim's theory, therefore, while the experimental demonstrations upon which it rests furnish a remarkably vivid insight into the vascular changes of inflammation, leaves little hope as a guide to fully grasping the essential nature of the process.

Inflammation has lost its original symptomatic significance of a morbid process marked by heat, redness, swelling, pain, and disturbed function. The term has come to be applied to the majority of complex, morbid processes in the body composed of admixtures in varying degrees of circulatory, retrogressive, and progressive changes. It is far from being a definite histologic process, possessing individuality on account of the typical nature of its changes, because at one time vascular changes predominate; at another retrogressive changes in the fixed and wandering, in the old and new cells; at still another the proliferative changes; nor is it an etiologic entity, for its causes are exceedingly varied and numerous.

Efforts have, therefore, been made, especially by surgeons, to limit the significance of inflammation upon etiologic grounds. Roser, Senn, and others would apply the term inflammation only to local processes due to the presence of microbes. Hüter claims that inflammation should be applied only to suppuration, that it is caused only by pyogenic microbes. Roswell Park would make inflammation synonymous with infection. The fact remains that inflammatory changes occur in response to traumatic, thermal, and chemic influences, as well as in consequence of infection. The term inflammation has been used too long to express certain essential processes of like origin and import in general pathology to be appropriated exclusively for the designation of one variety of inflammation, even though it be an important and frequent form. To apply inflammation to the general effects of infection is to usurp the term still more, because inflammation, no matter what the etiology of the processes called by this name, there can be no question, has always been a local process. Inflammation often occurs as the local reaction to local infection, but infection may occur without inflammation, as witness tetanus and the septicemias. Inflammation in general cannot be made an etiologic entity.

It has been proposed by Thoma and by Andral to banish the term inflammation from the vocabulary of

medicine, because it seems impossible to unite upon some fundamental definition from which the study of this process could start out, because it at present includes processes of different etiology, and because it is not possible to point out some single process that is characteristic of all inflammations; but this proposition has not met with favor among pathologists. It is true that the term inflammation has been loosely employed and variously defined and that the varieties of inflammation are so many that a wholly satisfactory classification is hardly attainable, but as yet no one has proposed a new and more practical method of presenting the common features of the inflammatory processes than can be done by the critical employment of the old terminology. It is evident, however, that as the general study of etiology advances, many inflammations may be considered with greater clearness and precision from the standpoint of etiology, as is now done, for instance, in the case of tuberculosis and other diseases. Clinically, anatomically, and etiologically many processes of disease, associated with inflammation, present marked differences, and yet they are pathogenetically similar. The generalization of so many etiologically distinct pathologic processes under the head of inflammation in general pathology is warranted not only because of similarity of origin, but still more because the investigations of recent years have shown that the essential changes in the inflammations are responsive, protective, and salutary in their nature.

Many features of inflammation point out that the tendency of the whole process is to protect the organism at large and to overcome or diminish the effects of local injury. Some such conception as this lies at the bottom of many recent attempts to formulate a definition of inflammation. Neumann defines inflammation as the series of local phenomena that develop in consequence of primary lesions of continuity or necrosis of the tissues, and that tend to bring about healing of these lesions. Sutton describes it as the method by which an organism attempts to render inert noxious elements introduced from without, or arising within it. Councilman speaks of it as the sum of phenomena that take place in a tissue as the result of an injury in order to overcome or diminish the effects of the injury. Adami defines inflammation as the series of changes constituting the local manifestations of the attempt at repair of actual or referred injury to a part, or, briefly, as the local attempt at repair of actual or referred injury. These definitions indicate clearly that an effort has been made to grasp the essential nature, the meaning, of inflammation.

The similarity of pathogenesis of the processes grouped together as inflammatory may be summarized in the statement that various agents, most frequently bacteria, produce, when they come in contact with the tissues, more or less well-marked necrotic and degenerative lesions at the same time as certain active or



reactive changes ensue. The most evident of these active, responsive changes are the well-known vascular phenomena—the dilatation, the hyperemia, the leukocytic emigration, and the plasmatic exudation—and the proliferation of the fixed tissue-cells. The comparative study of inflammation, inaugurated by Metschnikoff, has demonstrated that all organisms, even the simplest, do not passively submit to injury. Passive submission to injury would not be consistent with preservation of species. It has been conclusively shown by the comparative investigations of Metschnikoff and others that the migration of wandering cells and leukocytes to the regions of injury is a most striking and a nearly constant feature in the reactive process. In the simpler multicellular organisms this aggregation of wandering cells in the tissue-spaces occurs without the aid of nerves or bloodvessels. In the avascular tissues of the higher animals reaction may take place with coincident nervous and vascular influences in the vicinity, or without, especially when the injury is relatively slight; but in the vascular tissues of the higher animals there occur the familiar vascular changes in which the vasomotor nerves play an influential part. In other words, the reactive phenomena in the simplest animals and tissues show that the infiltration of wandering cells about injuries and injurious agents precedes the vascular events in the evolutionary history of the process.

There is now no longer any question that leukocytic emigration in the vascular tissues is an active process from beginning to end, favored by the vascular dilatation, the slower current, and the changes in the endothelium. Even the changes in the vessel-wall may partake of an active character. The increased porosity is not necessarily the result of a passive, degenerative lesion of the wall, due to the deleterious action of the inflammatory agent. Klebs and others seem to have shown that the endothelial cells have the power of contraction by means of which they may alter their shape and position and thus enlarge the spaces between each other. Heidenhain claims for the endothelial cells a secretory action, which is not, however, as yet generally accepted by physiologists. The well-known experiments of Samuel show that the course of inflammatory reaction is profoundly influenced by the nervous system, being imperfect and incompetent when the vasoconstrictor nerves only are in functional activity. The endothelial cells also incorporate bacteria and other foreign bodies. Hence, while the injurious action of the inflammatory agent may involve the vessel-wall in passive lesions, there is abundant evidence at hand to indicate that the endothelial cells may actively favor the occurrence of inflammation.

The mysterious force that attracts ameboid cells toward regions of injury or toward foreign bodies in the tissues has been termed positive chemiotaxis. It depends upon the production of diffusible substances acting upon the

sensibility of the cells. Sometimes the cells are driven away—negative chemiotaxis also occurs. The researches of Massart and Bordet, Leber, Gabritschewsky, Buchner, Kanthack and others show that the vast majority of pathogenic bacteria contain or produce substances that so affect the sensibility of the cells that they move toward the bacteria. Such diffusible substances may, of course, influence leukocytes still within the vessels. Buchner has also shown that the early products of cell-disintegration attract leukocytes, and a number of chemic substances are known to have the same power. Whatever the subsequent action of the ameboid cells may be, there seems no doubt that chemiotaxis is the power that leads to their aggregation in inflammation. But to build a theory of inflammation on the basis of chemiotaxis—an attraction-theory—as Leber would do, is not warranted, because this phenomenon is not constant and does not indicate broadly enough the essential nature of inflammation.

Some of the leukocytes, the wandering cells of the mesoblast, as well as certain fixed cells, have the power of incorporating within themselves various substances, including sundry bacteria. Metschnikoff has called such cells phagocytes; the whole process, phagocytosis. By intracellular action, phagocytes may destroy bacteria and digest other substances. Based on his classic studies of the processes of phagocytosis, as it occurs throughout the animal kingdom in the reaction to injury, and especially to infection, Metschnikoff has constructed the phagocytic theory of inflammation: "The essential and primordial element of a typical inflammation is a reaction of the phagocytes against the harmful agent." This theory regards inflammation as the means of defence among animals. It is a phagocytic struggle against infection, a salutary reaction, "an adaptation of the organism to its environment, which has been developed in its never-ceasing struggles against deleterious agents." In consequence of natural selection, the useful characteristics, including those required for inflammatory reaction, have been established and transmitted. The inflammatory reaction is the most important in the curative force of nature, although its mechanism is far from perfectly adapted to its end.

The broad, biologic conception that considers inflammation an adaptive, protective, and reparative tendency that is recognizable in the reactions to injury among all animals, is certainly the only one that is consistent with the phenomena observed, the only one that allows us to grasp the real meaning of inflammation. It is in large measure to Metschnikoff that pathology owes this expansion of its teaching concerning the meaning or idea indicated in the natural phenomena of inflammation; but Metschnikoff's efforts to make inflammation synonymous with phagocytosis, to establish and maintain that the intracellular action of the wandering and fixed cells called phagocytes is the essential and primary element of inflammation, have met with much

opposition, especially among the Germans. Indeed, it has seemed as if, in their frantic onslaught on phagocytosis, many of Metschnikoff's opponents, such as Ziegler and Weigert, have overlooked that broader bearing of the work of this investigator in forming a biologic theory of inflammation; but the opposition to Metschnikoff's theory of phagocytosis has been most beneficial to the development of this phase of pathology. As Oscar Hertwig says: "Science progresses most rapidly and successfully in proportion to the diversity of opinion held by different authorities."

First there was brought forward against phagocytosis the humoral theory, based on the demonstration by Nutall, Nissen, Baumgarten, Buchner and others of the presence in the blood-serum of bactericidal substances, or alexins, as Buchner calls them. At the present time the cellulo-humoral theory is in the ascendant. This theory ascribes the bactericidal and antitoxic properties of the blood-serum, as well as of the inflammatory exudate, in a large measure to the action of living and of disintegrated leukocytes.

In the first instance it seems reasonable that if the serum contains bactericidal substances these must be produced by cells. To quote again from Hertwig: "In opposition to the antiquated physiologic view that the principal metabolic processes take place in the fluids of the body, too much stress cannot be laid on the following proposition—that the cells are the site of the absorption, secretion, and transformation of material; the fluids functionate only in conveying the nutrient material in a fluid condition to the cells, and in carrying away the waste products. Between the cell and its surrounding medium, there exist the most complicated physical and chemic conditions of interchange."

The exact relations of the leukocytes to the bactericidal substances of the blood, or alexins, have not been fully established. The general tendency is to look on the leukocytes as their source. Buchner, Hankin, and, very recently, Löwit have shown that leukocytes contain substances destructive of bacteria. Buchner produced an exudation very rich in leukocytes by injecting an emulsion of wheat-gluten into the pleural cavities of animals. The exudate was more bactericidal than the blood and retained this power after freezing and thawing had killed the leukocytes, showing that the action could not be ascribed to phagocytosis. Experiments of similar import have been made by Denys and Havet, van der Velde, and others. Hankin found that organs rich in leukocytes yielded bactericidal bodies, and Löwit extracted from the bodies of leukocytes that had been repeatedly washed and centrifugated an exquisitely bactericidal substance. Löwit showed furthermore that when the aorta is ligated, so that the circulation is confined to the brain and lungs, the introduction of leukoblasts from the hematopoietic organs being excluded, there is marked lessening of the bactericidal powers of the blood parallel with a marked

fall in the number of leukocytes in the blood, especially the polymorphonuclear variety. Vaughan and Kossel separated from the blood a bactericidal nuclein that is produced only by cells. Bordet, Schattenfroh, Bail, and Stokes and Wegefath have also brought forward rather striking evidence that the leukocytes furnish bactericidal substances. When blood is withdrawn from the body there is a marked increase in its power to destroy bacteria, generally explained as due to disintegration of leukocytes. Stokes and Wegefath conclude after extensive observations, that in the serum of man and of many animals there are present a varying number of granules, which resemble the granules of the eosinophilic and neutrophilic leukocytes in size and appearance, and which are almost certainly derived from leukocytes. When the serum of the dog and the rabbit is filtered through new Müncke porcelain cylinders its property of agglutinating and arresting the motion of many motile pathogenic bacteria and destroying large numbers of these bacteria is lost. This property can be restored by adding a sediment of leukocytes and free granules. Hence leukocytes and granules furnish germicidal substances. These are all facts that indicate that leukocytes furnish microbicidal substances and that in acute inflammation the migrated cells may secrete or liberate on disintegration substances that greatly increase the microbe-killing powers of the serum.

Direct evidence of the destructive effects of serum on bacteria is also at hand. Afanassieff found that on placing virulent cultures of anthrax-bacilli on granulation-tissue there commenced an immediate and progressive disintegration of the bacilli due to the action of the serum, phagocytosis playing a secondary role. This protective action of the granulation-tissue hindered the invasion of the general organism by the bacilli. R. Pfeiffer showed that when cholera-spirilla are injected into the abdominal cavity of refractory guinea-pigs, the microorganisms become swollen and spherical before phagocytosis has time to occur. Metschnikoff and Bordet acknowledge, in respect to Pfeiffer's demonstration, that in rare cases bacteria may be affected, if not destroyed, by the diffusion of bactericidal substances from the leukocytes into the serum—an indication that Metschnikoff is convinced that leukocytes may have the power of extracellular action.

Finally, not all leukocytes are phagocytes. The finely granular neutrophiles (polymorphonuclear) and the large hyaline cells are the only ones that have the power of phagocytosis, and yet the nonphagocytic, coarsely granular oxyphiles are also susceptible to chemiotaxis. What is then their function? Kanthack and Hardy have shown that these cells act defensively by discharging their granules from the cytoplasm, which affect certain bacteria. Thus, when anthrax-bacilli are placed in the frog's lymph this phenomenon of discharge of eosinophile granules is the first observed, and



then the hyaline cells are seen to incorporate the bacteria. The results of the investigations of Kanthack and Hardy have been questioned by du Mesnil and others, but the recent study of Stokes and Wegfarth indicates that the specific granules of eosinophiles, as well as of the neutrophiles (finely granular oxyphiles of some writers), are the carriers of the bactericidal substances of the leukocytes and of the serum.

These considerations are sufficient to indicate that leukocytes in inflammation do not act solely as phagocytes, or by intracellular action only. Metschnikoff's contention that inflammation is phagocytosis must be held as taking a too one-sided view of the reactive processes in the higher animals. No one questions that phagocytosis, in the sense of Metschnikoff, occurs freely in most inflammations, but in many cases the extracellular action of living and dying cells plays an essential part in the struggle against infection equal in value to their function as pure phagocytes. It follows that, if the supposed extracellular action of leukocytes be finally accepted, their importance in inflammation becomes even greater than when regarded as phagocytes only.

Metschnikoff speaks of certain inflammations attended with serous exudation and little or no leukocytic emigration as incomplete phagocytic reactions. The endothelial cells alone react, but they do not accomplish all the phases of phagocytosis. They stop short at a stage of contraction which allows merely the plasma to pass through the vessel-wall; but, if the bactericidal and other beneficial actions of the blood-serum are acknowledged, as they must be, serous inflammations are included perfectly well in the general conception of the biologic theory, without narrowing all the phenomena down to phagocytosis. In the end all the active phenomena of inflammation are, and must be, cellular, but phagocytosis *sensu strictu* has been applied to intracellular destruction and digestion and does not embrace all the manifestations of cellular activity that may occur in the reaction to the effects of harmful agents.

Hence Podwyszozi would modify Metschnikoff's cramped statement that inflammation must be regarded as a phagocytic reaction, and he says that "inflammation is a local reaction, often beneficial, of the living tissue against the irritant substance. This reaction is produced chiefly by phagocytic activity of the mesodermal cells. In this reaction may, however, participate not only changes in the vascular system, but also the chemic action of the blood-plasma and tissue-fluids in liquefying and dissolving the irritant agent." It is probably not practicable to frame a concise definition of inflammation in which the exact parts played by each factor in the various anatomic and etiologic varieties can be fully indicated. The definition must remain general; it can indicate only the meaning of the inflammatory reaction, the general tendency of the

various factors and changes in the complex process. The moment phagocytosis, or the extracellular action of leukocytes, for instance, is singled out as important enough to constitute virtually the entire reaction, the notion of inflammation becomes one-sided and limited. "It is not by cells of one order alone—by phagocytes—or by leukocytes in general and only leukocytes, or merely by reaction on part of the fixed cells of the tissue, or by vascular changes alone, or by altered temperature, or solely by the chemic and mechanical action of the exudate that repair is effected. All means are employed to antagonize the irritant and to effect healing. Diverse processes are employed, now one more particularly, now another, according to the needs of the moment, but none exclusively." (Quotation cited by Adami.)

The leukocytes in inflammation act not only as phagocytes and as carriers of bactericidal substances that are secreted or liberated on disintegration; the presence of leukocytes within formative cells is usually interpreted as signifying an additional supply of food for the rapidly growing cells. Klebs and Ranvier, in particular, lay stress upon this role of the leukocytes. In addition to its bactericidal, diluent, and irrigant action the exudate also furnishes the proliferating cells with abundant nourishment. The precipitation of fibrin in inflammatory exudates can also be regarded as beneficial, in so far as the fibrinous adhesions often seem to circumscribe the action of the bacteria. The inflammatory proliferation of the fixed tissue-cells may be regarded as not only regenerative, but as an effort to build a protective wall between the bacteria and the healthy tissues. The experiments of Afanassieff show that healthy granulation-tissue is a powerful barrier against general infection, the action of its serum and of its cells being destructive to bacteria. Here are rehearsed some of the means to counteract harmful agents, protect the organism, and effect healing. As the same principles are seen in response to injury, in defence, and in repair in all animals and in practically all kinds of injury, no line can be drawn separating one set of responsive and reparative phenomena as inflammatory from another set a little differently constituted as not inflammatory. The common mode of origin, the similarity of the changes, though combined in differing proportions, and the recognizable tendency in these changes to protect and repair, justify fully the teaching that the inflammatory processes are essentially adaptive, protective and reparative.

Yet it cannot escape notice that the protective and reparative tendencies of inflammation are limited and imperfectly controlled. The reaction is not always in proportion to the strength of the "irritant." The adaptations to the pathologic conditions created are imperfect, as shown by "the excesses, disorders and failures incident to inflammation." (Welch.) The exudation may, as Adami says, possess but little bactericidal

power, or it may carry the bacteria outside the area of primary invasion. The leukocytes and other cells, instead of destroying, may undergo destruction. They may incorporate bacteria, but not destroy them; and the bacteria, as in the case of tuberculosis, may continue to multiply. The fixed cells may form imperfect material for repair, or they may proliferate excessively. The resulting cicatricial tissue may lead to serious functional disturbances after the harmful agent has been destroyed and repair completed. The inflammatory reactions do not respect the relative functional and anatomic importances of the various organs and tissues, but they create new conditions that are dangerous *per se*. It will suffice to call attention to occlusion of the larynx in consequence of violent inflammatory reaction, to fatal cerebral compression from excessive serous exudation in inflammations of the leptomeninx, to the contraction and functional disturbances of the valves of the heart from the fibrous tissue produced in repair after endocardial infections, and to the overgrowth of connective tissue in the chronic inflammations. These disastrous consequences of inflammation, examples of which can be multiplied, cannot always be regarded as unavoidable in order that it may fulfil the purpose of overcoming or diminishing the effects of the primary injury. Hence, Klebs concludes that inflammation is an increase in the reactive changes beyond the degree necessary for restitution. It is an adaptive and self-preservative, and yet often harmful and wayward, process that requires the active intervention of man. Consequently, inflammation, from the clinical standpoint, is harmful; from the pathologic, or biologic, a struggle for self-preservation. Inflammation is the reaction of the tissues to local injuries calling forth protective and reparative measures; an imperfect pathologic adaptation, often leading to consequences that are dangerous *per se* and may defeat its purpose.

## A SKETCH OF THE EARLY HISTORY OF PERINEAL LITHOTOMY.<sup>1</sup>

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THE early history of lithotomy, as portrayed by John Bell, nearly a hundred years ago, in his work on the *Principles of Surgery*, reads like a romance, and, if time permitted, I could furnish no better entertainment than to give his account, in which will be found most of the facts that I shall relate.

Stone in the bladder is a malady so distressing, so lingering and so frequently fatal that it engaged the attention of surgeons in the very earliest times. The diagnosis was then made by bimanual examination and not with the sound or staff. I call attention to this

fact because it has not been so long since the uterine sound was used to discover the size and position of the uterus, frequently to the detriment of the patient. When the bimanual method of examination supplanted it with the expert, it was recognized as a distinct advance, and even now there are many physicians otherwise skilful, who have so little expertness in the bimanual examination of the pelvic organs that they might, with profit, read the directions for lithotomy given by Celsus at the dawn of the Christian era. He directs that the fore and middle fingers of the left hand be gently passed into the anus, while the fingers of the right hand are spread over the abdomen. By the simultaneous movements of the two hands, the size and shape of the stone are determined and it is brought to the neck of the bladder and made to present at the perineum in its most favorable diameter. When it was found that by this manipulation the stone could be made to bulge the perineum from within, the idea naturally followed of cutting through the perineum directly on the stone. This was called "cutting on the gripe," the stone being fixed in the gripe or grasp of the operator. When the stone had been exposed by the incision it was delivered by pressure from behind or by traction with a hook from in front.

In later times, when more elaborate instruments had been devised, the old operation was, from its simplicity, called also "the apparatus minor." It will be observed that this operation could be performed by one who had little or no knowledge of anatomy, and it was, therefore, for ages the operation favored by quacks and charlatans. The "apparatus minor" was performed in the time of Hippocrates, the fifth century before Christ. Celsus, who flourished at the time of Christ, left a most minute account of this operation, the earliest we possess; but, in all probability, he never performed it; for, in his day and generation the performance of lithotomy was confined to those who made it an exclusive specialty. The first direction that Celsus gives the operator is to "pare his nails carefully." Whether this was to prevent mechanical injury or was in the interest of cleanliness, I shall not decide, but it is very significant that this is the first and one of the most important precautions taken by the surgeon to-day.

For many centuries, the performance of lithotomy was confined almost exclusively to traveling quacks, many of whom claimed to operate by secret and peculiar methods; and, just as in our own day, they had their enthusiastic followers, who praised them to the skies for their successful operations and as readily forgot their failures. These men traveled from place to place and cut upon the gripe, usually in the manner described by Celsus, without anatomic knowledge and, as their enemies, the regular profession said, without remorse. By manual dexterity, boldness and natural quickness of perception some of them attained great success. Of these was Le Raoues, of Chartres, who

<sup>1</sup> Read before the Association of Ex-Resident and Resident Physicians of Mercy Hospital, Pittsburg, Pa., March 3, 1898.



traveled from city to city in the south of France and cut persons of all ages, with wonderful dexterity, if we are to believe the accounts of his contemporaries. There is not wanting competent testimony to prove that Raoues, in his successful cases, secured results that no one since has been able to achieve. It is said that he cut men of all ages, which was a distinct departure from the rule of Celsus, who directed that boys only should be cut. He disregarded the season of the year, whereas Celsus had directed that lithotomy be performed only in the spring. It is said that his wounds healed by first intention, that no urine passed by the wound, and that his patients were well in seven or eight days. After a career of four years of successful operation in the provincial cities, Raoues came to Paris, where he was soon the target for the envenomed shafts of the regular lithotomists. Of these the most bitter was Collot, lithotomist to the King, who did not hesitate to assert that Raoues cut patients who had no stone, that his incisions never reached the bladder, but extended only into the superficial parts, and that thus could be explained the quick healing of his wounds and the fact that no dribbling of urine followed. The operation in vogue at that time and practised by Collot was the "apparatus major," which consisted in opening the membranous urethra only with the knife and dilating (often extensively lacerating) the neck of the bladder with instruments of various character, till a channel had been made sufficiently large to permit the passage of the stone in the grasp of forceps. This operation was protracted and painful beyond belief and the results most deplorable. In the Charité Hospital at Paris in the 5 years from 1731 to 1735 there were 71 cut for stone by this method, of whom 38 died, or 53%.

Notwithstanding the success of Raoues with the modification of the "apparatus minor" that he practised, the regular profession continued to employ the "apparatus major" which often required hours for its completion, invariably caused the most excruciating torture to its victims, and was so frequently fatal in its results.

In August, 1697, there appeared in Paris a mendicant friar of the third order of St. Francis, to whose courage, perseverance and skill we owe the operation of lateral lithotomy. Mauchart says:

"Of this celebrated hermit, alternately extolled by his friends and derided by his enemies, what shall we say? Intrepid and fearless, his hand never trembled, nor did his courage falter in the most undocked-for and perilous situations; modest, humble, covetous of nothing but glory, he presented himself in our city, as one sent from Heaven, to alleviate the sufferings of his fellow-creatures."

Such was the celebrated Frère Jacques, who came to Paris when about 40 years of age, clad in the habit of a friar, practising all the severities of an ascetic life, subsisting on the plainest diet, and accepting no other reward for his services than a few pence to mend his

shoes and keep his instruments in repair. He said his name was Jacques Beaulieu, that he had come from a village in Burgundy, that in that province and elsewhere in France he had cut for the stone, in proof of which he produced many certificates of his cures. He claimed a direct inspiration from Heaven to cut for stone, and his claims were received by the common people with enthusiasm. In point of fact, his early history was most commonplace. His parents were poor and had been able to have him taught no more than to read and write with difficulty. At the age of 21, he became the servant of one Pauloni, a traveling quack who cut for stone. With him he traveled through France for 6 years, when they separated and Jacques took up his master's trade. He went from place to place, living an idle and irregular life, cutting for stone as opportunity offered. So he continued for a period of about 13 years, distinguished in no manner from others of his class, when he suddenly became impressed with the truths of religion and showed himself an enthusiastic devotee. He resolved to devote his life to works of charity, and especially to the relief of those afflicted with stone. His enemies claimed that his piety was a sham and used by him to forward his professional interests, but the following 30 years of self-denial and constant effort to do good prove him sincere in his conversion and consistent in good works. He returned, in his wanderings, to his native place of Besançon, where he cut many poor persons with signal success, and others not so poor, among whom was a canon of the church. This canon, grateful to his deliverer from the tortures of stone, advised him to go to Paris and gave him a letter of commendation to De Harley, first president of the parliament of Paris. De Harley's influence was such that Frère Jacques was permitted to exhibit his operation on the cadaver before Mery, surgeon to the Hotel Dieu, and others of his confrères. These surgeons were loth to recognize in any manner a man whom they looked on as a quack and impostor. But the order of De Harley was peremptory, and they were obliged to witness the operation of Frère Jacques, and Mery was directed to make a report of the result of the dissection. The first report of Mery was fair and conservative, and, on the whole, favorable to the new operation. One week later, however, Frère Jacques was permitted to operate on two other cadavers, and the dissection that followed showed that he had inflicted such injury as, in the living subject, would have proved fatal. The report on these operations being adverse, he was excluded from operating at the Hotel Dieu, and soon after left Paris in disappointment, and appeared at Fontainebleau, where the King was staying with his court. Frère Jacques presented his letters there to the physicians and surgeons of the court, and was received with kindness. Very soon a subject for lithotomy, in the person of a shoemaker's boy, presented himself for operation. It

was performed in the presence of the royal physicians and surgeons, and with success, and Frère Jacques was domiciled in the household of Felix, body-surgeon to the King. When the court returned to Versailles, Frère Jacques went along, and during the next few months he cut a number of patients in Versailles and Paris. Being under Royal protection, he again made an effort to be allowed to cut for stone in the hospitals.

On April 7, 1798, a meeting was held at the palace of the archbishop, attended by the board of managers and the medical and surgical staff of the Hotel Dieu and the magistrates of the city, to decide the momentous question whether Frère Jacques should be admitted to operate in that institution. At this meeting, it was agreed that, during the ensuing season, he should be permitted to perform the operations at La Charité and the Hotel Dieu. His method of operating was to cut on a steel staff without a groove, entering his dagger-shaped knife by the side of the tuberosity of the left ischium, whence it was plunged upward and inward into the base of the bladder, and not withdrawn till the incision would permit the extraction of the stone. After the operation he applied a light dressing of wine and oil, and, when remonstrated with for the slight attention he gave the patient, said: "I have extracted the stone; God will cure him." So great was the enthusiasm that he inspired, that the doors of the hospitals were besieged by crowds anxious to see him operate, and visitors from all parts came to witness his bold and skilful work. Among others was Liester, who states that he saw him operate on nine persons in three-quarters of an hour very dextrously. Even Mery, his most vigorous opponent, was constrained to say:

"All the world allows him to be a man of unsubduable boldness; he never, in time of operation, was seen to falter, or seem distressed; he has a firm and steady hand; never, perhaps, has there been seen a more daring operator; he is withal pious and charitable, and it were greatly to be wished that such a man were better instructed in the anatomy of the parts."

During the few weeks following his admission to the hospitals, Frère Jacques cut 62 patients, of whom 25 died, as many as 7 being carried to the mortuary in one day. This was not the success he had anticipated, nor did it meet the expectations of the people, and, wearied by constant persecution and dispirited by the loss of so many patients, he left Paris and resumed his journeying through the provinces. He traveled, during the next two years, through the provinces of France, Holland and Germany, being received everywhere with enthusiasm and in many places covered with honors.

When Frère Jacques took his departure from Paris, he left behind a good friend and well-wisher in the person of M. Fagon, first physician to King Louis XIV. The active interest that he had displayed in the new operation, when Frère Jacques first appeared at Fontainebleau, and the many evidences of friendship that he continued to show for him had a more than

professional significance. M. Fagon himself was afflicted with stone; and, notwithstanding the fact that his colleague, Mareschal, had adopted the lateral operation, he could not forget the coolness, courage and dexterity of Frère Jacques. Notwithstanding the superior anatomic knowledge of Mareschal and the other surgeons of Paris, Fagon determined to have Frère Jacques perform his operation and invited him to Paris, installed him as a guest in his own house and induced him to be instructed in the anatomy of the parts involved.

Frère Jacques, with the admirable humility that was such a distinguishing trait in his character, submitted to this instruction, which was given by the eminent anatomist Du Verney in the presence of Fagon and Felix, the body surgeon of the King. Frère Jacques did the operations on the cadaver, and Du Verney then dissected the parts and demonstrated the success or failure of each operation. Consultations of the four were then held as to the best means of avoiding the dangers of the operation and rules formulated for making it a definite procedure. A groove was put in the staff and some modifications were made in the incisions.

After many and assiduous trials, Du Verney pronounced his pupil well grounded in the anatomy of the parts and all were satisfied that the operation would now prove successful on the living body; and so it proved, for Frère Jacques now cut at Versailles 38 patients for stone without a single mishap and thus justified the good judgment and foresight of M. Fagon, who expected soon to submit his own person to the knife.

Meanwhile, another distinguished patient was watching with intense interest the education of Frère Jacques and the development of his operation by Du Verney, Fagon and Felix. This patient was the Mareschal de Lorges, a man of high rank and great fortune, but a sufferer from stone. When Frère Jacques had completed his course of instruction, the Mareschal assembled in his palace 22 poor persons afflicted with stone. These were all cut by Frère Jacques with perfect success. The fame of Frère Jacques now seemed to be approaching its zenith. He had learned the anatomy so that even the wisest could not despise him. He had perfected his operation so that he could cut with confidence of almost uniform success. He had gained the esteem and admiration of the royal faculty and had the *entrée* of the public hospitals. He was the idol of the populace and was about to operate on Fagon, the King's physician, and also on De Lorges, one of the highest of the nobility. Now a singular thing happened. M. Fagon, at the last moment, changed his entire plan, and was operated on by his colleague Mareschal and with success; while De Lorges, operated on by Frère Jacques, died in torture on the following day. These unfortunate occurrences most unjustly blasted the reputa-



tion of Frère Jacques in the fickle French capital, and he left it, never to return. For 14 years at least he traveled over the Continent of Europe, received everywhere with the distinction to which his talents entitled him and operating always with signal success. The city of Amsterdam had his portrait engraved and presented him with a medal, appropriately inscribed, while The Hague presented him with a set of golden sounds. He received the just admiration of potentates, nobles and senates and the reverence of the common people. From first to last, he is said to have cut 4,500 persons for stone. Much more, he gave to the world an operation, that for nearly 200 years has been practised with success, in almost precisely its original form. As his age and infirmities advanced, he retired to the village of his birth, where he died in poverty in his seventieth year. His golden sounds had been melted down to meet his daily necessities. Throughout his wanderings he consistently declined all rewards for his inestimable services and constantly observed his vows of charity, humility and poverty.

It should never be forgotten that Frère Jacques concealed nothing in his method, and from his first appearance in Paris, he made every effort to have his operation known and adopted by all lithotomists. All honor, therefore, to the memory of Frère Jacques and none the less that the time is at hand when the history of his lateral operation may be completed and the volume closed.

#### REMARKS ON PULMONARY TUBERCULOSIS. WITH A REPORT OF FIVE CASES.

By M. V. BALL, M.D.,

of Warren, Pa.

Does the bacillus tuberculosis produce pulmonary phthisis? Have we settled this question beyond a doubt, or must we reopen the case and subject the evidence to a new examination? For the great majority of physicians there is no question. They are fully convinced, because the authorities have said so, and therefore—they are convinced. Here and there a few protests arise. One kind of protest comes from men who are against authority, right or wrong; they protest on principle; they object because they are objectors by nature. Then, of course, there is orthodoxy, which refuses to accept because it is new and different; but the bacillary theory of tuberculosis is no longer new, it is itself orthodox. Last of all, and most important, are the small voices heard now and then, in the closet, behind sealed doors, questioning the truth, earnestly questioning, yet afraid to speak their thoughts, thoughts contrary to the great majority, but thoughts based on experience, on demonstration and on reason.

In the course of a general practice, it has come to me that patients presenting no objective physical signs

of tuberculosis have shown tubercle-bacilli in their sputum, and, on the other hand, patients with all the physical signs, subjective and objective, have failed after repeated examinations to present the bacillary evidence.

In the first group of cases, the result has always been progressive development of physical signs, and in most instances death.

In the second group, no advance of symptoms and often clearing up of what was probably an influenzal pneumonia, or some undescribed hemorrhagic inflammatory condition of the lung-tissue.

In order to obtain the opinions of men of experience in chest-diseases, I wrote to a few of the more prominent ones asking them what reliance they placed on the tubercle-bacillus as a positive sign of tuberculosis?; and secondly, Whether in their experience they encountered patients presenting no other signs of the disease than the bacillary one, who were cured and *remained* cured without the development of further symptoms?

I herewith give the replies.

Dr. J. M. DaCosta writes:

"The question you raise is a very wide one and a difficult one to answer. It has happened to me repeatedly to see cases in which the microscope showed tubercle-bacilli, and in which no subsequent symptoms of tubercular phthisis arose. Among a number I can at once recall three: One case seen 3 years ago having the symptoms of acute catarrhal pneumonia. The patient completely convalesced and is now in perfect health. In a second instance, repeated attacks of bronchial catarrh and one severe attack of catarrhal pneumonia were followed by tubercle-bacilli in the sputum, found on many examinations. The lady went to Colorado, her general health always being good, and is now back in the city in perfect health, although still liable to attacks of bronchial catarrh. In a third case, that of a young man who also went to Colorado, no lung-symptoms at all have developed. It is true that the question of arrested tuberculosis suggests itself in all these cases, but not in one were there any symptoms or physical signs of the disease except the microscopic evidence."

Dr. Wm. Osler writes:

"Yes, I have quite frequently seen instances of tuberculosis in which, for a time at least, the bacilli were the only indications. You must remember that a great many bacilli may come from a very small focus quite inappreciable from any physical examination. In one instance, as shown by autopsy, the bacilli came from a localized abscess-cavity not bigger really than a marble."

Dr. Osler evidently did not quite understand my question, but this reply is given here in substantiation of the point that the bacilli are found when other evidences may be wanting. A later letter from him reads as follows:

"I think it perfectly possible for tubercle-bacilli to come, and even in numbers, from a small focus quite out of reach of diagnosis; but tubercle-bacilli in the sputum always mean tuberculosis of the lungs, except in cases of nasal, pharyngeal or laryngeal localized lesions."

Dr. J. C. Wilson replies:

"I have brief notes of cases in which, with the signs of chronic bronchitis affecting only the larger tubes and showing great variations in intensity, but no evidences of chronic pleurisy, consolidation of the lung, emphysema or retraction of

the chest, remaining under observation for years, tubercle-bacilli have been found in the sputum. I have been led from this to believe in the existence of a chronic tuberculous bronchitis without involvement of the vesicular tissue of the lung, and have long intended to look up the subject."

Dr. S. Solis-Cohen writes:

"I have had cases with tubercle-bacilli and no development of the disease."

Dr. H. P. Loomis writes:

"I cannot believe it possible for the tubercle-bacilli to be found in the sputum without tubercular changes in the lung. These changes may be slight and so localized that our present methods cannot diagnose, but I still believe them to be present. If one follow the history of these cases, especially when not placed in suitable climatic conditions, he will see the pulmonary lesions develop. In other cases which are sent to a suitable climate no evidence of pulmonary lesion may be found, and after a time the bacilli disappear from the sputum; but still I believe that in these case a lesion was present at the time. I naturally throw out of the discussion any tubercular lesion of the throat or upper air-passages."

Dr. Karl von Ruck writes:

"In all my experience I have not seen tubercle-bacilli in the sputum without lesions more or less pronounced existing in the upper air-passages or chest. There is such a thing as tubercular bronchitis without consolidation of lung-tissue, but auscultatory symptoms of catarrh are present. Cases of tuberculosis of peribronchial and mediastinal glands may also give rise to tubercle-bacilli in the expectoration, the lung becoming affected later on."

Hansemann<sup>1</sup> contends that fibrous thickening of bronchi and lung-tissue, especially about the lymphatic channels, may present the clinical picture of tuberculosis and yet be free from bacilli; and many other tissue-changes commonly supposed to be due to the action of tubercle-bacilli are due to other inflammatory causes, and only secondarily become invaded by the bacilli. In a case in which tuberculosis had been diagnosticated from the presence of bacilli in the sputum, a bronchiectatic cavity was after death found in each upper lobe; one of these was free from bacilli, while the other contained clump of germs, which had, however, not invaded the cavity-wall, but were simply using the location as a culture-medium.

I shall now report a small number of cases that have come under my observation:

CASE I.—A young woman complained of cough of two months' duration, without loss of flesh. There was no fever, but she had just passed through an attack of what seemed to be gastric fever, lasting three days. The expectoration was suspicious. On examination of the sputum I found tubercle-bacilli. Examination of chest revealed a very slight impairment of resonance on one side, as compared with the other. On consultation one of the foremost diagnosticians in Philadelphia, after careful examination, pronounced the trouble to be catarrhal until he was told of the detection of tubercle-bacilli in the sputum, when he coincided with me in pronouncing the trouble tuberculous. Unable to afford a change of climate the girl succumbed to the disease in less than six months, the process seeming exceptionally rapid.

CASE II.—A convict, aged 24, on entrance into prison, gave a history of night-sweats, cough and loss of flesh. The sputum contained tubercle-bacilli. The individual was placed in the quarantine set aside for tuberculous patients, and he was given extra food, plenty of codliver-oil and exercise. In a short time all subjective signs of the disease passed away (the physical signs were never positive). He became fat and after serving 2 years was discharged in very good health. I

could not obtain any sputum for examination, so complete had been the apparent cure. Two years after his discharge, *i. e.*, 4 years after the tubercle-bacilli were first found, I encountered the fellow on the street, in the last stages of pulmonary tuberculosis, and gave him a letter recommending his admission to the Philadelphia Hospital. After his discharge from the prison, he led a reckless life as a tramp and a drunkard, and took no precaution in regard to his health.

I had considered this case as one of cured pulmonary tuberculosis, and it shows that the demon was not dead, but only sleeping.

CASE III.—A male convict, aged 45, tall and slender, an ex-president of a bank, who had always been in good health previous to his incarceration, after one year's confinement began to lose flesh, coughed and expectorated considerably, and six months thereafter had two slight hemorrhages from the lungs. Physical examination revealed little. The man was trying to obtain a pardon and it was thought by the authorities that his condition was not as serious as it appeared. I had him placed on extra diet, codliver-oil and daily exercise in the open air, cautioning him also in regard to his personal habits. The sputum, after several examinations, had failed to exhibit bacilli, finally it showed a few very thin and small ones. Several outside physicians, some of note, were called in to examine him and from my report testified that he was affected with tuberculosis, although one of the more prominent of these physicians has since told me that he did not believe the prisoner was so affected. The man obtained a commutation of his sentence and was discharged one year ago, that is nearly three years after the bacilli were found. He left for the West directly and a letter from a relative of his informs me that the man is in very good health.

Whether this man had pulmonary tuberculosis or not, perhaps the future will show. The subjective signs were surely present, and the specimen of the sputum stained in 1895 still shows, though somewhat faded, the characteristic bacilli. It is not at all unlikely that the bacilli were accidental, as in the same corridor and acting as a servant was one whose sputum later contained many tubercle-bacilli, and who might have expectorated, though against the rules, on the stone floor of the corridors. The convict-banker, however, had a cell to himself, was very cleanly in his habits and kept his place freely ventilated. Nor would the hypothesis offered explain the cough and the hemoptysis.

CASE IV.—A young woman, aged 31, married, with a good family-history, has always been considered healthy save for slight nasal and pharyngeal catarrh. She has had a hacking cough for several years, but no great amount of expectoration. She had an attack of supposed malaria 6 months before in Virginia, since which time she has had a slight rise of temperature and sweats at night and has lost several pounds in weight. She consulted a laryngologist, who treated her locally, scraped the post-nasal space and examined her chest, but found no abnormality. The sputum was examined, with a negative result. After a few weeks' treatment the patient returned to her home in Warren, where she put herself under my care for further throat-treatment. The slight hectic flush and subjective symptoms, fever, sweats, etc., made me feel certain of the existence of pulmonary tuberculosis, and accordingly I re-examined the sputum, though told that an examination had already been made carefully by an expert. The first slide showed several bacilli in each field. I made another examination on the next day and this also gave a positive result. Then, on carefully percussing the naked chest, I detected some impairment of resonance at both apices. Not trusting my own evidence I urged the patient to consult a prominent diagnostician and to refrain from mentioning my results until after his examination. She returned and I received a letter with the statement that the trouble was only catarrhal, that the lungs were not affected, but that a change of climate might



be beneficial for the cough. After further correspondence with the consultant he informed me that he did find the "Percussion-resonance not so good at the right apex as at the left; also that there was slight prolongation of expiration, with feebler inspiration, yet nothing very definite;" and yet with all these evidences of incipient pulmonary tuberculosis, with a rise of  $1^{\circ}$  in evening-temperature, cough, morning-expectoration, loss in weight, the diagnostician called the trouble catarrhal. The patient left for the Bermudas, where she remained for 3 months without betterment in any of the symptoms. On returning to the specialist he now discovered "thickening" at the apex, and on having the sputum examined, "numerous bacilli," and he urged Colorado.

I report this case in detail not to proclaim my own powers, but to show how valuable is the microscopic evidence and how worthless negative testimony stands against positive. My slide containing a half-dozen tubercle-bacilli appearing in 2 or 3 successive examinations, I would be willing to stake against the testimony of the ablest clinician.

I shall add one more case.

CASE V.—Last summer a young man, aged 25, called me to his room and I found him coughing violently, with profuse whitish expectoration, a temperature of  $104^{\circ}$ , considerable weakness, constipation, no physical signs detectable. The family-history was good and he had always been in good health before the week previously. There was great need for a speedy recovery, as he intended marrying in three days and all the wedding-solemnities had been arranged. I gave a guarded diagnosis, and I was in doubt as to the true nature of the trouble. Rest, antipyretics, and stimulants soon brought relief and the patient was so much improved in two days that permission was given to go on with the wedding. I was present and the patient passed through a tedious ordeal very well. I did not see him again for 3 days, when he called at my office. His temperature in the evening was  $103^{\circ}$  F. Breathing was hurried and difficult. Both lungs were full of coarse rales, but there was no dulness on percussion. There was considerable mucoid expectoration; weakness was not marked; but anorexia and constipation were present. The patient did not feel so ill as his symptoms would indicate. Examination of his sputum failed to disclose the presence of either tubercle-bacilli or pneumococci. The blood tested for Vidal's reaction yielded a negative response. He was sent to bed, and placed on alcohol, creosote and ammonium carbonate. The morning-temperature was  $105^{\circ}$  and perspiration was profuse. Never was the sputum the least bit blood-stained. I called a specialist in consultation, who thought the trouble influenzal. The patient continued to grow worse, with rapid loss of flesh and fever in the morning  $1^{\circ}$  or  $2^{\circ}$  higher than in the evening; sweating was continuous; cough and expectoration were constant day and night. A second and a third examination of the sputum failed to demonstrate any pathologic condition. This state persisted for three days, when I suspected acute miliary tuberculosis and another practitioner confirmed my diagnosis. We advised removal to a hospital, as the home-conditions were bad. We gave an unfavorable prognosis. The ambulance-physician refused to take the man, saying that the case was one of pulmonary tuberculosis in the last stages and the hospital could not accept him. By personal influence the patient was finally received and was placed in the tuberculous ward. So sure were the residents and the visiting physician of the diagnosis that they felt it unnecessary to visit him more than once in a few days. His sputum was examined by the pathologist several times, without finding any bacilli. The patient was allowed to walk about and I visited him several times. There could be no doubt about the condition, with extreme emaciation, a flush on the cheeks, dyspnea, fever of hectic type, the lungs seemingly choked up. All that was wanting was the presence of tubercle-bacilli in the sputum; and the books teach us that in acute tuberculosis they are often wanting. The whole process had hardly lasted three weeks. At the earnest solicitation of the patient's friends, one of the visiting physicians, who was not then on duty, consented to see the patient and, being an authority in diagnosis, his opinion was much desired. The result of his examination

was expressed as follows, that the condition was most likely not tuberculous, and that the chances for recovery were good. This was an agreeable surprise to us all, and the residents, acting on suggestions given, furnished the patient with plenty of stimulation, and in a short time, three weeks, discharged the man, fairly convalescent. It is now eight months since then and he is reported to be perfectly well. At the hospital the case was called one of tuberculous pneumonia, but there evidently was no tuberculosis about it.

The foregoing cases, happening in the course of a general practice, are not offered as proving anything, and yet they teach a few things: That in the early stages the microscope is more to be relied on than the finger or the ear; that the evidence gained through it may be present before any other sign is appreciable; that the presence of tubercle-bacilli is a positive sign of tuberculosis, but that its absence does not preclude the possibility of the disease. (I have often found it necessary to make several examinations before finding the suspected bacilli.)

No case of apparent tuberculosis in which after repeated examinations tubercle-bacilli are not found should be considered hopeless, no matter how severe the symptoms. Authorities and specialists are not infallible and make mistakes like the common everyday practitioner. I have often been told by patients that physicians had predicted an early grave for them ten and twenty years before. It is never wise to predict; the prognosis may be a guarded one, but never absolute, especially in diseases belonging to the group under consideration. What is needed is a careful record of the lives of the patients in whom the tubercle-bacilli have been found a number of times. A collective investigation as to the beneficial results of climatic treatment is also badly needed. In the usual reports of this or that vaunted resort there is too much vagueness, too much of what smacks of quackery, too much advertising. The evidence needs careful sifting and cross-questioning before it is to be accepted. Why can we not have an experiment on a more or less extended scale that will be worth something? Let, for instance, 25 or more undoubted cases of pulmonary tuberculosis be transferred to a climate like that of Colorado. Let them be studied in all particulars and watched for a period of 4 or 5 years, examined at frequent intervals by experts, and let the world know the results. Such an experiment would mean a great deal for the medical world; it might mean a great deal too for the millions of tuberculous subjects; and the cost would be insignificant. At present we know but little about the effect of climate, except in a general way; and we know but little concerning the cases of so-called cured pulmonary tuberculosis—whether the tubercle-bacilli disappear for good or merely lie dormant.

**The Knights of Pythias**, of Chattanooga, Tenn., have made arrangements for the establishment of a hospital to care for the sick of the members of the order among the volunteers at Chickamauga Park.

ARTISTIC BREATHING.<sup>1</sup>

By G. HUDSON MAKUEN, M.D.,  
of Philadelphia.

Professor of Defects of Speech in the Philadelphia Polytechnic; Laryngologist to St. Mary's Hospital; etc.

THAT breathing which is employed for purposes other than the involuntary and physiologic one of aerating the blood may be called artistic breathing, and under this head would come the breathing of all such specialized muscular acts as walking, running, rowing, etc. But that of which it is my purpose to treat in this paper is the breathing used in speaking and singing. I would designate it as artistic rather than natural because it is acquired after the most prolonged and painstaking effort, and it does not come by nature, as honest Dogberry supposed to be the case with reading and writing.

Even among those who are devoting their lives to its study and practice good singing or even good speech is exceedingly rare. The proportion of those who excel in either of these arts is surprisingly small, and the reasons for this lamentable fact are not far to seek. The first and most important one is the utter lack of any definite or scientific knowledge of the use of the singing and speaking instrument, and especially that part of it which pertains to what may be called the motor power of song and speech, viz., the breath-control. The action of no part of the vocal instrument should be left to chance or nature so-called, but it should be governed entirely by scientific principles rightly understood and rigidly applied. The action of the more intricate and delicate structures of the larynx and pharynx may be left more safely to chance or nature than the action of the powerful respiratory muscles in the thoracic region. If these are not controlled with great accuracy there is no possibility of ever acquiring a good laryngeal and pharyngeal action; but once master this motor element in the production of voice and all other things are much more likely to follow, or at least are much more easily acquired.

The importance of artistic breathing was fully recognized by Morell Mackenzie, when he said some years ago that "although the abdominal mode of breathing may be the natural method of inhalation, there can, I think, be no doubt that in singing it is not the most effective," implying and suggesting that the most effective breathing for singing—and the same must be true of speaking—is not the natural, or what I have called voluntary and physiologic breathing, but it is a totally different kind, which must be acquired for that special purpose. It has ever been a common error to try to make the specialized breathing employed in such definite muscular acts as song and speech, for example, conform to the involuntary breathing employed in the various conditions of the body. The fact is that they

differ very widely, but before discussing them further it may be well to name and describe the various forms of breathing and to define their distinguishing characteristics.

There are three well-marked types of breathing and each one may be recognized by certain outward manifestations. These are the abdominal type, the costal type, and the clavicular type. The abdominal type is that one in which the abdominal walls are protruded or expanded by means of the contraction and consequent depression of the diaphragm. In the purely abdominal type, which is probably possible only theoretically, there would be no enlargement of the thorax except vertically and at its base. Practically this type is supplemented to a varying extent by the costal type. Some years ago it was supposed by Mandl and his followers (and they were many) that the cultivation of abdominal breathing would revolutionize the art of vocalization, and they resorted to various curious schemes to develop this type to the exclusion of every other. They even went so far as to try, by mechanical means, to check rib-movement entirely and thus confine the breathing to the action of the diaphragm alone. It seems absurd to try to limit the breathing of singing and speaking to the action of one muscle, viz., the diaphragm, and especially does it seem absurd to those of us who, with Morell Mackenzie, believe that "abdominal breathing is not the most effective" for singing and speaking; and some of us go even further and claim that it can take no part whatever in artistic breathing and that the contraction of the diaphragm, that which makes abdominal breathing, interferes with the most effective breathing by checking the free uplifting of the ribs.

We shall now consider the second or costal type of breathing. This type is characterized by a free expansion all about the entire circumference of the thorax, and this expansion is brought about by the upward and outward tilting of the ribs. This has been called the pancostal method of breathing, and the muscles engaged are the intercostals and all those muscles running from the ribs to the bony parts above the ribs. In full costal breathing there must be some elevation of the inner ends of the clavicles, on account of their close connection with the upper ribs and sternum, and so great does this motion become in some cases, and especially in those who try to sing or speak with the waist tightly constricted, as to give rise to the designation of a third type of breathing, namely, the clavicular type. Still other divisions might be made, but the three general types described are comprehensive and quite sufficient for our purpose, which is to determine, if possible, which should be the predominating type in our teaching of artistic breathing. It is important that this question should be settled, because it is clear that some one of these types or some combination of two or more of them must constitute the most efficient

<sup>1</sup> Candidate's Thesis presented to the American Laryngological Association at its Twentieth Annual Meeting held in Brooklyn, N. Y., May 16, 17, and 18, 1898.



method of breathing, and it is a fact that any one of them or almost any combination of them may be acquired by practice; and as it is possible to acquire an inefficient method, which must make success in voice-building an utter impossibility, the importance of selecting the best method for artistic work will be apparent. Hundreds of voices are sacrificed annually on the altar of false methods, and in no part of the vocal mechanism will a mistake in choice of method be so disastrous as in the breathing, for it is here that the voice gets its motor power.

Now how shall we arrive at satisfactory conclusions as to the best method? We cannot do it by examining noted singers or speakers, because each one has become more or less proficient in the method that he has acquired, and we cannot tell how much more proficient he might have become had he been taught some other method. It is a peculiar fact that of those practising the most diverse methods each one thinks his own is the best. If we could compare the methods of all the great singers and their resultant voices we might be able to get some data that would be valuable, but anything short of a larger investigation in this line than seems practicable would be of little use.

It would seem, therefore, that we must reach these conclusions by a closer study of the precise action of the muscles engaged in breathing, for it is owing to a disagreement with reference to this muscular action that the different methods have been developed and taught. If we could agree once for all upon the precise action of each muscle, that is to say, upon what is the result of its contraction and of its relaxation, much of our difficulty would be removed. But this is not an easy thing to do. The muscle concerning which there is the greatest difference of opinion is the diaphragm, and the different things that this muscle is supposed to be capable of doing when acting in conjunction with other muscles is probably the origin of many of the different theories that have been advanced with reference to breathing.

There is no muscle in the body that has so many attachments as the diaphragm, and yet at no point is the attachment absolutely fixed. It is attached to movable ligaments, cartilages and ribs, and its action at any given time depends largely on the position that these points occupy at that particular time. For instance, if the ribs and costal and ensiform cartilages are highly elevated; that is to say, pulled upward and outward, the diaphragm would tend to become flattened out like a plate, and a contraction of the muscle at that moment would tend to draw the ribs in toward the center; whereas, when the ribs are in their normal position of rest, and the diaphragm is arched up under them by means of the contraction of the abdominal muscles, the contraction of the diaphragm would have a tendency to elevate rather than depress the ribs. Now let us consider the three types that I have de-

scribed with reference to deciding upon one as the best and most efficient.

We may throw out the clavicular type entirely, for no one claims that it can be more than supplementary to the other two, to be used in forced inhalations and when there is some obstruction to the other types of breathing. Our choice, then, must be between abdominal breathing and costal breathing, and the only alternatives would be a modification of one of these types or a combination of the two. The modifications of the costal type that have been suggested are the lower costal and the upper costal. The former is that in which the greater expansion takes place in the region of the lower seven or eight ribs, and the latter is that in which the expansion takes place in the region of the upper ribs, and it is somewhat similar to what I have called clavicular breathing. The extent to which this localized costal breathing may be developed by practice is surprising. The extreme type of upper thoracic breathing is seen in women who wear tight corsets, and thus restrict lower breathing; but the artistic breather, without any external constriction, and simply by voluntary muscular action, may expand at will either the upper or the lower chest, and some acquire the ability to raise the ribs of one side, while those of the other side remain almost stationary.

If we consider how great are the demands made upon the breath both in singing and in speaking, we must agree, I think, that, other things being equal, that type of breathing that controls the greatest amount of breath with the least expenditure of effort will be the most efficient. Applying this test to the types I have described, we find that abdominal breathing would be the last to be selected, because, unaided by other types, it controls the least amount of breath. Then, if we combine with the abdominal the costal type of breathing, or any portion of the costal type, the amount of breath inhaled will be increased, but the maximum amount cannot be reached by this combination, as may be proved by the following test: Take a slow and full inhalation by contracting the diaphragm. (Place the hand on the anterior abdominal wall. If this protrudes, you know the diaphragm is being contracted.) At the same time elevate the ribs. When you have taken the greatest amount of breath in this way, gradually relax the diaphragm and allow the anterior wall of the abdomen to recede, and continue the rib-lifting effort and you will find that as the diaphragm relaxes the ribs will go further upward and outward and a considerable additional breath will be inhaled. The result of this test is always the same, and I have applied it in a large number of cases, and it brings us to the following important conclusions: First, that the abdominal is not the most efficient type of breathing for artistic purposes because it does not control the maximum amount of breath that is oftentimes required; and, second, that any action of the diaphragm prevents the full upward

and outward motion of the ribs and therefore this muscle should not be used in artistic inhalation. In other words, whatever may be the action of the diaphragm in passive breathing, it is not inspiratory in the breathing of singing and speaking, but it is altogether expiratory, the contraction of the diaphragm tending to draw the ribs downward and inward.

Now, having disposed of clavicular breathing as being insufficient for artistic purposes, and having shown that abdominal or diaphragmatic breathing is impracticable because it does not control the requisite amount of breath, there remains only costal or rib breathing, and this we find to be the most efficient for the following reasons: It enables the singer and speaker to take in the greatest amount of breath, as I have shown by the test described, and the effort is not great because it is shared by all those muscles whose function it is to pull the ribs upward and outward. If the thorax be unconstricted the greatest expansion will be about its lower and middle portions, where the ribs are more movable and where the angle of their inclination with the spine is more acute. Another reason why this type of breathing is the most effective is that this uplifting of the ribs puts the thorax in the best possible position for the expiratory control that follows during the act of vocalization. The uplifting muscles now give way to the down-pulling muscles, principally the diaphragm, the abdominal muscles and the intercostals.

The actions of these two sets of muscles should be entirely dissociated in practice. The down-pulling muscles should be relaxed during inhalation and the uplifting muscles should be relaxed during exhalation, otherwise there will be a contest between the two sets, thus increasing unnecessarily both the inspiratory and expiratory efforts.

The points that I would repeat and emphasize finally are, first, that the diaphragm for artistic purposes is not an inspiratory muscle; second, that it should be used only in the expiratory effort of singing and speaking; and third, that the abdominal method of inhalation, so-called, is not only insufficient but harmful, and it should not be encouraged.

### NOTES ON EPILEPSY.

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For many years the beneficial influence of an acute illness upon an existing mental affection has been carefully noted and reported upon by many alienists and asylum-physicians. Again, other clinicians, aside from those experienced in mental affections, have noted the influence of disease upon disease. We have read frequently of the necessity in cases of tuberculosis of establishing a fibroid diathesis, so that any ulcerative

process in the lungs would terminate in cicatrization. Serum-therapy has progressed to such a stage that many trials of various disease-germs have been inaugurated for the curing of chronic nervous affections, such as epilepsy, chorea, etc.

In reporting a few cases in this article, I desire to place on record two interesting examples showing the effect that pulmonary tuberculosis sometimes has upon epilepsy.

F. D., a male, aged 20, was admitted to Craig Colony June 11, 1896. Epilepsy had begun at 9 years of age, its cause being attributed to heredity. The attacks were almost all of grand mal character for the first 8 years; then they became petit mal and much more frequent, occurring almost always at night. Frequently the seizures alternated with disturbed dream-states allied to night-terrors. The attacks became very frequent, often averaging 7 or 8 each night and about 100 per month. The patient has, at two different times since his epilepsy began, suffered from epileptic mania lasting for 2 or 3 weeks. During this time he has had vivid hallucinations of sight. Since his admission to the Colony he has repeatedly complained of hallucinations of sight preceding and following his attacks of petit mal at night. His disturbed sleep seemed to react unfavorably upon his mentality during the day, resulting in marked depression and bodily inactivity. About July, 1897, the patient began to complain of a troublesome cough and night-sweats. His attacks decreased from 80 to 2 each month for October, November and December. His pulmonary affection progressed steadily until marked tuberculous consolidation was present in the entire right lung. Since January, the patient has had no epileptic attacks, and his entire mentality has changed from a sullen and morose condition to that of the typically hopeful tuberculous state. His whole facial expression has undergone a marked change in this short period of time. He is much brighter mentally and capable of considerable mental activity. He has had two attacks of hemorrhage from the lungs and a portion of the second lung has also undergone consolidation. The man has been allowed to return home at the earnest solicitation of his friends and relatives.

G. B., an unmarried carpenter, aged 36, had had epileptic seizures for four years without known cause. All neurotic family-history was denied. The patient has a nephew who is a cripple and is feeble-minded. The attacks were described as being of the character of grand mal and they occur once in two or three weeks, generally at night, but occasionally by day. Physical examination of the patient at the time of admission to Craig Colony, on January 18, 1897, disclosed a double cardiac murmur, mitral and aortic. The peripheral circulation was very poor. Examination of the lungs disclosed contraction and consolidation at the right apex. Respiration was poor and shallow on the right side and there was some retraction of the whole chest-wall, especially from the fifth to the eighth rib. The patient's fingers were clubbed. Examination of the larynx disclosed the presence of two or three small ulcers, and the patient was afflicted with a constant hacking cough, which he stated had been present for two or three months. The bodily condition was very poor. The skin was rough, scaly and poorly nourished. The eye-balls were prominent and bulging. Speech was nasal and monotonous in character. The superficial reflexes were exaggerated; the deep reflexes markedly so; and all in greater degree on the right side than on the left; foot-clonus was obtainable on the right side. Motion and coordination of muscular movements were poor on the right side. The patient had some difficulty in adjusting his muscular movements to ordinary simple acts (ataxia). The tongue was protruded and deflected to the right side. The ears, the palate and the cranium exhibited stigmata of degeneration. The dynamographic examination showed the hand-grasp to be on the right, 70, on the left, 85.

For many years prior to the onset of epilepsy, the patient had had periodic attacks of epistaxis. He had led a variable life, although no specific history was obtainable. At times he had used alcoholic drinks to excess. The epilepsy was probably associated with the right hemiplegia, and symp-



tomatic epileptiform seizures continued at the time of his admission and for some months thereafter.

August 15, 1897, the patient's tuberculous processes, which had been held somewhat in abeyance for the first few months after his admission, became active again and gave him considerable trouble, although he continued to work at his trade at the Colony for several months thereafter. As soon as the tuberculous processes became prominent in August, he ceased having epileptic seizures and had no more while at the Colony. The patient was a Christian Scientist and was opposed to the taking of medicines for both his tuberculosis and his epilepsy. He died of pulmonary tuberculosis August 20, 1898. No seizures had occurred for a little over a year.

During the past year further studies conducted upon the aura of epilepsy have revealed some interesting facts.<sup>1</sup>

In one case<sup>2</sup> the psychic aura, consisting in the repetition of a single phrase "nicht wiedersehen," has now changed to the phrase "My God, why hast thou forsaken me!" In the patient's own words, "The phrase comes to me when I am doing my work about the house, and then as soon as I put my mind on it and wonder why such a thing should be in my mind, I have my attacks."

Another case came under my observation a few years ago with a similar psychic aura. The patient, a man subject to maniacal outbreaks for several hours after his epileptic fits, was accustomed to have the word "avoidupois" appear before his eyes in bright letters, and as soon as he made an attempt to spell the word, he invariably had an epileptic seizure. He stated that he had never yet been able to finish spelling the word before a "whizzing sound" took away his senses and he fell.

Various forms of visceral symptoms have been reported in connection with an epileptic attack, particularly by Féré, Bourneville and Gowers, but many of the gastric and intestinal disorders supposed to act as incentives to epileptic seizures really have their origin in the premonitory nervous disturbance of the epileptic fit, thus in a measure discounting the so-called gastro-intestinal origin of the epilepsies.

Much might be written upon the reflex effects of disturbance of a nervous center upon the visceral functions. We have come to regard the aura as having essentially its initiation in the central nervous system and not in the periphery; therefore we may ultimately regard many of the gastro-intestinal diseases associated with epilepsy as of primary centric origin.

However this may be, I desire to cite a case in which spasm of the ureter acted as an aura. This is quite rare, and I have been able to find no similar case on record.

F. C., a male, aged 32, an American, and a carpenter by occupation, began to have epileptic attacks at the age of 26. There is no family-history of a neurotic character. The at-

tacks are almost always of the grand mal variety, and they occur generally by day. The patient was admitted to Craig Colony February 10, 1898, and was supposed to be suffering from some "kidney-trouble." It has been demonstrated that this affection of which he complains is in the nature of renal colic. It occurs before about one-half of his attacks and persists as a post-epileptic symptom for a few days.

At first it was thought that some disturbance in the secretory activity of the left kidney was responsible for this renal colic, but the urine has been found to be quite normal at these times, and the condition has proved to be only a spasmodic state of the ureter presenting all of the typical symptoms of renal colic. I am able to see how this spasm of the ureter may act as an aura, as reports of neurotic spasms of asthma occurring in epileptics are not unknown. I have reported a case<sup>3</sup> in which asthmatic attacks took the place of seizures of petit mal, and in all respects were petit-mal attacks of epilepsy attended with marked disorder of consciousness.

## THE PERITONEAL FOVEÆ AND THEIR RELATION TO OPERATIONS FOR THE RADICAL CURE OF HERNIA.

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THE importance of a thorough understanding of the anatomic relations, of the structure of the parts forming the walls of the abdomen, and of the natural openings and weak places in those regions in which hernia most frequently occurs, has long been recognized and receives careful consideration in all our best textbooks on anatomy. The existence, however, of certain foveæ or depressions, into which the abdominal contents naturally tend to force themselves in effecting their escape from the abdomen seems to be a factor in the causation of hernia whose importance is not generally recognized or sufficiently appreciated. These foveæ, fossæ or *fossettes inguinales*, are well described by Til-laux<sup>1</sup> and other French writers, but their important relation to hernia was first pointed out, I believe, by Joessel, formerly professor of anatomy in the University of Strassburg, and the subject has recently received most careful study by Waldeyer, professor of anatomy in the University of Berlin.

The accompanying illustration, reproduced from Joessel's *Lehrbuch der topographisch-chirurgischen Anatomie*, page 179, shows the anterior wall of the abdomen as looked at from behind. The ridges formed by the obliterated urachus and umbilical artery and by the epigastric artery and Poupart's ligament, with the folds of peritoneum covering them, divide the posterior surface of the anterior abdominal wall into well-defined fossæ, of which those just internal and external to the

<sup>1</sup> It would seem that the term *aura* is a most unfortunate one, in so far as it is not properly a warning of the attack, but essentially a part of it and therefore no *aura*, as properly considered. The precursory symptoms would be a proper scientific designation for these epileptic phenomena, and the term "*aura*" might be reserved for such symptoms as are observed many days before an attack occurs.

<sup>2</sup> *American Journal of Psychology*, Vol. Iiv, No. 1, 1897.

<sup>3</sup> *Journal of Nervous and Mental Disease*, Vol. Ix, No. 1, 1897.





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**The Antitoxin Monopoly**, as granted to the Behring-Hochst Corporation, is creating quite a stir in the English medical world. The idea is indicated that the professor would be unable to obtain any patent in England that would be respected by manufacturers or physicians, while all alike deplore the sad lapse from the noble attitude that has hitherto been invariably taken up by the medical profession with regard to discoveries in medical science.

**A Yellow-journal Boomerang.**—In manufacturing and publishing sensational accounts of negligence and incapacity whereby the sick soldiers have been subjected to disease and suffering, *the yellows* have, as usual, brought on themselves a merited punishment. In hypocritically pandering to a false sentimentalism they have so aroused the fears and feelings of the soldiers' friends and relatives that these, many of them entirely too poor to endure the expense, have felt compelled to undertake journeys to the camps and hospitals in order to bring relief to the men they have been taught to believe were so cruelly neglected and maltreated. They have found, almost without exception, that everything has been done for the men, which, under the circumstances, was possible, and that the sufferers had no word of complaint to make. Mistakes there have doubtless been, and lack of preparation for a war, which the chrome-colored screechers brought on; but the second crime of the jingoes only doubles their first one, and people are slowly learning the evils of demagogic and cheap journalism, whether it be lay or medical.

**An Interesting Physiologic Experiment** has recently been carried out in the German army to test the food-value of sugar. Ten men were given a sugar-diet—just precisely what that means we are unable to say—and ten others were given the regular army-ration. The weight of the men on the sugar-diet is said to have increased during the maneuvers more than that of the men fed upon the common ration, hunger was kept down longer, there was less suffering from thirst, and exhaustion and sunstroke were more quickly overcome. We await more definite information and the judgment of experts, but would suggest that a ten-day test is altogether too brief for any scientific conclusions to be reached, as to the relative value of a preponderatingly

sugar-diet in tissue-building and repair. This test suggests also how little we know of the secrets of assimilation, and that too little attention on the part of scientists has been devoted to careful experiment.

**"Charity" and "Kindness" to Tramps** is like much other sentimentalism in that it has to pay dearly for its weak self-gratification. In our country the professional tramp should be treated as a criminal. His do-nothingness is another name for laziness and scoundrelism and it is high time we made an end of the calling and of its encouragement. The tramp's viciousness has recently wrecked a passenger-train in New York, resulting in a number of deaths, many injuries, and great loss of property. The tramp is the curse of every railroad, and our lives are daily endangered by him. To the hospital-tramp and dispensary-sponger, however, we can be just as well, as to the tramp in general, without, in the least, being "cruel," or "hard-hearted." If the recipient of "charity" loves the causes that begot his dependency, he must be denied the means of repeating and continuing them. The condition of the exercise of real charity or philanthropy is that it shall do away with the need of repetition.

**One of the Amusements of the Judicious** is to watch the morbid and frantic efforts of the self-advertiser who grasps at every wave of popular feeling and seeks to swim into notoriety by scattering dismal prophecies, by exaggerated spasms of virtue, and all the other common tricks of the politician. The great Doctor So-and-so finds his frequent way into the newspapers, he foretells evils, criticises the powers in charge of the army, the government, the hospitals, etc., organizes charities for relief, advertises his hospital and college, and infallibly also himself, fights for patients (one subordinate is said to have yelled, "Pull them [the sick soldiers] out through the car-windows, we must fill our hospital!"), and behaves exactly as if he were making mighty sure of the biggest slice of the next State appropriation bill. Doubtless he will succeed,—he is, in his way, shrewd, but the sting lies in the words, *in his way*. It is not the way, however, of increasing the respect of the community for the profession, and we shall finally have to suffer for all the buffoonery. A wise philosopher once said that the wicked have two ways of injuring—by doing good, and by doing evil.

**Colonization and Tropical Civilization Dependent upon a Physiologic Fact.**—An English writer, Benjamin Kidd, has contributed a series of noteworthy articles to the *London Times*, in which he emphasizes an important and overlooked fact in relation to the civilization of tropical countries. He says that history proves that the white man cannot become acclimatized in the tropics; and as civilization has also been proved impossible without the Caucasian race, certain very practical conclusions must be drawn and carried out in regard to the scramble of Northern people for the political control and commercial exploitation of these hot countries. The principal of these is that free development and government upon the democratic lines of Northern races is impossible, and that consequently the home government must constantly supervise its temporary governors and merchants in its tropical dependencies, and guard against the subtle establishment of what tends in one form or another to become a real slavery of the natives. The fact is of great suggestiveness just at present for us Americans, and it is hoped may stay the hands and give caution to the promoters of "imperialism" and territorial expansion. Thus again and again do we find that even the largest national questions of policy need the scrutiny of physicians and modifications according to the teachings of a large professional science and experience. Will any medical society, local or national, ever accept the duty devolving upon it of exercising the function inherent in its very nature? We ignore our highest office and belittle our calling by struggling only with individual disease and examples. We can teach our rulers many needed lessons, if we would.

**The Professional Work of Medical Men and its Results** during the war and immediately following its close are beginning to be properly recognized and appreciated. A careful statistical estimate made by the *Chicago Tribune* up to September 1st finds that 350 men were killed in battle or died of wounds received, and at least 1,284 have died of disease. Of the deaths from disease 515 were due to typhoid, 84 to yellow fever, 63 to dysentery, 47 to meningitis, 81 to malaria, 106 to "fever," 61 to pneumonia, and 326 to miscellaneous and unclassified causes. Massachusetts has furnished the largest number of victims of disease—130, Illinois next, 100; then follows Michigan, New York, Wisconsin, Pennsylvania, Ohio, and Iowa, with 91, 85, 46, 45, 43, and 31 respectively. A careful correspondent of the *Philadelphia Press* writes of the work of the army-physicians as follows:

By and by, when indignation has been appeased by investigation and the fixing of just responsibility, the country will learn some of the amazing stories of heroism, endurance and faithfulness to duty which characterize the relations of the great majority of the surgeons to the soldiers. In Camp Wikoff the surgeons as a whole have been as tireless in their attention to the soldiers as they would have been had the soldiers been private patients capable of paying large fees for

medical services. Many of the surgeons have worked for twenty-four hours, or thirty-six hours, without closing their eyes in sleep. Most of them have been able to get not much over four or five hours sleep in any one day. They have fought disease stubbornly, faithfully and in a good many cases have beaten death itself.

"Their records when they are published will contain the most valuable information as to the effect of climatic or other fevers upon a body of troops like that one engaged in the Santiago campaign. Their record will make it clear that the mortality would have been much reduced had it not been for those causes of complaint which have created so much indignation throughout the country. They find that the majority of the men who had prompt attention and constant care speedily responded favorably to medical treatment and that experience justifies the surgeons in saying that while the tropical fever is enervating and causes a peculiar listlessness both of body and mind, yet modern medical methods are sufficient to cope with it so that it is not to be dreaded as would have been the case fifteen or twenty years ago.

"If the medical records do show a mortality of not over 2 per cent. among the wounded, and of about 2 per cent. among those ill of fever or dysentery, then the medical staff will be entitled to the highest praise and a service of world-wide importance will have been rendered by the surgeons who attended the sick and wounded."

**To pursue good ends by evil means**, is a practice concerning the ethics of which casuists and moralists have long differed. We are now witnessing more than one example, national in extent and power, that is serving to bring some light upon the question. Our own latest war could be made to yield most convincing evidences that this so-called jesuistic principle is not lightly to be adopted as a rule of conduct. It will not excuse much that went to the making, the carrying on, or the closing up of the affair. But just now we are too feelingly implicated in it to discuss it dispassionately. In France, however, we see on a grand scale the most pitiful proof of the heinousness of the principle. To get revenge a whole people shut its eyes to everything that prevented the formation and idolization of what it has for 25 years hoped would be a victorious army. Every principle of civil justice and legal honor has been sacrificed, and every abuse of power has been encouraged that prevented the undisputed and rampant sway of the fetish-worship of military power. The result is one of the saddest in all history. And even sadder than the isolated fact is this, that the lesson will not be learned by others without the scourging of the bitter experience. We could as a nation save ourselves great suffering sure to come if we would only profit by the experience of France. And a hundred lessons will crowd upon the mind of the physician that might be gleaned upon a careful observation of these seemingly unrelated national facts, whether French or American. Medically we have been taught a vast deal by our recent political and military experience, but nothing is more ignored or more needed than this, that the surest accomplishment of the desired result is by methods that are not blameworthy. If we can first learn this ourselves and then help to teach it to our countrymen we would greatly hasten the slow march of progress and prove ourselves true and not false patriots. As physicians, we are not only citizens,



but we are particularly interested in the health of the community. Can any one deny that boss-rule has contributed to increase the death-rate, and that "politics" and nepotism have been potent reasons for maladministration and sanitary crime, both in peace and in war? In neglecting our civil duties we necessarily neglect our professional duties.

**Artificial albumen** is said to have been synthesized by Lilienfeld of Vienna, and if albumen could thus be made as cheaply as hens are able to construct it, we would have a solution of "the food-problem" desired by the socialists. It is noticeable that the discoveries of the construction of such products by the synthetic chemists do not now arouse quite the enthusiasm they formerly did. Heine dreamed that in an ideal state fried oysters would fly about begging to be eaten, and Fourier had some fancy that the ocean would sometime become an inexhaustible supply of delicious lemonade. Scientific progress is slow, and despite our laboratory victories we still get our quinin from Nature's manufactory, and it will probably be a long time before we send to the drug-store instead of to the farm for our eggs. Possibly the lessening of enthusiasm for the chemists' ingenuity is due in no small degree to a more correct estimate of the materialist as regards the limitations of his creed. Once every synthesis imitating natural products was hailed as a sure approach to the solution of the question of the origin and nature of life. The failure to catch spontaneous generation at work, the unquestioned assent to the laws that all life is derived from previous life, and all cells from previous cells, has cooled the ardor of controversialists, and we are content to study the facts and the modifications of living things, leaving to the future philosophers that of the ultimate origin of life itself. This result is of advantage both to philosophy and to science. The time has long passed when dogmatism, whether religious or materialistic, can pass for science. Lord Kelvin has said that "the influence of animal or vegetable life on matter is infinitely beyond the range of any scientific inquiry hitherto entered on. Its power of directing the motions of moving particles is different from any possible result of the fortuitous concourse of atoms;" and another master, in another department, physiologic chemistry, (Bunge, in his *Lehrbuch der physiologischen und pathologischen Chemie*) writes: *Je eingehender, vielseitiger, gründlicher wir die Lebenserscheinungen zu erforschen streben, desto mehr kommen wir zur Einsicht dass Vorgänge die wir bereits geglaubt physikalisch und chemisch erklären zu können wir nicht mehr als einfacher Natur sind und deshalb jeder mechanischen Erklärung spotten.* Indeed the more expert we become in forming some of Life's simpler products, the more profound seems our ignorance of her more recondite and higher syntheses, and our pride is duly tempered by the fact that after all we are but her followers and imitators.

**A Water-Famine in London.** Philadelphia may learn a wholesome lesson from the experience of London that should deter her from entering into any agreement to make the city dependent for its water-supply upon private corporate interests. The north-eastern district of London is threatened with a serious water-famine. This district is supplied by the East London Waterworks Company, and is in part suburban, but in part one of the poorest and most densely crowded areas of the metropolis. The company draws water from three sources:—(1) from the river Lea, which runs south through Hertfordshire and Essex into the Thames; (2) from certain chalk-wells in Essex; and (3) from the river Thames some twelve miles above London. The prolonged drought of this summer in England has rendered the Lea of but little use, particularly as the Lea has to give some half of its stream to another metropolitan water-company, the New River Company, before it is tapped by the East London Waterworks intake. The wells show signs of water-shrinkage, and the Thames is low. As a consequence the company finds the daily expenditure of water, when the supply is constant, greatly in excess of the daily receipt, and has given notice to all its luckless customers that water will be supplied for six hours in the day only, trusting, moreover, that if rain does not come soon the supply will be still further cut down. Public feeling runs very high in the matter, as it is known that the East London Waterworks Company has connection through its mains with four or five other metropolitan water-companies, all of which would be very happy to supply the deficiencies at a price. The East London Waterworks, however, is a private company, and a good dividend has to be got for the shareholders. Hence, the directors are very reluctant to buy water at high prices, and are openly accused of preferring to endanger the public health rather than injure the private purses of their friends. If this be so, the policy is suicidal, for a water-famine in London will afford an argument not to be resisted for taking the water-supply of London out of the hands of private capitalists and confiding it to the municipality or to a Government body especially constituted. The Royal Commission now sitting in London to inquire into the whole subject—notes upon whose deliberations have appeared several times in the JOURNAL—will meet in November after a long adjournment, when all the circumstances will be brought before them and when it is probable they will try to ascertain the reason of the breakdown of the company. If the company is then found not to have done its best for London, but to have preferred to consider its shareholders, it is probable that the report of the commissioners will be much influenced thereby. In the meantime all medical men are shuddering at the idea that some zymotic disease may break out in the squalid waterless districts when the absence of proper facilities for flushing might

have most disastrous consequences. Does Philadelphia care to invite such a condition of affairs and will her Councilmen place her thus at the mercy of any group of men, however eminently respectable? If the city wishes to insure her citizens always an adequate supply of pure water, she must retain the control in her own hands.

**Hydrophobia Again.**—We have failed as yet to see any scientific report of the autopsies and microscopic examinations upon which a diagnosis of "spinal meningitis" was based in the recent cases of alleged hydrophobia in Philadelphia. We know, of course, that it may be premature to demand the microscopic findings so soon after death, but as the diagnosis was so positively asserted to have been made, we must conclude that some hasty method of microscopic technic may have been adopted of which we are ignorant, for, of course, no thorough-going scientist would be willing to decide such a gravely important question without an appeal to the microscope; and also, we may add, to the bacteriologist.

The microscope, of course, may not be able to decide either for or against a case of hydrophobia, but, in a case of meningitis, it certainly would give plain readings to an expert in neuropathology. The evidence, so far, goes to show that rabies is an infectious disease, caused probably by a toxin especially noxious to the cytoplasm of the neurons. This toxin leaves little if any trace after having done its deadly work, and in this respect it is like the poisons of some others of the infectious diseases, such as tetanus, chorea, and, possibly, epilepsy; and also like some of the most rapidly fatal vegetable poisons, such as morphin, strychnin, atropin, etc. He would be a rash pathologist who said that the victims of these various poisons died of fright because these toxins and alkaloids left no recognizable traces in the tissues.

With reference to this subject of death from fright and from the imagination, we wish to ask why it is that this peculiar mode of death occurs only after a dog-bite? Death in hysteria is certainly one of the rarest of phenomena, and death from any form of fright or disturbed imagination is practically unheard of. The instances of tarantism and the dancing manias of the Middle Ages were quite unlike our modern isolated instances of hydrophobia. The future advocates of the theory that rabies is a disease of the imagination should be better fortified in both their facts and their theory. Do little children die after a dog-bite from its effects on the imagination? Do the lower animals die from an imaginary disease?

We return, however, to the more important aspect of this matter, and insist that the postmortem findings, both in the recent and in future cases of rabies, be given to the medical public from the hand of a recognized neuropathologist.

As there seems to be something peculiar to the latitude and longitude of Philadelphia that insists on finding anything and everything rather than a simple case of hydrophobia, we shall feel inspired in the future to criticise closely but impartially all postmortem reports in such cases, and especially when a diagnosis is given of such an extraordinary disease as simple, acute, rapidly fatal "spinal meningitis," simulating hydrophobia, in a little child.

**The Inevitable Reaction.**—It is quite apparent that a reaction in public sentiment is taking place against the indiscriminate and exaggerated criticism that has been directed against the medical administration in the army. Rational and fair-minded men, who are no longer misled in this country by the utterances of a certain class of proletariat journals, are beginning to make their influence felt in and out of the newspapers in behalf of a dispassionate and self-respectful judgment. The general public has been fed full of hospital horrors and clinical sensations until it, too, is beginning to be satiated and wearied with the mere iteration. Even the yellow journals are becoming more cautious as orders are being given to investigate and brand their mendacities.

The recent visit of President McKinley to Camp Wikoff at Montauk Point has had a most wholesome effect on public opinion. When the Chief Magistrate walked through the great hospital-camp without being scandalized by its sights, and came away without making a melodramatic announcement to the public, most sensible people probably felt that there was no cause for continued apprehension, and that medical affairs in the army are, after all, in the hands where they belong. Even the sensation-mongers must have taken a crumb of comfort in being relieved by no less a person than the President of the United States of the burden of responsibility for all the diseases caused by the war.

General Wheeler, in command of Camp Wikoff, recently made public a letter from the anxious family of a soldier, inquiring as to the truth of the heart-rending tales of abuse and neglect by the medical officers published in some of the newspapers. This letter was a sample of many received by him from distant parents and friends, about soldiers who were being properly cared for. The aiders and abettors of this unconscionable raid upon both public sympathy and private distress, may take pride in the fact that they alone have preempted the right to add at haphazard to the horrors of war. The general public may learn to discount or ignore their tales, but the anxieties of fathers and mothers, wives and children may not admit of such philosophic calm. The promoters of public alarm are only a degree less culpable just after than during a time of war.

The public is beginning to learn how some of this sensationalism has been manufactured. The grim hor-



rors of military camps and hospitals are real enough, but out of them can come from the mouths of the dissatisfied and mischievous a ten-fold exaggeration of the truth. The difficulty always is to distinguish the real distress from the fictitious grievance. For instance, a reckless and ignorant soldier sent to his country home a report that his whole command, numbering 1,700 men, would soon be down with typhoid fever; but inquiry proved to the alarmed friends that that particular camp was in a good sanitary condition, with prevalence of but little disease. A wealthy city-man and rough rider complained in the newspapers because an over-worked army surgeon had not at command the whole instrumental outfit of a laryngologist.

It is not the duty of medical men or of medical journals to be the partisans of any abuse. We repeat and emphasize the need of a judicial attitude of mind, and the postponement of criticism and condemnation, until there shall have been a careful accounting of facts. Mistakes may have been made, even many and great ones, but do they not belong to the civil and military, rather than to the medical departments? We believe they do.

## Correspondence.

### ELECTRICITY IN TUBAL PREGNANCY, MALIGNANT DISEASE, ETC.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

IN the critical notice in the JOURNAL of September 3d, in which my work on "Conservative Gynecology and Electro-Therapeutics" was honored by words in many respects pleasing to the author, an exception was taken to the advocacy of electric methods in the treatment of tubal pregnancy and malignant diseases. With your kind permission I wish to advert briefly to these two matters, as they are both of practical importance to all physicians in active practice.

That the advocacy of electricity in tubal pregnancy is but temperate is shown by the statement that it is only recommended (1) when a diagnosis of unruptured tubal pregnancy is made prior to the fourteenth or sixteenth week, and (2) when an early rupture has occurred into the broad ligament. In neither case is death imminent, and in both conditions many physicians have reported cures by electricity, while many others report spontaneous cures without any treatment. In all other conditions an immediate recourse to the abdominal surgeon is counselled.

Concerning the new method of lethal cataphoresis recommended for cancer the conditions are different, for this is as yet too new for the reviewer to consider judicially without the possession of a personal experience with it. But it is a mistake to discourage new discoveries by the assumption that we are in possession of any satisfactory authoritative method for the treatment of malignant diseases, which bases its claims on a reasonable efficiency. God forbid that we regard surgery as such, even though it be the best remedy generally known to the profession, and I am happy to state that those with the most experience amongst the surgeons themselves are least satisfied with this particular branch of

their work. The late Dr. Agnew made the statement some years before his death that he had cut out a cartload of these growths, but that all the patients had ultimately died from a recurrence of the affection. We must get rid of cant in the esoteric relations, at least, of the science of medicine.

The particular method of treating cancer recommended in the work is my own contribution to further knowledge on this subject, and is based on an encouraging number of successful results that promise well for a high plane of future usefulness.

Very sincerely yours,

G. BETTON MASSEY.

Philadelphia, Sept. 5, 1898.

### AN ATTEMPT AT A NEEDED DEFINITION.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

IF Hippocrates taught that *similia similibus curantur* is one of the laws of cure, but not the only one, and if he was right in so teaching, it would seem about time to advance a step further by accurately defining the particular cure of which *similia similibus curantur* is the law, and thus showing wherein that particular cure differs from other cures. The final result under different laws of cure may be the same (e.g., a restoration to health), but the steps to that result under one law cannot be just the same as the steps to it under another law. Now, I think that the cure of which *similia similibus curantur* is the law is an immediate transformation from abnormal to normal (or approximately normal) of vital processes, and, in consequence, their effects—that, in other words, this cure is the first effect of the drug, an effect to which no pathogenic effects are mediate. Neither in rational practice nor in an intelligent practice of empiricism can we attempt this particular cure, for the immediate object of any such practice is a change in conditions which are in themselves knowable, as vital processes are not—they are known only in their effects. Though more than two thousand years have passed since the days of Hippocrates, it still remains, I think, a question of opinion whether *similia similibus curantur* is a law of cure. I can but think that in dealing with this question of opinion we shall find it immensely useful to accurately define the particular cure of which *similia similibus curantur* purports to be the law. I have above attempted to so define it.

Respectfully,

CHAS. S. MACK, M.D.

La Porte, Indiana, Aug. 20, 1898.

**The Treatment of the Placenta after the Seventh Month of Ectopic Gestation.**—Price (*North Carolina Med. Jour.*, June 20, 1898) states that after the seventh month of extra-uterine pregnancy, with a living child, there are two ways of dealing with the placenta. If possible it is to be removed, but if impossible, as is often the case, the cord should be cut short, the face of the placenta and the abdominal cavity cleaned, and the abdomen closed; further indications for removal being waited for if required. Under these circumstances the placenta may be encapsulated or absorbed. Another method is to leave the abdomen open and pack gauze daily over the face of the placenta and wait for it to come away. In one case treated successfully in this way, the woman's temperature ranged between 95° and 105° for 32 days, and she then fell into spurious labor, the abdominal muscles contracting very much as the uterus does to force the placenta from its fastenings. The removal of the placenta was followed by frightful hemorrhage, which was checked by packing. The woman made a rapid recovery, and mother and child have remained in perfect health for over four years.

## American News and Notes.

**Dr. Albert E. Ebert** has been nominated for the Legislature in Illinois.

**Dr. David DeBeek**, of Cincinnati, has been made a member of the Société Française d'Ophthalmologie.

The library of the late **Dr. R. C. M. Page**, consisting of about 650 volumes, has been presented to the University of Virginia by Mrs. Page.

The **Texas Medical News** was, at the recent meeting of the Arkansas, Louisiana, and Texas Medical Association, selected as the official organ of the association.

The **Tri-State Medical Society** of Alabama, Georgia, and Tennessee, will hold its tenth annual meeting at Birmingham, Ala., October 25, 26 and 27, 1898.

One surgeon in charge of 260 sick soldiers from Chattanooga to New York was criticised for not putting off his typhoid patients *en route*: but he did not lose a patient.

**Troy (N. Y.) Hospital.**—The pathologic department has been reorganized and Dr. George Blumer appointed pathologist, and Dr. H. O. Fairweather assistant pathologist.

A **Public-Health Association** has been established at Rochester, N. Y., the object of which is to purge the city of all unsanitary conditions and educate the masses in sanitary matters.

The hospital-ship "**Olivette**" sank at her moorings near the quarantine-station at Fernandina, Fla., August 31st. The hospital-corps of 35 persons and the crew of 45 were rescued without injury.

**Itinerant doctors in Iowa** must pay the State a tax of \$250 per year, and each city and town can likewise assess them afterwards, according to a recent decision of the Attorney-General of the State.

**Dr. W. F. Blout**, of Lockhart, Tex., formerly quarantine-officer at Galveston, has been appointed State health-officer of Texas, to succeed the late Dr. R. M. Swearingen. Dr. F. E. Daniel is to be secretary of the Board of Health.

**Miss Helen Gould** has taken twenty sick men from the camp at Montauk Point to her magnificent home at Irvington-on-the-Hudson, where they are to be provided with medical care and attention until they are thoroughly convalescent.

**Hospital on Fire Island.**—The State of New York having offered to the Department of War the buildings on Fire Island for hospital purposes, it is proposed to transfer about 600 patients to them as soon as the necessary alterations can be completed.

**Bacteriologic Examination of the Water-supply of Camp Wikoff.**—Lieut.-Colonel Smart has gone to Camp Wikoff with a full supply of bacteriologic apparatus, for the purpose of making searching investigations into the bacteriology of the water-supply of the camp.

**Yellow Fever in the South.**—As a consequence of the prevalence of yellow fever at New Orleans, the Mississippi State Board of Health has issued a State-quarantine against the city of New Orleans, and no passengers, baggage, freight, or express will be allowed to be brought from that city into Mississippi until the official reports and investigations show that the disease is no longer prevalent. Reports, however, indicate that the disease also exists in Mississippi.

**Niagara Medical College.**—We learn that the information conveyed on page 441 of our issue of September 3d, was incorrect. We relied upon the report of a contemporary usually well-informed. No such reorganization of the School by the Niagara faculty has been undertaken.

**Dr. L. S. McMurtry**, professor of gynecology and abdominal surgery in the Hospital Medical College of Louisville, Kentucky, has been elected president of the faculties of the Hospital Medical School and the Louisville College of Dentistry, succeeding the late Dr. John A. Larrabee.

**Surgeon-General Sternberg** visited the hospitals at Camp Wikoff, Montauk Point, September 5th, on a tour of inspection. As a result of his investigations and inquiry into the sanitary arrangements, he is said to have declared the hospital-conditions excellent, and he considers the camp-site well chosen.

The **typhoid-fever epidemic at Reading, Pa.**, is assuming serious proportions, 130 cases having been reported to September 1st. A spring in the eastern section of the city is held answerable for the inception of the disease; but there is, in addition, a suspicion that the Antietam dam is now contaminated.

**Fumigation of Premises in Washington, D. C.**—It has been decided by the Attorney for the District of Columbia that owners of property cannot be compelled to fumigate premises in which diphtheria has been treated. The Health-Officer, however, may enter all such premises and disinfect them if necessary.

The **Maryland State Board of Health** has determined upon the establishment of three bacteriologic stations—at Hagerstown, Hancock, and Sharpsburg. The stations will be supplied with culture-tubes, which, when inoculated, will be transmitted to the State Bacteriologic Station, where the examinations will be prosecuted.

A recently issued catalog of the Chicago College of "Osteopathy" contains the statement that the "officialist surgeon," E. H. Pratt, one of its faculty, is a member of the Chicago Academy of Medicine. We are informed that this is not true.

**The President at Camp Wikoff.**—As a result of the inspection of Camp Wikoff, made September 3d, by President McKinley, it is asserted that the camp is to be abandoned as rapidly as possible, that the regulars are to go to their posts and the volunteers to their State-camps. Many of the complaints relative to defective sanitation and insufficient supplies and attendants have been remedied, and the camp is now in much better condition than it has been.

**Pennsylvania State Medical Examinations.**—At the examinations held recently at Philadelphia and Pittsburgh simultaneously, of the applicants for license to practise medicine in the State of Pennsylvania, 254 presented themselves at Philadelphia and 63 at Pittsburgh. Of the entire number, 47 failed to attain the average required by law; and 2 were rejected for unfair practices, one in each city. The next examination will be held in Philadelphia, December 12, 13, 14 and 15, 1898.

**The American Microscopical Society**, at its recent annual session, elected the following officers for the ensuing year: President, Dr. William C. Krauss, of Buffalo; first vice-president, Prof. A. M. Bleile, of Columbus, O.; second vice-president, Dr. G. C. Huber, of Ann Arbor, Mich.; secretary, Prof. Henry D. Ward, of Lincoln, Neb.; treasurer,



Magnus Pflaum, of Pittsburg; executive committee, Prof. S. H. Gage, of Ithaca, Dr. A. Clifford Mercer, of Syracuse, and Dr. V. A. Moore, of Ithaca.

**Reading Medical Association.**—At the stated meeting held August 29, 1898, the following officers were elected: President, Dr. Bankson Taylor; vice-president, Dr. Henry Landis; treasurer, Dr. J. F. Wethered; secretary, Dr. Onan Thompson; censors, Drs. M. L. Wenger, F. W. Frankhauser, and C. M. Kurtz; curator, Dr. W. M. Weidman; representative to the Board of Managers of the Reading Hospital, Dr. A. S. Raudenbush; committee on scientific investigation, Drs. F. W. Frankhauser, J. F. Wethered.

**Obituary.**—DR. FRANCIS W. TODD, Capitola, Cal., August 5th, aged 82 years.—DR. HARVEY S. BAKER, Bradford, Pa., August 17th.—DR. C. B. BELT, Boston, Mass., August 23d, aged 51 years.—DR. D. W. BOYD, Yoakum, Texas, August 18th.—DR. JOHN B. WALLACE, Detroit, Mich., August 21st, aged 48 years.—DR. N. CHAPMAN, Washington, D. C., August 16th, aged 58 years.—DR. CABEL C. JOHNSON, Hillsdale, Mich., August 28th; aged 84 years.—DR. J. M. WILKINSON, Dover, Del., August 23d, aged 48 years.—DR. JOHN A. GRAHAM, Sandusky, O., August 20th.—DR. GEORGE T. WALKER, Roanoke, Va.—DR. JOHN L. GRIFFIN, founder of East Los Angeles, Cal.—MAJOR GEORGE MCCREERY, U. S. A., at sea, on board the transport *Catania*.

**Correction.**—In regard to the statement, which appeared in the issue of September 3d, that Dr. Emma Wakefield is the first negress in America to receive a medical diploma, reference to the catalogue of the Woman's Medical College shows that Dr. Rebecca J. Cole, colored, of Pennsylvania, was given a diploma in 1867. Among other colored graduates are Dr. Caroline V. Wiley, Anderson, Pa., 1878; Dr. Verina M. Harris, Morton, S. C., 1888; Dr. Halle Tanner, Dillon, Pa., 1891; Dr. Alice R. McKane, Woodby, Pa., 1892; Dr. Lucy H. Brown, N. C., 1894; Dr. Lula Fleming, Congo Free State, 1895. As to the claim that Dr. Wakefield is the first woman in the State to practise medicine, she will have to yield to Dr. Laura M. Reville, white, who graduated in 1890.

**A Medical Law for Texas.**—A committee of the Texas State Medical Association, composed of Drs. M. M. Smith, S. E. Hudson, and J. L. Wilson, has addressed a strong communication to the medical profession of the State, urging upon the individual members the necessity for supporting a bill governing the practice of medicine, which is to be recommended to the next Legislature for enactment. The bill, which was unanimously adopted at the recent session of the Texas State Medical Association, provides for the appointment by the Governor of three boards of medical examiners, regular, homeopathic, and eclectic, consisting of seven members each. It also provides for the examination of midwives. We trust it may meet with legislative and executive approval.

**The American Public Health Association** will convene in twenty-sixth annual session at Ottawa, Ontario, September 27th-30th. The following subjects have been arranged for discussion:

The Pollution of Water-Supplies; The Disposal of Garbage and Refuse; Animal Diseases and Animal Food; Car Sanitation; Steamship and Steamboat-Sanitation; The Etiology of Yellow Fever; The Relation of Forestry to Public Health; Demography and Statistics in their Sanitary Relations; The Cause and Prevention of Infectious Diseases; Public-Health Legislation; The Cause and Prevention of Infant-Mortality; Transportation of Diseased Tissues by Mail; The Period during Which Each Contagious Disease Is Transmissible, and the Length of Time for Which Each Patient Is Dangerous to the Community; Sanitation, with Special Reference to Drain-

age, Plumbing, and Ventilation of Public and Private Buildings; Report upon Some Method of International Arrangement for Protection Against the Transmission of Infectious Diseases; Disinfectants; To Examine into the Existing Sanitary Municipal Organization of the Countries Belonging to the Association, with a View to Report upon Those Most Successful in Practical Results; The Duties and Responsibilities of the Healthy Man for His Own and Others' Health.

**Vital Statistics of Washington, D. C.**—The compilation of the vital statistics of the District for the fiscal year ending June 30, 1898, has progressed far enough to indicate that the death-rate for the period was the lowest that has yet been recorded—19.32 per 1,000, against 20.71 for 1896-97, and 21.53 for 1895-96. The death-rate of the whites during the year was 15.53; that for the colored race 27.51. Figures with reference to typhoid and malarial fevers and intestinal diseases are shown as follows:

	1895-6.	1896-7.	1897-8.
Typhoid fever.....	228	147	130
Malarial fevers.....	84	57	43
Intestinal diseases.....	468	358	319

Deaths from measles, scarlet fever, diphtheria, meningitis, and whooping-cough were considerably increased over the previous year. Those from acute lung diseases fell from 702 to 607, and those from pulmonary tuberculosis fell from 776 to 667. The number of marriages during the year was 1,598, and the number of births 4,709.—[*Maryland Medical Journal*.]

**Deaths from Lightning.**—Statistics as to the comparatively few deaths from lightning may not avail to lessen the nervousness of those who view every "thunder-head" with alarm, but they may avail to quote to children old enough to be apprehensive and who may have many summers ahead of them. Investigations made a year or two ago showed that of 298 classes of objects of which 1,707 persons confessed fear, lightning was dreaded by the greatest number. Yet in the record of fatalities there is a very small record against lightning, as compared with other causes of accidental death. Statistics prepared by the United States Weather Bureau show that for four years the average number of persons killed by lightning annually in the whole country was 196. More than that number are drowned annually, in the waters about New York City, it is said, and many more than that number annually lose their lives throughout the country in bicycling. It might even appear that one is in greater danger of being fatally kicked by a horse, or of being killed by a falling chimney, than of being struck by lightning.—[*The Evening Post*.]

**The New York State Pathological Laboratory of the University of Buffalo,** Roswell Park, M.D., Director, H. R. Gaylord, M.D., Associate, announces that during the spring of 1898 the Legislature of the State of New York appropriated a sum of money for the purpose of "Equipping and Maintaining a Laboratory to be devoted to the Study of the Causes, Mortality-rate and Treatment of Cancer." This Laboratory is now being conducted under the supervision of the medical department of the University of Buffalo. Its existence is amply justified by the difficulty of the problems involved, the evidently increasing death-rate from this disease, and the impossibility of studying it successfully by purely private means. The Laboratory is equipped with every possible facility for investigating the disease, both in its clinical and pathological aspects. The officers of the institution invite correspondence with physicians throughout the country in regard to statistics and all matters connected with this study; they also desire to secure reprints of all monographs pertaining to this subject for its library. They

furthermore particularly wish to learn the names, addresses and, so far as possible, the methods in use, of the various quacks, charlatans and institutions advertising as curing this disease. Such correspondence will be regarded as absolutely confidential, if so requested. It is desired also to secure specimens of tumors from all varieties of the lower animals, either gross specimens or fragments for microscopical examination. These should be sent securely packed, the former immersed in weak alcohol or formalin-solution, the latter in pure alcohol, and will be gratefully acknowledged, or even paid for in exceptional instances. The cooperation of the entire profession is urgently solicited in this study, in order that it may be made more thorough and more complete.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending September 3, 1898:

SMALLPOX—FOREIGN.			CASES.	DEATHS.
BELGIUM:				
Antwerp	July 31-Aug. 6	1	2	
Ghent	Aug. 6-13		1	
BRAZIL:				
Rio de Janeiro	July 8-15	4		
"	July 15-23	1		
INDIA:				
Calcutta	July 2-9		1	
Madras	July 16-22		1	
NORWAY:				
Christiania	July 31-Aug. 6	1		
"	Aug. 6-13	3		
RUSSIA:				
Moscow	July 23-30	2	2	
"	July 30-Aug. 6	8	2	
Odessa	July 31-Aug. 6	1	2	
"	Aug. 4-13	3	1	
St. Petersburg	July 31-Aug. 6	4	1	
Warsaw	July 31-Aug. 6		6	

YELLOW FEVER—UNITED STATES.			
LOUISIANA:			
Franklin	Aug. 23-Sept. 2	2	
MISSISSIPPI:			
Orwood	Aug. 29	2	
"	Aug. 31	10	
"	Sept. 2	9	
East of Waterford, 5 miles in country	Sept. 2	1	

YELLOW FEVER—FOREIGN.			
BRAZIL:			
Rio de Janeiro	July 8-15	22	15
"	July 15-22	13	13
JAMAICA:			
Kingston	Aug. 10	1	on S. S. "Darren," from Colon for Pensacola, Fla.
MEXICO:			
Tampico	Aug. 13-20	25	
Vera Cruz	Aug. 12-19	1	
SAN SALVADOR:			
San Salvador	July 23-31	12	3
"	Aug. 1-7	9	3

CHOLERA.			
INDIA:			
Bombay	July 19-26	4	
Calcutta	July 2-9	2	
"	July 9-16	6	

PLAGUE.			
CHINA:			
Hong Kong	June 25-July 2	10	11
"	July 2-9	2	1
"	July 9-16	1	2
INDIA:			
Bombay	July 19-26	69	
Calcutta	July 2-9	10	

**The Colored Race in Life-Assurance.**—The Atlanta University has examined into this subject and issued a pamphlet giving statistics of results. In general, the conclusions are as unfavorable as those that have formerly been

made public. The prevailing causes are scrofulous, infantile and pulmonary diseases, the following comparisons being from Richmond, Memphis and Charleston combined; by consumption and pneumonia the colored showed a rate of 75.5 as compared with white 32.8, being an excess of 130.5 nearly. In fevers, as typhoid, scarlet, malarial, etc., the excess was 30% on the same side; in cholera infantum, convulsions, etc., it was 165.1. Consumption and pneumonia thus appear the most deadly. As to the former alone, the percentage of excess of deaths per 10,000 in case of blacks over deaths of whites, covering periods of four years each, from 1881 to 1895, was from 143 to 172 in Atlanta, from 90 to 137 in Memphis, from 162 to 239 in Charleston, from 128 to 149 in Baltimore, and from 87 to 114 in Richmond. This is an unhappy condition, but not necessarily a hopeless or even a discouraging one. The evolution of the long depressed race must be slow, but it is none the less sure under environments that are no more unfavorable than we know them to be in the area of this inquiry. The Prudential Company has had an experience in both equal and discriminated insurance for blacks and whites. For a term of years it has been in the habit of giving one-third less insurance, for the same money, to colored than to white "adults," or 12 to 70 years. During the period in question mortality was separated and tabulated by color and special search and study among health reports and census reports was made. From 1884 to 1893, inclusive, the company's experience showed an average loss per \$1,000 at risk of \$16.96 among whites and \$21.63 blacks. The causes were found to be four: Comparatively higher actual mortality resulting from lack of physical vigor, inherited tendencies to disease, neglect in sickness, improper food, unwholesome habits of life, unhealthy localities; a heavy lapse-rate, in which the "selection" was against the company as usual; a low moral sense; ignorance of its attendant evils, although the last-named cause might seem included in the others. Even among the small number of negroes who are thrifty, intelligent and on a high comparative level of moral and social living the Prudential is satisfied that mortality still exceeds that of whites, owing to low vitality and inherited weaknesses of constitution. The Sun Life has reported a similar experience and belief, adding that Southern whites object to joining any company which accepts negro risks freely, not from race-prejudice, but because they do not believe insurance of the two races on equal terms to be equitable. The lowest of Northern laborers may possibly have as high a mortality as among the negroes, but no proof can be had because the mortality of the low Northern whites is inextricably merged in the general mortality. The negro lapse-rate alone would make him an undesirable risk. The reporter of the company believes that the negro generally insures out of vanity and the love of novelty; the notion of a showy funeral impresses him, but wears off in time, when he is ready to drop out.—[*Baltimore Underwriter.*]

#### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 21 Days Ended September 1, 1898.

Surgeon R. D. MURRAY to proceed to Galveston, Tex., for special temporary duty. Aug. 12.—To proceed to Key West, Fla., for special temporary duty. Aug. 17.—To proceed to Tampa, Fla., for special temporary duty. Aug. 25.  
Surgeon H. R. CARTER to proceed to Franklin, La., for special temporary duty. Aug. 13.  
Surgeon W. A. WHEELER to proceed to Cairo, Ill., and assume temporary command of service. Aug. 19.  
Surgeon D. A. CARMICHAEL detailed as chairman of board to select site for national quarantine-station at or near the mouth of the Columbia River, Washington. Aug. 18.



Surgeon P. C. KATZMAN to proceed to Fort Pierce, Fla., for special temporary duty. Aug. 19.—To proceed to Franklin, La., for special temporary duty. Aug. 29.

Surgeon C. T. PECKHAM to proceed to New Orleans, La., for temporary duty. Aug. 30.

Surgeon J. H. WHITE, unexpired portion of sick leave granted by Bureau letter of July 30, revoked, and directed to rejoin station at New York, N. Y. Aug. 16.

Passed Asst. Surgeon G. T. VANDERGRAN granted leave of absence without pay during war with Spain. Aug. 18.

Passed Asst. Surgeon J. O. COLE granted three months' leave of absence without pay from Aug. 8. Aug. 11.—Leave of absence granted by Department letter of Aug. 11, revoked, and directed to proceed to Ponce, Porto Rico, for special duty. Aug. 19.

Passed Asst. Surgeon J. B. STONER to proceed to Montauk Point, N. Y., for special temporary duty. Aug. 16.—To report at Bureau for special temporary duty. Aug. 18.—To proceed to Miami, Fla., for special duty. Aug. 22.

Passed Asst. Surgeon W. J. S. STEWART granted leave of absence for one day, Sept. 3. Aug. 31.

Passed Asst. Surgeon E. K. SPRAGUE to proceed to Montauk Point, N. Y., for special temporary duty. Aug. 16.

Asst. Surgeon H. W. WICKES, upon expiration of leave of absence, to proceed to Cleveland, Ohio, and assume command of service. Aug. 12.

Asst. Surgeon H. S. CUMMING to proceed to Montauk Point, N. Y., for special temporary duty. Aug. 23.

Asst. Surgeon H. B. PARKER to proceed to Montauk Point, N. Y., for special temporary duty. Aug. 23.

Asst. Surgeon J. F. ANDERSON to proceed to the Tortugas Quarantine Station and report to commanding officer for duty and assignment to quarters. Aug. 26.

Asst. Surgeon M. K. GWYN to proceed to Montauk Point, N. Y., for special temporary duty. Aug. 23.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon W. H. RUSH, detached from the "City of Pekin" and ordered to the naval hospital, Mare Island, Cal.

Passed Asst. Surgeon N. J. BLACKFORD, detached from the "City of Pekin" and ordered home.

Passed Asst. Surgeon D. L. PARKER, honorably discharged.

Asst. Surgeon F. E. WAGNER, detached from the "Dale" and ordered home.

Passed Asst. Surgeon L. W. SPRATLING, detached from the "Columbia" and ordered to the Naval Home, Philadelphia, Pa.

Passed Asst. Surgeon J. P. MCGOWAN, detached from the "Yankee" and ordered home.

Passed Asst. Surgeon J. SAILER, detached from the "St. Louis" and ordered home.

Asst. Surgeon T. O. HUTSON, detached from the Port Royal Naval Station and ordered home.

Asst. Surgeon A. HEGER, ordered to the "Yankee."

Passed Asst. Surgeon G. M. PICKRELL, detached from the "Yale" and ordered home to wait orders.

Surgeon L. G. HENEBERGER, order, detaching from the "St. Paul" and ordering home to wait orders, modified; ordered to the "Indiana."

Surgeon N. M. FEREBEE, detached from the "Indiana" and ordered home to wait orders.

Surgeon D. O. LEWIS, detached from the "Harvard" and ordered to the "Yankee."

Passed Asst. Surgeon J. F. LEYS, ordered to the Boston Navy Yard.

Passed Asst. Surgeon J. C. MACVITT, detached from the "Jason" and ordered home.

Asst. Surgeon E. THOMPSON, detached from the "Harvard" and ordered to the "Vermont" immediately.

Asst. Surgeon W. S. TUKEY, detached from the "Nahant" and ordered home.

Asst. Surgeon J. R. M. DILLON, detached from the "Passaic" and ordered home.

Asst. Surgeon A. HEGER, order of the 29th inst. to the "Yankee," revoked.

Asst. Surgeon W. E. HIGH, detached from the Naval Academy and ordered to the "Iris."

Asst. Surgeon S. V. MERRITT, detached from the "Lehigh" and ordered home.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

A board of medical officers is appointed to meet at Vancouver Barracks, to examine and make recommendation in all cases of enlisted men brought before it on surgeon's certificate of disability from the Volunteer Army stationed in the Department of the Columbia. Aug. 20.

Major NATHAN S. JARVIS, brigade-surgeon, is assigned to duty as attending surgeon and examiner of recruits at New York City. Aug. 26.

Acting Asst. Surgeon P. S. LEE will proceed from Baltimore, Md., to Huntsville, Ala., for duty. Aug. 26.

Acting Asst. Surgeon DONALD MACLEAN, JR., will proceed from Detroit, Mich., to Camp Meade, Pa., for duty. Aug. 26.

Acting Asst. Surgeon A. R. BOOTH will proceed from this city to Shreveport, La., and await orders. Aug. 26.

Leave granted Acting Asst. Surgeon J. RYAN DEVEREUX is extended 21 days on account of sickness. Aug. 26.

Acting Asst. Surgeon HERBERT L. HARRIS will proceed to Montauk Point for duty. Aug. 26.

The following-named acting assistant surgeons will proceed from the places designated to Chickamauga Park for duty: HOWARD CAREY, from Sand Beach, Me.; EDWIN L. SUTHER, from Portland, water, Mass.; WM. T. TANNER, from Buffalo, N. Y. Aug. 26.

Acting Asst. Surgeon EDWARD M. PARKER will proceed to Montauk Point for duty. Aug. 26.

Leave for seven days is granted Acting Asst. Surgeon JOHN D. THOMAS. Aug. 26.

Acting Asst. Surgeon THOMAS H. LOWE will proceed from Baltimore, Md., to Montauk Point and report for duty. Aug. 27.

Acting Asst. Surgeon F. ARTHUR ZELLER will proceed from St. Paris, Ohio, to Chickamauga Park and report for duty. Aug. 27.

Acting Asst. Surgeons FERDINAND H. SCHOLLE and MARTIN M. DOLAN will proceed from Baltimore, Md., to New York City, and report to Lieut. Col. J. Morris Brown, D. S. G., to await transportation by the U. S. steamer "Seneca" to Ponce, Porto Rico, and, upon arrival there, will report for duty. Aug. 27.

Acting Asst. Surgeon E. HAROLD WILLIAMS will proceed from Hamilton, Ga., to New York City, to await transportation by U. S. steamer "Seneca" to Ponce, Porto Rico. Aug. 27.

Acting Asst. Surgeon H. A. EBERLE will proceed from Canton, Ohio, to Jacksonville, Fla., for duty. Aug. 27.

Acting Asst. Surgeon RAPHAEL A. EDMONSTON will proceed from this city to Montauk Point for duty. Aug. 27.

Major CHARLES ADAMS, brigade-surgeon, is relieved from duty at Chickamauga Park and will proceed to Montauk Point for duty. Aug. 29.

Acting Asst. Surgeon J. D. DABNEY will proceed from Birmingham, Ala., to New York City to await transportation by U. S. steamer "Seneca" to Santiago, Cuba. Aug. 29.

Acting Asst. Surgeons F. A. HODSON, LEWIS M. WALKER and B. F. WOODIN will proceed from Denver, Colo., to Fort Monroe for duty at Josiah Simpson U. S. General Hospital. Aug. 29.

Acting Asst. Surgeon ANITA NEWCOMB MCGEE will proceed to New York City on official business pertaining to the Medical Department. Aug. 29.

Acting Asst. Surgeon DELOS L. PARKER will proceed from Detroit, Mich., to Montauk Point for duty. Aug. 29.

Acting Asst. Surgeon CHARLES S. PINCKNEY will proceed from Charleston, S. C., to Chickamauga Park for duty. Aug. 29.

The following-named acting assistant surgeons will proceed to Chickamauga Park for duty: ALFRED O. STIMPSON and JOSIAH B. TRUDGIAN. Aug. 29.

Leave granted Capt. WALTER D. McCaw, A. S., Aug. 19, is extended one month and twenty-three days on surgeon's certificate of disability. Aug. 30.

Acting Asst. Surgeon W. L. COLEMAN will report in person to the Surgeon-General of the Army. Aug. 30.

Acting Asst. Surgeon ROBERT C. EVE will take charge of the post-hospital, Key West Barracks and of all the property pertaining to the U. S. general hospital at Key West. Aug. 30.

Acting Asst. Surgeon JAMES MC V. MACKALL will proceed to Montauk Point for duty. Aug. 30.

Acting Asst. Surgeon ELIJAH J. RUSSELL will proceed from Baltimore, Md., to Montauk Point for duty. Aug. 30.

Major AARON H. APPEL, surgeon, will proceed to Jacksonville, Fla., for duty. Aug. 31.

Major ROYCE D. FRY, brigade-surgeon, is relieved from duty at the U. S. General Hospital, Fort McPherson, and will proceed to Montauk Point for duty. Aug. 31.

Leave for thirty days from September 1st is granted Major CLAYTON PARKHILL, chief surgeon, on surgeon's certificate of disability. Aug. 31.

Leave granted Major CHARLES M. ROBERTSON, chief surgeon, is extended to include Aug. 31. Aug. 31.

Major CHARLES K. WINNE, surgeon, is assigned to temporary duty at Fort McHenry. Aug. 31.

Captain HARRY M. HALLOCK, A. S., is relieved from duty at Montauk Point and will proceed to Fort Monroe for duty at the Josiah Simpson U. S. General Hospital. Aug. 31.

Acting Asst. Surgeon HERBERT GUNN is assigned to duty at the division field-hospital, the Presidio. Aug. 26.

Acting Asst. Surgeon ERNEST W. EWELL will proceed from Lancaster, N. Y., to Fort Monroe, for duty at the Josiah Simpson U. S. general hospital. Aug. 31.

Acting Asst. Surgeon CHARLES A. HAMILTON will proceed to Montauk Point for duty. Aug. 31.

Acting Asst. Surgeon D. T. LAINE will report in person to the Surgeon-General of the Army. Aug. 31.

Acting Asst. Surgeon D. T. LAINE will proceed to New York City, and report to Major-General James F. Wade, chairman of the U. S. Commission on the Evacuation of Cuba, for duty with the commission. Aug. 31.

Leave is granted Acting Asst. Surgeon FRED. W. PALMER for fifteen days. Aug. 31.

Captain DANIEL H. BRUSH is transferred from K to D. Aug. 31.

The following-named acting assistant surgeons will proceed to Montauk Point for duty: ORIN S. MILLS, FREDERICK W. R. LAPSLEY, WILLIAM O. CUTLIFE. Sept. 1.



## Foreign News and Notes.

**The cholera at Madras** is increasing.

**Dr. Königshöfer** has been appointed professor of ophthalmology in the University of Stuttgart.

**Dr. Calmette** has been appointed professor of bacteriology and experimental therapeutics at the University of Lille.

**Dr. Albert Fleischmann** has been appointed ordinary professor of zoology and comparative anatomy in the University of Erlangen.

**Mortality from Tuberculosis in France.**—Prof. Landouzy stated at the *Congrès de Tuberculose*, recently held in Paris, that there were 150,000 deaths from tuberculosis in France for the year 1895, a mortality of 1.14 per 1,000 inhabitants.

**Obituary.**—**DR. MACARIO**, for many years medical director of the Institute of Hydrotherapy at Serin, France, at Lyons, aged 87.—**KAIKHOSRO NASARVANJI BAHADHURJI**, chief physician of the first plague-hospital erected in Bombay, and an ardent advocate of medical reform in India.—**MILES ASTMAN WOOD**, one of the oldest medical practitioners in the West of England, at Ledbury, aged 91 years.—**DR. ENDRES**, privat-docent at the University of Halle.

**The Edinburgh School of Medicine for Women** has, for the present, suspended its courses. This action is due to the fact that practically half the curriculum for the medical graduation of women may now be taken in mixed classes (which the majority of the women-students seem to prefer), and in view of the impossibility of conducting separate classes for women on a self-supporting basis while exposed to competition with the much cheaper system of mixed classes in men's schools.

**25th Anniversary of the Foundation of the Berlin "Charité Ärzte."**—In April, 1899, the Society of attending and resident physicians of the Berlin Charité Hospital will celebrate the 25th anniversary of its foundation. On the occasion, it is understood, the new pathologic institute now approaching completion is to be dedicated. As many prominent German medical men have been connected with the Charité during the last 25 years it is anticipated that the celebration will be one of the notable medical events of the coming year.

**The Queen-Dowager of Holland Finds a Hospital for Tuberculous Patients.**—The Queen-Dowager of Holland recently granted an audience to a committee formed for the purpose of offering a "testimony of the people's love at the close of the Regency." The Burgomaster of Amsterdam, having presented to the Queen-Dowager the sum of 300,000 florins, she announced her intention of founding a hospital for tuberculous patients with a portion of the fund, and devoting the remainder to philanthropic purposes in the Dutch East Indies.

**Typhoid Fever in Belfast.**—A serious epidemic of typhoid fever has broken out in Belfast, 100 new cases being admitted during the week ending August 27th into the Union Fever Hospital alone, which is now quite full. How many actual cases have been reported to the Medical Officer of Health is not known, but the number is probably very large, and a high mortality may be confidently expected. It should be added that Belfast enjoys already the unenviable distinc-

tion of having the highest death-rate in Ireland and one of the highest in the United Kingdom from typhoid.

**The health of the Prince of Wales** continues generally good, and he has left Cowes, still on board the royal yacht *Osborne*, for a cruise in the western waters of the Channel, when he will probably visit Plymouth, Dartmouth, and other ports. The intention is that he should be occasionally landed and given an opportunity of having a short drive in a carriage to form some sort of change to the monotonous surroundings of a yacht. The local conditions are as satisfactory as the general ones. The fragments of the patella are in close apposition, and slight passive movements of the joint have been made without pain or inconvenience. His Royal Highness' medical men are loud in their praise of him as a patient, saying that he has shown through all the trying circumstances and tedium of the accident fortitude, patience, and good temper.

**Resolutions Adopted by the Fourth Congress of Tuberculosis.**—The Congress of Tuberculosis held at Paris from July 27th to August 3d, considering that contagion constitutes by far the most important cause of human tuberculosis, and that sputa dried and reduced to dust are the most effective agents of contagion, made the following recommendations: 1. That until the time arrives when tuberculosis will be included among the contagious diseases the notification of which is compulsory, all places open to the public should be provided with hygienic spittoons, and with a conspicuous notice forbidding expectoration anywhere else than into these receptacles. 2. That the public authorities show the example by ordering the carrying out of this measure with the least possible delay in all places under their jurisdiction, and especially in schools of every class. 3. That tuberculous patients should not be sent to convalescent-homes open to persons suffering from other diseases. 4. That homes should be established and especially reserved for convalescent children. 5. That a "medical committee of initiative" for the establishment of popular and gratuitous sanatoria should be formed. 6. That the private initiative of the medical body, and the initiative of the public, imitating the example already set in France and in other countries, should lead to the creation of the largest possible number of sanatoria. 7. That the Minister of Public Instruction and the Department of Public Hygiene in the Ministry of the Interior encourage by official patronage the courses of instruction in hygiene that the League against Tuberculosis is now organizing in Paris in each *arrondissement*, with the idea of extending this movement to the other towns of France. 8. That the permanent Committee of the Congress make an official application to the general management of the Universal Exhibition of 1900 to bespeak its interest in the work of prevention of tuberculosis by studying, in conjunction with the Committee, the form in which instruction should be given to visitors to the exhibition as to the means whereby tuberculosis is contracted and can be avoided. 9. That periodic international meetings be held for the study of tuberculosis, especially its prophylaxis. 10. That Governments should endeavor to devise means of preventing or repressing the fraudulent use of tuberculin for the purpose of concealing the existence of tuberculosis in animals intended for sale or exportation. The Congress, further, considering that the constant increase of tuberculosis of bovine animals gravely threatens public health and wealth, and that contagion is the sole truly efficient cause of this increase, affirmed the urgent necessity of legislative measures



enjoining (a) the separation of diseased from healthy animals; (b) the prohibition of the sale of diseased animals except for butcher's meat; (c) the supervision of cowhouses devoted to the production of milk intended for public use as food, and the immediate slaughter of every cow affected with tuberculous mammitis; (d) the sterilization, or at least the pasteurization, of milk intended for the production of butter and cheese on a large scale; (e) the generalization of the service of inspection of butcher's meat on a plan more or less analogous to that which has been in operation in Belgium for several years.

**Comparative Mortality of Physicians, Teachers and Clergymen in Germany.**—The annual *Transactions of the Brunswick (Germany) Association for Natural Sciences* contains an article on this subject from the pen of Dr. Heese, including figures taken from the recently published mortality-statistics of the Gotha Life-Insurance Company, one of the oldest and largest of German companies.

The average mortality among German physicians in all parts of the Empire is 11.5% above that of the average mortality of the general population. The average mortality from diseases of the respiratory tract is 15% above the average.

The higher mortality among physicians is doubtless due to their greater exposure in the pursuit of duty and to the breathing of the infectious causes of disease. The mortality among physicians from other contagious diseases is, as is well known, extremely high. From typhoid, for instance, 27% more physicians die than ordinary people, indicating the activity of the contagious material. The smaller increase in mortality among physicians from respiratory and other infectious diseases is considered an index of the lesser activity of the infecting material of respiratory contagions, despite their plentiful presence, though it distinctly affirms the fact of contagion. The mortality among German school-teachers is notably below that of the general population. Curiously enough, the mortality among country school-teachers is higher than among their city brethren, as a result probably of the longer hours, harder work and poorer nutrition in consequence of smaller remuneration, teachers' incomes especially in the country in Germany are not what would be called princely. Among the principal causes of death noted are carcinoma and emphysema of the lungs. Clergymen show a mortality 14% below the average. There is, however, a great difference between the average clerical mortality of the north and that of the south of Germany; according to the Actuary's statistics nearly 27%. In the South of Germany, too, the deaths from digestive disturbances form an important element in the mortality-lists. Dr. Heese attributes this to the consumption of beer, so common among all classes in the south of Germany and so liable to be especially harmful in people leading a sedentary, inactive life. Among clergymen generally important causes of death are pulmonary tuberculosis and carcinoma. In general, the statistics seem to show that deaths from carcinoma are on the increase among all classes.

**Hydrophobia in Paris.**—Now that the German adoption of French methods in the treatment of hydrophobia removes the last doubts as to the Pasteur method of treatment, the Paris reports on hydrophobia have a renewed interest. According to the report submitted to the board of health of the department of the Seine at its last meeting, 17,240 dogs had been impounded during the past year, 4,804 more than during the preceding year. Despite this unex-

ampled police-activity, with which the statistics of any other city in the world bear no comparison, 1,816 animals inflicted wounds with their teeth in Paris during the year (1,594 dogs, 74 cats, 146 horses and two undesignated animals). Of these animals 554 were determined to have been "mad;" 1,212 were healthy; and 50 had disappeared before the matter could be decided. 222 human beings—58 children and 164 adults—were bitten by animals known to be suffering from hydrophobia, and 9 children and 34 adults by suspected animals that afterward disappeared. It is somewhat reassuring to note that over 1,100 of the persons bitten had been wounded by animals determined satisfactorily afterward not to have been hydrophobic. A curious and interesting feature of the statistics are the number of animals also bitten by animals afterward decided to have been suffering from hydrophobia—1,202 in all. Of these 212 were bitten by cats in whom the virus of lyssa was demonstrated by inoculation to have been present in the central nervous system at the time the bite was inflicted. This large number of hydrophobic cats represents a feature of the danger from hydrophobia to which, as a rule, not enough attention has been paid. As the result of recent investigations the police-regulations as to hydrophobia are to be made even stricter than they have been. Mere autopsy of an animal and failure to find the hyperemic condition of the meninges and nerve-substance, usually considered characteristic of hydrophobia, are not hereafter to be considered sufficient to justify a diagnosis of the non-existence of the disease. Without careful negative inoculation-experiments, wounds inflicted by animals are to be considered suspicious, and the patients are to be advised to take a course of antirabic treatment at the Pasteur Institute. Hereafter, all vagrant dogs are to be kept off the streets and owners to be held to strict accountability for negligence. The report closes with the Pasteur Institute statistics for 1897, showing 6 deaths among 351 patients, so that not all the terrors of hydrophobia disappear, even with the treatment, under most favorable conditions.

## Philadelphia News and Notes.

**Obituary.**—HENRY TRIMBLE, professor of analytic chemistry in the Philadelphia College of Pharmacy, and editor of the *American Journal of Pharmacy*, August 24th, aged 42 years.

**The University of Pennsylvania hospital-train** arrived from Camp Meade, September 5th, carrying 39 sick soldiers. Of these, 10 were taken to the Presbyterian Hospital and the remainder to the University Hospital.

**The Relation of Streptococcus Sore Throat to Erysipelas.**—In the fourth line of the communication of Dr. Edward G. Rhoads, on p. 440 of the *JOURNAL* for September 3, 1898, the word *staphylococcus* is used instead of *streptococcus*.

**The Army hospital-ship "Relief"** arrived in port September 5th, carrying 248 sick soldiers from Ponce, Arroyo, Guantanamo, and Mayanez. Such were the discipline aboard and the care bestowed upon the soldiers by the hospital-corps, under the supervision of Major George H. Torney, U. S. A., that words of commendation were heard on all sides from both the patients and their friends. The sick men were distributed as follows: To the Pennsylvania Hospital, 84; to the Jefferson Hospital, 38; to the Polyclinic



Hospital, 25; to the Medico-Chirurgical Hospital, 24; to the Presbyterian Hospital, 24; to the University Hospital, 21.

**Dr. Daniel E. Hughes**, Chief Resident Physician of the Philadelphia Hospital, has been appointed Assistant Surgeon in the United States army, with instructions to attend to the distribution of fever-stricken soldiers among the different hospitals as they arrive in this city. He will act in conjunction with the Relief Commission.

**Resolutions of the Board of Health Relative to the Disinfection of Hospitals.**—The following resolution has been passed by the Philadelphia Board of Health:

*Resolved*, That the managers of the hospitals in Philadelphia be requested to exercise care in the disinfection of the clothing of patients suffering from infectious diseases, especially cases coming from the soldier-camps, and that they be notified that the use of a disinfecting plant is at their disposal."

The following resolution was also adopted:

*Whereas*, A large number of soldiers suffering from typhoid and malarial fevers, dysentery, and other camp-diseases, are now under treatment in various hospitals in this city; and,

*Whereas*, The returns of these cases will seriously invalidate the correctness of our vital statistics and increase our mortality-rate from such affections; therefore,

*Resolved*, That a communication be addressed to the authorities of each hospital, requesting that in reporting both cases and deaths of soldiers the physicians be instructed to write distinctly on the face of the report or certificate the word "Soldier."

**Vital Statistics of Philadelphia for the week ending September 3, 1898:**

Total mortality ..... 413  
Children under 5 years of age..... 131

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	46	
Cholera infantum.....	30	
Marasmus.....	25	
Carcinoma.....	19	
Pneumonia.....	18	
Nephritis.....	17	
Senility.....	16	
Gastro-enteritis.....	15	
Heart-disease.....	15	
Eclampsia.....	14	
Uremia.....	14	
Inanition.....	13	
Typhoid fever.....	175	13
Apoplexy.....	12	
Diphtheria.....	60	10
Scarlet fever.....	16	2

## Selection.

**Controlling the Use of Milk and Meat From Tuberculous Animals as a Means of Preventing the Spread of Tuberculosis.**—At the Conference of State Boards of Health held recently at Detroit, Dr. H. M. Bracken, secretary and executive officer of the Minnesota State Board of Health, said that the sale of milk from a tuberculous animal should be absolutely prohibited. It is a common idea that so long as the udder of a cow is not involved in the tuberculous process, the milk may be free from infection, but this is not safe reasoning, as demonstrated by various observers, and so ably set forth by Dr. Ravenel in a paper read before the American Public Health Association at Philadelphia in 1897.

There is but one way to control the sale of milk from tuberculous cows and that is through control of the dairy. The selling of milk should be permitted to those only who have a statement from the proper authorities, setting forth the fact that their cow or cows are free from tuberculosis. The tuberculin-test is a reliable means of determining the presence or absence of tuberculosis in a given cow. All cows should therefore be subjected to the tuberculin-test, and those

that respond should be rejected as milk-producers and placed in quarantine. There are some cattle so thoroughly infected with tuberculosis that they fail to respond to the tuberculin-test. These animals can generally be condemned on the clinical symptoms, without resorting to the tuberculin-test.

A single test of a cow or cows should not be considered sufficient. Cattle that are free from tuberculosis to-day may be affected at some later date. Milk-producers should be tested every six months, if possible, and at the longest, not more than one year should be allowed to pass without a re-test. Dairymen should not be forced to bear the expense of these tuberculin-tests. The tests are made chiefly for the good of the public and therefore the expense should fall upon it, through either municipal or State authority. There should be no attempt to compensate a dairyman financially for the loss of a tuberculous milk-producer. Such a course would make it of little importance to the dairyman whether his dairy-cattle were tuberculous or not. Let the dairyman understand that the financial loss associated with the existence of tuberculosis in his dairy-herd rests upon himself and he will quickly become a most important aid in eliminating this disease from his herd.

Boards of health, State or municipal, should be looked upon as the friends of the dairyman in his attempt to eliminate tuberculosis from his herds. They should take particular pains to urge upon the dairyman the necessity of buying only such cows as have stood the tuberculin-test. They should also point out the existing dangers in a stable that has formerly contained tuberculous animals, explaining the possibility of infection from such a source. They should also insist upon the fact that cattle, poorly housed, poorly fed, and poorly cared for, are more liable to infection than are cattle receiving the reverse of such treatment. They should not only point out these facts, but should insist that all dairies must come up to a certain standard in cleanliness, air, space, and ventilation, and that certain foods (commonly known as slops) should be excluded from use in a dairy. Dairy-cattle should be as well housed, groomed, and fed, as are the thoroughbred horses in wellkept stables.

It may be said that the dairyman cannot fulfil all these demands and sell milk at the present price. Then let him raise the price. No one, not even the poor man, can reasonably object to paying a little higher price for milk, providing he can be assured that the higher-priced milk is safe as an article of diet, when the lower-priced milk is not safe as such. If necessary to protect the dairyman financially, boards of health, establishing a standard for the dairies, might reasonably be expected to fix the price for the milk produced at such dairies.

It has been stated that all cattle responding to the tuberculin-test should be condemned as milk-producers. It does not follow, however, that all cattle responding to the tuberculin-test should be condemned as meat-producers.

Cattle that have a very limited area of infection may respond to the tuberculin-test. They at once become unsafe as milk-producers. At the same time they may be in good flesh, or a sufficient time may be given the owner to fatten them, provided strict measures are taken to prevent the cattle from passing out of quarantine.

Such cattle should be slaughtered under inspection and the carcass passed, or condemned, according to the judgment of the inspector. We should go still further and say that all animals intended for meat should be killed under inspection. Pruden, in his little book, "The Story of the Bacteria," says, on page 73:

"It is almost inconceivable that any man not wholly given over to the spirit of the devil should be capable of sending into the market meat from tubercular cattle, if he is aware of it. Yet there is reason for believing that a very considerable amount of such diseased meat is actually sent into our large towns every week, with the full knowledge of some of the unscrupulous dealers, and probably consumed, usually by the poorer and more ignorant classes."

We all know this statement to be a true one. There is but one way to prevent it, viz., by establishing as strict inspection, both antemortem and postmortem, as is that carried out under the Bureau of Animal Industry in the inspection of meat for export. The inspectors should be of as high a grade as are those under the Bureau of Animal Industry, and should be under the control of the State or municipal board of health.



## Society Proceedings.

### AMERICAN CLIMATOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held at Maplewood Hotel, near Bethlehem, N. H., August 31 and September 1, 1898.

#### FIRST DAY.

Fitting tributes were paid to the memories of Drs. T. D. Bratton, of Augusta; Harrison Allen and William Pepper, of Philadelphia, by Drs. E. O. Otis, R. G. Curtin, and J. H. Musser, respectively.

**President's Address.**—After welcoming the members of the Association Dr. E. O. OTIS delivered an address upon Avenbrugger and Laennec, the discoverers of percussion and auscultation. He thought it eminently proper that an association devoted largely to the consideration of diseases of the chest should honor the memory of these illustrious men by reviewing their lives and work. He gave an account of Avenbrugger's life and his great work upon percussion. His life was spent in enthusiastic devotion to his profession and in love and service to his fellow-men; he was modest, like most great men. His "Novum Inventum" was revived by Corvisart in 1808, in a French translation, with copious commentaries, and its inestimable value shown. An account of Laennec's life was also given and the incident leading to his discovery of auscultation and the making of the stethoscope was detailed. Laennec's whole life was absorbingly devoted to professional pursuits. He was absolutely true and unselfish in his professional aims. In the diagnosis of diseases of the chest he was universally allowed to be without a rival.

**Common Errors of General Practitioners in Dealing with Cases of Pulmonary Tuberculosis.**—DR. FREDERICK I. KNIGHT, of Boston, referred to certain common errors that might be diminished by attention to certain facts. The errors to which he especially called attention were: (1) Failure to make an early diagnosis, which is usually easy since the possibility of discovery of the tubercle-bacillus. (2) Failure to admit the gravity of the situation the moment it is discovered, and to put the patient at once in the best possible condition for recovery. Niemeyer used to say that the danger of a consumptive patient was "that he became tubercular." In the light of modern pathology, Dr. Knight would say that the danger to a tubercular patient is that he became consumptive, *i. e.*, subject to secondary infection. There is often failure also to sufficiently impress the patient with the gravity of the situation to secure his thorough cooperation in the effort for his recovery. (3) While temporizing, giving nauseating medicines, too much alcoholic stimulants, and prescribing exercise, etc., which only hasten the decline. (4) Sending patients away from home who have only a few months or weeks to live, or who have not sufficient money to live properly away from home long enough to do them any good; also exercising insufficient care in the selection of a residence for those who are suitable for change. (5) Insufficient professional supervision of patients, who always require constant watchfulness whether at home or in some climatic resort.

**Suggestions: The Result of Recent Experience with Phthisical Patients.**—DR. VINCENT Y. BOWDITCH, of Boston, said that in his examination of patients he had been frequently impressed with the fact that one or two of what he believed to be the most important features in diagnosis, or rather prognosis, had apparently been overlooked by the physician in attendance. Although ordinarily comparatively easy to make a diagnosis of pulmonary tuberculosis in cases in which dulness upon percussion, changes in the respiratory murmur and even rales are lacking—cases in which the power of diagnosis and prognosis are taxed to the utmost—he had frequently found that the general practitioner had not paid sufficient attention to what he deemed the most important symptoms,—the quality of the pulse, the temperature, and condition of the digestive organs. Post-mortem examinations had frequently shown that in patients with few physical signs in the chest, but with a weak, rapid pulse, more or less elevated temperature and poor condition of the stomach, there had been an almost universal dissemination of tubercle, without perhaps marked breaking down of tissue. These unfavorable conditions of the pulse, tem-

perature, and digestive organs he believed entirely inconsistent with a truly incipient form of tuberculous disease, even when the physical signs in the chest were few or entirely lacking. He referred to an emphasized observation recorded in a previous publication, "A Plea for Moderation in Our Statements Concerning the Contagiousness of Phthisis," (*Boston Medical and Surgical Journal*, 1896). While appreciating fully the teachings of bacteriology, the importance of absolute cleanliness in connection with tuberculous patients, and attention to the general health of those in attendance, he maintained that this care could be kindly and wisely given, without causing a spirit of terrorism and without making such sweeping and unjustifiable statements as that "all homes for consumptives are a source of danger to the surrounding community." He mentioned the statement of Flügge (*Deutsche medicinische Wochenschrift*, October 15, 1897) regarding the possibility of bacilli being carried in small droplets of mouth-fluid into the air during the act of coughing, and believed that we should wait for further proof before accepting this extreme theory.

The papers of Drs. Knight and Bowditch were discussed jointly. DR. H. D. DIDAMA, of Syracuse, referred to one of the errors mentioned by Dr. Knight, of sending patients to Colorado and elsewhere, who are too far advanced in tuberculosis, and said it would seem that some physicians send them away to escape signing the death-certificate. Yet there are instances of patients who had many hemorrhages being benefited by residence in Denver. He questioned whether, when the disease is far advanced, and the patient nervous about his condition, it is right to tell him frankly the absolute truth. Regarding remedies, he said that tuberculous patients are expected to improve as the medicine is changed or as they change doctors. Even within two or three days of their death there is an improvement in their symptoms. He was glad Dr. Bowditch had spoken of the too common feeling that tuberculous patients are social lepers. He did not believe there is any particular danger in having a friend call who had a cough due to tuberculosis. DR. R. G. CURTIN agreed with the statement that physicians are often to be blamed for sending patients away when they would be better at home, yet, there are times when the advice is unheeded until the disease is too far advanced.

DR. J. H. MUSSER thought it one of the most difficult things in medicine to decide which cases should be sent away, and which retained, and cited one case of apparent general tuberculous infection advanced to extreme weakness and emaciation in which he had advised the patient to go to the Adirondacks. His stay there under medical treatment had resulted in arrest of all manifestations of the disease. DR. HART, of Denver, said that too often patients arrive in Denver in about the condition in which they send them home; with every indication of advanced tuberculosis, and that it is a very difficult thing for the physician at the health-resort to manage these cases. DR. COLEMAN, although having had but few cases illustrating points brought out in the papers under discussion, believed that the early appreciation of the tuberculous lesion is the key to the cure, and that when a proper physical examination is made many of the errors would be avoided. He had made it a rule of his life to make a thorough physical examination of all cases coming to him. DR. BEVERLY ROBINSON, of New York, said that while he agreed that a great many individuals are not examined accurately enough and the diagnosis is not settled sufficiently soon, and proper and judicious treatment is not followed up at all times as it should be, at the time most favorable, he believed that with a better understanding of the disease, the better education of our medical colleges, this error would be much less frequently committed. DR. KNIGHT said in closing the discussion that in the treatment of tuberculosis he thought the use of sirups should be avoided as much as possible.

#### SECOND DAY—SEPTEMBER 1st.

**A Case of Dissecting Aneurysm of the Thoracic Aorta Rupturing into the Pericardial Sac and Causing Immediate Death.**—DR. JUDSON DALAND, of Philadelphia, said that the rarity and completeness of this lesion, the evidences of complete reparation of a similar previous lesion in a higher situation, and the extraordinary changes in the heart and aortic valves, together with the unusual mode of death, led him to report the case of a man,



38 years old, with an unimportant personal and family history, except that he used whisky moderately, who sought relief from edema of the legs, headache and diarrhea. His symptoms improved under absolute rest, eight ounces of buttermilk every two hours, and Basham's mixture, and he gradually resumed a mixed diet. He did not then again seek medical aid for four years. During this interval he returned to the use of whisky, averaging two pints a day. Examination showed marked arterio-capillary fibrosis, considerable hypertrophy of the left heart, with a faint systolic murmur. Two years previously the man had suddenly experienced complete loss of muscular power, without other symptoms. The urine presented a moderate amount of albumin and a few hyaline tube-casts. Three months later the patient complained of excessive muscular weakness and a fear of death, accompanied by headache and morning vomiting. In a few weeks he suddenly developed left hydrothorax, with excessive frequency and irregularity of breathing, rapid and irregular heart's action, and cyanosis, all of which were relieved by thoracentesis. Five years after the first examination ordinary evidences of cardiac failure showed themselves, and death took place suddenly, apparently from cardiac failure. The autopsy showed as the immediate cause of death, half an inch above a recent rupture of the aorta, a linear laceration measuring one-half inch in length, parallel to the long diameter of the artery, and communicating directly with the pericardial sac. The dissecting aneurysm extended for an unknown distance into the thoracic aorta.

**Clinical Notes on Asthma and Its Treatment.**—DR. BEVERLY ROBINSON, of New York, said that among the diseases that the practitioner is called upon to treat, none is of greater interest than asthma. This interest is partly due to the obscurity surrounding the etiology of the disorder. Cases of so-called nervous asthma have been infrequent in Dr. Robinson's experience, and he expressed the belief that with better information examples of purely functional asthma will be perhaps no longer described. Despite the existing nervous irritability, the asthmatic attack would rarely occur were there not other discernible causes that more advanced researches may be expected to reveal. Conditions of the blood are often ignored. Malarial toxemia is frequently present, and yet overlooked, and it is wise to act in accord with its recognition. If there be sudden chill, followed by rise of temperature and sweating, and if at the time of the chill and previous to the giving of quinin internally careful microscopic examination of the blood be made, the plasmodium malaria should be found. For an asthmatic attack of probable malarial causation increasing doses of Fowler's solution of arsenic to its physiologic effect were advised; if the bowels are constipated and the liver inactive, Warburg's extract in 5-grain doses three or four times daily; if anemia be present, quinin, iron, and arsenic in a suitably formulated pill, such as the following: 1 grain of reduced iron, 2 grains of quinin sulphate, or preferably quinin hydrochlorate, and from  $\frac{1}{10}$  to  $\frac{1}{30}$  grain of arsenous acid three times daily after meals. If the attack be severe, antispasmodic remedies should be employed, and patients should be permitted to smoke and inhale from a cigaret d'Espic, datura Tatula (Savoy and Moore) or from simple niter-paper. As a last resort, an inhalation of a small quantity of chloroform or a hypodermic of morphin and atropin may prove the only satisfactory help. Dr. Robinson agreed with those who find in the constitutional conditions of gout and rheumatism an underlying influence of great power in causing nervous irritability and characteristic appearances of the throat, and with a clear history of these affections it may be inferred, many times, that the asthmatic attack is of similar origin. As to the reflex causes of asthma: When morbid conditions are found in the nose and throat, treatment will include operative interference to modify or remove these evidences of disease. While this is true, it should be admitted that the diseased conditions of throat, and nose as causative in producing asthmatic attacks have been exaggerated by some. In the presence of chronic gastric catarrh, brought on by errors of diet or alcoholic habits, frequent lavage of the stomach and a regulated regimen have afforded great relief in the asthmatic seizures. In the consideration of bronchitic cases of asthma, with some development of emphysema, questions arise that are clinically most difficult to decide. When the bronchitis is clearly defined and the secretion is slight, efforts should be directed

to stimulation of the latter by appropriate means, and small repeated doses of ipecac, tartar emetic, grindelia robusta, ammonium chlorid, potassium iodid will be found very useful. When the bronchitis is also evident and attended with much bronchial secretion, belladonna or atropin must be combined in small or moderate doses with the drugs previously named, or they should be given with a little camphor and quinin in capsule or tablet, or, what is often preferable, alone, until their physiologic effect is manifest. When the emphysema and bronchitis are clearly defined, and when the asthma is also pronounced, recourse must be had for temporary results to inhalation of the fumes of the antispasmodic cigarettes, the repeated use of oxygen, the administration of Hoffman's anodyne, alcohol, hot coffee, capsules of ether, or chloroform. When, in connection with the previous conditions, there is evident cardiac distention, resort must be had to the use of nitroglycerin or the nitrites, or to a soluble salt of caffeine (salicylate), either by the mouth or hypodermically. Occasionally, blood-letting by bleeding from the arm, or the use of leeches, or wet cups to the chest or epigastrium, will afford more or less lasting relief. Usually, the relief is only temporary, and it is under these circumstances that particular care must be taken in the use of amyl nitrite in inhalations that seem to occasion further and more intense pulmonary congestion, and thus add an additional obstacle in front of a right heart already overtaxed. One of the most difficult matters to decide is when and how frequently injections of morphin should be given hypodermically. Great care is to be advised in this connection. The question of change of locality is one difficult to solve. After considerable experience, Dr. Robinson has been led to believe that the climatic conditions that are best for subacute or chronic bronchitis are also those best suited to the bronchitis when complicated with asthma.

**Ergot in Chronic Malaria.**—DR. A. JACOBI, of New York, discussed the active principles of ergot and the action of each. Ergot is liable to lose its power in a short time, particularly when not gathered before the harvesting of rye, because of the speedy decomposition of its alkaloids and of its fat. After giving the result of his long experience with ergot in the treatment of malaria, Dr. Jacobi expressed the following conclusions: That there are cases of chronic intermittent fever with tumefaction of the spleen that, after having resisted the action of quinin, arsenic, methylene-blue, eucalyptus and piperin, are benefited by ergot; when enlargement of the spleen is not old and firmly established the contracting effect of ergot is noticed within a reasonable time; the attacks will disappear before the diminution in the size of the spleen is very marked; though the temperature after the employment of ergot remains irregular and is now and then somewhat elevated, chills are, as a rule, not noticed with this elevation; the plasmodia do not seem to disappear from the blood so rapidly as they do after quinin when the latter is effective; even while some are still present, the attacks being more or less under control, the patient will feel better; complicating local pain requires additional treatment with ice or cold douches or heat; chronic hyperplasia demands iron iodid; digestive disturbances may indicate, as they often do when quinin is expected to act before the employment of ergot, an emetic or a purgative, or stomachics. An experience extending over forty years, in which ergot has been used in many instances, justifies the assertion that there are many cases of apparently intractable chronic malaria that will get well with ergot. There are cases occasionally in which the return of elevations of temperature after successful use of ergot makes the combination of ergot and quinin, or of ergot and arsenic, advisable, though quinin and arsenic were not successful previously. Ergot, like quinin, probably by the sudden effect upon the spleen, is capable of bringing on the first attack of chills and fever in cases of chronic malarial poisoning, when hydremia and splenic tumor are not excessive.

The following papers were read by title: **A Preliminary Report upon 65 Cases of Malarial Fever in Relation to Contiguity to Certain Brooks**, by DR. R. C. NEWTON, of Montclair; **Concerning the Natural History of Pulmonary Tuberculosis**, by DR. J. C. WILSON, of Philadelphia; **Variations in Pathogenic Activity among Tubercle-bacilli**, by DR. THEOBALD SMITH, of Philadelphia; **Oxygen-inhalation in Acute Pulmonary Affections**, by DR. ANDREW H. SMITH, of New York,



**The Treatment of Hay-fever**, by DR. J. C. MULHALL, of St. Louis; **A New Jujube**, by DR. H. LONGSTREET TAYLOR, of St. Paul.

**Sanatoria and Special Hospitals for Poor Consumptives and Persons with Slight Means.**—DR. J. M. ANDERS, of Philadelphia, summed up the more salient points and inferences in the discussion of this subject under two heads: (1) those showing the needs of the large class of tuberculous patients and the value of special hospitals and sanatoria for their treatment; and (2) points bearing upon the discrimination of the cases among the lower class into three groups, and as a remedy for each he advocated an institution with distinctive characteristics. That pulmonary tuberculosis is proportionately far more common, as well as more inauspicious, among the lower than among the higher classes, statistics clearly prove. A most potent factor in the enormous death-rate from this disease is to be attributed to the almost total lack of proper facilities for the poor afflicted. Special hospitals for the treatment of pulmonary tuberculosis were favored rather than separate wards in general hospitals, where there was serious danger of the transmission of the disease, particularly in the suppurative stage. As a result of the special hospitals the mortality-figures show a reduction of 50%. Sanatoria near large cities afford more advantages than special hospitals in densely-populated centers, and climatic sanatoria showed results better than any known method of treatment in the earlier or incipient stages of the disease; sanatoria lessen the mortality-rate of tuberculosis in communities in which they are situated. In the treatment of the advanced and practically hopeless cases every comfort should be afforded, with kind care by special hospitals in healthful urban localities. Sanitariums conveniently located close to large cities were advised for incipient cases among the very poor, special reference being made to purity of atmosphere and natural protection from chilly blasts. Persons having small means, and compelled to depend largely upon private philanthropy, need institution-treatment in the best climate. Dr. Anders favored the combined sanitarium and climatic treatment.

**Infection from the Hands in Phthisis.**—DR. E. L. BALDWIN, of Saranac Lake, described the results of an examination of the hands of 28 patients by washing their fingers in a sterilized weakly alkaline solution. Inoculation of the washings into guinea-pigs was successful in producing tuberculosis in 10 of 15 patients, mostly in advanced stages of the disease, and many of whom expectorated into handkerchiefs. Of 24 cases in which the centrifuged washings were examined microscopically for bacilli, six yielded positive results. The danger of infection from the hands may be regarded as small, unless it shall be shown that the disease is more frequently acquired through the mouth, but more general use of cheap, destructible handkerchiefs and frequent ablution were urged when cuspidors are impracticable.

**Application of the X-rays in the Diagnosis of Tuberculosis.**—DR. FRANCIS H. WILLIAMS, of Boston, presented a general statement of the medical applications of the X-rays. One of the most useful of these is for diseases in or contiguous to the thoracic cavity. Diagrams were shown that were made by transferring outlines drawn on the skin of patients while looking through the fluoroscope, to a skeleton outline copied from one of Luschka's plates. The position of the diaphragm and the heart were shown in full inspiration, and also in expiration. In health the diaphragm has a wide excursion between the extremes of respiration, and the heart also changes its place. The difference in the brightness of the lung-area between expiration and full inspiration may be perceived in the fluoroscope. This shows how conditions involving congestion, as in early tuberculosis or in some form of cardiac disease, may alter the appearances in the fluoroscope. The diagram of health was used as a key to the others and comparisons were made with it and the diagrams of the various diseases. Thoracic aneurysms may now be certainly recognized with certainty; further, symptoms due to aneurysm are sometimes ascribed to other diseases, and an X-ray examination is required to establish the diagnosis. Diagrams were exhibited showing the excursions of the diaphragm, the position of the heart, and the appearances in emphysema, pleurisy, pneumonia, pulmonary tuberculosis, pneumohydrothorax, and pneumothorax. As the X-ray examinations in pulmonary tubercu-

losis come more into use the presence of the disease will be recognized earlier. A number of cases were cited to illustrate some of the ways in which X-ray examinations might be useful in pulmonary tuberculosis.

**The Value of Systematic Physical Training in the Prevention and Cure of Pulmonary Tuberculosis.**—DR. E. FLETCHER INGALS, of Chicago, said he was compelled to be in a measure dogmatic because of the absence of systematic study by physicians and the very meager literature upon the subject. He called attention to the frequency of the observation made by medical men that the narrow, flat-chested individual is the one most liable to the development of tuberculosis, and the least likely to recover. He thought the single observation sufficient to suggest systematic physical training of great service in preventing tuberculosis, and also in curing its early stages. If it be granted that the beneficial influence of high altitude is due to the increased distention of the air-cells, the first duty of the profession should be, as a means of prophylaxis, to teach the patient to breathe deeply. By this exercise, combined with careful physical training, the chest might be much improved in form and circumference.

**The Distribution of Pulmonary Tuberculosis in New Jersey.**—DR. GUY HINSDALE, of Philadelphia, read a paper on this subject and exhibited a map in which the various regions of the State were plotted so as to show the different degrees of prevalence of the disease. The distribution of tuberculosis in this State corresponds in great measure with well-known facts relating to the disease. Contrasted with New York and Pennsylvania, New Jersey does not show such wide variations. In New York there are counties in which the disease is three or four times as rare as in densely-populated districts. In New Jersey the counties in which the larger cities are situated show a prevalence only twice as great as in the sparsely-settled regions. Hudson, Essex, and Mercer Counties, in which are situated Jersey City, Newark, and Trenton, have from 400 to 500 persons living to one death from pulmonary tuberculosis; while Sussex, Warren, Hunterdon, and Gloucester Counties have between 800 and 900 persons living to one annual death from the same disease. The remaining counties were plotted to show the three intermediate grades. Elevation above tide does not play a part, as it apparently does so plainly in the case of Pennsylvania. In New Jersey, on the other hand, one of the counties, Gloucester, in South Jersey, is quite low, but it belongs to the group in which tuberculosis is least prevalent. In the northern and northwestern part of New Jersey the surface is more diversified, reaching elevations of about 2,000 feet. The soil in the northwestern half of New Jersey is largely red clay, with outcroppings of sandstone, and in the northeastern portions trap-rock. In Essex County there are positive evidences of a great prehistoric lake, Passaic, whose southern portion is the present site of a great swamp. The soil of the southern half is principally sand, which in places like Lakewood reaches to a depth of 600 or 700 feet. But the character of the soil would seem to have little if any influence in the present instance in modifying the presence and distribution of tuberculosis. It is density of population that bears the closest relation to the distribution of tuberculosis in New Jersey. A diagram was shown in which this relation was characteristically represented. The counties that have less than one acre to each inhabitant have a high death-rate from tuberculosis, while Atlantic, Sussex, and Cape May Counties, which have from 10 to 22 acres per inhabitant, have a low death-rate. Three of these are maritime counties. Sussex has the lowest death-rate of the four and of all the counties in New Jersey. It is the farthest from the sea and embraces the highest land in the State. It adjoins Pike County, in Pennsylvania, one of the wildest and most healthful counties in that State. Few visit the hilly country in the northern and northwestern portions. If more accessible to the larger cities these undeveloped districts would no doubt be highly prized and largely sought.

**A Single Test of the Virulency of Sputum Kept Many Months.**—DR. IRWIN H. HANCE, of Lakewood, referred to the virulency of tubercle-bacilli as demonstrated by the clinical pictures of pulmonary tuberculosis and the resistance of these germs against development. He reported the experiment of Stone in 1891, in which tubercle-bacilli retained their form and virulency for three years. Similar experiments made by himself were described, with results so



different as to justify the conclusion that the tubercle-bacilli were no longer viable, and the following queries were presented: Whether sputum that remains in a liquid state for a long time develops toxins inimical to the life of the tubercle-bacilli? Whether the result would not have been different had the sputum been more virulent in its character, and taken from a case of acute, active tuberculosis? Whether, if sputum dries more rapidly, it retains its virulency longer? All of these queries, it was believed, could only be answered by further experimental work.

**Some Statistics upon Serotherapy in Tuberculosis.**—DR. J. E. STUBBERT, of Liberty, N. Y., discussed the theories of the action of anti-tubercle serum and the methods of its preparation. The serum attacks the disease by destroying the pabulum upon which the germ thrives, rather than by a direct and germicidal action. Dr. Stubbert has used mostly the serum manufactured by the United States Government under the direction of de Schweinitz. The use of the anti-tubercle serum is indicated only in incipient cases, although temporary reduction of temperature and prolongation of life have been accomplished in the advanced stage. The use of the serum is contraindicated, generally speaking, in cases showing softening or excavation, in incipient cases with marked hereditary taint, with patients in whom corpulence and vital capacity are much below normal, with those showing rapid heart-action, and in cases of mixed infection. No danger attends the injections of the serum. Occasionally a slight reaction occurs in the first few treatments. Among the advantages claimed for the serum-treatment are absence of interference with digestion; in cases in which bacilli have disappeared they have done so while the sputa were still present; no report of relapses among patients declared cured, even though they have returned to their former environments. Dr. Stubbert does not declare himself a thorough advocate of serotherapy, adhering still to a climatic, hygienic, and dietetic basis of treatment in all cases. He believes, however, that sufficiently good results have been obtained in some cases to justify further research in the same direction. The following table of results was given:

Number of cases treated.....	82
Expectoration decreased in.....	82%
Appetite improved in.....	81
Weight gained in.....	78
Physical signs improved in.....	82
Temperature decreased in.....	49
Bacilli disappeared in.....	13
Apparent immunity established in.....	21
Bacilli decreased in.....	35
Cough decreased in.....	79
Generally improved.....	85

**Pretubercular Stage of Phthisis or the Condition Which Antedates Tubercular Development, and Some Aids in Its Diagnosis.**—DR. HENRY P. LOOMIS, of New York, said that there is a stage or condition precedent to the initial development of tuberculosis, which should be called the pretubercular stage. These signs are to be looked for in corpulence of the individual, that is, the relation of the weight expressed in pounds to his height expressed in feet; in the conformation of the chest, chest-measurements, and vital capacity; in the constitutional condition, *i. e.*, whether there be chloranemia; in digestive disturbances, and in the character of the pulse. Progressive loss of weight without apparent cause is an indication of this pretubercular stage. Of 40 cases of which very complete records have been kept, Dr. Loomis has noted this characteristic loss of weight in 50%. The average corpulence of a woman should be 23; that of a man 26. Vital capacity does not indicate anything special, but taken in connection with the height it is an important aid. The normal vital capacity for a man 5 ft. 8 in. in height is 230 cubic inches. The relation between height and vital capacity for the normally healthy man is 1 to 3; that of a woman 1 to 2.6. Dr. Loomis believes chloranemia to be one of the most pronounced symptoms of the pretubercular stage, especially when taken in connection with loss of weight without cause, and poor chest-development. Under these conditions the hemoglobin is diminished out of all proportion to the loss of the number of red corpuscles. In tuberculous chloranemia the hemoglobin never falls as low as in true chlorosis. There is also a relative feebleness of arterial pressure in the pretubercular stage.

**A Plea for a Scientifically Accurate Method of Recording the Results of Physical Examinations of the Lungs.**—DR. CHARLES E. QUIMBY outlined some attempts at recrystallization and urged the adoption of a scientifically accurate method of recording the results of physical examinations of the lungs, in order to establish a direct index of the amount of disease and a standard for future reference. Complete physical record of respiration at any given point comprises: (1) the pitch-note of the trachea; (2) that of inspiration and expiration; and (3) the relative length of these two sounds expressed as a fraction. For example, respiration at point *a*, left chest; tracheal note, *g*; inspiration, *f*, above; expiration, *e*, between; rhythm,  $\frac{3}{4}$ . The foregoing statements refer solely to respiratory sounds as affected by uniform changes in the chest, and they exclude localized excavations, although the same principles may be applied to these conditions. Thus respiratory sounds, with percussion-sounds, afford an absolutely scientific, accurate record of pulmonary conditions and changes. It were superfluous to dilate upon the value of such records in cases remaining under a physician's supervision, or for such as he may desire to send to other climates and places in the care of other physicians.

The following officers were elected for 1899:

President, Dr. Beverley Robinson, New York.

Vice-Presidents, Drs. James A. Hart, Colorado Springs; R. C. Newton, Montclair, N. J.

Secretary and Treasurer, Dr. Guy Hinsdale, Philadelphia.

Council, Drs. Isaac Hull Platt, Lakewood; S. E. Solly, Colorado Springs; James B. Walker, Philadelphia; E. Fletcher Ingals, Chicago; E. O. Otis, Boston.

Delegates to the Executive Committee of the Congress of American Physicians and Surgeons, Dr. F. I. Knight, Boston; Alternate, Dr. Roland G. Curtin, Philadelphia.

The following were elected to Active Membership:

Drs. Howard S. Anders, of Philadelphia; Edward L. Baldwin, of Saranac Lake; S. Westray Battle, of Asheville; D. R. Brower, of Chicago; L. D. Bulkley, of New York; W. E. Casselberry, of Chicago; Walter F. Chappell, of New York; R. A. Cleeman, of Philadelphia; E. C. Dudley, of Chicago; Albert C. Getchell, of Worcester, Mass.; Alexander Lambert, of New York; Samuel K. Merrick, of Baltimore; J. E. Stubbert, of Liberty, N. Y.; James Tyson, of Philadelphia; Herbert Whitney, of Denver; Harold Williams, of Boston; F. H. Williams, of Boston.

The following Corresponding Members were elected:

Drs. G. G. Eyre, of Claremont, Cape Town; Samuel Gache, of Buenos Ayres; Eduardo Licéaga, of Mexico; Domingo Orvañanos, of Mexico; Carl Ruedi, of Arosa, Switzerland; Septimus Sunderland, of London; Clement L. Wragge, of Brisbane, Australia.

The next meeting will be held in New York City in May, 1899.

**Borax for Epilepsy.**—C. E. Todd (*Australasian Med. Gaz.*, July 20, 1898) reports five cases of epilepsy in which the convulsions ceased after the administration of 10 grains of borax four times a day. One patient has remained well for over a year.

**Localization of Foreign Bodies with the Roentgen-Rays.**—Davidson (*Annals d'Electrologie*, etc., May 15, 1898) has devised still another method of localizing foreign bodies with the Roentgen-rays, based upon a simple geometric principle. It has some advantages over other methods in that it is less complicated and does not necessitate the knowledge of intricate algebraic problems. It has been used with unquestioned success, especially in the localization of foreign bodies in the eye. The directions require that the limb be placed upon a transparent stage, on which are stretched two wires at right angles to each other; the Crookes tube is suspended from a horizontal bar (placed at a known distance from the stage and parallel to one of the wires), whose center corresponds to a point perpendicular to the intersection of the wires mentioned. The photographic plate is placed at a known distance below the stage. Two skiagraphs are taken on one or two plates, the tube being placed successively first on one side and then on the other, at a point equidistant from the perpendicular, the plate and member being retained in the same position.



## The Latest Literature.

### British Medical Journal.

August 20, 1898. [No. 1964.]

1. A Discussion on the Surgery of Pelvic Inflammation. CHARLES J. CULLINGWORTH, E. DOYEN, C. JACOBS, THEODOR LANDAU, SAENGER, FEHLING, A. MARTIN, A. V. MACAN, J. W. BYERS, HEYWOOD SMITH, H. C. TAYLOR YOUNG, A. LAPHORN SMITH, AMAND ROUTH, M. HANDFIELD JONES, A. E. AUST LAWRENCE, E. T. DAVIES, and J. WARD COSSINS.
2. A Discussion on the Use and Abuse of Midwifery-Forceps. R. MILNE MURRAY, W. S. PLAYFAIR, W. J. SMYLY, FEHLING, WILLIAM PRIESTLEY, WM. STEPHENSON, ARTHUR V. MACAN, J. M. MUNRO KERR, J. W. BYERS, W. JAPP SINCLAIR, ROBERT JARDINE, M. HANDFIELD-JONES, SAMUEL SLOAN, A. LAPHORN SMITH, J. BRASSEY BRIERLEY, JOHN MOIR, J. W. DRAPER, JOHN CONNELL, and THOMAS MORE MADDEN.
3. A Discussion on the Use of Röntgen Rays in Ophthalmology. J. MACKENZIE DAVIDSON and E. TREACHER COLLINS.
4. Demonstration on the Histology of the Cornea. THOMAS REID.
5. The Absorption of Aqueous Humor by the Iris. NUEL.
6. The Development of the Operative Treatment of Strabismus. SNELLEN.
7. An Operative Procedure for Cases of Incarcerated Iris. J. B. LAWFORD.
8. On Paralysis of Accommodation after Influenza. RICHARD WILLIAMS.
9. A Case of Cyst of the Hyaline Canal Producing a Double Lens. J. TATHAM THOMPSON.
10. The Hyaloid Canal and its Relation to Cyclitic Exudation. ANGUS M'GILLIVRAY.
11. A Clinical and Bacteriological Study of Diplo-Bacillary Conjunctivitis. J. W. EYRE.
12. The Bacteriology of the Normal Conjunctival Sac. ARNOLD LAWSON.
13. Case of Orbital Cyst. A. HILL GRIFFITH. (*Illustrated.*)
14. The Operation now usually Substituted for Enucleation of the Eyeball. JOHN HERN.
15. Two Cases of Tertiary Syphilitic Lesions of the Eye. HENRY E. JULER.
16. Cases of Myopia, in which the Subjective Test and Estimation by Retinoscopy Showed Considerable Difference in the Amount of the Error of Refraction. G. VICTOR MILLER.
17. The Use of Compressed Fluorescein in the Diagnosis of Corneal Abrasions. JOHN FALLOWS.
18. Extraction of Transparent Lens in High Myopia. CHAS. WRAY.
19. A Mode of Irrigating the Nasal Duct. H. E. JONES.
20. A Case of Acute Exophthalmic Goiter with Ulcerative Keratitis. JOHN GRIFFITH.
21. Crystals of Cocain in Preference to Solution. ADOLPH BRONNER.

1.—Cullingworth contends that in **suppurative pelvic cellulitis** operations should always be performed without opening the peritoneal cavity. In the majority of cases the abscess points externally above Poupart's ligament, indicating the proper site for the incision. In cases in which the suppuration occurs in the neighborhood of the pelvic glands, behind the posterior parietal layer of the pelvic peritoneum, the pointing does not occur, and a similar incision is required as for tying the external iliac artery. In rarer cases the pus collects between the bladder and cervix uteri and behind the posterior vaginal wall. Operative interference is not called for in cases of pelvic peritonitis due to simple catarrhal salpingitis, but it is called for in all cases attended with the formation of pus in appreciable quantity, whether in the oviduct, in the ovary, or among peritoneal adhesions. As to the time of operation it is, generally speaking, good practice to avoid operating during an acute attack of localized peritonitis.

Doyen holds, with regard to the treatment of pelvic suppuration, that periuterine collections of pus have their seat (1) in the subperitoneal connective tissue (iliac abscess); (2)

in the peritoneal cavity itself (ovaritis, salpingitis, and peritoneal suppurating cysts); purulent collections low down in the broad ligament may be advantageously opened by a lateral colpotomy by plunging into the inflamed ligament a long forceps, and emptying the abscesses that lie low down close to the uterine artery. For suppuration of the adnexa or peri-adnexa there are three methods of operation: (1) Simple incision of the purulent pouch by posterior colpotomy; (2) vaginal castration; (3) celiotomy. The following rules for intervention in the different varieties of pelvic suppuration are suggested: *Phlegmon of the Broad Ligament.*—(a) By iliac evolution: classical iliac incision; (b) abscess of the inferior portion of the broad ligament: lateral colpotomy. *Intraperitoneal suppuration.*—(a) The inflammatory mass remains intrapelvic, and does not reach above the brim: vaginal operation; (b) the suppurating tumors pass the brim of the pelvis, and reach the level of the umbilicus: celiotomy. By each one of the foregoing methods, vaginal or abdominal, three distinct operations may be performed: (1) Simple incision of the purulent focus; (2) ablation of the adnexa, leaving the uterus; (3) total castration.

Jacobs states that pelvic suppuration may be uterine, adnexial, or periuterine, and whether they be acute or chronic, the treatment may be palliative or conservative. Palliative operations include vaginal electrolytomy, anterior or posterior, puncture, drainage, ovarosalpingectomy on one side (by abdominal vaginal), marsupialization by the abdomen of pus-cavities and their drainage. The radical operations are bilateral ovarosalpingectomy and hysterectomy or total castration (abdominal or vaginal). The vaginal route should be preferred in cases of old-standing pelvic suppuration, with fistulae, adhesions, periuterine abscess, etc. The abdominal route is best in relatively recent cases in which there is no evidence that surrounding organs are seriously involved.

Landau reports a series of vaginal celiotomies numbering 58 cases performed by him during the last three-and-a-half years. All of the patients made uninterrupted recoveries. The permanent results of these operations lead to the conclusion that those patients that were operated on by vaginal celiotomy for true—non-inflammatory—tumors, and for extrauterine pregnancy without severe inflammatory symptoms, have been permanently cured. On the other hand, of the patients in whom inflammatory conditions led to the operation, only 20% at best have been cured. Landau claims that the immediate dangers of vaginal celiotomy are less than those of abdominal section. This is because, in the proper position of the patient during the operation, physical irritation by cooling and the injury of the peritoneum from touching the intestines is much less than in abdominal section. In most cases the intestine is not seen at all. It follows, therefore, that convalescence is generally more agreeable and the period of treatment is shorter. Further, it is certain that the cicatrix after vaginal celiotomy is formed very rapidly and solidly, and is preferred by the patient because it is invisible. Landau does not admit that the vaginal wound always unites by first intention, nor that hernia are absolutely excluded. As to the technic, the incision from the posterior vaginal vault is naturally more simple; it penetrates only the tissues of the pelvic floor without coming in contact with any organ. It does not demand the dislocation of bladder and ureters, as does anterior section. Furthermore, it has the great advantage that the posterior culdesac is thereby opened, and that from here the lowest point of the pelvis can be thoroughly drained if desired. A disadvantage of posterior section is that the view is obscure, for the uterus fills up the vaginal vault. The advantage of anterior section consists in the possibility of temporarily removing the uterus from its place and correspondingly increasing the ability to feel and see. When technical difficulties are encountered it is advisable not to hesitate to combine both incisions. The longitudinal incision in front of the transverse incision gives more room than the simple transverse incision. It, however, has certain objectionable features: (1) the bladder is separated not only from the uterus, but also from the vagina; (2) it must be sewed separately when, after the incision is made, bilateral disease is found to exist, and the radical operation must be done in addition, because otherwise the opening in the vaginal vault would be too large, and thus favor descent of the intestines. If the transverse incision be found to be insufficient, it is easy to add the longitudinal. When prolapse of the anterior wall of the vagina is present, it is better



to commence with the longitudinal incision, because the superfluous part of the vagina can easily be resected. It is also advisable in cases of vaginal fixation. The uterus is to be luxated anteriorly without wounding it. To sew the peritoneum separately is of no importance for the immediate or the permanent process of healing. From vaginal celiotomy must be excluded all tumors, irrespective of size and position, that must under no consideration be exposed to the liability of rupture; also those in which an inspection of all the abdominal organs is necessary to determine whether they are operable at all. Vaginal celiotomy is to be excluded *a priori* in all cases of certain malignancy of tumors of the internal genitals; also when there is a well-founded suspicion of malignancy. It is an operation for the treatment of diseases only of the genitalia and pelvic organs. It is indicated for all plastic and orthopedic operations on the normal-sized or only slightly enlarged uterus and the normal-sized or only slightly enlarged movable adnexa; in cases of genuine tumors of the internal genitals (uterine myomata) up to the size of a child's head; ovarian tumors—unilocular cysts—excluding, however, large multilocular cysts and malignant tumors; various stages of extrauterine pregnancy. It is forbidden in malformation of the genitalia and inflammation of the adnexa.

Saenger states that to remove non-suppurative parts in the course of an operation is by no means justified in principle. A radical operation, abdominal or vaginal, should not be undertaken except in a few rare special cases during the acute state of disease, when the microbes are fully virulent. In every case an effort should be made to ascertain the bacteriologic character of the case, and the operation, when possible, should be postponed until the virulence of the microbe has been lost or diminished. Expectant treatment must precede surgical interference.

Fehling highly recommends puncture of the vagina with the thick needle of Dieulafoy's apparatus. There is no general rule as to the choice of the vaginal or the abdominal route. If the diagnosis is uncertain he prefers the abdominal route.

Martin lays great stress on the history of the case, for much depends on whether there is a history of gonorrhea or not. In gonorrheal cases expectant treatment will often answer, but in septic cases it often fails. There is a cause of disease of the pelvic organs that has not obtained sufficient recognition, namely, the bacillus coli; this is responsible for many cases of illness in quite young women. The first condition may be constipation. Infection may take place directly through the walls of adjacent organs, or it may take place by way of the lymphatics.

Young prefers the dorsal position for making a clear diagnosis. Removal of the uterus should be practised only in cases of bilateral suppuration and destruction of the adnexa.

Smith employs the abdominal route in all cases with large tumors of any kind; in pyosalpinx and hydrosalpinx; in tubo-ovarian abscess, and in tubal pregnancy. He would employ the vaginal route for all small growths and collections situated low down in the pelvis, such as cystic ovaries, chronic salpingitis, small pustules, sclerotic ovaries, and retroversion with fixation. The mortality of the vaginal operation is almost *nil*. With regard to removal of the uterus, Smith is strongly in favor of doing so when the tubes are full of pus, and when both ovaries must be removed.

Rout holds that puerperal septic parametritic abscess should be opened and drained by the vagina as soon as the presence of pus is suspected, and should not be allowed to drift on till the pus pointed above Poupart's ligament, as it only does in neglected or long-standing cases.

Davies considers the abdominal route as generally safer, because hemorrhage and adhesions are more under control. He would not postpone operation too long for fear of the formation of adhesions.

2.—Murray states that a direct indication for the use of the **forceps** arises whenever it is decided that the danger of interference has become less than that of leaving the patient alone. The dangers of the forceps-operation are: (1) The mother's parts may be bruised, lacerated, or otherwise injured by mechanical violence; (2) the too sudden emptying of the uterus may be followed by imperfect retraction and, consequently, dangerous hemorrhage; (3) the fetal head may be unduly compressed, lacerated, or otherwise damaged. When flexion is deficient, as shown by the ease with

which the vagina can be reached, the sooner forceps is applied after the os is dilated the better. Backward rotation can thereby be prevented. Everything, however, depends on the forceps employed. With the axis-traction forceps, more especially if slightly modified, flexion can be developed, and rotation secured in nine of ten cases. Murray would use the axis-traction forceps in all cases, and not only in those in which the head is at the superior strait. He does not believe that the compression of the head by the axis-traction forceps is as much as 10% of that inflicted by the ordinary forceps.

Fehling insists that forceps should not be applied until the head is under the brim, is well rotated, and the os is dilated. If there is any danger to mother or child it is then justifiable to operate in the absence of these three conditions.

Kerr maintains that the more nearly the head is grasped transversely the better.

Jardine believes that axis-traction forceps give a better chance to both mother and child. He always uses them in preference to turning, and he never attempts to turn after failure with the axis-traction forceps. Craniotomy should be done in such cases. Theoretically the transverse grasp of the child's head is the right one, but practically it is often impossible.

3.—Davidson's method of locating **foreign bodies in the eye**, which he used in 41 cases, is based on getting the three coordinates of any point. In his apparatus a vertical knitting needle forms one plane, a horizontal knitting-needle the second plane, and the photographic plate the third. The patient's gaze must be parallel with the horizontal needle, and to the lower eyelid must be fixed a loop of lead wire with its point projecting upward, forming the landmark from which the position of the foreign body is to be calculated. The Crookes tube is on a sliding scale and the second exposure is made from a point 6 cm. in front of the position for the first exposure. An exposure of one minute is sufficient for a tube that has a fine point from which the light is emitted. The situation of the foreign body is then calculated from the proofs by means of a second apparatus that is not described, but that, it seems from the discussion that followed, is a schematic eye.

E. Treacher Collins reported 4 cases of foreign bodies in the eye that were successfully operated after they had been located by the method just described. The period between accident and operation was 4 months, 5 days, 15 years, and 4 weeks, respectively.

In the discussion of the two preceding communications, Cargill, McHardy, and Nettleship reported successful operations after localization of the foreign body by Davidson's method. Reeve exhibited Sweet's apparatus, which he had used in 3 cases, and he referred also to Leonard's method. Thompson's (Cardiff) results with the X-rays had been negative.

4.—Reid showed lantern-slides illustrating the **healing of corneal wounds**. The stratum lucidum he holds responsible for the growth of the epithelium that spreads over the wound and often hangs free over the injured corneal substance. The intercalary cells of the corneal epithelium are chromatin bodies or cells of a migratory nature, seen in various transitions from the epithelium to the corneal substance.

5.—Nuel believes that the reason investigations have thus far failed to show that no inconsiderable **absorption of aqueous humor** does occur by way of the anterior surface of the iris lies in the fact that the experiments made were largely limited to rabbits, whose iris lymph-apparatus is entirely rudimentary. He showed lantern-slides illustrating the absorption of India ink by the iris of dogs and cats four hours after injection into the vitreous body, from which he postulates that there can be little doubt that in man also the orifices in the anterior surface of the iris, and the interstitial clefts into which they lead, have the function of absorbing the aqueous humor.

6.—Snellen gives a comprehensive view of all the aspects of the **operative treatment of strabismus**. Advancement of the tendon is particularly valuable when secondary operations are necessary and when there has been much cicatrization after previous operations. However, his preference for simple tenotomy is unmistakable. "By it satisfactory results are obtained in the majority of cases, certainly in all cases of spasmodic strabismus as found with hyper-



metropia or with paresis of accommodation; but good results are obtained often in cases of paretic strabismus. Bad results from tenotomy are largely due to faults of execution. In order to secure binocular vision, it is often necessary to combine with operative treatment exercise and education. This overcomes the want of fusion and restores the muscular tonus." The foregoing views were reflected in the remarks by Williams, Little, Berry, and Argyll-Robertson.

7.—In cases of **incarcerated iris** with high tension, Lawford's plan is to pass a Graefe knife through the margin of the cornea and the anterior chamber, emerging at the opposite corneal margin. Both corneal punctures are then enlarged, and an iridectomy is effected through each incision, *i. e.*, double iridectomy. This procedure was considered unnecessary by Argyll-Robertson, Williams, Snellen, Collins, and Little; Berry sometimes did double iridectomy on one eye for such a purpose, but always with a keratome.

8.—Williams reports a case of **paralysis of accommodation of one eye** in a physician, 35 years old, one week after the disappearance of the acute symptoms of influenza. This report brought out verbal reports of similar cases by Argyll-Robertson, Juler, Mackay, Browne, Cargill and Williams.

9.—Thompson records a case of what is practically a **double lens**, produced by cystic dilatation of the hyaline canal just behind the lens, and having all the properties of a lens. "The distinct nature of the cyst, and its differentiation from posterior lenticonus, was shown by its position in the parallax and by the position of the spot when viewed obliquely, showing a convex not a concave surface." Gunn stated that he had seen a similar condition in a child.

10.—M'Gillivray traced the development of the **hyaline canal** and its contents, after injecting it with coloring-matter from the anterior chamber. In cyclitic exudation, the lymph effused into the anterior chamber passed backwards into this canal. A specimen showing the canal and exudation was shown. Gunn said many of these cases were diagnosticated as instances of persistent hyaloid artery.

11.—Eyre describes at great length the clinical and bacteriologic aspects of that form of subacute conjunctivitis, termed by Morax and Axenfeld **diplobacillary conjunctivitis**. Lawford stated that, clinically, the appearances are those long since recorded as the signs of "angular" conjunctivitis. Eyre finds that zinc-solutions are effective in this disorder, which commonly affects middle-aged females.

12.—The following are the most interesting features of Lawson's experimental inquiry into the bacteriologic status of 200 **normal conjunctivæ**: (1) The frequency with which the so-called xerosis bacillus was found; (2) the comparative infrequency and the attenuated form of the pyogenic cocci; (3) the considerable number of sterile tubes. This is perhaps the first time that the xerosis-bacillus has been said to be a common resident of the conjunctival sac. Lawson says the fact has probably been overlooked on account of the difficulty of growing the bacillus on any other medium than blood-serum. If this medium is employed, it will be found to be by far the commonest microorganism encountered in the conjunctiva. If the xerosis-bacillus be excepted, the conjunctival sac is singularly devoid of living microorganisms. All of the foregoing facts point strongly to the conclusion that the conjunctival sac, probably chiefly by its epithelium, but also possibly in part by the lacrimal secretions, possesses great powers of resistance to the growth and life of pyogenic organisms, a conclusion emphasized by the great freedom of eye-wounds from suppurative process, even before the days of aseptic surgery. Lawson urges therefore the abandonment of irritating antiseptic solutions. M'Gillivray said that he had given up the use of antiseptics in ophthalmic surgery, using now only sterile normal salt-solution. He believed that the conjunctival sacs of all persons over the age of 60 years are septic. Lawson, in concluding the discussion, said there is a greater proportion of infected sacs in old than in young persons, probably because of the defective drainage so frequent in old people.

13.—A. Hill Griffith removed from the left orbit of a 53-year-old woman a **cyst** measuring 21 by 15 mm., which he regarded either as an offshoot from the capsule of Tenon, or from the bursa around the tendon of the superior oblique muscle as it lies in the pulley. The cyst was neither hydatid nor cysticercal. The patient made a perfect recovery.

14.—Hern outlined the indications for **evisceration**,

**Mule's operation**, and removal of **anterior staphylocoma**. Buller, M'Gillivray, and Griffith declared their satisfaction with Mule's operation; while Spence Meigham, Snellen, and Argyll-Robertson rather leaned toward enucleation as the safest procedure.

15.—Juler related the case of a young man-servant who had acquired syphilis and later developed a **gunma in the ciliary body** of each eye. Restoration of vision in each eye, such as this patient secured after treatment, is, as Juler says, most exceptional. In another case **interstitial keratitis** occurred as a tertiary symptom in a 33-year-old married woman. Hinshelwood and Lawson both spoke of having seen cases that closely simulated Juler's second case.

16.—Miller reports three cases in which a discrepancy existed between the subjective and the retinoscopic findings, dependent upon spasm of the accommodation.

17.—Fallows finds that **fluorescein**, compressed into the form of the ordinary **ophthalmic disc**, is of much convenience when one desires to carry with him this drug for revealing and outlining corneal abrasions.

18.—Wray believes that the published cases appear to prove that the immediate results and risks are not such as to warrant repudiation of **extraction of the lens for high myopia**. The weak spot in the statistics is that they bear only on immediate consequences. Up to August, 1897, over 2,000 patients, with myopia of over 10 D., had submitted to the operation, but up to the present time no one has attempted to show the probable *ultimate* consequences. Post-operative dangers are from detached retina and inflammatory affections, in which the ciliary region participates. Wray's own notes of 123 *nonoperated* myopes of over 10 D. have not shown one case of detachment under 45, while it occurred three times in patients above that age. After operation, detachment occurred in from 5 to 10% of the cases. Both detachment and suppurative iridocyclitis have been seen as long as 4 years after operation, and the conclusion is forced that if the risks of operation are proved to be from 5 to 10% within 4 years of operation, they will undoubtedly prove much higher later on, after the cases have been watched a few years, and time and work have contributed their share to the ultimate conditions of the eye.

20.—Griffith records a case of **exophthalmic goiter** in a maid-servant, 21 years old, in whom the protrusion of the eyes was so great and the inability to close the lids so long-continued that both corneas ulcerated through, and removal of both eyes became necessary, after which the general condition of the patient improved greatly.

21.—Bronner finds that for nearly all major and minor **operations on the eye, cocain in crystals** is far preferable to the ordinary solutions. As the crystals cause severe smarting, he uses a few drops of a 2½% solution first, and then lays about ¼ grain of crystallized cocain on the part of the globe to be incised. After a few seconds of such contact the eyes are closed 4 or 5 minutes and they are then ready for operation.

Lancet.

August 20, 1898. [No. 3912.]

1. Some Clinical Experiences. PAUL SWAIN.
2. The Treatment of Fractured Bones by Operation. ARTHUR E. BARKER.
3. Vaccination: with Special Reference to Prospective Legislation. FRANCIS T. BOND.
4. The Pathology of a Fit of Gout (Paroxysmus Podagræ). GEORGE W. BALFOUR.
5. The Operation of Gastrostomy Performed by the Kader-Senn Method, with Two Cases Successfully so Treated. A. ERNEST MAYLARD.
6. Vaccination-Rashes. ROBERT J. CARTER.
7. Notes on the Localization of a Center in the Brain-Cortex for Raising the Upper Eyelid. W. HARTEY BUNTING.
8. Fracture of the Patella. HEATHER BIGG. (*Illustrated*.)
9. Remarks on the Mortality from Cancer. W. ROGER WILLIAMS.
10. Some New Features of the Accessory Cavities of the Nose. ROBERT H. CRAIG.
11. The Role of the Mosquito in the Evolution of the Ma-



larial Parasite. (The Recent Researches of Surgeon-Major RONALD ROSS, I.M.S.) (*Illustrated.*)

12. A Case of Imperforate Hymen; Retained Menses; Hematocele; Operation; Recovery. (Under the care of DR. PASTER and MR. ANDREW CLARK.)
13. A Case of Intussusception; Operation; Recovery. (Under the care of MR. W. H. BROWN.)

1.—By this illuminating and accurately descriptive title, so helpful to the cataloger and student, Swain reports a case in which **gastrotomy** was performed and a mass of hair weighing 5 pounds, 3 ounces, was removed from the stomach of a woman 20 years old. Previous to the operation the patient manifested no symptoms of gastric disorder and was able to digest ordinary hospital-food. She made a good recovery. Swain has performed Loretta's operation for constriction of the pylorus twice with a fatal result in each case. In one of these cases there was also an **hour-glass contraction of the stomach** resulting from the cicatrices of an old ulcer. The constricted portion was two inches long and was at first supposed to be the esophagus. In performing gastrotomy Albert's method is preferred. **Posterior gastroenterostomy** was performed twice by means of Murphy's button and satisfactory results followed in each case. In the second case an **epithelioma of the hepatic flexure** of the colon perforated the stomach on the fifth day after operation and stercoraceous vomiting and death followed. A number of cases are mentioned in which Murphy's button was used for intestinal anastomosis, and a high opinion of its value is expressed. A case of **intussusception** of the sigmoid flexure into the rectum, caused by a malignant growth, is reported in which after dilating the sphincter the intussusception was drawn down by vulsella and silk sutures passed through its coats over its entire circumference; the bowel was then opened and divided below the sutures. It was found impossible to reduce the stump, but the next day the bowels moved normally and no intussusception could be discovered. Recovery followed.

2.—Barker reports 46 cases in which **operations** were performed for **fractured bones**: Subcutaneous suture of the patella for fracture, 19; suture of the patella (open method), 10; suture of the olecranon for fracture, 6; suture of the olecranon for dislocation, 2; suture of the bones of the forearm (united fracture), 2; suture of the bones of the leg (united fracture), 4; suture of the clavicle (united fracture), 1; suture of the patella after division, 2; total, 46. In all of the cases of subcutaneous suture of the patella the patients recovered well from the operation; osseous union seemed to be present in all and was shown by skiagrams in some; the wire gave no trouble. Barker is well satisfied with this method of treatment for recent cases at any age. Of 10 old ununited fractures of the patella all but 2 united by first intention. Suppuration was not serious in the other cases, one of which had ataxic symptoms, and a good result was obtained in both. The results in the cases of fracture of the olecranon were excellent except in one of compound fracture, and in this case the adhesions were broken up under anesthesia, with a good final result. The method employed consisted in making an oval flap, drilling the fragments transversely and using wire, making the knob on the outside. In only one case did the wire irritate the skin and it had to be removed. In the other cases the results were satisfactory. The cases reported include all that have occurred in Barker's practice, without exception, and they are encouraging, although it is believed that better results will be obtained in the future.

3.—Bond reviews the salient features of the **vaccination-bill**, and then mentions as his objections to the omissions from the bill, that there should have been legislation upon the subject of re-vaccination; that vaccination by private practitioners should not have been excluded, but should have been regulated in some definite way; that sanitary authorities should have been given power to insist upon vaccination in times of epidemic, and should have been made responsible for vaccination at such time.

5.—Maynard expresses satisfaction with Senn's modification of Kader's method of **gastrotomy** and reports two cases of esophageal obstruction, one of them malignant, in which he used this method very successfully.

6.—Carter divides **vaccination-rashes** into two main groups, the first being those that arise from pure vaccine-

inoculation. There may be secondary local inoculation of vaccine eruptions that occur before vesicles form, and eruptions after the formation of vesicles, as well as sequelæ of various forms due to the irritation of vaccination, and usually occurring in predisposed subjects. The second group includes eruptions due to some admixture with the vaccine-virus, which may be introduced with the virus at the time of vaccination, causing some local disease, such as impetigo contagiosa, or constitutional disease, such as syphilis, leprosy, or tuberculosis; or these may be introduced after the vesicles have developed and ruptured and then cause conditions like erysipelas, cellulitis, gangrene or pyemia. In the first group, among eruptions occurring before vesicles form, may be noted vesicular and bullous eruptions and erythema multiforme, which are rarely mentioned by writers. In the next subsection of this group may be noted the frequency of roseola and a measles-like rash and a lichen of various forms that comes out in successive crops. Purpuric rashes may occur in very cachectic children. As to the occurrence of eczema there is no doubt that it may occur, but it should not be attributed to the vaccination unless it appears before this is completely healed. Psoriasis after vaccination is a pure curiosity. As to the possibility of the inoculation of syphilis it is insisted that the irritation of vaccination is likely to determine the outbreak of the rash of congenital syphilis, and that it is absolutely wrong to consider a syphilitic rash due to inoculation at the same time with the vaccine, unless the rash appears only about 50 days subsequent to the inoculation, and this, while it has occurred, is a matter of the utmost rarity and will never occur with the use of calf lymph. Tuberculosis has certainly been introduced with vaccine-virus, but this is extremely rare, and this, too, cannot occur when glycerinated calf-lymph is used. The possibility of the inoculation of leprosy is usually considered very doubtful. Those rashes that may occur after the vesicles have broken are of some importance, particularly in weakly children, and erysipelas is particularly important in very young infants, as it is likely to prove fatal. This has led to the proposition to raise the age-limit of vaccination of infants to one year.

7.—Bunting reports a case of **head-injury** in a boy, 12 years of age, whose skull was crushed in the anterior part on the right side, and a certain amount of brain-matter escaped, and still more was lost when the opening in the skull was enlarged to raise the depressed fractures. There was no paralysis until operation was undertaken, but after this there was slight ptosis, which persisted for a few months and then disappeared. The posterior end of the fracture, from which the brain-matter chiefly escaped during the operation, was just about at the ascending frontal convolution on the level of the middle frontal convolution and the sulcus between the first and second convolutions. Bunting believes that the ptosis was due to the destruction of the cortical center during operation, and that recovery was due to the function being taken up by the other side. As there was no paralysis immediately after the accident he does not think it possible that the subsequent ptosis was nuclear, and he concludes that there is a distinct cortical center for the elevation of the upper eyelid, and that this center is in the posterior extremity of the second frontal convolution, extending probably into the first frontal convolution; that is, above and in front of the location suggested by De Bono, and lower than that suggested by Ferrier. This center is distinct from the centers for the other eye-muscles and, as a result, cortical lesion may cause solitary paralysis of the levator, or, when all other muscles are paralyzed, the levator may escape. There is a distinct relation between such cortical center and the levator muscle of the opposite side, destruction of the center on one side causing temporary or permanent paralysis of the eyelid on the other side.

8.—Bigg describes a form of apparatus for the treatment of **fracture of the patella**, consisting of two lateral rods, extending from well up the thigh to the foot, to which are attached two bands encircling the leg above and two below the knee. Two semilunar pads hold the fragments in place. The lower pad is attached to the lateral rod by transverse straps and the upper one has straps placed obliquely which draw the upper fragment down. Bigg states that he has treated about 300 cases satisfactorily by this method.

9.—Williams calls attention to the increasing **mortality from carcinoma** in recent years and to the fact that less



effort has been made, apparently, to diminish the prevalence of the disease than is the case with typhoid fever, tuberculosis, etc. Williams has compiled tables showing the increasing prevalence of carcinoma in England and Wales since 1840 and the relative increase among males and females. In 1840 carcinoma caused 2,786 deaths, the proportion being 1 in 5,646 of the total population and 1 in 129 of the total mortality, or 177 per million living. In 1896 the deaths due to the same disease numbered 23,521, or 1 in 1,306 of the total population and 1 in 22 of the total mortality, or 764 per million living. Thus the proportionate mortality now is four and a half times greater than it was half a century ago. In this respect its position is unique, for no other disease can show anything like such an immense increase. It is believed that this increase may be in part due to the excessive consumption of meat of late years. It is stated that statistics show that more than double the amount of meat is consumed at present than there was 50 years ago. Insufficient exercise and deficient fresh vegetable food may also have an influence. The heavy mortality at advanced ages may be due to the survival in increased numbers of weakly lives artificially prolonged by improved conditions of existence. The increased frequency in males may be due to the increasing urban population, the men living under conditions resembling more closely those for women than heretofore.

11.—Manson reviews the work of Ronald Ross, dealing with the part played by the **mosquito** in the transmission of **malaria**. Ross was able, after repeated attempts at feeding gray mosquitos on larks who were infected with proteosoma, to discover, in the first place, 1 out of 14 of these mosquitos that contained pigmented cells. Another attempt discovered pigmented cells in 5 of 9 mosquitos. From the fact that these pigmented cells occur when mosquitos are fed on blood containing gymnosporidia, it would follow as a corollary that these pigmented cells are a stage in the life-history of the gymnosporidium in the mosquito. Mosquitos fed on birds infected with halteridium or with immature proteosoma or on healthy sparrows did not show any pigmented cells. Ross suggests that something similar to the process of entrance of white blood-corpuscles by the halteridium that MacCullum has described occurs in his mosquitos, the pigmented proteosoma vermiculi, entering the tissue of the mosquito's stomach, and increasing in size until it projects into the body-cavity of the animal, the pigment then diminishing and disappearing and this coccidia-form becoming granular. Ross had at the time when this communication was sent to Manson noted no further growth, but suggested that the coccidia find themselves then in a closed cavity, so that it would seem that sporulation might occur within either the living host or the dead host, the first pointing to direct infection of men and birds by the mosquito, the second to a circuitous infection, perhaps by a second generation living in the water; but subsequent study showed that the next stage of growth was a bursting and a setting-free of germinal vermicules into the body, blood and tissues of the mosquito, and the climax of the investigations was reached when Ross was able to infect healthy birds by allowing them to eat mosquitos that had fed upon birds infected with proteosoma. The healthy birds subsequently showed proteosoma in their blood.

12.—Pasteur and Clark record an interesting case of **imperforate hymen** in a girl, 15 years of age, who had never menstruated. Abdominal section was first performed, and the nature of the tumor that existed ascertained. The hymen was then incised and the characteristic retained menses was evacuated. The girl made a good recovery.

13.—A boy 3 years old had been seized with abdominal pain two days previously to his admission to the hospital and had vomited and passed blood by the rectum on several occasions. The abdomen was slightly distended and somewhat tender, and an elongated swelling could be felt in the region of the ascending and descending colon. On opening the abdomen an **intussusception** was found extending from the cecum to the splenic flexure of the colon. The greater part was easily reduced, but the last few inches appeared to be a double intussusception and was reduced with difficulty. The wound was washed, the abdomen closed and recovery followed. Brown advocates early operation and believes that if cases similar to this were treated like cases of strangulated hernia, by immediate operation, without prolonged trial of palliative measures, many lives would be saved.

### New York Medical Journal.

September 3, 1898. [Vol. lxxviii, No. 10.]

1. Brain Anatomy and Psychology. STEWART PATON.
2. Extra-uterine Gestation of the Interstitial Variety terminating by Rupture into the Uterus. Recovery. ROBERT MACLEAN TAFT.
3. An Operating Table and Chair Designed for Use in an Office or Hospital. ROBERT M. TAFT.
4. The Treatment of Fractures of the Patella by the Purse-string Suture. IRVIN S. HAYNES.
5. The Early Diagnosis of Dementia Paralytica. STEWART PATON.

1.—Paton discusses the relation of psychology to brain-anatomy, the preliminary portion of his paper being purely historical. The important workers in this field were: Willis, Stahl, du Petit, Rolando, Hall, Beebe. It is suggested that great advances will probably be made by more careful study of the psychology of the infant and of the structure of its brain. Attention is called to the importance of Apathy's researches, and the belief expressed that his doctrine of neuro-fibrils, originating from the nerve-cells and not from the ganglion-cells, will enable the acceptance of the doctrine of a network permeating the whole central nervous system. These investigations, however, await confirmation.

2.—Taft records an extremely interesting case of the **interstitial variety of extra-uterine pregnancy**. The patient was 30 years of age and had given birth to two children, the youngest being 20 months old. Both births were normal. The woman had had no miscarriages, nor did she give any history of previous uterine trouble. Some four weeks after the last menstrual period she experienced severe cramps low down in the pelvis, the pain being severe enough to cause her to cry out. This continued for two weeks, during which time she continued to ride her bicycle constantly. She had constant leukorrhea, and the discharge had become rust-colored. She also suffered with a dragging pain in the back. Examination showed the uterus to be mobile, somewhat enlarged, very painful to touch, and displaced somewhat backward, with slight sensitiveness on either side. A vaginal tampon was introduced the next day, and one on the following day. On the third day, after severe pain the tampon was expelled, together with a small portion of decidual membrane. The flow was profuse for the next three days and then stopped. Six weeks later, the patient was again seen and found to be suffering from leukorrhea and severe pelvic pain. Examination showed the body of the uterus to be much enlarged and very sensitive, but there was no perceptible irregularity of the tumor. The cervical canal was open and dilated. A sound showed the cavity to be apparently empty. A small curet introduced and withdrawn brought away a quantity of gelatinous fungoid tissue. Believing the case to be one of subinvolution and chronic endometritis, curettage was performed, bringing away a great quantity of degenerated and altered mucous membrane and fungoid vegetations. Three days later there was a profuse hemorrhage, followed by a constant leukorrhea. After two weeks the uterus was found much reduced in size, being four-fingers' breadth below the umbilicus; but with the reduction in the size of the uterus a tumor had developed, or rather was distinguishable on the right side, feeling like an orange placed one-half outside and one-half inside the uterus, at or about the attachment of the oviduct. The cervix was decidedly deflected to the left. The faradic and galvanic currents were applied with the idea of destroying fetal life should the tumor be an extra-uterine pregnancy. In the sequence of this the patient had a severe cramp followed by the discharge of a fetus of about 2½ to 3 months attached to a cord that extended through the cervix into the uterine cavity. The finger could not detect a placenta. Under anesthesia, however, this was found high up on the right side and strongly adherent to the upper wall of a dilated pouch with very thin walls. It could not be separated, and the hemorrhage following the introduction of the hand was very severe. The placenta was, however, finally removed in twenty small pieces after profuse hemorrhage. The uterus was tightly packed with sterilized gauze. [We doubt if this is a true case of interstitial extra-uterine pregnancy. There may have been a slight tendency to duplication of the uterus with intra-uterine gestation.]



4.—Haynes points out that the cases of **fractured patella** suited for non-operative treatment are those in which there is a minimum degree of separation of the fragments with a reasonable certainty that there is little or no tissue between the fragments. The condition in life of the patient is also to be considered, those whose circumstances permit them to live with comparatively little physical exertion being fit subjects for milder measures and less satisfactory results. The class of cases recommended for non-operative treatment are by far in the minority. By the open method alone can the joint be freed from blood-clot, the fibrous cap covering the upper fragments dissected away, the strands of torn tissue removed, the fragments cleaned and brought into perfect alignment, and then fastened so that this condition can be maintained. Patients are not operated upon until about a week has elapsed, during which time the knee is bandaged, lead-water and opium and an ice-bag applied, and the leg fixed on a posterior splint. The leg is prepared the night preceding the operation, and salt-solution is the only fluid used during the operation. A vertical incision is less likely to result in a compound fracture in case refracture occurs. Blood-clots are removed by irrigation, and frayed edges and damaged tissue are trimmed away. The edges of the fracture are cureted, and oozing is stopped by hot irrigation and pressure. Strong, braided silk, is usually best suited for the purse-string suture, and should be freshly sterilized before operation. Two pieces, each 18 inches long, are threaded in long half-curved needles. The needle is entered in the tissues close to the fractured edge of the patella, carried upward, closely hugging the bone, and brought out at the lateral superior angle; it is reinserted close to the hole of emergence, carried through the tendon of the quadriceps extensor, always close to the bone, then brought out at the other superior lateral angle. Again it is inserted and made to emerge at the side of the fractured edge opposite the point of entrance. The lower fragment is similarly semicircled; the joint is washed out and the sutures are drawn tightly and tied simultaneously with a square knot on each side. The skin-wound is then closed and dressed and a plaster-of-Paris splint is applied over lint. The disadvantages of wiring are that it is almost impossible to get the drill-holes opposite each other; the wire passes only through the anterior part of the bone, tending to tip the fragments; the amount of bone included within the wire is limited; and the wire tends to ulcerate through the skin. The purse-string suture avoids these disadvantages, and, no matter what the number or irregularity of the fragments or direction of the fracture, it brings the fragments accurately together. Haynes has operated in 5 cases by this method, the cause of fracture having been indirect violence in all. The fracture was located in the middle in one case, the middle and upper thirds in one case, in the middle and lower thirds in three cases. The line of fracture was transverse or slightly oblique in all. Primary union of the skin followed in all cases; union of the patella was bony in four cases, fibrous in one. The average angle of motion was  $114^{\circ}$ , the least,  $98^{\circ}$ . The time spent in the hospital was from 3 to 4 weeks.

5.—Paton does not believe that **syphilis** has been conclusively proved to be the only etiologic factor in **paralytic dementia**. The disease may be of many various forms. The most important unusual prodromal symptoms are those associated with the spinal cord, the moral alterations in the character, and a preliminary period of neurasthenia. Inequality and unevenness of the pupils, a sluggishness in their reaction to light rather than entire absence of this reflex, are common ocular changes. Changes in the fundus may also occur. The motor disturbances consist in tremor, particularly of the muscles of the face. Apoplecticiform or epileptic attacks may also occur. No symptom is pathognomonic of the disease.

#### Medical Record.

September 3, 1898. [Vol. liv, No. 10.]

1. Experimental Researches on the Effects of Different Anesthetics. W. H. THOMSON and ROBERT COLEMAN KEMP.
2. Clinical Study of Interstitial Nephritis, with Methods of Diagnosis. EVERETT J. BROWN.

3. Some Pneumogastric Reflexes of Common Interest to Practitioner and Specialist. J. WILKINSON JERVEY.
4. Ligature of the Left Subclavian in Third Part for Axillary Aneurysm—Recovery—Ligature of the Innominate for Innominate Aneurysm. Also Left Subclavian in its First Part for Aneurysm of Third Part—Recovery. T. E. SCHUMPERT.
5. Oligophosphaturia—A Well-defined and Important Symptom in Disease. GEORGE FREDERICK LAIDLAW.
6. Hyperosteoma of the Dura; Infradural Fibroma; Jacksonian Epilepsy; Apoplexy; Death; Necropsy. HENRY WALDO COE and E. D. JOHNSON.
7. Two Cases of Carcinoma Successfully Treated by the Electro-Mercuric Method. G. BETTON MASSEY.
8. Maternal Impressions. EDWARD D. ELRIGHT.
9. Enlarged Prostate and Spina Bifida in the Negro. T. M. MCINTOSH.
10. Some Hints in the Management of Simple Spasmodic Croup. JOHN H. BILLINGS.

1.—Thomson and Kemp report a series of experiments in which the condition of the circulation in the kidney was determined by the oncometer of Roy, which is a small, bi-valved, kidney-shaped, metal box, hinged at the back, with a clasp in front, and a grooved notch at the center of the rims of the valves, that prevents pressure on the vessels and nerves of the pedicle of the kidney when the organ is enclosed in the instrument. Lying loosely upon the inner surface of the valves, but fastened to their rims, are two pieces of thin soft rubber, which when filled allow a layer of water to be interposed between them and form a water-pad for the kidney. A short tube in the upper valve, to which is attached a piece of soft rubber tubing, allows the water to rise and fall according to the expansion and contraction of the kidney. The movement of the column of water is communicated to the column of air farther on in the tube, and this in turn moves the diaphragm of a drum to which is attached a lever and pen for registering tracings on moving smoked paper. The secretion of urine was observed as regards rate, quantity, and quality during the experiments, by tying a small glass cannula in the ureter leading from the kidney that was not inclosed in the oncometer. For the purpose of a constant comparison between the blood-pressure in the kidney and the general blood-pressure, a small glass cannula was introduced and tied in the right carotid, and was connected with a Ludwig's mercurial manometer. A float on the mercury in the manometer carried a fountain-pen attachment, which registered the carotid pulsations with ink on the paper of the revolving kymograph. About 20 minutes were needed to arrange the apparatus and start the tracings. **The effect of the administration of ether** was tried on 10 dogs; **chloroform** was used with 6; the **A. C. E. mixture** with 4; **Schleich's mixture** with 2; and **nitrous oxid** with 3. As a result of these experiments it was determined that ether raises the blood-pressure, and under moderate anesthesia there is at first a slight rise shown by the kidney-tracings, but if the ether is continued the waves grow progressively shorter or disappear. From the uniform contrast with the corresponding carotid tracing it appears that this effect upon the kidneys is specific. The secretion of urine diminished progressively as the oncometric curve dropped toward the base line, until finally, under free and continuous etherization, complete suppression occurred. It is believed that ether produces a special contraction of the renal arterioles, with a consequent damaging effect on the renal secretory cells similar to that which follows clamping the renal artery. Albumin appeared early, even under moderate anesthesia. The action of chloroform, as shown by the carotid-tracings, was directly depressing to the heart, but the kidney-tracings were affected only as the general circulation was influenced; the secretion of urine continued up to the last moment of life, and albuminuria was slight. The A. C. E. mixture showed the special effect of ether on the kidneys and the cardiac depression of chloroform, the ether-effect being more predominant if a small percentage of air was inhaled. The objections to the A. C. E. mixture appeared still more applicable to Schleich's anesthetic. With nitrous oxid the general blood-pressure was at first rapidly raised, and there was no depression of the heart unless the respiration was affected by pushing the narcosis. The renal circulation was affected in every particular like the general circulation.



2.—Brown discusses the subject of **chronic interstitial nephritis**, and reports, among others, the case of a physician who knew that his urine contained albumin, but had taken no precautions, and was suddenly attacked with severe headache and vomiting. He recovered after free catharsis and diaphoresis. Another patient was, without previous symptoms, taken ill upon the street and soon died. A third patient developed uremia after internal urethrotomy. In a fourth case the chief symptom was asthma. Among the chief preliminary symptoms of the disease are hypertrophy of the heart, high tension of the pulse, dyspnea, palpitation, etc., and dimness of vision. The most efficient tests for albumin are nitric acid and heat. The urea should be carefully determined, and it is desirable to estimate the phosphates. The prognosis as to cure is bad, but the disease often progresses very slowly.

3.—Jervay describes some of the **unusual reflexes** that result from **naso-pharyngeal conditions**, mentioning cough, induced by hypertrophic adenoids, chronic dry pharyngitis, or disease of the ear, spasm of the glottis, which is always due to reflex peripheral irritation, the asthmatic attacks of hay-fever, and the asthma due to ecchondroses and exostoses of the nasal septum. Headache may be due to irritation of almost any part of this region. Among the cardiac reflexes is faintness, and the gastric reflexes nausea. Epilepsy may occur, although Jervay has not observed a case in which this was present. He also mentions vertigo, aphonia, and spasms of the pharynx and esophagus.

4.—Schumpert reports the **ligation of the left subclavian artery** in its third part for axillary aneurysm in a man 43 years old, who had been shot in the back three months previously, five shots entering the region of the shoulder and base of the neck. No pulse was perceptible at the left wrist for 15 days, but the temperature of the arm was at all times good. Pain and swelling rapidly disappeared, and the patient was discharged at the end of four weeks. A woman, 42 years old, without a history of trauma, nephritis or syphilis, was admitted to the hospital with a small pulsating tumor behind the inner third of the clavicle. She complained of dull aching pain and difficulty in breathing and there was an audible bruit. A diagnosis of aneurysm of the right common carotid near its origin was made, and a  $7\frac{1}{2}$ -inch incision was begun over the sternum and carried across the sterno-clavicular articulation parallel to and about  $1\frac{1}{2}$  inches beyond the inner margin of the sternomastoid muscle, on division of which and the cervical fascia an **aneurysm of the innominate artery**, near its bifurcation, was found. The artery was separated and cleaned with care, to avoid important adjacent structures, and ligated with braided silk. All went well for four days, the patient then began to show signs of coma, and died of cerebral anemia on the ninth day. A man, 56 years old, was admitted to the hospital with edema and constant aching of the left arm and shoulder and with an aneurysm the size of an orange involving the third part of the subclavian artery. While chopping wood one month previously he had felt his arm give way and a pulsating tumor was noticed shortly afterwards, which grew rapidly in size. **Ligation of the first part of the left subclavian artery** was decided upon. An incision was made and the sternomastoid muscle divided as in the operation just described. After an unsuccessful attempt to pass a ligature between the carotid artery and the jugular vein, a needle with braided silk was carried to the tracheal side along the inner border of the scalenus anticus muscle and  $\frac{1}{2}$  inch above the first rib. The ligature was drawn only sufficiently to control the circulation entirely, and a second ligature was placed about  $\frac{1}{16}$  inch above the first. Primary union followed, the patient making himself useful about the hospital the ninth week after operation.

5.—Laidlaw summarizes the recent investigations with the question of **oligophosphaturia** in connection with nephritis. This apparently occurs constantly in association with the chronic interstitial variety and with the waxy kidney.

6.—Coe and Johnson report the case of a man with chronic epilepsy whose mind was impaired, and who presented partial paralysis of the right side. The epileptic attacks were Jacksonian in type, always involving the right hand and face first. Later there developed complete paralysis of the right side. This subsequently improved, with dis-

appearance of the convulsions; the latter, however, reappeared shortly before death. At the autopsy almost the entire left hemisphere was found to be covered by a layer of bone in the duramater, and a similar but smaller ossification was found over the right motor region. Closely attached to the inner layer of the duramater was a small fibroma causing pressure in the left motor region. No inflammatory changes were noted.

7.—Massey reports the destruction by the electro-mercuric method of 7 **carcinomatous nodules**, which had recurred after an operation for carcinoma of the breast. The patient remained well 5 months after treatment. A carcinoma of the sublingual salivary gland was similarly treated, and remained well  $4\frac{1}{2}$  months after treatment. A microscopic diagnosis was accidentally omitted in the second case.

8.—Elright reports the case of a girl, 6 years of age, with imperfect development of the right side of the head and contraction of the right palpebral fissure. The upper lid was entirely devoid of muscular tissue. The mother ascribed the deformity to the fact that some months before the child's birth she had seen her husband kill a cow by hitting it on the head with an axe. This crushed into the right side of the head, causing the right eye to protrude.

9.—McIntosh reports a case of **enlarged prostate** and two cases of **spina bifida** in colored patients. Both conditions are said to be exceedingly rare in negroes.

10.—Billings reports six cases of **spasmodic croup**, in all of which there were naso-pharyngeal adenoids and in three also enlarged tonsils. Surgical treatment of the growths was followed by entire disappearance of the spasmodic condition.

### Medical News.

September 3, 1898. [Vol. lxxiii, No. 10.]

1. On the Value of the Autopsic Findings in Subjects Dead from Suspected Yellow Fever. EUGENE WASDIN.
2. Catgut Sutures and Ligatures. HOWARD A. KELLY.
3. Hypnotism in Pregnancy and Labor. LOUIS LICHTSCHNEIN.
4. Tobacco-intoxication Locally and Systemically Considered; Report of a Case of Tobacco-amblyopia. ALBERT B. HALE.
5. The Effect Produced upon the Blood by Vaccination. JOHN S. BILLINGS.
6. Some Unusual Tumors of the Orbit and Vicinity. CHAS. STEDMAN BULL.
7. Report of Three Cases of Stone in the Kidney. J. J. BUCHANAN.

1.—Wasdin describes as characteristic features of the **autopsy-findings** in cases of **yellow fever** rigidity of the body, yellowness of the skin, extensive hypostatic congestion, dilated pupils, and bloody gums. These changes are frequently found in patients that have died of malarial fever. Internally there is yellowness and dryness of the peritoneum, congestion of the omentum, congestion and swelling of the kidneys, and extravasation in the mucous membranes. The liver and spleen are usually normal in size. The former may vary in color from buff to dark brown, and may present a nutmeg appearance. There is usually extensive fatty degeneration. There are ecchymoses in the pericardium, but the thorax is not otherwise characteristic. Wasdin isolated from the blood of a case of yellow fever a microorganism that corresponded to the bacillus of Sanarelli. This, when injected into guinea-pigs, caused death in 42 hours, with the characteristic changes produced by the bacillus icteroides. A pure culture of the bacillus was obtained from the tissues. Wasdin then reports the case of a seaman who had been ill for a week with appendicitis. After operation, free drainage was secured, and the patient was doing well; but on the third day, on entering the hospital, he developed high fever, and died on the following day. The appearance of the body resembled that of a patient dead of yellow fever, and the examination of the organs confirmed this opinion. Nevertheless, Wasdin believes that the patient died of auto-intoxication by a bacillus of the colon-group, for the reason that, although the patient had not been exposed as much as other members of the crew of the ship, and was constantly surrounded by non-immunes up to the time of his death, no other case of yellow fever developed. (This paper only emphasizes the



importance of obtaining some specific and characteristic reaction for this disease.)

2.—Kelly states that in general if he had to abandon all sorts of **sutures and ligatures** but one, he would unhesitatingly prefer to keep catgut as the one that unites in itself the most advantages with the fewest drawbacks. Catgut, however, should not be used exclusively for the two reasons that it does not bear tension well, and in surface-work it is liable to infection. The rendering aseptic of catgut has now been definitely disposed of by the cumol-sterilization, by which the hydrocarbon at a temperature of from 155° to 160° C. renders the gut sterile beyond peradventure. Kelly considers catgut the ideal ligature for vessels of small size. In the abdominal incision he has long used catgut throughout in three or in four tiers for incisions two inches long or less.

3.—Lichtschein thinks there are only three abnormal conditions attending **pregnancy** in which **suggestive therapeutics** may be of use: hyperemesis gravidarum, anorexia with disgust for certain articles of food, and abnormal craving for particular foods, and especially for unpalatable substances that are usually not regarded as food. **During labor**, also, hypnotism can be used with benefit, having a decided advantage over chloroform. Lichtschein has tried hypnotism in 46 cases: 9 patients could not be hypnotized at all; 11 slept superficially, with posthypnotic effect; 15 slept deeply, with intrahypnotic and posthypnotic effect; 10 had deep sleep, with perfect amnesia upon awakening, and 1 was awake but felt no pain at all. He claims that though the sleep be not deep, enough influence can be gained to moderate or entirely banish pain, and that in deep sleep not only can the pain be stopped, but by suggestion the uterine contractions can be intensified or weakened, thereby avoiding the use of forceps in many cases.

4.—Hale reports a case of **irritation of the conjunctiva by tobacco-dust** in a cigar-maker. The conjunctiva was red and injected, and there was constant lachrimation. The treatment was palliative. Hale also reports the case of a man who had smoked excessively for 10 years. He developed dimness of vision, which, when measured, was found to be  $\frac{6}{32}$  for the right eye, and  $\frac{6}{16}$  for the left. Lens and retina were normal, and there was no error of refraction. The man was treated with strychnin, and the tobacco stopped, and in the course of three months his vision again became normal. Hale believes that this was a case of toxic tobacco optic neuritis.

5.—Billings reports the results of the examination of the **blood** of 14 children during **vaccination**. He failed to find the small bodies with ameboid movements that have been described by others, but he noted a moderate leukocytosis that reached its maximum at the maturation of the pustules. There was no characteristic change in the morphology of the leukocytes. The periods at which the examinations were made are not given.

6.—Bull reports several cases of various **tumors in the region of the orbit**. A cysticercus cyst the size of a small filbert was successfully removed from the lower lid of a boy 6 years old. A fibrolipoma of the accessory lacrimal gland, the size of a lima-bean, was removed from another boy 6 years old. Operation was refused in the case of a congenital dermoid tumor of the eyeball complicated by a malignant intraocular growth occurring in a girl 1 month old. A year later the protrusion had ruptured; the child was anemic, but seemed well. A tuberculous eyeball, of one year's duration, was successfully enucleated from a girl 3 years old. The little patient died 4 or 5 months later of abdominal tuberculosis. A boy 3 years old injured his eye and the surrounding structures while at play and in about three months protrusion of the eyeball was noticed. In about three months more the entire contents of the orbit were thoroughly removed. Good recovery followed, but two months later a second operation had to be undertaken because of recurrence on the inner wall of the orbit. The disease recurred again after two months and further interference was declined. Death followed from exhaustion about six months later.

7.—Buchanan reports the case of a man, 38 years old, previously in perfect health, who was suddenly seized with vomiting and abdominal cramps. The pain was controlled with opiates and it ceased in a few days, but the patient was confined to bed nearly six weeks with variable fever. During

this time there was no derangement of the urinary functions. About 7½ weeks later the patient was again seized with pain, vomiting, and fever, together with scanty, high-colored urine. After 8 weeks more he was admitted to the hospital in a much emaciated and feeble condition. An elastic mass was found on the left side of the abdomen, over which the colon passed perpendicularly. An incision was made parallel to and above the crest of the ilium, a cystic kidney was exposed and the incision was packed with gauze. Two days later the cyst was opened, a large quantity of clear urine being evacuated and a glass drain inserted. A calculus was felt with a probe, but it was found impossible to remove it. A few days later a median incision was made, the ureter was examined, and on failing to extract the stone by bimanual effort it was crushed in situ. Good recovery followed. In a second case, a boy, 18 years old, was troubled with dull pain and swelling in the left loin without fever, hematuria or pyuria. The medical attendant made an opening below the twelfth rib and evacuated about half a pint of pus. A fistula persisted, however, through which a stone was felt with a probe. The opening was enlarged and a stone of considerable size removed. Two weeks later the incision was dilated, several abscesses were broken through and other stones were removed. The kidney would have been removed had the patient's condition permitted, but this had to be deferred until about a month later, when a greatly enlarged, adherent kidney containing many abscess-cavities was removed with difficulty. A large branching calculus was found in the pelvis of the kidney. Recovery was uninterrupted. A third patient, a man of 35, had suffered from aching pain in the loin, at times radiating to the testicle and thigh for a year, and he had passed small quantities of blood in the urine. No enlargement of the kidney could be found and he had never suffered from renal colic. A lumbar incision was made, exposing the kidney, and indistinct resistance was felt near the pelvis. On incision a flattened stone  $\frac{3}{8}$  inch in diameter was removed from the pelvis of the kidney. The removal of a strand of gauze on the fourth day was followed by hemorrhage necessitating the removal of stitches, evacuation of clots and blood and the insertion of gauze-packing. Convalescence was from this time uninterrupted. Attention is called to the possibility of the existence of **renal calculus** without the existence of one or more of the typical symptoms, as illustrated by the absence of hematuria and pyuria in two of the cases reported and of renal colic in the third case.

### Boston Medical and Surgical Journal.

September 1, 1898. [Vol. cxxxix, No. 9.]

1. Talks on the History of Medicine. No. 2.—Physiology in the Sixteenth Century; Paracelsus and Bruno. DAVID HUNT.
2. Congenital Defect of the Fibula. F. J. COTTON and A. L. CHUTE. (Concluded.)
3. Gonorrhea in Women. WARREN R. GILMAN.
4. Note on the Duration of Eosinophilia in Trichinosis. THOMAS R. BROWN.

2.—In concluding their paper on **congenital defects of the fibula** Cotton and Chute cite the views of surgeons who have written on the subject in recent years and sum up the indications for treatment as follows: Osteotomy is to be performed not merely because deformity exists, but only for definite indications; tenotomy only to reduce the valgus or as an adjunct to osteotomy; resection of the ankle or Bardenhauer's operation, when apparatus will not control the tipping of the ankle; amputation only in cases utterly unfit for other treatment. The general line of treatment in all ordinary cases is by apparatus to support the ankle and prevent valgus, with a high sole to supplement the equinus in equalizing the shortening. The treatment seems to be at best unsatisfactory, and, as always in such cases, operation is to be avoided unless there is some clear gain in view.

3.—For **acute gonorrhea in women** Gilman uses a solution of silver nitrate, 20 grains to the ounce, and what may be called a dry dressing. The parts are cleansed with a solution of borax, after which the silver-solution is painted upon the entire surface and allowed to dry. The vagina is lightly packed with clean gauze, and wisps of absorbent



cotton are placed between the opposing surfaces of the labia. In 12 hours the gauze is removed and the patient takes a douche of mercuric chlorid, 1 to 5000, or potassium permanganate, 1 to 5000, every six hours. The silver nitrate and the gauze packing are reapplied every second day.

4.—Brown, in answer to Cabot's remark that it would be interesting to note how long the **eosinophilia** lasts in **trichinosis** after the acute symptoms have disappeared, states that the third case that he had himself reported left the hospital in January, and came back in the following July, and when examined it was found that all the leukocytes were present in about normal proportion. It is to be expected that the increase of eosinophiles would not be found for any great length of time after the acute stage is passed, but as it is so marked, it is probable that some considerable time does elapse before it disappears.

### Journal of the American Medical Association.

September 3, 1898. [Vol. xxxi, No. 10.]

1. The Influence of Age, Sex, and Race in Surgical Affections. WM. L. RODMAN.
2. Chairman's Address. JOSEPH PRICE.
3. The Qualifications and Duties of the Military Surgeon. N. SENN.
4. Treatment of Retrodisplacements of the Uterus by Shortening the Round Ligaments per Vaginam. J. RIDDLE GOFFE.
5. Descensus and Suspension of Ovaries. A. GOLDSPOHN.
6. Further Experiences in the Management of Uterine Displacements. AUGUSTUS P. CLARKE.
7. The Treatment of Ambulatory Gynecologic Cases. DENSLOW LEWIS.
8. Congenital Uterine Atresia and Double Hematosalpinx. ALEX. HUGH FERGUSON.
9. The Use of the Curette in Acute Infection of the Uterus with Adherent Placenta. D. S. FAIRCHILD.
10. The Effect of Uterine Curettage and Drainage on Diseases of the Tubes. W. W. GRANT.
11. Prophylaxis of Diseases of Women. DAVID W. BASHAM.
12. Gonorrhea as a Factor in Puerperal Fever. ALBERT H. BURR.
13. Compound Intra-Uterine Fracture of the Femur, with Report of a Case. A. D. WILKINSON.
14. Anatomic Points in Abdominal and Pelvic Surgery. C. E. RUTH.
15. Total Removal of Stomach for Carcinoma of Pylorus—Recovery. G. CHILDS MACDONALD.

1.—See this JOURNAL, Vol. I, p. 1083.

2.—See this JOURNAL, Vol. I, p. 1084.

3.—Senn states that he is, as the result of his experience, convinced that the average National Guard surgeon is a faithful doctor, with more than average professional ability, but, with few exceptions, lacking the necessary military training in performing satisfactorily his administrative duties. Very few States make provision for physical examination of the medical officers; consequently some of them have entered the service totally disqualified for participating in an active campaign. The surgeons of the United States Army are all men of superior education, splendid physical development, and those who have been in the service for several years are well versed in the routine work of the Medical Department. However, in all matters pertaining to medicine and surgery the average National Guard surgeon more than holds his own. This superiority of the National Guard surgeon over his colleague of the regular army is no reflection on the latter; it is the natural outcome of circumstances. The young army-surgeon has to spend many years at small and often out-of-the-way posts, where the opportunities for clinical experience and intercourse with professional colleagues are necessarily limited. He naturally soon falls into the monotonous and routine work of the post life, with little or no inducements to continue his post-graduate scientific and medical studies. The surgeon from civil life emerges from the turmoils of family-practice. From the day of his graduation he has tasted the bitter fruit of active competition. His work has been watched with an envious eye and subjected to sharp criticism by his neighboring colleagues, old and young. He has felt from the very beginning of his

professional career that success depends upon his own exertions. Common sense and deliberate action are worth more in military life than scholarship and reasoning, and the medical officer with a full knowledge of hygiene and sanitation and endowed with the faculty of making a rational, practical use of it is preferable to the most expert clinician. The physical condition of the military surgeon must be as nearly perfect as possible, for during a campaign the loss of a single medical officer may prove a great disaster. His position is one requiring special training and one that cannot be filled without crippling the medical service at some other point. He should be accustomed to frugal living, capable of enduring fatigue, and prepared to suffer hardships and privations. A proper and adequate preliminary education is exacted of every surgeon in the regular army, but about the only evidence of proficiency the National Guard surgeon in most States is required to show is his diploma. In consequence of such an easy entrance into the medical service of State troops, many of the men who receive commissions are illiterate. The education of the **military surgeon** should be of the broadest kind. Not only should he be familiar with the usual medical subjects and specialties, but he should know something of dentistry and veterinary medicine, and his knowledge should be of the most practical kind. He should also be imbued with a proper military spirit. The medical officer who has enjoyed the advantages of an early military training in a military academy or the national guard, is the one best qualified to enforce military rules and assert the dignity of his position. Courage, punctuality, and good personal habits are essential qualifications. The first and most important duty of the military surgeon during active warfare is to prevent disease. The location of camps, their policing, the water-supply, food and clothing, are subjects that must receive his early and earnest attention. To be successful in the treatment of disease, he resorts to the simplest medication. Tablets containing drugs in the most concentrated form are a great blessing in field-practice, and a liberal supply of quinin, opium, calomel, strychnin, camphor, iron, arsenic, sodium bicarbonate, and potassium bromid will leave but little to be desired. Strict asepsis and conservatism are the two things that are destined to make military surgery successful. Every surgeon must have special training in emergency-work. He must be perfectly familiar with the indications and technic of every operation that may become necessary in the field. He must know how to treat a compound fracture in the most modern and approved manner; he must be skilful in the treatment of wounds of all kinds, and he must be a master in performing an amputation and in ligating arteries in any part of the body. He must learn to perform all emergency operations with the simplest facilities and fewest instruments possible, in order to adapt himself in time to the exigencies of war. The surgeon who can extemporize an operating table in the field and who can secure asepsis with the use of the camp-kettle, soft soap and carbolic acid or sublimate, and who can perform the most difficult operations with the simplest and fewest instruments, with little or no assistance, is the one who will accomplish the most and who will obtain the best results in the field.

4.—See this JOURNAL, Vol. I, p. 1085.

5. " " " " " 1091.

6. " " " " " 1146.

7. " " " " " 1146.

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11.—The prophylaxis of gynecologic diseases depends upon the minimizing of traumatism to the genital mucosa and preventing the introduction of pathogenic microorganisms into the organs of the genital tract. Care in obstetric practice will prevent many of the inflammatory conditions of the organs; prompt repair may avert the necessity of hysterectomy for displacements or an operation for cystocele, and early repair of the cervix may prevent carcinoma. Well-directed medical attention during the early years of menstrual life may avert nervous diseases later.

12.—See this JOURNAL, Vol. I, p. 1146.

13.—Wilkinson reports the case of an epileptic multipara, aged 25 years, who gave birth to a child with considerable shortening of the right leg. On close examination it was found that the right femur was shorter than the left,



and there was a cicatrix at the middle of the right thigh. There had evidently been a **fracture in utero** and the bone had united at an obtuse angle, but after a few months the leg became gradually almost straight.

**15.**—MacDonald reports the case of an Italian dairyman, aged 38 years, who presented symptoms of carcinoma of the pylorus. The man had been unable to work for 2½ months, and was markedly emaciated. A movable tumor was distinctly felt in the right hypochondrium. **Removal of the entire stomach** was advised, and to this the patient consented. An incision was carried from the ensiform cartilage to ½ inch below the umbilicus on the right. On opening the abdomen no adhesions were found. The omentum was tied off with fine catgut, and divided from the duodenum to a point midway to the splenic end, and the gastro-hepatic omentum was treated in the same way to the middle of the lesser curvature. The duodenum was clamped in two places and divided between them, gauze-packing being used about the ends to prevent infection of the peritoneum. The pylorus was then drawn out of the abdomen and the rest of the omentum was tied off and divided. Clamps were applied to the esophagus, as they had been to the duodenum, and the stomach was removed. It was found that the ends of the esophagus and of the duodenum could be brought together with moderate tension, and a large Murphy's button was inserted and reinforced by sutures of fine silk. The abdomen was closed in the usual way. From the time the anesthetic was begun until the patient was taken from the operating table 90 minutes had elapsed. The patient took the anesthetic badly and was considerably collapsed in spite of free stimulation. On the day following the operation ½ ounce of peptonized milk and whisky were given by the mouth every hour and larger amounts were given by enema. On the third day the amount of nourishment by the mouth was doubled and given at intervals of two hours. The wound was dressed on the eighth day and was found closed by primary union. On the eighteenth day the button was passed. One month after the operation the patient slipped out of the hospital without permission and went shopping. He was found and brought back, however, and remained until six weeks after the operation. He left the hospital feeling well and increased in weight and was in satisfactory condition at the time of report.

#### Berliner klinische Wochenschrift.

July 18, 1898. [35. Jahrg., No. 29.]

1. Two Cases of Tabes Dorsalis.—Tabetic Foot and Tabes with Dupuytren's Contraction. H. SENATOR.
2. In How Far Does Burning or Corrosion Protect Aseptic Wounds from Infection with the Diphtheria-Bacilli and Pyogenic Streptococci? PAUL COHN.
3. Does Pepsin Possess Antizymotic Power Opposed to Gastric Fermentations? LUDWIG ALDOR.
4. A Case of Puerperal Tetanus, together with a Contribution to the Etiology and Symptomatology of Tetanus Infection. W. KÜHNAU.
5. The Diagnosis of Gonorrhea in the Female. P. BROESE and H. SCHILLER.

**1.**—The first case was of interest because of the intensity that the symptoms had attained in the short period of 16 months. A post-office official, without specific history, was seized with pains in the knee and ankle-joints and a little marked weakness in the lower extremities. The ataxia in the latter was extreme; there were sensory disturbances in the feet and legs; the patellar reflex was absent, and the vesical sphincter incompetent. The pupils, however, reacted to light, though sluggishly, and immediately dilated again. The localization-sense was greatly disturbed in the lower limbs, and there was marked loss of power. There was no distinct ataxia of the arms. The patient suffered also from peculiar vertiginous seizures bordering on syncope, which seemed to be connected with a sclerosing middle-ear catarrh, and resembled the attacks simulating Menière's disease, sometimes observed in locomotor ataxia.

In addition to these symptoms, which came on so rapidly that the patient, at the end of 16 months, presented a most marked picture of paralytic tabes, there was a well-developed tabetic foot ("piéd tabétique" of Charcot and Féré). The foot was short, thick, stumpy, and had lost its normal curves.

The tabetic foot is a form of arthropathy, but it is very rare (occurring in 0.08% of all cases of tabes). It is an early symptom, and was noticed by the patient whose case is reported almost synchronously with the beginning of his illness.

The second case, which occurred in a man of 50 years, was one of slow development, and the disease had begun 10 years previously with gastric crises; there had been about a dozen. The patellar reflexes were absent, the Argyll-Robertson pupil was present, and there were slight sensory disturbances, but little ataxia, and the man could pursue his occupation of table-setter and waiter. The interesting feature was a bilateral Dupuytren's contraction, more marked on the left side. This lesion is considered to belong to the category of arthropathies. It occurs in association with other nervous diseases (e. g., syringomyelia) [the referee has also seen it in a case of amyotrophic lateral sclerosis] as well as in perfectly healthy persons. In cases of tabes it is very rare. It, as well as other tabic arthropathies, it is thought, cannot be explained as a purely traumatic affection, but must depend on nervous disturbances.

**2.**—Cohn has investigated the question as to the amount of protection afforded by various eschars to infection with diphtheria and streptococcus germs. The eschars produced by burns and by alum do not protect against virulent bacteria; those from copper sulphate and copper alum are protective, although the bacteria implanted upon them are not at once destroyed. The silver-nitrate eschar proved the most efficient of all, killing the microorganisms immediately, and it was even yet protective after the excess of silver-nitrate had been removed with salt-solution. The eschars were made in guinea-pigs in the case of the diphtheria-bacillus, and in rabbits in the case of the streptococcus.

**3.**—Various opinions prevail as to conditions influencing the formation of lactic acid in the stomach. Hammerschlag maintained that, given fermentescible material and ferment, three factors were necessary: (1) Absence or marked reduction of free HCl; (2) marked diminution of gastric ferments; (3) motor insufficiency. Aldor endeavored to learn to what extent combined HCl affected lactic-acid fermentation, and whether pepsin in larger quantities really had the inhibitory action that Hammerschlag and others maintain it has. (The article is to be concluded.)

**4.**—Kühnau completes his article on puerperal tetanus by recording the case of a woman, 42 years old, who had given birth to 11 children and had had two miscarriages. After a normal delivery, the puerperium continued normal until the sixth day, when a profuse vaginal discharge appeared. Four days later headache appeared, and a half hour later, on attempting to drink, she experienced pain in the throat. She felt as if she suddenly had no breath, became blue in the face, started to the floor, and suffered tonic spasms in the neck, back, and arms. Her condition steadily grew worse, with elevation of temperature, marked cyanosis and persistent tonic contraction of the neck-muscles. The fundus of the uterus was three fingers' breadth above the symphysis. Repeated convulsions occurred, and the patient shortly died after an unusually strong one. The rectal temperature after death was 40° C.

**5.**—The diagnosis of chronic gonorrhea in the female must depend finally upon the recognition of simultaneously existing disease in the different parts of the genital canal. The most positive symptom, and the one upon which the most reliance can be placed, is chronic urethritis, the diagnosis of which depends upon the presence of a secretion, upon swelling of the papillæ and caruncles at the external orifice of the urethra, and upon a stricture, which may occasionally be present. There are other symptoms of chronic gonorrhea, which, though not of themselves pathognomonic, may become so if associated with disease of the uterus and adnexa. Among these may be included condylomata, signs of inflammation of the glands of Bartholini, the maculæ gonorrhoeica of Sänger, tissue-defects and scars in the vulva, vaginitis maculosa and granulosa. It is difficult to distinguish whether or not a chronic endometritis has been caused by gonorrhea, if there are no manifestations of gonorrhea in other parts of the genital apparatus. As a rule, the joint appearance of endometritis and inflammatory diseases of the adnexa bespeaks gonorrhea. Dependence cannot be placed upon a microscopic examination of the secretion; while the finding of the gonococci is of positive diagnostic value, failure to do so is not proof against the existence of gonorrhea.



## Original Articles.

### LECTURES ON ORTHOPEDIC SURGERY.

By JOHN RIDLON, A.B., M.D.,  
of Chicago.

AND  
ROBERT JONES, F.R.C.S., EDIN.,  
of Liverpool, Eng.

(continued from page 175.)

*The Treatment of Spondylitis by the Antero-posterior Leverage Spinal Brace.*—It is not necessary to describe the original Taylor brace, as it is no longer in use. The modifications of this brace by Dr. Taylor have all been designed to increase its efficiency; those introduced by others have generally been to reduce its cost, but the principles upon which they have all been used are the same, namely, immobilization of the spine at the area of disease by adjustable leverage, using the transverse processes of the vertebræ included in the kyphosis as the fulcrum. Braces have been made before and have been made since the Taylor brace was devised, much like it in appearance, but generally differing from it by separating the parallel upright bars so far that the leverage is brought to bear on the ribs, or they have attempted to combine traction with leverage and have thus failed to effectively apply the principle of making the leverage adjustable.

By adjustable leverage in the treatment of kyphosis, it is meant that the brace is so constructed that by manipulating the bars by means of wrenches (at first it was by hinges and set-screws) the pressure over the transverse processes of the vertebræ composing the angle can be adjusted to a nicety and increased or diminished at will, it being anticipated that in certain cases and with the disease in certain localities the curve will gradually diminish and occasionally be entirely effaced by the leverage-action.

It will be seen that the principle is essentially different from that underlying the use of the plaster-jacket. It does not suspend or partially suspend the patient, to gain the posture of greatest comfort or to improve the curve, but it applies the brace to the patient, with no attempt at improvement in his posture beyond that which is gained by lying down for a short time. More often than otherwise the patient is kept recumbent only so long as it takes to apply the brace, and, at times, when the disease is in the lumbar or in the cervical region, the brace is applied with the patient standing. This, however, is contrary to the teaching of Dr. Taylor, who never permits the patient to stand, either during the application of the brace or afterward, until convalescence is well established.

The brace being applied, the chief aim is to immobilize the area of disease until a cure is effected; meantime, if consolidation has not already taken place, it is attempted by gradually increasing the pressure to straighten the curvature, or at least check the progress

of the deformity. The plaster-jacket aims at preserving the reduction of deformity gained by periodic partial suspension; the brace by its continued leverage-action is used to reduce the deformity; both primarily aim at immobilization.

The advantages of the leverage-brace, over and above the efficiency with which it carries out the principles involved, are its comparatively small cost, its durability, and the little time and effort required of the surgeon to adjust it. A gunsmith, locksmith, or blacksmith of average ability can, under surgical supervision, be trusted to make it, and the result will be a more efficient apparatus than can be obtained from any of the great instrument-shops, where exorbitant prices and erroneous ideas as to construction are usually prevalent. Braces with hard-rubber pad-plates and bearings will cost considerably more than if the rubber pieces be omitted, as the shaping of these hard-rubber pieces requires specially constructed molds and consumes much time. The brace, except when these pads are used, can generally be fitted in a few minutes; it does not require frequent modification when once properly fitted; and it rarely requires repair or material alteration; it is comparatively light, cool, and easily kept clean and free from vermin, and the patient can, while recumbent, have it removed without risk and enjoy the pleasure of a sponge-bath. To be sure, it requires a certain degree of mechanical knowledge to rapidly and perfectly adjust it, but it appears to us a less difficult proceeding than to properly apply a plaster-jacket.

The objections to the brace are that it is difficult to fit over a large kyphosis when the disease is in the upper dorsal and cervical regions, and even more so when any considerable lateral deviation exists; that prolonged use of the chin-piece may cause some recession of the chin; and that it makes no provision to prevent forward bending of the spine above and below the area of disease.

This brace is not an apparatus that can be bought ready-made at any instrument-maker's; it must be made for the individual, from measurement and pattern, and with a definite end in view. A tracing is taken with a flexible metal tape along the line of the transverse processes—the line of the spinous processes always shows a much greater curve—and the tracing is copied upon strong paper, whereon are noted the position and direction of the shoulder-pieces, the place of the cross-pieces and the pad-plates, and the length and curve of the hip-piece. This diagram is the guide for the instrument-maker. The resulting brace should accurately follow it; but it usually requires a little refitting, which is accomplished by gradually bending it with wrenches made for the purpose; or ordinary monkey-wrenches may be used.

The pad-plates must be made to accurately fit the surface upon which they bear, and the remainder of the brace to approximately follow the outline of the

back. The test of an accurate fit is a pink pressure-line upon the skin for the full length of the pad-plates after the brace has been worn, but with no place showing that the pressure is sufficient to create discomfort or to cause sloughing. The brace should be removed every day by the attendant while the patient is prone; the back should be washed, rubbed with equal parts of spirit and water, and when dry dusted with some good talcum-powder or a mixture of powdered zinc oxid and starch. The brace should not be removed at night until the patient is convalescent.

The form of brace now used by Dr. Henry Ling Taylor consists of two parallel upright bars, two shoulder-pieces, one cross-piece, a hip-piece, a chest-piece, an apron, and the connecting straps and buckles. (Fig. 1.) Each of the parallel upright bars consists of three parts: a forged pad-plate to which are attached an upper and a lower bar by a half-hinge, and a set-screw forming

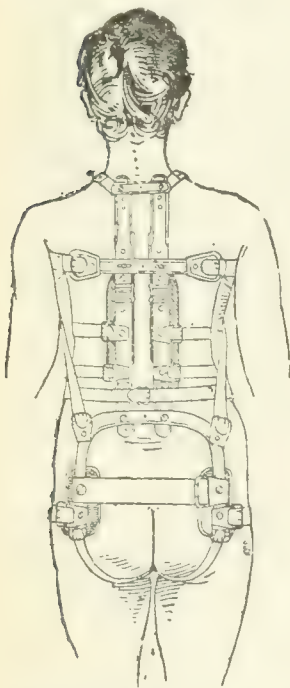


FIG. 1.—Dr. H. L. Taylor's support.

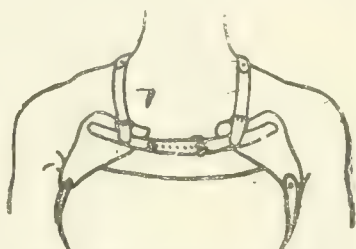


FIG. 2.—Showing ear-shaped chest-pads.

a false hinge. This false hinge is placed opposite the angle of deformity, and the pad-plates are made to extend well above and below the area of disease. The lower sections of the upright bars extend downward to a point just above the posterior spines of the ilium; the upper ones extend upward to

the base of the neck, and in cervical disease to the upper part of the neck. The uprights are joined at the top by a short cross-piece; opposite the lower border of the axillæ is another cross-piece extending two-thirds across the back, and provided with buckles at the ends; at the bottom the uprights are attached to the hip-piece. The hip-piece is forged from steel in the shape of an inverted U. It extends across the back above the posterior spines of the ilia and then curves downward to the hollow behind the greater trochanter on each side. At each end of the hip-piece is a bearing-pad of hard rubber, where a buckle faces downward and another laterally. Across the buttocks, at about the beginning of the anal fissure, is buckled a broad strip of webbing, passing from one side of the hip-piece to the other. Between the axillary cross-piece and the hip-piece, equidistant from these pieces and from each other, two

buckles are attached to each upright, and face laterally. The bearing-surfaces of the pad-plates are lined with hard-rubber plates molded to fit the contour of the spine. The shoulder-pieces are of steel, attached to the uprights at such an angle that they may pass across the shoulders close to the root of the neck, terminating somewhat above the clavicles in straps that pass downward to buckle on the chest-piece. The chest-piece consists of two ear-shaped or somewhat triangular pieces of thin sheet-steel faced with hard rubber, shaped to fit the contour of the chest below the clavicles and in front of the shoulders, and joined by two steel bars lapped and screwed so as to be of adjustable length. (Fig. 2.) From the lower end of each ear-shaped piece a webbing-strap passes downward to a buckle at the bend of the hip-band. The apron that holds the whole apparatus in place is made of two thicknesses of twilled muslin, and reaches on each side from the axillæ to the iliac crests, and thence along the lines of the groins to the pubes, covering the entire front of the trunk as high as the arms. When the disease is situated at or above the seventh dorsal vertebra a head-piece is added, attached to the upper cross-piece by a pivot; this head-piece may be of the form shown in Fig. 1. The head-piece is an ovoid ring forged from steel; hinged on one side and fastened by a sliding-ring on the other. At the back a hole is made into which the pivot fits. Free lateral motion of the head-piece is permitted in dorsal disease, but in cervical disease this motion is restricted by a set-screw. In front, the chin rests in a hard-rubber cup, and at the back the occiput may be supported by two padded pieces of sheet-steel, screwed to the ring and extending upward.

An inexpensive modification of this brace is used at the Children's Hospital in Boston (Figs. 3 and 4.) The



FIG. 3.

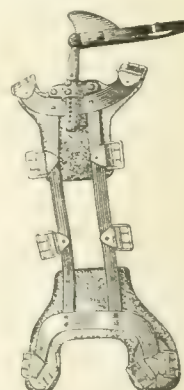


FIG. 4.

Braces used at the Children's Hospital, Boston.

pad-plates are omitted and in place of the hard-rubber bearings stiff, smooth leather is used. The apron is narrowed at the top and made to extend upward to the sternoclavicular junction, to take the place of the chest-piece of the Taylor brace.

The form of antero-posterior leverage-brace that one of us (J. R.) has generally used, is shown in Figs. 5, 6,



and 7. It consists of a hip-band, two parallel uprights, two cross-pieces, two shoulder-pieces, and two pad-plates. The hip-band is made of sheet-steel; it is from  $1\frac{1}{2}$  to 2 inches wide, and made of two pieces riveted together; the longer piece reaches from a point just above one great trochanter, across the back to a similar point on the opposite side; the shorter piece is one-third this length, lies upon the middle portion of the longer piece, and is riveted to it at the middle and at each end, before it has been bent, as later on it must

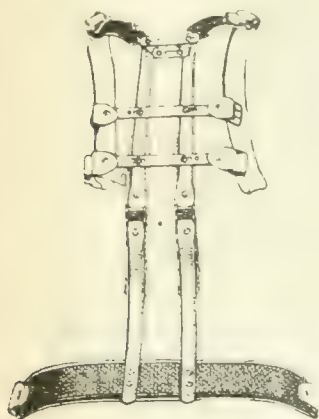


FIG. 5.

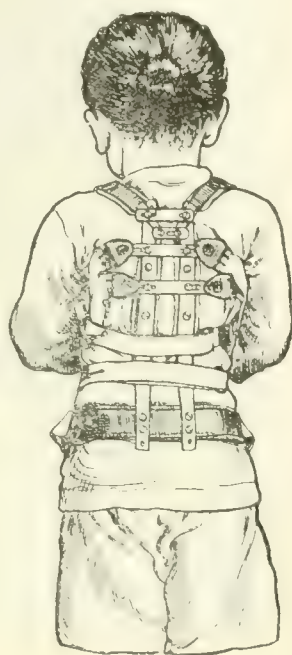


FIG. 6.

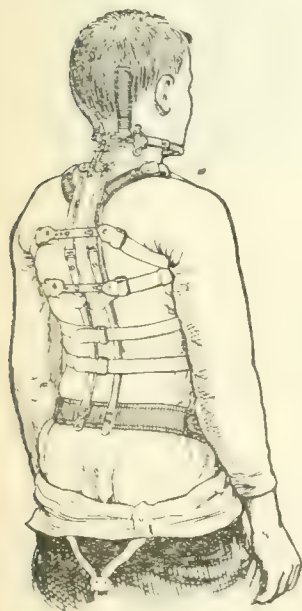


FIG. 7.

be, to fit the outline of the hips. This arrangement gives a straight middle third more rigid than the same thickness in one piece would be, and an easily bent third at each end. At about an inch from each end a hole is bored for the attachment of a buckle; and at each side of the middle, three pairs of holes are bored for the attachment of the uprights. These holes are

usually cut with screw-threads so that the uprights may be screwed on; they may, however, be riveted. The hip-band is lined on the side next the patient with felt, and the whole is covered with leather. The uprights are made of annealed steel,  $\frac{1}{2}$ ,  $\frac{3}{8}$ , or  $\frac{5}{8}$  inch wide, and gauge 9, 10, 11 or 12 in thickness, according to the size of the patient. They are each pierced by three holes at the bottom, each hole somewhat elongated and separate from the next by the same distance as the holes in the hip-band. By this arrangement the brace can be lengthened or shortened half an inch.

The pad-plates may be simply screwed on—holes having been pierced—or the arrangement of the pad-plates may be the same in detail as that shown in Fig. 5. In any case, the holes through the uprights, for screwing on the pad-plates, should be elongated to allow for easy fitting after any change in the curve of the brace. A hole is made in each upright at a point opposite the lower angle of the scapula, for the attachment of the lower cross-bar, and another pair of holes, opposite the lower borders of the axillæ for the upper cross-bar. At the top of each upright two or three holes are bored for the attachment of the shoulder-pieces; if they are to be screwed on and made adjustable, as is customary when no chin-piece is used, screw-threads must be cut in these holes; when a chin-piece is used, the shoulder-pieces are riveted on. The pad-plates serve to strengthen the brace at the part of greatest strain; if the false hinge is not required, they are cut from sheet-steel the same width as the upright bars and of a length sufficient to reach well above and well below the kyphosis; they are pierced around the border with numerous holes for sewing on the pads, and, at about an inch from each end, a hole is bored and cut with screw-threads for receiving the screws that pass through the uprights. The cross-bars of steel are somewhat thinner and narrower than the main uprights; in length, they extend for an inch or two to each side of the uprights when in position. They are pierced with a hole at each end for buckles, and with three holes on one side and a slot on the other to allow of separation or approximation of the uprights. In putting on the buckles the rivet should pass from without inward, first through the leather and then through the steel, and be hammered into the hole in the cross-piece instead of being set into a bur.

The pads that are to be sewed on to the pad-plates are small bags of canton flannel, filled with powdered cork and quilted flat to about  $\frac{3}{4}$  inch in width and  $\frac{3}{8}$  inch in thickness. Good pads, however, may be cut from piano-felt. The shoulder-pieces are thinly padded on the side next the patient and covered with leather; at the end of each a tab of leather is riveted, and to these the shoulder-straps are sewed. The shoulder-straps may be of webbing covered with flannel, but they are better when made from a roll of blanketing or thin felt and covered canton flannel, and terminating in a short piece of webbing, which buckles to the lower cross-piece. The apron is made of two thicknesses of twilled muslin, and reaches from the lower part of the abdomen to the level of the axillæ in front, and from the crests of the ilia to the axillæ laterally. Across the bottom is sewed a strong strap of webbing covered with canton flannel; this fastens to the buckles of the hip-band on each side. At each of the upper corners of the apron a piece of webbing is sewed in between the thicknesses of the muslin, and these pieces are fastened to the buckles at the ends of the upper cross-piece.

Between the top and bottom straps, two or three others are sewed in along each side; all of these on one side are provided with buckles, to receive those from the other side when fastened around the patient and the brace.

When the disease is at or above the ninth dorsal vertebra, a head-support is used of the same form as that described in connection with the Taylor brace. With disease in the cervical spine a band may be riveted to the upper ends of the occipital rests and thence buckled around the forehead. When there is much rotary or lateral deformity in connection with cervical disease a ball-pivot may be used in place of the ordinary pivot, but this adds considerably to the expense, and it readily gets out of order. Under such conditions it is usually better to reduce the rotary or lateral deformity by horizontal traction and use the ordinary pivot, or in place of this brace the Thomas collar hereafter to be described.

To measure for a spine-brace of this kind it is necessary to transfer to strong paper a tracing of the spine taken with a lead or block-tin tape, and upon this should be marked the length of the hip-band, the location of the pad-plates, the cross-pieces and the shoulder-pieces. To an instrument-maker unfamiliar with the

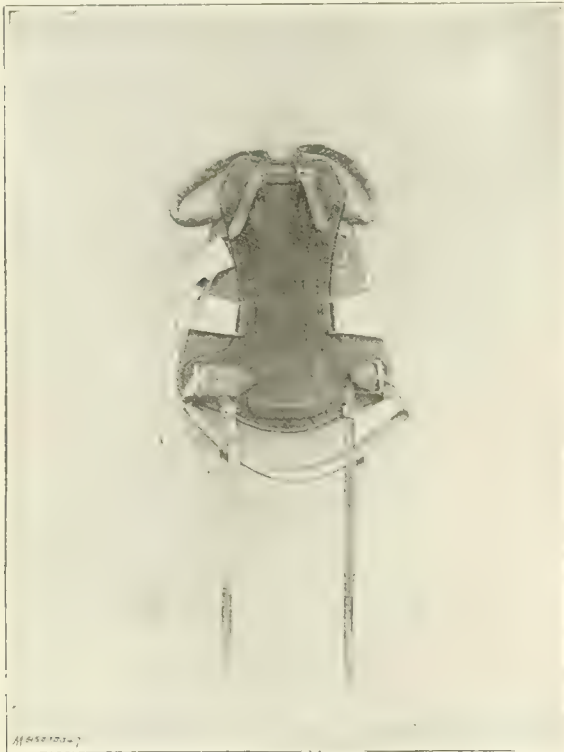


FIG. 8.—Thomas' cuirass.

work the sizes of steel to be used should be specified and the pattern for the apron drawn.

The Thomas collar, for use in disease of the cervical portion of the spine, is made by cutting from a piece of sheet-metal, steel, iron, aluminum, zinc, or tin, a piece straight on one side and convex on the other, long

enough to somewhat more than encircle the neck; at the ends it should be wide enough to reach from the base of the neck to the base of the occiput, and in the middle wide enough to reach from the sternum to the chin. It is bent to roughly fit the neck; then the edges are turned slightly out, and the whole is wrapped

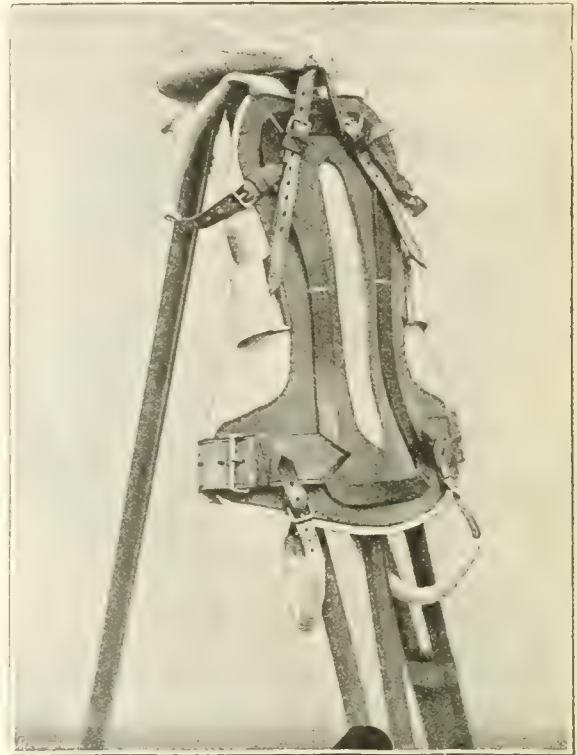


FIG. 9.—Showing cuirass before it is covered with leather.

in felt and covered with sheepskin. At the ends a buckle and strap are attached, or two rings, so that the collar may be securely fastened around the neck, resting on the chest and shoulders, and supporting the chin, jaw and occiput. This simple device is one of the most satisfactory of all methods for treating cervical caries.

*Treatment of Spondylitis with the Thomas Cuirass.*—The treatment of Pott's disease by this appliance (Figs. 8 to 12) is based upon the principle of immediate and complete immobilization of the diseased area by an apparatus applied in most cases to fit the deformity, without any effort then, or at any time, to correct the deformity by suspension, posture, and only very exceptionally by leverage. The principle logically obtains from the theory that a diseased joint recovers quickest when subjected to immediate and complete immobilization, and receives injury from, and is delayed in its recovery by, each successful attempt at correction of the existing deformity.

The brace consists of an irregular-shaped frame of flat bar-iron forged into the required form, as shown in Fig. 9. At the bottom it reaches to the level of the great trochanter; that is to say, it extends as low as



the sitting posture will allow. Laterally it extends from the space posterior to the great trochanter on each side, and from there curves upward, passing to the outer side of the posterior superior spines of the ilium, thence inward to the immediate neighborhood of the spinal column in the dorso-lumbar region, from there



FIG. 10.—View of Thomas' cuirass applied to the patient.

curving somewhat outward toward the posterior border of the axillæ, then upward and inward to the back of the shoulders, at such distance as not to interfere with the movements of the arms, till the root of the neck is reached, when the two sides join in a horizontal upper bar. The width and thickness of the bar-iron used will depend upon the size and weight of the patient, but for a child of from 4 to 8 years it should be  $\frac{3}{4}$  by  $\frac{3}{16}$  inch. In forging the frame it is made to lie flat with some accuracy upon the patient's back. This frame, being in one continuous piece and nowhere pierced with holes, gives a great degree of rigidity for its weight. Under it is placed a piece of fairly rigid leather cut to the same shape as the frame, but extending beyond its margins as shown in Fig. 9. Again, under this is placed a sheet of saddler's felt extending a little beyond the borders of the leather piece. The felt and leather are sewed together, and to them are fastened the necessary straps and buckles. The whole is then covered with basil leather (Fig. 8). From the bottom of the brace a broad leather strap, lined with felt, buckles across the front of the patient, and secures the brace to the pelvis. At the lower lateral curves of the frame, on each side, a buckle faces

downward to accommodate a perineal strap, which in front passes up to a buckle on the broad leather strap just mentioned. Above, at the junction of the neck and shoulder, a buckle looks forward and, at the lower border of the axilla, another looks laterally on either side; these are for the shoulder-straps. The shoulder and perineal straps are of felt covered with basil leather. From the middle of the brace on each side a strap of webbing two inches wide passes over the abdomen of the patient and buckles (Fig. 1). The position of this strap is changed with the necessities of the case, and at times a second strap is added.

Should the deformity be an extensive one and the angle formed by the spines of the diseased vertebræ be acute, one or both of two procedures may be necessary. The leather between the frame and over the kyphosis may have to be split, so that no pressure is exercised over sharp projecting bone; or, in addition, a bar of



FIG. 11.—Front view of Thomas' cuirass.

iron may be so placed over the projection as to render the recumbent position easy (Fig. 12).

In exceptional cases, when the superincumbent spine falls considerably forward, traction is made by the shoulder-straps toward the cuirass, which, in such cases, in order to allow of a pull, is not fitted accurately to the upper portion of the back. In lumbar disease, or

when there is psoas-contraction, a leg-piece is added, ending close above the knee, to prevent movement of the limb and traction upon the vertebræ. One of us (R. J.) uses this support largely. It is comparatively

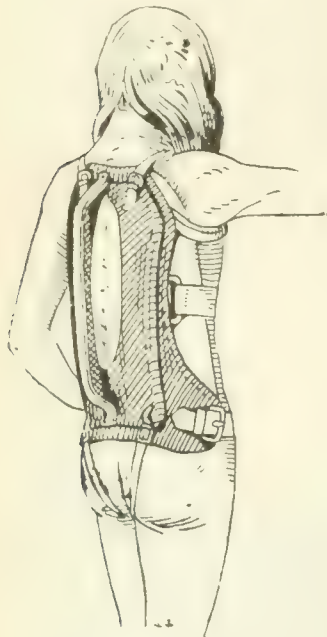
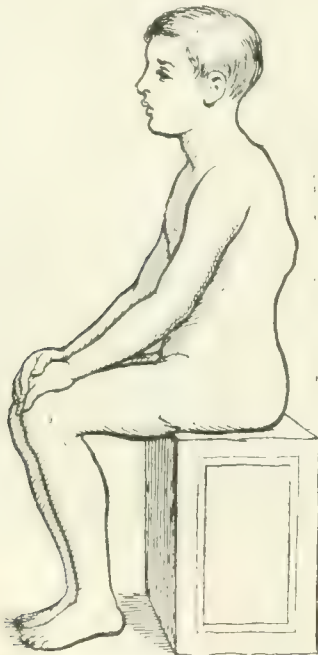


FIG. 12.—The Thomas cuirass with bridge for use during recumbency when the deformity is severe.

cheap and cleanly. It can be removed at intervals while the back is cleansed, and a sheet of cotton wadding inserted between the support and the skin. It need not be removed oftener than twice a week. This cleansing should always take place while the patient lies on his face, with arms outstretched above the head. The special value of this support consists in the length of the spine that it controls. It reaches the seventh cervical vertebra above, and by its action on the shoulders partly governs the upper dorsal vertebræ, while below it extends to the trochanteric

regions and is there assisted by groin-straps. There is no undue pressure upon chest or muscles, and, with care, no danger of sores or excoriation. It is



7<sup>th</sup> Cervical

FIG. 13.—Method of measuring for the Thomas' cuirass.

easily worn and is never uncomfortable and in no way interferes with recumbency.

In order to measure for the splint the patient should be placed in a sitting position upon the chair and the

distance measured from the seventh cervical vertebra to the chair. The measuring tape should not follow the contour of the back, but take the direction shown in the vertical dotted line (Fig. 13). In diseases high up, when the collar is required, it is well to cut out for the instrument-maker a pattern in brown paper something like the old-fashioned stock. Unless this be done it is very difficult to secure an accurate fit, as the position of the head and neck varies so much in different cases. When there is any doubt on the part of the surgeon as to his being able to measure properly for a collar it is well to order one filled with sawdust, which can be modified as to size and be molded so as to shape to suit the particular case.

When the disease is in the upper dorsal region, a Thomas collar may be added and buckled (as shown in Fig. 13), or any of the head-rests and chin-pieces already described, may be attached to the upper portion of the frame.

The absence of holes, screws, and rivets renders the construction of this brace simpler than that of the Taylor brace or any of its modifications, and while the patient is confined to recumbency it will be found more comfortable.

(To be continued.)

### ACUTE EXFOLIATIVE DERMATITIS.<sup>1</sup>

By JOHN DEVINNE SINGLEY, A.M., M.D.,  
of Pittsburg, Pa.

A RARE disease that has a favorable prognosis, is non-contagious and yet simulates such a common and fatal affection as scarlet fever in many of its symptoms, is certainly of interest from a diagnostic, prognostic, and prophylactic point of view, to say nothing of its etiology. The infrequency of the disorder impels me to place upon record the following case, occurring in my private practice.

Miss M., 19 years old, gave a negative family-history: no such disease ever having occurred in grandparents, parents, brothers, sisters or any relative of the family. Her general health had always been good. She had had measles twice (rubella and röteln), but never had scarlet fever, typhoid fever, or diphtheria. She had passed through five previous attacks similar to the present one, and had noticed that sneezing, "taking cold," an irritable temper and some other indefinite symptoms usually preceded an attack. Nausea and vomiting were present, as a rule, a few hours before the appearance of the erythema. Her first attack occurred when she was 5 years of age, the skin desquamating in enormous pieces from the entire body. The onset of this attack was marked by the child suddenly, while at play, beginning to scream and cry. A physician who was called could find no cause for the child's distress. A few hours later she began to vomit and continued to do so at intervals for several hours. On the following day the rash developed, coincidently with fever, and it terminated as already stated. The second attack occurred at 13, the third at 15, the fourth at 16, and the fifth at 17. The sixth attack began on February 19, 1897, when the girl began to sneeze and to "take cold." On the 22d she noticed a slight pruritus and erythema in the flexures of the body. She went to bed and in a short time was covered from head to foot with a diffuse erythematous rash, associated with moderate pruritus. At about the same time she began to feel

<sup>1</sup> Read before the Pittsburg Academy of Medicine, May 2, 1898.



feverish and to have pain generally all over the body and especially marked in and around the joints. When I saw her, on February 23d, a diffuse erythematous rash of a bright-scarlet hue, not punctiform, covered the entire surface of the body, the skin being dry and warm to the touch, but not harsh or rough. The temperature was 102.6° F., the pulse 120, the respirations 22. The fauces and the pharynx were red and injected, the tonsils red, but normal in size, deglutition not painful, and palpation of the submaxillary and cervical glands furnished no evidence of hyperplasia. Heart and lungs yielded perfectly negative results on examination, but some slight cough was complained of. No enlargement of the spleen or liver could be detected. The urine was highly colored, acid, contained no albumin or glucose, had a specific gravity of 1030, and showed under the microscope some epithelial cells, uric-acid crystals and amorphous urates. On the following day the temperature had fallen to normal, the pulse to 88 and the respirations to 18. The pains over the body had almost disappeared, while the erythema was slightly paler than on the previous day. On close inspection fine white epithelial scales could be seen, still adherent, but evidencing a tendency to desquamation. From this time on the erythema gradually lessened in intensity. Desquamation of the epidermis in large pieces from the entire surface of the body followed, the size of the cast-off portion being greatest where the integument was thickest. That from the palms of the hands and soles of the feet was the last to separate and came away almost entire. The process was complete by the 29th instant, ten days after the onset of the attack.

In April of the same year the patient had another attack, this being the first time that it had occurred twice in the same year. After the usual premonitory symptoms of sneezing, "taking cold," irritability of temper, etc., the girl noticed, on April 3d, a slight pruritus in the flexures of the joints over the body, and she vomited at intervals for a couple of hours. Upon inspection an erythematous patch was discovered corresponding to the itching surface. Fever and its accompanying symptoms soon developed and in an hour or two she was covered with a rash over the entire cutaneous surface. I saw her on the following day, when she complained of slight headache, dull pain in many of her joints, moderate pruritus and said that the skin felt hot. The temperature was 99°, the pulse 84, the respirations 18. The result of a physical examination was similar to that of the February attack, the erythema presenting the same appearance. The depth of color was more marked upon the face, hands, forearms and feet than upon the remainder of the body-surface. The urine was highly colored, acid, with a specific gravity of 1025, and it contained no albumin or glucose and precipitated a moderate amount of amorphous urates and epithelium. On the 5th instant the temperature was normal, the intensity of the erythema was not so marked, and desquamation was observed to have already begun upon the face near the alæ of the nose and upon the auricles, in the form of fine white epithelial scales, adherent, but readily detached. As the erythema subsided, desquamation advanced, and by the 7th the former had totally disappeared and the epidermis was exfoliating from the face and neck, trunk, arms and legs in pieces varying in size from a pin-head to a patch from 4 to 6 cm. in diameter. On the 13th, desquamation was complete, the epidermis of the palms and soles peeling off entirely and forming a complete cast of the parts. During the latter part of the attack and for several months afterwards the patient stated that she was much annoyed by bromidrosis, but I was unable to appreciate any odor about her person while in attendance. She has never had a relapse in any of her attacks, and the nails have never been shed, although they have become quite loose upon several occasions. The patient was unable to account for the onset of the attacks, and I did not succeed in eliciting any information from her or her family bearing upon this point.

Although the cases are comparatively rare (indeed, Kaposi states that he has had no personal experience with such a disease), the literature upon the subject is by no means scanty. The large variety of names that have been applied to the disease by various observers, as well as the great variation in the character of the cases reported under these titles, combine to render the

subject very confusing. Almost all writers concur in the use of either "erythema" or "dermatitis," but the selection of the one to the exclusion of the other can only be made when the pathology of the disease is more fully worked out. A host of qualifying adjectives descriptive of the clinical phenomena have been employed—acute, relapsing, recurrent, general, universal, exfoliative, scarlatiniform, desquamative. Withal, it has been termed Erasmus Wilson's disease. Under some of these compound titles many cases of erythema due to some demonstrable cause, such as septicemia, the ingestion of certain drugs or foods, and other causes apparently active in individual cases, have been reported. Osler<sup>2</sup> believes that some reported cases of second and third attacks of scarlet fever have been examples of exfoliative dermatitis, and Whittaker<sup>3</sup> speaks of a case recorded by Stiebel as one of scarlet fever in which there had been four attacks in as many years.

The earliest mention that I have been able to find of a similar disease is stated<sup>4</sup> to occur in the *Ephemerides* of 1686, where there is described a case of general and habitual desquamation of the skin. Benjamin Gooch published an "Account of a Singular Separation of the Cuticle" in the *Philosophical Transactions of the Royal Society of London*, for 1769, according to Leloir and Vidal.<sup>5</sup> The same authors state that John Latham reported a case of this disease in the *Philosophical Transactions of the Royal Society* for 1770, and that Thomas Newell recorded a case in the *London Medical Gazette* for 1829. Latham's case was in a man of 50, who had had many previous attacks, which appeared to be brought on by obstructed perspiration after "catching cold." It began with fever and its attendant symptoms followed by general pruritus, especially marked at the joints. In about ten days the cuticle had separated over the entire body, that of the feet and hands coming away entirely. The nails were discharged later and were replaced by new ones in about 6 months.<sup>6</sup> Another case in the *Philosophical Transactions*, occurring once or twice a year, came on with fever, pains in the head, back and extremities, vomiting, dry skin, great thirst, furred tongue, and constipation. The surface of the body became yellow, then florid, and in about three weeks the epidermis desquamated in large pieces, that of the hands coming off as a glove.<sup>7</sup>

Under the title "Erytheme scarlatiniforme desquamatif récidivant," Besnier and Féréol<sup>8</sup> gave distinct individuality to the disease. They had observed cases of erythema with a sudden onset following malaise, which spread rapidly and involved the entire skin-surface.

<sup>2</sup> Principles and Practice of Medicine, 2d edition, p. 78.

<sup>3</sup> American Textbook of the Practice of Medicine, vol. i, p. 210.

<sup>4</sup> Gould and Pyle, Anomalies and Curiosities of Medicine, 1897, p. 833.

<sup>5</sup> Traité descriptif des Maladies de la Peau, 1891, 3. liv., p. 163.

<sup>6</sup> Gould and Pyle, Anomalies and Curiosities of Medicine, 1897, p. 833.

<sup>7</sup> *Ibid.*

<sup>8</sup> Bull. et Mém. Soc. Méd. des Hôp. de Paris, 2 s., t. II, 1876, p. 30.



It resembled somewhat the rash of scarlet fever. Desquamation took place in a few days, the epidermis separating in large pieces all over the body. As indicated in the title these observers also noted the fact that recurrences were common. Brocq,<sup>9</sup> a prolific writer on the subject, has said that he believed not a few of the cases reported have been examples of pityriasis rubra.

In an excellent article entitled "Relapsing Desquamative Scarlatiniform Erythema," Elliot<sup>10</sup> makes a laudable attempt to classify the cases and says that although the majority of cases of scarlatiniform erythema could be attributed to some definite and tangible agent there are some in which the causative influence could not be demonstrated; that they seemed to originate spontaneously, though there unquestionably must have been some exciting cause, *i. e.*, there are a certain proportion that must be looked upon, for the present at least, as idiopathic. Of this latter class of cases, Brocq, as quoted by Elliot, says:

"They represent a form of pseudo-exanthema which simulates scarlatina in its quite sudden onset with fever, is accompanied by the eruption of an intense diffuse redness which tends to become quickly generalized over the entire body and is followed by a dry lamellous desquamation of squamæ of various sizes according to the different regions of the body, which begins to make its appearance even before the redness has disappeared. It lasts from two to six weeks; occasionally the hair and nails are attacked and shed. It can relapse many times and each attack seems to be shorter and less severe."

While the separation of the cases into two groups, (a) *idiopathic* (or primary) and (b) *secondary*, is of undoubted working value, it is and will remain unsatisfactory from a scientific standpoint, as long as the true cause of the idiopathic group is unknown. There is, however, an intermediate class of cases that can scarcely be placed in either group with propriety. Such cases are those in which the first attack was plainly secondary to some exciting cause, yet it is impossible to discover any adequate cause for the subsequent recurrences. A few cases of this nature have been reported. For obvious reasons the consideration of the secondary type of cases does not concern us at present, and they have been excluded, as far as possible, from the following list of cases that have been collected from accessible literature upon the subject, since 1879.

### I. *Idiopathic.*

1. Preston<sup>11</sup> describes the case of a woman, 67 years old, who suffered at intervals of from a month to six weeks from a universal "peeling of the cuticle since she was 7 years of age." After general malaise for a day or two, the skin became "irritable and inflamed," and some days later it desquamated from the entire body in large pieces, separating from the extremities in the shape of gloves and stockings. She suffered from vague rheumatic pains in the elbow in the attack observed. The temperature is not mentioned.

<sup>9</sup> *Edinburgh Medical Journal*, 1889-90, xxxv, p. 814. *Annales de Dermat. et Syph.*, Paris, 1882, 2. s., iii, p. 534. *Ibid.*, 1883, 2. s., iv, p. 333. *Etude critique et clinique sur la dermatite exfol.*, 1, Paris, 1882, Thesis of 232 pp. *Archives Générales de Méd.*, 1884, i, p. 350. *Bull. Soc. Franc. de dermat. et syph.*, Paris, 1893, iv, p. 117. *Journal of Cut. and Ven. Dis.*, New York, 1885, iii, p. 225.

<sup>11</sup> *New York Med. Journal*, 1890, iv, p. 29.

<sup>12</sup> *Lancet*, Lond., 1881, ii, p. 703.

2. Rotillou and Gongelet,<sup>12</sup> report the case of a woman, 27 years old, in whom erythema appeared, with cough and digestive disturbances, following nervous excitement. The joints were painful and the patient gave a history of rheumatism. Desquamation in large lamellæ followed. The woman had five attacks in all.

3. Elliot<sup>13</sup> reports the case of a man, 29 years old, who had had five previous attacks, usually one year apart. The later attacks had become more frequent. In the first attack the epidermis of the palms and soles was exfoliated in one piece. Previous to the last attack there was marked psychic disturbance, and two others were ushered in with chills and fever. The second attack observed occurred after an interval of only six days, affected the hands alone and was not preceded by headache, chills or fever. In only the first attack was the entire body affected, the subsequent ones being confined to the hands and the feet.

4. Bulkley<sup>14</sup> has reported a similar case, in which the disease had existed for a longer period and the attacks were more numerous.

5. Tilbury Fox<sup>15</sup> mentions a case that had had over 100 recurrences, which occurred at irregular intervals.

6 and 7. Blanc<sup>16</sup> has reported two cases. In the one the patient, a man 23 years old, had been subject to an attack almost every spring and fall since he was 10 years old. The fever and erythema developed after prodromes of malaise, headache, pain in the back and extremities, and occasionally sore throat. With the subsidence of the temperature in two or three days, the redness began to fade and desquamation set in. The epidermis of the hands and feet exfoliated entirely, that from other portions of the body in various-sized patches. The complete attack lasted about 5 weeks.

The second case was in a woman, 21 years old, who had had her first attack at the age of 13 and six subsequent ones. The earlier attacks were accompanied by elevation of temperature, but later this element was wanting on several occasions. Once or twice the first symptoms were those of "taking cold," angina developing later. Desquamation always followed the erythema, but the epidermis did not peel off in such large lamellæ as in the case of the man. The attacks were becoming more frequent.

The diagnosis of scarlatina in the primary attack of both cases was in all probability erroneous.

8. Two years later Brocq<sup>17</sup> recorded another case in a domestic, 20 years old, who while perspiring profusely was suddenly chilled. Nausea and vomiting, with pains in the back and extremities, followed. Three days later, with a slightly elevated temperature, an erythema appeared and covered the entire cutaneous surface. Exfoliation began on the sixth day, the epidermis peeling off in large sheets and separating from the hands and feet in complete casts. Two previous attacks of a similar nature had occurred and 25 days later there was another recurrence of a milder character in which only the face, upper extremities and mucous membrane of the mouth were involved.

9. Ohmann-Dumesnil<sup>18</sup> relates a case in which there had been three attacks from 6 to 9 months apart, each one occurring just one week prior to the menstrual epoch. Nausea, vomiting, high fever, and pain all over the body marked the onset of each attack. On the following day an erythema of the entire body except the face and the neck, accompanied by an intense pruritus, developed. A few days later the epidermis exfoliated in large sheets, that from the hands and feet coming away entire in the form of gloves and moccasins.

10. In an article entitled "Recurrent Scarlatiniform Erythema," Hartzell<sup>19</sup> gives the account of a case observed in the third, fourth and fifth attacks. The patient, a man, 22 years old, complained of chilliness and nausea, shortly followed by fever. In a few hours an intense general erythema appeared, followed in three or four days by desquamation of the epi-

<sup>12</sup> Quoted by Frank, *Jour. of Cut. and Gen.-Ur. Dis.*, 1897, xv, p. 113.

<sup>13</sup> *Med. Record*, N. Y., 1891, xxxix, p. 563.

<sup>14</sup> Quoted by Elliot, *ibid.*

<sup>15</sup> Quoted by Elliot, *ibid.*

<sup>16</sup> *International Clinics*, Oct., 1891, p. 343.

<sup>17</sup> *Journ. of Cut. and Gen.-Ur. Dis.*, 1893, xii, p. 11.

<sup>18</sup> *Ann. of the Am. Med. Assoc.*, 1894, xxi, p. 210.

<sup>19</sup> *University Med. Mag.*, 1894-5, vii, p. 826.



dermis of the entire body, the process being complete in about one week. Large sheets separated from the trunk, but desquamation was less abundant upon the arms and legs. The erythema in the fourth attack was less extensive and subsided without any desquamation following. The fifth attack was accompanied by pains in the neck and occiput, and a bran-like desquamation followed the erythema.

11. Sandford reported for J. Frank<sup>20</sup> an extraordinary case. The patient was a vigorous, healthy miner, 34 years old, with a negative family-history. Every year since his birth, on July 24th, between 3 and 9 P.M., he had experienced an attack similar to the one observed. These attacks were ushered in with a feeling of malaise, mental anxiety, muscular tremors, nausea and vomiting, and a rapid rise of temperature, soon followed by an intense erythema involving the entire body. All of the symptoms save the erythema entirely disappeared in about 12 hours, the maximum temperature in the attack observed being 103° F. The erythema disappeared in from 36 to 48 hours. Desquamation began before the erythema had subsided and in six days the skin was being shed from the trunk and extremities in large lamellæ. The epidermis of the hands and feet had exfoliated entire in 18 days and shortly afterward the nails were shed. In the earlier attacks desquamation began and was completed earlier—often in five days.

The same case with an account of a subsequent attack was reported later by Sligh,<sup>21</sup> but no additional facts of any importance were noted.

12. Allen<sup>22</sup> observed a case of erythema in which several attacks had occurred. The desquamation was marked and the attack lasted about ten days.

13. Hallopeau and Besnier<sup>23</sup> observed a case in which there had been twenty attacks. The last two followed small doses of mercury, but the previous attacks originated without any discoverable cause.

14. Blackader<sup>24</sup> narrates the case of a boy, 16 years old, who had four or five attacks of fever, nausea and vomiting, accompanied by a general scarlatiniform eruption, which was followed by desquamation. The febrile course lasted nine days in one instance and in another it was accompanied by chills.

15. Duhring presented a case at clinic in January, 1895. The patient was a man who was said to have had two or three attacks every year at irregular intervals. Specimens of the epidermis that had exfoliated from the hands were shown.

## II. Intermediate.

1. Elliot<sup>25</sup> details the case of a woman, 39 years old, who after wounding her hand developed symptoms not inconsistent with wound-infection. A few days later, fever, nausea, severe abdominal and pelvic pain and a bright-red punctate rash developed, which spread over the entire body. Menstruation began on the following day, with severe pain. The eruption was itchy and after lasting four days, disappeared. Desquamation began before the exanthem had subsided, and it continued for three weeks. The patient had three subsequent recurrences at intervals of a few months, menstruation always coming on the day after the onset of the symptoms.

2. Frank<sup>26</sup> has reported the case of a boy, 16 years old, who had seven attacks. The first occurred after a supposed exposure to rhus toxicodendron. It came on suddenly, with a temperature of 104° F. Fever lasted four days and was accompanied by delirium. A general erythema then appeared, with some vesicles and serous discharge, in the flexures. Pruritus was marked. Desquamation followed in the form of thin, dry flakes from the body and of thick lamellæ from the feet, lasting three weeks. The nails and hair were shed. The succeeding attacks occurred at intervals of from 10 to 18 months, without apparent cause, and were free from

serous oozing. Most of them were accompanied by tonsillitis and all were followed by a relapse when desquamation was almost completed.

It is evident from these cases that the description Brocq has given us (*vide supra*) may be accepted as presenting in concise terms an accurate picture of the affection; and also that the tendency with recurrences is for the disease to become not only less severe (as Brocq has pointed out) but more frequent as well. This feature was observed in my own case. Case 11 of the first series is so remarkable as to excite a suspicion that the patient was able to induce the attacks in some manner known to himself. Several writers in speaking of this case refer to the invariable recurrence of these attacks on a certain day of the month, notwithstanding the variations in our calendar.

Regarding the etiology of the affection much may be surmised, but nothing is known. Many observers have suggested that it is a neurosis or an angioneurosis, but these terms do not satisfy us in this materialistic age of medicine. Reflex causes have been invoked, but the reflex is passing and already its role as an etiologic factor is much circumscribed. I am not so sure that the disease should be considered wholly in the domain of dermatology, any more than measles or scarlet fever. In its acute onset, with fever, in many cases nausea and vomiting, pains in the joints, back and extremities, occasionally a chill, it certainly resembles an acute infectious process. The resemblance is the more striking when we call to mind the fact that streptococcal and staphylococcal infections frequently cause an erythema that, if it is of great intensity and lasts any length of time, is followed by desquamation. Now that acute rheumatic fever has come to be regarded as an infection (though not so proved), the possibility that exfoliative dermatitis is caused by a like cause does not appear altogether unreasonable. The disease, too, bears some resemblance to (acute febrile) rheumatism in that there is pain in the joints, from about which the erythema frequently starts; tonsillitis, closely related to rheumatism, has occurred in several cases reported. In addition, a general erythema has been observed in cases of rheumatism.

So far as I have been able to learn, no bacteriologic study of the disease has been made. Russell<sup>27</sup> published an article in 1892 entitled, "The Bacteriology of Epidemic Exfoliative Dermatitis," but the disease, in its clinical course, was not the one we are considering.

The most recent contribution to the pathology has been made by Hartzell,<sup>28</sup> who excised a portion of the skin on the third day of the third attack at the height of the erythema, and submitted it to microscopic examination. He found that the granular layer had almost disappeared, but that little change had taken place in the mucous layer beyond slight thickening; the papillæ

<sup>20</sup> *Am. Journ. Med. Sci.*, 1891, cxi, p. 164.

<sup>21</sup> *Internat. Med. Mag.*, 1893, ii, p. 463.

<sup>22</sup> Quoted by Frank, *Journ. of Cut. and Gen.-Ur. Dis.*, 1897, xv, p. 118.

<sup>23</sup> Quoted by Frank, *ibid.*

<sup>24</sup> *Archives of Pediatrics*, 1895, xii, p. 641.

<sup>25</sup> *N. Y. Med. Jour.*, 1890, li, p. 29.

<sup>26</sup> *Journ. of Cut. and Gen.-Ur. Dis.*, 1897, xv, p. 116.

<sup>27</sup> *British Journ. of Dermatol.*, 1892, ix, p. 105.

<sup>28</sup> *University Med. Mag.*, 1894-5, vii, p. 826.

of the corium were somewhat altered; the areas adjacent to the bloodvessels and the margins of the papillæ were infiltrated with small, round cells. In several places the infiltration was more extensive and "encroached upon the margin of the rete, obscuring the line of demarcation between this layer and the papillæ." Hartzell adds that Petrini, in 1889, in the examination of a piece of skin removed after desquamation was well advanced, found changes similiar in every respect, except that the granular layer was greatly increased in thickness. This discrepancy he accounts for by the fact that in the one case the examination was made previously to exfoliation, in the other after this was well established. Other observers have found the cutaneous nerves normal, the bloodvessels dilated and the corium slightly edematous.<sup>20</sup> The hyperemia and round-cell infiltration probably furnish sufficient ground for terming the affection a dermatitis, but as the pathology of the skin is as yet in its incipency, further research must decide the question. Leloir and Vidal, some years ago, were disposed to call it an inflammation, and said, "the skin is inflamed and not simply hyperemic."<sup>20</sup>

The complete clinical course of the disease enables the diagnosis to be made very readily, but a case seen before the erythema subsides presents some difficulties from its resemblance to scarlet fever; so much so that nearly all modern writers upon general medicine make some mention of it under the diagnosis of scarlet fever. The history and course of previous attacks, the absence of exposure to contagion, of the characteristic tongue and of a punctate character to the rash, with mild or absent throat-symptoms and no involvement of the cervical glands will usually suffice to exclude scarlet fever. Later, the character of the desquamation, the absence of contagion and of nephritis will settle the diagnosis. The elevation of temperature present in acute exfoliative dermatitis is somewhat variable. It appears to be quite marked (102°-104° F.) in the earlier attacks, but subsequent recurrences may show an elevation of only 1° or 2°; or it may be absent. A slow pulse has been claimed as an important element in diagnosis. In my case the pulse was increased in rapidity to correspond with the temperature.

Treatment has no influence upon the course of the disease, but it is well to remember Boerhaave's dictum to "keep the head cool, the feet warm, and the bowels open." A weak carboic lotion or an alkaline solution may be used to alleviate the intense pruritus present in some cases. Hartzell has employed fluid extract of pilocarpin, which he believes influences the disease favorably, relieving the itching and burning. A bland ointment during the stage of desquamation will add to the comfort of the patient.

## FORMALDEHYD AS A DISINFECTANT,

Especially in its Practical Application to the Disinfection of Infected Dwellings, Bedding, Clothing, Books, etc.

From the Bacteriological Laboratories under the Supervision of the Department of Health of the City of New York.

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AND

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THE problem of house-disinfection is one not easy of solution, because the operation to be entirely satisfactory involves certain conditions: (1) the disinfection must be complete; it must destroy surely and quickly the most resistant forms of pathogenic bacteria present; (2) it must be easy of application and inexpensive; (3) it must be non-toxic to the higher forms of animal life; (4) it must not injure the articles subjected to disinfection; (5) a good disinfectant must also be a good deodorant, while, if it possesses an odor, this should be one that dissipates rapidly and does not incommode the occupants of the apartment. Of the agents heretofore employed none has satisfactorily fulfilled the required conditions.

The ideal disinfectant is a gas that, penetrating all parts of a room, will permeate articles to be disinfected without injuring them. Chlorin, bromin, iodin, sulphur dioxid, free-flowing steam and dry heat at 230° F. are all gaseous disinfectants. But the first three, owing to their poisonous and destructive properties, are inapplicable for general use; and sulphur dioxid, which until recently was the least injurious gaseous disinfectant known, has rarely given thoroughly satisfactory results. In order to be efficacious, a prolonged exposure to large quantities of the gas is required *in the presence of moisture*, a condition that, in burning sulphur (the method usually employed) it is difficult to control. This is more easily regulated in the vaporization of liquid sulphur dioxid; but in either case, when effective, the sulphurous acid formed is liable to destroy some of the articles upon which it acts. Sulphur dioxid, moreover, has slight germicidal effect on spore-bearing bacteria, possesses but little penetrating power, and is not devoid of danger from fire when produced by burning sulphur in an open vessel. Steam, with or without pressure, and dry heat at 230° F., are undoubtedly the best disinfectants we have; but they cannot be applied to house-disinfection, and a large number of household articles, such as fine garments, furs, leather, toys, books, upholstery and the like, are seriously injured, if not destroyed, when subjected to heat sufficient to disinfect them.

Of the large number of liquid disinfectants known, such as mercuric chlorid, carboic acid, creolin, trikresol, lysol, etc., the majority possess poisonous and destructive properties, or are otherwise not suitable for household use, or for purposes of general disinfection.

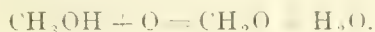
<sup>20</sup> Blanc, *International Clinics*, 1891, p. 357.

Blanc, *ibid.*



It was with a considerable degree of interest, therefore, that the announcement was received a few years ago of the discovery of a new and powerful germicide—formaldehyd—which was said to possess all the properties of a satisfactory disinfectant. The practical use of this agent has now been made the subject of exhaustive experiments by numerous observers, the results of which have shown that, though formaldehyd is not capable of doing all that was originally claimed for it, yet we have in it a most valuable disinfectant, especially for the disinfection of dwellings and of such articles as cannot without injury be sterilized by heat, and one that is destined in time to largely supplant all other disinfectants for general use when great penetration is not required.

The substance known as formaldehyd, formic aldehyd, methylic aldehyd, formalin or formal, is not new. It was isolated by von Hoffmann in 1867, who obtained it by passing the vapors of methyl-alcohol mixed with air over finely divided platinum heated to redness. Its germicidal powers, however, were not noticed until 1888, when Loew first drew attention to these valuable properties. Later, Buchner, Trillat, Roux, Aronson, and others, by their investigations, brought formaldehyd prominently before the public in its practical aspects as a general disinfectant. It is now manufactured on a large scale in France and Germany for purposes of disinfection. The vapors of wood-alcohol are allowed to pass through incandescent copper tubes; these maintain the incandescence of the metal; the methyl-alcohol is oxidized and produces formaldehyd as follows:



Formaldehyd is a gaseous compound, having the chemical formula,  $\text{CH}_2\text{O}$ , and possessed of an extremely irritating odor. At a temperature of  $68^\circ \text{F}$ ., the gas is polymerized, that is to say, a second body is formed, composed of a union of two molecules of  $\text{CH}_2\text{O}$ . This is known as paraformaldehyd, and is a white, soapy body, soluble in boiling water and alcohol; it exists in the solution of commerce, a clear, watery, liquid, containing from 33 to 40% of the gas, and from 10 to 20% of methyl-alcohol, its chief impurity. If the commercial solution, ordinarily known in the trade as "formalin," is evaporated or concentrated above 40%, paraformaldehyd results, and when this is dried in vacuo over sulphuric acid, a third body, trioxymethylene, is produced, consisting of three molecules of  $\text{CH}_2\text{O}$ . This is a white powder, almost soluble in water or alcohol, and giving off a strong odor of formaldehyd. A further action which, according to Trillat, takes place when a solution of formaldehyd is heated, is that the methyl-alcohol contained in it as an impurity combines with a corresponding quantity of formaldehyd to form methylal, a body which is said to possess no germicidal properties. The solid polymers of formaldehyd when heated are again reduced to the gaseous condition; ig-

nited, they finally take fire and burn with a blue flame, leaving but little ash.

Formaldehyd has an active affinity for many organic substances and forms with some of them, definite chemical combinations. It combines readily with ammonia to produce a compound called ammoniacal aldehyd, which possesses neither the odor nor the antiseptic properties of formaldehyd. This action is made use of in neutralizing the odor of formaldehyd, when it is desired to dispel it rapidly after disinfection. Formaldehyd also forms combinations with certain aniline colors, viz.: fuchsin and safranin, the shades of which are thereby changed or intensified. These are the only colors, however, which are thus affected, and, as they are seldom used in dyeing, owing to their liability to fade, this effect is of little practical significance. The most delicate fabrics of silk, wool, cotton, fur, leather, etc., are unaffected in texture or color by formaldehyd. Iron and steel are attacked, after long exposure, by the gas, and more so by its solution; but copper, brass, nickel, zinc, silver and gilt work are not at all acted upon. Formaldehyd unites with nitrogenous products of decay, fermentation, or decomposition, forming true chemical compounds, which are odorless and sterile. It is thus a true deodorizer, in that it does not replace one odor by another more powerful, but forms new chemical compounds which are odorless. Formaldehyd has a peculiar action upon albumin, which it transforms into an insoluble and indecomposable substance. It renders gelatin insoluble in boiling water, and most acids and alkalies. It is from this property of combining chemically with the albuminoids forming the protoplasm of bacteria that formaldehyd is supposed to derive its bactericidal powers. Formaldehyd is an excellent preservative of organic products. It has been proposed to make use of this action for the preservation of meat, milk, and other food-products; but, according to Trillat and other investigators, formaldehyd renders these substances indigestible and unfit for food. It has been successfully employed, however, as a preservative of pathological and histological specimens.

There are no exact experiments recorded of the physiological action of formaldehyd on the human subject when taken internally. Slater and Rideal<sup>1</sup> report that a 1% solution has been taken in considerable quantity without serious results; and trioxymethylene has been given in doses up to 90 grains as an intestinal antiseptic. Pottevin<sup>2</sup> states that a 2% solution of formaldehyd injected subcutaneously into guinea-pigs in doses of 0.25 gm. per 1,000 gm. weight, and 0.03 gm. by intravenous injection, usually produced death after a few days, while, according to Trillat and Aronson, doses of 0.53 gm. and 0.38 gm., respectively, did not cause death. The vapors of formaldehyd are extremely irritating to the mucous membrane of the eyes, nose,

<sup>1</sup> *Lancet*, April 21, 1894.

<sup>2</sup> *Annales de l'Institut Pasteur*, November 25, 1894.

and mouth, causing profuse lacrimation, coryza, and flow of saliva. Pottevin states that guinea-pigs exposed for two or three days to the action of the gas were generally killed. Aronson, on the contrary, reports that in many of his experiments rabbits and guinea-pigs allowed to remain for 12 and 24 hours in rooms which were being disinfected with formaldehyd-gas were found to be perfectly well when the rooms were opened. On autopsy the animals showed no injurious effects of the gas. Pfuhl, Rosenberg, and other German observers confirm these results. De Schweinitz<sup>3</sup> reports that, while testing the action of formaldehyd-gas on the cattle-tick, a calf was kept for 5 hours in an atmosphere containing 2% of the gas. During this time there was a slight watering from the eyes, and the animal coughed occasionally, but it did not seem to be in any special distress, and as soon as it was brought into the fresh air again it was all right and showed no bad after-effects. Harrington,<sup>4</sup> on the other hand, states that, of two rabbits exposed for 15 hours to the action of the gas in a room that was being disinfected, one was found dead on opening the room, and the other died 36 hours later. On autopsy, great hyperemia and increased moisture of the respiratory passages, congestion of the lungs, and fatty degeneration of the liver-cells were noted. Others have noticed that animals, such as dogs and cats, which have accidentally been confined for any length of time in rooms undergoing formaldehyd-disinfection, occasionally died from the effects of the gas. Many observers, however, have reported that insects, such as roaches, flies and bedbugs, are not, as a rule, affected. The result of these observations would seem to indicate that, though formaldehyd is comparatively non-toxic to the higher forms of animal life, and that considerable quantities of the gas may be respired for a short time without ill effects, nevertheless, a certain degree of caution should be observed in the use of this agent.

The results of numerous experiments have shown that in the air, 2½% by volume of the aqueous solution, or 1% by volume of the gas, is sufficient to destroy fresh virulent cultures of the common pathogenic bacteria in a few minutes. The researches of Pottevin and of Trillat have shown that the germicidal power of the gas depends not only upon its concentration, but also upon the temperature and the condition of the objects to be sterilized. As with other gaseous disinfectants, viz., sulphur dioxid and chlorin, it has been found that the action is more rapid and complete at higher temperatures, i.e., from 35° to 45° C. (95° to 120° F.), and when the test-objects are moist, than at lower temperatures and when the objects are dry. Still it has been repeatedly demonstrated by actual experiment in rooms that it is possible to disinfect the surface of apartments and articles contained in them, under the conditions of temperature and moisture ordinarily existing in rooms,

by an exposure of a few hours to a saturated atmosphere of formaldehyd-gas.

Stahl<sup>5</sup> has shown that bandages and iodoform-gauze can be kept well sterilized by placing in the jars containing them pieces of "formolith," a preparation of paraformaldehyd in tablet-form containing 50% of formaldehyd. The same observer has also succeeded in making carpets and articles of clothing germ-free by spraying them with from ½ to 2% solution of formaldehyd for from 15 to 20 minutes, without the color of the fabrics being in any way affected. The investigations of Trillat, Aronson, Pottevin and others have shown that a concentration of 1:10,000 of the aqueous solution (40%), equal to 1:25,000 of pure formaldehyd, is safe and sufficiently powerful to retard bacterial growth.

The following tables, compiled from the investigations of Koch, Miquel, Jaeger, Sternberg, Walter and others, give the antiseptic and germicidal powers of some of the more important solutions as compared with the aqueous solution of formaldehyd.

TABLE I.

## ANTISEPTIC VALUES.

Hydrogen dioxid .....	1:20,000	Carbolic acid.....	1:333
Mercuric chlorid.....	1:14,300	Potassium permanganate.....	1:285
Silver nitrate .....	1:12,500	Boric acid.....	1:143
Formaldehyd (40%) .....	1:10,000	Pure formaldehyd .....	1:25,000

TABLE II.

## GERMICIDAL VALUES.

DISINFECTANT.	STRENGTH.	BACTERIA.	DESTRUCTION OF VITALITY.
Mercuric chlorid .....	1:1,000	Anthrax-spores.....	In 5 minutes.
" .....	1:5,000	All other germs.....	" 15 "
Silver nitrate .....	1:10,000	Anthrax-spores.....	" 48 hours.
" .....	1:4,000	All other germs.....	" 2 "
Carbolic acid .....	3:100	Anthrax-spores.....	" 48 "
" .....	1:300	All other germs.....	" 2 "
Trikresol .....	1:100	Anthrax-spores.....	" 48 "
" .....	1:500	All other germs.....	" 2 "
Lysol .....	1:100	Anthrax-spores.....	" 1 "
" .....		All other germs.....	" 5 minutes.
Formaldehyd .....	3:100	Anthrax-spores.....	" 15 "
(40% solution) .....	1:100	All other germs.....	" 1 hour.
		Most other germs.....	" 30 minutes.

Walter<sup>6</sup> thus summarizes the results of experiments on the antiseptic and disinfecting power of formaldehyd in solution:

(1) Formaldehyd in a concentration of 1:10,000 makes the growth of anthrax, cholera, typhoid, staphylococcus pyogenes aureus and diphtheria impossible. (2) In gaseous form a weak dilution is sufficient to check growth. (3) A 1% solution will kill pathogenic

<sup>3</sup> The Year-Book of the U. S. Department of Agriculture, 1893.

<sup>4</sup> American Journal of the Medical Sciences, January, 1898.

<sup>5</sup> Pharmaceutische Zeitung, No. 22, 1893.

<sup>6</sup> Zeitschrift für Hyg. und Infektionskrankheiten, vol. xxi, 1896.



organisms in an hour. (4) With a 3% solution and the final use of alcohol it is possible to make the hands germ-free. Whether the skin of the hands is attacked by this method remains to be proved.<sup>7</sup> (5) Spraying with a formalin-solution and subsequent enclosure of the articles in a closed space will sterilize them. (6) Feces are deodorized by a 1% solution almost immediately, and are in 10 minutes germ-free.

From these results, which have been repeatedly confirmed, it would thus appear that formaldehyd is at least not surpassed in antiseptic and germicidal power by any substance in common use, with the exception of mercuric chlorid; while it possesses the advantage over such disinfectants as mercuric chlorid, carbolic acid, lysol, etc., of not being retarded in its action by albuminoid matters, of not injuring the articles to which it is applied, and of being safer for general use. It has the disadvantage of its irritating effect upon the skin and mucous membranes.

In the latter part of 1896, experiments were instituted in the laboratories of the Department of Health of the City of New York on the use of formaldehyd as a disinfectant in its practical application to the disinfection of infected dwellings, bedding, clothing, books, etc. These investigations were undertaken, not so much to test the germicidal powers of the disinfectant, which had already been amply demonstrated, as to determine the possibilities and limitations of the methods now employed of producing formaldehyd-gas (from a practical and economic point of view), for the purpose of general house-disinfection as carried on in large cities, and for the disinfection of such articles as cannot without injury be disinfected by heat.

The following are the methods now in use for generating formaldehyd-gas, of which tests were made:

1. FROM WOOD-ALCOHOL.—A number of lamps have been devised, all very much on the same principle, though varying somewhat in mechanical construction, which bring about the incomplete oxidation of methyl-alcohol by passing the vapors mixed with air over incandescent metal.

The Moffat Formaldehyd-Generator, or Lilly Lamp, with which experiments were made, is described as follows: The base of the generator is a receptacle for the alcohol and contains a wick to supply the wood-spirit to the upper part of the apparatus, where it undergoes oxidation. This upper part is provided with a metallic tube to promote the draft, and internal devices to regulate this draft. The formaldehyd-vapor is thrown off from the top of the tube. In operation the apparatus is self-regulating, and to operate it all that is necessary is to remove the upper part of the generator, light the wick and replace the upper part. The apparatus will then generate formaldehyd, it is claimed, until the alcohol is exhausted. Each pint of wood-alcohol, in this lamp, is said to generate the gas in sufficient quantity to disinfect 3,000 cubic feet of space. The lamps are made in three sizes, one with a single tube for use on a small scale, one with four and one with twelve tubes. In operation the lamp is placed in the room to be disinfected. It is fitted with a handle by which it may be carried, and weighs, when filled (the 12-tube lamp), about 20 pounds.

2. FROM FORMOCHLORAL BY THE TRILLAT SYSTEM.—This

<sup>7</sup> When a solution of formaldehyd is brought in contact with the unbroken skin, it hardens the epidermis, rendering it rough and whitish, and causes anesthesia. On the abraded skin it creates a sharp, stinging sensation, momentarily painful, and it finally produces necrosis of the superficial tissues.

system consists in heating, under 3 atmospheres' pressure, a solution of formaldehyd-gas in water mixed with 30% calcium chlorid, known as "formochloral," to a temperature of 135° C. (255° F.). It is claimed for this method of producing the gas from formochloral that by its polymerization of the formaldehyd is prevented, which would otherwise take place if a solution of formaldehyd were evaporated under ordinary conditions, and that thereby the whole of the formaldehyd is obtained in the gaseous state. The addition of any neutral salt aids the process, it is said, but calcium chlorid is used because this salt dissolves easily and has great dehydrating power, thus helping to produce a dry gas. The formaldehyd used for making the mixture should be free from methyl-alcohol, otherwise this will combine with an equal quantity of formaldehyd, according to Trillat, to produce methylal, a body having no disinfecting power, and thus cause a loss of formaldehyd.

The apparatus, which is manufactured by the Société Chimique des Usines du Rhone, Lyons, France, consists of an autoclave, not unlike that used in laboratories, made of heavy copper, which is lined inside with silver (the copper would otherwise be attacked by the lime-salt), and has a capacity of four liters. The cover of the autoclave, which rests on a rubber band so that it can be tightened to avoid any leakage, is fitted with a pressure-gauge, a tube in which a thermometer is placed, and a stopcock by which the escape of gas is regulated. The vessel is heated by means of a Primus, or Swedish, lamp (such as was used by Nansen on his Arctic expedition), which burns the vapors of kerosene-oil, or by a Bunsen burner. In operation the apparatus is placed outside of the room to be disinfected and the gas is conducted into the room by a tube passed through the key-hole of the door. The maximum charge of the autoclave is three liters (there is a larger apparatus of double the capacity for hospital-use). It should never be more than three-fourths full. The minimum charge is one liter; if a less quantity is required the necessary amount of formochloral is diluted with a properly prepared solution of calcium chlorid up to one liter, as to use less than one liter would injure the apparatus. After the autoclave is placed in position and charged, the cover is evenly screwed down, the outlet tube is passed through the keyhole and attached to the apparatus by means of a screw-bolt. The thermometer is then put in place, the stopcock closed and the lamp lighted. When the pressure-gauge indicates three atmospheres' pressure, the stopcock is carefully opened (otherwise the pressure may force the liquid out and upon the floor and carpet of the room). The pressure should be kept between two and three atmospheres and the temperature about 135° C. The vaporization of one liter of formochloral occupies from one to one and a half hours. The operation must be stopped when the thermometer registers over 135° C. and the pressure-gauge less than two atmospheres. When the apparatus has cooled, the residue, which should be liquid, must be emptied out and the vessel cleaned before charging again. One liter of formochloral is said to be sufficient for the disinfection of from 2,500 to 5,000 cubic feet of air-space. The apparatus with fittings weighs between 50 and 60 pounds.

3. FROM COMMERCIAL FORMALIN BY THE NEW YORK SANITARY CONSTRUCTION COMPANY'S SYSTEM.—This system of disinfection by formaldehyd-gas, which has recently been introduced, consists in heating the ordinary commercial formalin to a temperature of 1,000° F. or more in an incandescent copper coil or chamber, and allowing the vapors to pass off freely.

The following description is given of this process: Formaldehyd in aqueous solution when heated under ordinary circumstances is largely converted into its solid polymers, in which state it has but little germicidal action, requiring a degree of heat considerably above that of the boiling-point to reconvert it into the original formaldehyd-gas. It is claimed that by this method, in which the solution of formaldehyd is slowly introduced into an incandescent tube kept at a very high temperature, the degree of heat is supplied necessary to break up the polymerized products formed, and thus a loss of formaldehyd is prevented. A further action of the intense heat in the copper tube on the solution is to convert the methyl-alcohol contained in the formalin into formaldehyd-gas by partial oxidation, thereby preventing the formation of methylal.



The apparatus consists of a closed receiver of copper holding about a gallon, a coil of copper pipe or corrugated chamber attached at one end to the bottom of the receiver, and at the other by means of a suitable connection (rubber tube with gutta-percha or metallic mouthpiece) with the room or apartment to be disinfected; a valve, to control the entrance of the liquid into the coil; a graduated glass gauge on the side of the receiver, to indicate the quantity of formalin evaporated, and a heating lamp (Swedish lamp or Bunsen burner). In operation the desired quantity of formalin is placed in the receiver and the receiver is closed. The lamp is lighted and the coil brought to a red heat. The valve is then opened and the solution contained in the receiver is allowed to pass down and into the coil in a fine stream. Upon coming in contact with the heated metal, the formaldehyd-solution is instantly decomposed, and the liberated gas is further purified as it progresses through the incandescent coil. The apparatus is fitted with a handle by which it may be carried, and weighs about 15 pounds when filled. The receiver need not be refilled until the contents are exhausted. Four ounces of formalin are said to be sufficient to disinfect 1,000 cubic feet of space.

4. FROM TRIOXYMETHYLENE BY SCHERING'S SYSTEM.—This system consists in heating the solid polymer of formaldehyd, trioxymethylene, in a lamp specially constructed for the purpose by the *Chemische Fabrik auf Actien*, in Berlin. The trioxymethylene is used in the form of compressed tablets or pastils, as being more convenient for use. Each pastil contains, according to the manufacturers, 100% of formaldehyd-gas, and weighs one gram. The action of the lamp, as described by Aronson, is as follows: The hot gases of combustion transform the trioxymethylene into gaseous formaldehyd, and are afterward thoroughly mixed with them. This mixture of the vapors of formaldehyd and of combustion enables the necessary quantity of moisture to be present to hinder a polymerization, and renders thorough disinfection possible. The apparatus consists of a cylindrical sheet-iron mantel, beneath which is a spirit-lamp with a suitable wick. In the upper part of the mantel hangs a vessel designed to contain the formalin-pastils. The upper end of the vessel is provided with a number of slits, through which the gases formed by the combustion of the alcohol (carbonic acid and aqueous vapor) must escape. In their passage through this vessel there is a thorough mixture of these vapors of combustion with the formaldehyd-vapors generated by the heating of the formalin-pastils.

The mode of using the apparatus is very simple. The disinfecter is placed upon a sheet of iron on the floor of the room to be disinfected. From 100 to 150 pastils can be evaporated at a time in the apparatus. For the production of greater quantities of formaldehyd-vapors, several of these apparatuses must be used together. The lamp is filled with ordinary or wood-alcohol, about twice as many cu. cm. of the alcohol being employed as there are pastils to be vaporized. The wicks should project but little above the necks of the burners, or the apparatus may get too hot and ignite the pastils. The vessel is charged with formalin-pastils, and the disinfecter placed over the lighted spirit-lamp. The lamp is then allowed to burn out in the closed room. Thirty pastils are considered to be sufficient for the disinfection of 1,000 cubic feet of space. Besides the disinfecter described, there is also made a smaller deodorizing and disinfecting lamp.

In making the experiments and tests described later, the apparatus, with all necessary materials for operating them, were furnished to the Department of Health, free of charge, for experimental purposes, by the respective representatives in New York City of the different companies who manufacture them. In order to make the tests as practical as possible, such conditions were selected as would occur in the ordinary routine work of disinfection by the Department of Health disinfectors in the reception and scarlet-fever wards of the Willard Parker Hospital, in tenement and private houses in the city, and in the disinfecting stations. In some cases the tests were made intentionally very severe,

with the view of determining the possibilities and limitations of the disinfectant with regard to penetration.

As test-objects, sterilized cotton threads were taken, some quite coarse, in fact small lamp-wick  $\frac{1}{4}$  inch thick and others only  $\frac{1}{16}$  inch in diameter: also pieces of cotton gauze. These were saturated with pure cultures of the *staphylococcus pyogenes aureus*, diphtheria and typhoid-fever bacilli, from 24 to 48 hours old, and anthrax-spores from 4 to 6 days old. Some of the test-objects were exposed in a moist condition; the majority were dried in the incubator. Tubercle-bacilli contained in the spleens of tuberculous guinea-pigs were also used to test the action of the gas on this organism. It was assumed that if the disinfectant destroyed the vitality of these bacteria, or even of the non-spore-bearing forms, it would disinfect dwellings and articles infected with the ordinary infectious diseases.

The test-objects were distributed in various ways and places throughout the spaces to be disinfected, some being freely exposed to the action of the gas, and others protected by different thicknesses of blankets, quilts, mattresses, etc., and all being subjected to different conditions of time, exposure, temperature and volume of gas.

A special investigation was made into the question of the disinfection of books by formaldehyd-gas. The importance of this question from a sanitary standpoint can no longer be doubted. Diseases, such as scarlet fever and measles, have long been thought to be communicable by means of letters, etc., and now we know that books may be vehicles of infection, as Cazal and Catoin<sup>8</sup> have shown. School-books, books in public and circulating libraries and books which have been handled by sick persons or even kept for a length of time in an infected atmosphere, may undoubtedly become sources of infection. But though these facts have been recognized by sanitarians, there has been no available method heretofore of disinfecting books without practically destroying them. Thus many books have been left to run the risk of communicating disease, and some valuable books have been unnecessarily destroyed.

Tests were also made of the effect of formaldehyd on different fabrics and colors. Articles of different shades of silk, velvet, plush, wool, cotton, and of furs, feathers, etc., were repeatedly subjected to the action of formaldehyd, in both the liquid and the gaseous condition.

At the conclusion of the experiments on disinfection the test-objects were immediately immersed in sterile bouillon (occasionally they were washed in dilute ammonia and then in sterilized water, to remove any possible trace of the disinfectant; but this was soon abandoned, as it was found to be unnecessary), and the cultures thus prepared were placed in the incubator and observed daily for a week or ten days. At the same

<sup>8</sup> *Annuaire de l'Institut Pasteur*, December, 1895.



time control-cultures were made. In the case of the test-objects containing tubercle-bacilli, animal tests were made by injecting subcutaneously and into the peritoneal cavity of healthy guinea-pigs, emulsions of the tuberculous spleens subjected to disinfection, the animals being observed for  $4\frac{1}{2}$  months.

Thus five series of experiments were made; the first in the reception-wards of the Willard Parker Hospital under the most favorable conditions possible; the second in the scarlet-fever wards of the same hospital under very unfavorable conditions; the third in tenement and private houses in the city, under the ordinary conditions of routine disinfection by Department of Health officials; the fourth under the conditions of elevated temperature, with and without the assistance of a vacuum, and larger volumes of gas, in the iron chambers of the Disinfecting Station; and finally a special investigation into the disinfection of books.

(To be concluded.)

## ON PHLEGMASIA ALBA DOLENS, OR PHLEBITIS OF THE LEG, IN PNEUMONIA.<sup>1</sup>

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of Philadelphia.

I WISH to call attention to a complication of pneumonia very seldom met with: phlegmasia alba dolens, or phlebitis of the veins of the leg. There are two patients now in the hospital that show this rare condition.

CASE I.—Annie O., 19 years of age, born in Russia, was admitted into the Women's Medical Ward on January 24, 1898. She stated that both her parents were living and well, and that, except for an attack of rheumatism one year ago, she had always been in good health. The present illness began two weeks prior to admission, with a chill, followed by pain in the left side, vomiting, fever, and cough; there was but very slight expectoration. Upon admission, the temperature was noted as  $100^{\circ}$ , the pulse 100, the respirations as 28; the urine was of acid reaction, its specific gravity 1015, and it contained neither albumin, sugar, nor casts. The record of her physical condition is "dullness on percussion over the left lung at base, almost flatness; fine crepitation, with bronchial breathing, which, at the middle portion, is markedly sniffling, increased vocal resonance, also of sniffling character." Between the 24th and the 27th, the temperature oscillated between  $99.4^{\circ}$  and  $103.2^{\circ}$ ; there was loose cough, with slight expectoration, and many crepitant rales over the left lung; the pulse was regular and strong, and examination of the heart showed nothing abnormal. The girl's condition did not vary much for the next ten days, the lung evidently undergoing resolution very slowly. At the angle of the left scapula was a spot where the respiration sounded cavernous and there was pectoriloquy; it was thought that a small abscess had formed at this point. On February 9th an intercurrent pleurisy manifested itself by distinct friction in the left axilla, but it passed away by the 11th, by which time the patient was much improved; the temperature ranged between  $98^{\circ}$  and  $100.8^{\circ}$ . The lung gradually cleared, but, while the dullness lessened, it did not disappear; large bubbling rales were noted over the center of the left lung posteriorly, and the signs of the small abscess persisted. Examinations of the sputum showed no tubercle-bacilli; the general condition was steadily improving, and the patient expressed herself as feeling well. On the 23d there was a slight rise of temperature to  $100.4^{\circ}$ ; but it declined the next day to  $99.4^{\circ}$ , and was  $100.2^{\circ}$  on the morning of the 25th, going to  $103^{\circ}$  by evening. Early in the

day the girl complained of pain in the calf of the right leg, which was distinctly swollen and painful on palpation; there was tenderness along the line of the long saphenous vein, but no sign of redness or resistance. The next day the left leg and thigh were also swollen; indeed, they were more swollen than the right, and mottled; and there was considerable tenderness of the calf, though the tenderness was not confined to it. The swelling was firm and not edematous; nor were the veins specially prominent, though engorgement of the external saphenous near its passage into the popliteal vein was observed. The legs were kept in an elevated and extended position, and lead-water and laudanum were constantly applied, and by the 11th a marked reduction had taken place, in both the soreness and the swelling, which still, however, was noted on the 13th. Pain in the legs was again much complained of on the 21st, and the calves were tender on pressure and slightly swollen, but there was very little general swelling of the thighs or the other parts of the legs. The treatment with lead-water and laudanum, which had been discontinued, was resumed, and by the 27th it was noted that the pain in the leg was absent, though there was still some soreness in the calves elicited by pressure. The patellar reflexes, carefully tested, were found to be equal but increased; an attempt to ascertain the electric reactions of the leg produced so much pain that the examination was not repeated.

During the time of the phlegmasia dolens in the leg, the girl's physical condition did not retrogress. The pulse was noted as 100, small, regular, and of moderate tension. The cough was very slight. The signs of the small cavity persisted, with an area of pain over it. On March 3d, tubercle-bacilli were found in the sputum for the first time. In addition to iron iodid, the patient had been using, with evident benefit to her cough, inhalations of formalin (20%) in a steam atomizer, three times daily, which had been ordered to be increased to 40%. She left the Hospital on April 6th very much improved, though with the signs of a small cavity remaining. I have seen her since, and as regards the legs, there is freedom from pain and swelling, and perfect motion.

The second case presents features much like the one you have just seen, though the complication was confined to one leg.

CASE II.—Ida S., 28 years, a Russian, was admitted into the hospital February 2, 1898. She was nursing a child four months old, and had been in good health until a few days before admission. She was found to have a temperature of  $102^{\circ}$ ; a pulse of 112, and full; the respirations were 34. There were dry rales in both lungs, and at the lower part of the left lung slight dullness was observed with diminished vesicular expansion; a fully developed pneumonia gradually became evident, with tubular breathing marked at the angle of the scapula. The face was flushed, the left cheek more than the right. The pneumonia, though decided, was not very extensive, and it passed through its stages without any unusual features, except that the consolidation was slow in disappearing; no crisis was observed. By the 19th of the month the lungs were clear; there were no rales, no dullness, no cardiac murmurs; the temperature was normal; the pulse was regular, but small and weak. Two days afterward, on trying to walk, the woman complained of weakness and pain in the left leg, which was not swollen; nor was enlargement of the veins noted, although there was tenderness of the calf. In the next few days the temperature, which on the 21st was  $98.6^{\circ}$ , rose to  $101^{\circ}$ ; the left thigh and leg were painful and swollen, principally about the knee. There was mottling of the surface, with prominence of the veins; the femoral vein was hard, swollen and tender. Under elevation of the leg, applications of witch-hazel and then of lead-water and laudanum, and an occasional saline laxative, the swelling had, by March 1st, entirely subsided, and though it was considered premature for her to use her leg, the patient left the hospital March 2d, at her own request.

The cases that I have been showing you are not the first of the kind that I have encountered. There was, in December, 1893, a patient in my ward at this hospital who, while convalescing from left-sided pneumonia,

<sup>1</sup> A clinical lecture delivered at the Pennsylvania Hospital.

developed phlebitis of both legs, first involving the internal saphenous vein of the right leg, then the veins at the upper part of the left thigh. The attending swelling was considerable; there was distention of the abdominal veins, as well as of the veins of the upper part of both thighs, and tenderness over the left femoral vein; there was considerable numbness of the right leg, and slight pitting upon pressure at the upper part of the right thigh. The heart's action was feeble. The case is published in full in the *Journal of the American Medical Association*, for February 10, 1894, and I shall only further state that the man made a slow but complete recovery.

I thus call your attention to three cases of phlegmasia alba dolens, presumably connected with phlebitis, that have come here under my observation, and it is remarkable that in two the disease was double-sided. The symptoms, you will observe, are exactly like those we see in the phlegmasia alba dolens of typhoid fever, an affection very much more common as a result of this fever than of pneumonia. Like the phlebitis of typhoid fever—for, with certain qualifications that I shall presently mention, I adopt this view as the cause of the painful swelling of the leg in both diseases—it comes on late in the malady, more as a consequence or sequel than as an integral part. Slight rise of temperature, with occasional chilly sensations, and a sense of weight and stiffness and pain in the leg, sometimes very severe, are its early manifestations. The leg becomes sensitive, and is very painful on any attempted motion; the tenderness often shows itself first on pressing the calf. The swollen limb is white or mottled, and has a hard but elastic feel; it does not pit at all on pressure or pits but slightly, and while the veins presumably affected, the internal saphenous and the femoral, are prone to be prominent, you will not always, as might be expected, find them tender or manifestly altered. The disease gradually subsides; but aching, some numbness, stiffness, and want of control over the affected leg, may remain for a considerable period, and, with pain and swelling, are likely to return on undue exertion.

Phlebitis in pneumonia giving rise to phlegmasia dolens is very rare, and its occurrence is scarcely mentioned by systematic authors. Still you will find some examples recorded in medical literature. A case is reported by Laache<sup>2</sup> in a workingman, 21 years of age, who had an attack of acute pneumonia involving the left lower lobe that pursued an uneventful course to the crisis. Four days later, the right lower extremity swelled, and the femoral vein was found to be enlarged, like a cord, and tender. There were also some enlarged and tender glands in the inguinal region. Convalescence was protracted, and only after several months had elapsed was health perfectly restored.

Hasell<sup>3</sup> describes a case in which right-sided pleuropneumonia existed. On the fifth day after the temper-

ature had become normal, the patient was seized with sudden pain in the left thigh and leg, which became swollen and excessively tender; the pain followed the course of the saphenous vein. The temperature rose again to 101°. Pain and swelling gradually subsided.

The case published by Nourse<sup>4</sup> occurred in a woman with left-sided pneumonia, complicated by considerable pleurisy that caused a great deal of pain. Convalescence was slow. After sitting up for a couple of hours, and walking about, the left leg began to swell, and became exceedingly painful and sensitive to touch. A swelling could be detected soon afterward over the internal saphenous vein, an inch below the saphenous opening. A similar bunch was perceived at Poupert's ligament. These bunches were excessively tender to touch, as was, indeed, the vein throughout its entire course. The vein, from the groin to the popliteal space, could be felt as a hard, round cord. Considerable swelling of the whole leg, particularly below the knee, and, later, edema occurred. Under rest, opium to control the pain, belladonna-plasters over the tumor, and hot fomentations to the entire leg, the affection subsided within two weeks, though the induration and the occlusion of the vein persisted. The patient had had phlegmasia dolens in one of her pregnancies, and had been troubled with varicose veins of both limbs during every one of them.

Katz<sup>5</sup> details the case of a laboring-man, 36 years of age, who was suddenly seized with a chill, fever and pain in the left chest; and the characteristic rusty sputum, percussion-dulness, and subcrepitant rales left no doubt as to the diagnosis of croupous pneumonia. On the seventh day the crisis occurred, with profuse sweating. The patient felt comfortable, and was sleeping about the middle of the day, when he was awakened by severe pain in the left leg, which was found to be much swollen. The entire left leg was edematous. The color was lightly cyanotic, and the temperature lower than that of the opposite side. On account of the great amount of swelling, the femoral vein could not be felt. The patient complained only of feeling cold and of the tension in the entire limb. There was no fever, and no cardiac complication. The urine was free from albumin. Elevation of the limb and rest in bed for three months was required before the edema decreased sufficiently for the man to resume his work, and, even then, there was a tendency to swelling of the foot after standing on it for a long time.

Another case is reported by Kob;<sup>6</sup> yet it is very questionable whether this is really one of pneumonia, even of the catarrhal form. A schoolmaster, 30 years of age, was first seen on March 23d. The history was one of moderate fever, weakness, frontal headache, and dull pain in the left chest. There was frequent cough

<sup>1</sup> *Medical Record*, April, 1894, p. 525.

<sup>2</sup> *Deutscher Medicinaler*, July 1, 1897.

<sup>3</sup> *Deutscher Medicinaler*, Dec., 1897, p. 855.

<sup>4</sup> *Journal of the American Medical Association*, Aug., 1894, p. 785.

<sup>5</sup> *Deutscher Medicinaler*, Jan., 1894.



and mucous expectoration, without trace of blood. The lung was clear on percussion, but over the lower part of the left chest the respiratory vesicular murmur was weak and mixed with fine mucous rales. The case was considered to be one not of croupous, but of catarrhal pneumonia. Convalescence set in, and on April 20th the man was free from cough, and there was no pain in the chest; he had been out of bed daily for several days, and had partly resumed his school-duties. On the day mentioned he complained of tension and swelling in the right foot and calf. The general condition was very good. He was ordered back to bed, and the leg was kept elevated. By April 28th the swelling had extended to the middle of the thigh, where there appeared a circumscribed, painful tumor. On the 29th the patient's condition was not so good, and he was feverish; but nothing abnormal was found in the lungs except a little friction on the left side. The heart was normal. Thrombosis of the femoral vein was diagnosticated. On May 6th the man's condition was about the same; but, on the 13th, while sitting up in bed, he was suddenly seized with a fainting-spell, followed by very rapid breathing and mucous rales in the trachea, and he expired. Death was supposed to be due to a clot carried from the femoral vein to the pulmonary artery. Although the case was considered one of catarrhal pneumonia, it is uncertain whether it was due to influenza.

The cases are too few to make a definite statement regarding the leg that is most likely to be affected. As in the milk-leg of typhoid fever, I believe it is the left that suffers for the most part. Of 9 cases, which are all I can find recorded in medical literature, and of which 3 are my own, 5 were on the left, 2 on the right, and 2, recorded in this paper, were bilateral.

The prognosis is favorable. Nearly all the cases recover, though the recovery may be tedious. Yet we know that, even leaving out Kob's, which is a doubtful illustration of the malady, there are fatal cases, and from them we have learned the lesions: for instance, one reported long since by John T. Metcalfe.<sup>7</sup> Let me give an abstract of the history of this very rare case.

An intemperate woman, 27 years of age, was admitted to Bellevue Hospital on November 10, 1852. On November 8th she felt a sharp stitch in the right mammary region. There was cough and scanty expectoration, but no rigor. Rusty sputum soon appeared, and dulness of the lower half of the right lung posteriorly was detected. The patient was treated with wet cups and nauseating doses of tartar emetic; and on November 12th being regarded as convalescent, remedies were stopped. The left lower extremity was now found to be swollen and painful. The popliteal and femoral veins were cord-like and tender. A cathartic was given, leeches were applied along the course of the painful vessels, and the leg was fomented with hot poultices. The swelling increased for a while, and this treatment was repeated several times, and by December 1st the tenderness and swelling began to subside. On the 10th the appearance of the patient was much improved, there was no complaint of pain, and the anasarca had diminished. For two days she had been sitting up. While in a chair, having her hair dressed, she became

weak and faint; there was restlessness, great oppression in breathing, and pain in the cardiac region. Death occurred by syncope fifteen minutes later. At the autopsy the external iliac, femoral, and popliteal veins were filled throughout nearly their whole extent by firm, whitish, fibrinous coagula, in many places adherent to their walls.

No statement is made regarding embolism of the heart or of the pulmonary artery.

Another fatal case is reported by Porte,<sup>8</sup> in a woman 48 years of age, with pneumonia of the right apex. On the sixth day of apyrexia phlebitis of the right leg developed, and subsequently dyspnea, irregular, rapid pulse, fainting-spells, high temperature. At the autopsy, obliteration of the internal saphenous vein was found, also red hepatization of the upper part of the right lung, a polypiform clot on the tricuspid, and arterial obliteration at the base of the left lung. In this case the cause of death was clearly a detached clot washed into the lung; and, though not stated, judging from the symptoms, pulmonary embolism was the most likely cause of death in Metcalfe's case, as it will be, probably, found to be in almost every fatal case.

What occasions the mishap? It is due to plugging of the veins of the thigh or leg by thrombi that form there; but whether the coexisting phlebitis is the cause or is secondarily induced is not so clear. Nor is it always certain that we have phlebitis; there may be a periphlebitis, or the inflammation may be in the structures beyond. Indeed, as in all forms of phlegmasia alba dolens, opportunities for minute examination have been few, and, necessarily, we only know what has happened in the severest cases, those that prove fatal. Here undoubtedly thrombosis is found, and generally phlebitis.

What leads to the thrombosis can be only inferred. I think it is due to the altered blood-condition and languid circulation occurring at the end of the acute infectious malady. This would make the clogging in the veins the main and primary condition, and of more importance than the phlebitis, which may or may not be present; but there are other views that are very tenable. In influenza, in which venous thrombosis is not uncommon, for von Leyden<sup>9</sup> and Guttmann have collected 28 cases, Kuskow has discovered disease of the internal wall of the vessels. Such a cause may be found also in the veins in acute pneumonia, and it readily explains both the phlebitis and the thrombosis. It might be further suggested that the irritation of the veins and the coagulation in them are due to pneumococci circulating in the blood, the phlegmasia dolens being thus produced in a manner similar to that of typhoid fever, which is now held by many pathologists to be directly caused by typhoid bacilli in the veins; indeed these microorganisms were found by Vaquez in a clot obstructing the vein. Nor is it inconceivable that they may be the cause of the inflammatory condition of the surrounding areolar tissues. But I have no

positive evidence to offer you on these points, and can only repeat that to my mind the thrombosis is of predominant importance.

The usual seat of the lesion is in either the internal saphenous or the femoral vein, or it may be in both. In Metcalfe's case the external iliac was also involved. In a case recorded in *Guy's Hospital Reports*,<sup>10</sup> occurring in a man whose lungs were found at the autopsy to be affected by an old pneumonia, the inferior vena cava, as well as the right iliac vein, was obstructed by coagula adherent to the inner coat. The kidneys were granular. But, as there had been edema of the right leg and albuminous urine, and the left leg also had been edematous, it is very doubtful whether this case may be looked upon as the result of pneumonia. Hayem<sup>11</sup> makes the statement that thrombi may form in the peripheral veins, and cause sudden death by gangrene; but such cases must be of extraordinary rarity.

The treatment is the same that you have seen carried out here repeatedly in the phlegmasia alba dolens of typhoid fever. Absolute rest in bed and elevation of the limb are essential, and fomentations both relieve the pain and reduce the swelling. I direct usually the whole limb to be wrapped in compresses of hot fluid extract of witch-hazel, or of hot lead-water and laudanum. Laxatives, also, should be given, to keep the venous system from becoming engorged; and it is well to look closely to the condition of the heart, and to sustain its action by digitalis or kindred remedies. When the swelling persists, after the acute stage is over, gentle friction with belladonna or mercurial ointment, alone or in combination, may be employed, but all very active disturbance of the leg is to be avoided. So, too, should massage; though later in the case, for the persistent stiffness and lack of power and tendency to recurring swelling, it is useful. The patient should be carefully guarded from getting up too soon, and should be allowed to walk only short distances at first. The mechanical support of a bandage or a long elastic silk stocking is most advantageous.

## DISLOCATION OF THE ULNAR NERVE.

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DISLOCATION of the ulnar nerve, by which we mean a slipping out of the nerve from the groove that it normally occupies behind the internal condyle, is, if we may judge from the scarcity of published cases, a very rare condition. Historically, it is of interest to note that it was first observed by Blattmann,<sup>10</sup> in 1851, his being a traumatic case. In 1880 Zuckerkandl<sup>2, 11</sup>

reported 4 cases and made some interesting observations on the pathology. In 1890 Raymonenq\* published a thesis and collected several cases, none of which, however, was original. In 1895 Wharton<sup>21</sup> read a paper before the American Surgical Association, in which he reported 14 cases, including one of his own. The cases of Sir William MacCormac<sup>6</sup> and of Mr. Croft<sup>15</sup> were presented at the same session of the Association. In 1895 Drouard<sup>9, 26</sup> published a thesis entitled "*Luxation et subluxation du nerf cubital*," in which he was able to detail 41 cases which had been operated on up to that time, of which 17 were traumatic in origin. To this list I am able to add two cases, one of my own, and another, that of Frederick Lange,<sup>3</sup> of New York, which had been previously overlooked. I have thought it worth while to give the histories of these cases in some detail, after a brief enumeration of the main features of the etiology, pathology, and symptomatology of the affection. Drouard's thesis is by far the most exhaustive paper upon the subject that has yet appeared, and I have availed myself freely of his article.

The ulnar nerve courses down the inner side of the arm below the brachial artery, and departs from that vessel at about the middle of the arm, piercing the intermuscular septum to take up its position in the groove behind the internal condyle, in which it runs until it passes the joint, when it penetrates between the two heads of the flexor carpi ulnaris, beneath which muscle it passes down the forearm. What are the factors that serve to keep it in this groove? We have the internal condyle, behind which it runs, and which varies much in size and shape in different individuals. The portion of the nerve that runs in the groove describes a curve at the concavity, backward and outward. When the forearm is flexed, owing to the obliquity of the articulation, it falls inside the arm, and the nerve forms an angle at the elbow, opening forward and inward, which carries the nerve against the inner side of the groove and favors its slipping out. The nerve is partly imbedded in the fibers of the internal head of the triceps, and is attached by a little fibrous tissue to the bony groove in which it lies and which varies much in depth. Above the elbow the nerve runs under a band of fascia, a portion of the intermuscular septum; below are other fibrous bands, varying in strength in different individuals. One set of fibers runs from the epicondyle to the olecranon, and below this point the nerve runs beneath the aponeurosis connecting the heads of the flexor carpi ulnaris muscle.

In considering the pathology of this affection we find that cases may be divided into *congenital* or *habitual*, or, as I prefer to call them, *spontaneous* and *traumatic*. In the first named there is, as a rule, comparatively little disability, the patient often not noticing the condition unless his attention is called to it. Of the spontaneous cases Collinet,<sup>8</sup> in a systematic exami-

<sup>10</sup> Second series, vol. iv, 1846, p. 69.

<sup>11</sup> *Gaz. med. de Paris*, 1871.

\* De la luxation du nerf cubital, Lyon, 1890.



nation of 500 individuals, found 13 instances, 5 of which were bilateral, and 8 unilateral. Drouard found 3 cases among 200 persons examined. It is evident that the number of congenital cases is only limited by the number of persons examined for the lesion, and many of whom are unconscious that they possess such a surgical curiosity. In some of these cases, however, there is a great deal of disability, suffering, and even the production of a neuritis.

The foregoing classification does not take into account the more frequently encountered cases of subluxation, in which the nerve is partially displaced during flexion of the forearm, coming to the summit of the internal condyle, but not overriding it. Nor have authors included cases of dislocation produced at the same time as fracture of the joint. As predisposing causes of this condition may be mentioned smallness of the internal condyle, and abnormal mobility of the nerve; an anomalous position of the nerve, which may run over, instead of under, the confining fibers; feebleness of the ligaments, shallowness of the groove, and an advanced position of the internal lateral ligament during flexion (Zuckerkanl). As exciting causes we have flexion of the joint, in which position not only is the nerve brought more tightly against the wall of the groove, but the widening of the triceps muscle in this movement encroaches upon the groove, and tends to push the nerve inward. In the congenital or spontaneous variety (the word congenital here being used in the same sense as in speaking of congenital hernia, and meaning congenitally predisposed) the frequent repetition of movements of flexion and extension is sufficient to bring about the dislocation. In the traumatic cases the origin can be traced to violent muscular exertion, as was probably the case in the patient under my own observation, and which was the mode of origin in the cases reported by Blattmann,<sup>10</sup> Holden,<sup>18</sup> Poncet<sup>14</sup> and Jalaguier;<sup>24</sup> or it may arise from direct traumatism, tearing the ligaments, as in the cases reported by Andral,<sup>12</sup> Annequin,<sup>13</sup> Croft,<sup>15</sup> Cunningham,<sup>16</sup> Smith,<sup>17</sup> Plicque,<sup>20</sup> and Wharton;<sup>21</sup> further, it may be due to direct enucleation by the dislocating force, as in Schwartz's case;<sup>22</sup> and lastly, we have those cases in which there has been a fracture into the joint resulting in the production of "gunstock deformity." Under the condition last named, the nerve, instead of forming at the elbow an angle opening outward, is carried inward with the forearm, which brings it against the inner edge of the groove, and favors its slipping out of the same. This condition was present in Zuckerkanl's<sup>11</sup> traumatic case, and in one of Drouard's.<sup>25</sup> Curiously enough, in Poncet's case and in my own, the dislocation was produced in exactly the same manner, viz., by throwing snowballs.

**SYMPTOMATOLOGY.**—Objectively, we have the presence of a cord that can be felt slipping over the internal condyle on flexion, going back again on extension,

movable under the finger, and pressure on which occasions the tingling sensations produced by pressure upon a nerve. The sheath is sometimes thickened, and the nerve may be fusiform. Subjectively, the symptoms are usually more severe in traumatic than in congenital cases. There are pain and tingling at the time of dislocation, felt at the elbow and in the distribution of the nerve. The pain is exaggerated by movements of the arm, and may be severe and persistent. Later, there may be neuritis, either as the result of the primary injury causing the dislocation, or due to subsequent traumatism to the nerve from its exposed position, or, what seems the most probable explanation, to the constant exposure to what might be called *articular traumatism*, provoked by its constant sliding backward and forward in its abnormal position, in relation to such an active joint as the elbow, and being constantly redislocated with each movement of flexion. Neuritis is manifested by sensory and motor changes in the distribution of the nerve, especially in the fingers. Acute myositis may be an associated condition, as in Lange's case.

The diagnosis should be easy if once the condition is suspected. That it may be overlooked, unless its possibility be kept in mind, is proved by my own case, in which a diagnosis of contusion was originally made, the history being somewhat imperfectly given at first.

**TREATMENT.**—In many cases, especially of the idiopathic variety, little or no discomfort is experienced, and in some of the traumatic cases the subjective symptoms gradually disappear, and the patient is perfectly well, except for the possible future development of a neuritis. This possibility is one that must be borne in mind. Neuritis has developed in a sufficient number of cases to warrant the insistence on careful treatment in every traumatic case that comes under observation.

Treatment may be either mechanical or operative. Cure has been obtained after fixation with a splint and compress, and I think that in traumatic cases seen immediately after the occurrence of dislocation it is worth while to give this a trial if circumstances permit. There certainly should be a chance of success in the early stage, before the groove has become filled up, and while healing is taking place in the lacerated aponeuroses, insuring some chance of adhesions forming to bind the nerve in place. After this period I do not see that fixation can be of much service, and the results have not been encouraging under any circumstances. The only case that is recorded as having been cured by fixation is that of Plicque, while in four others it failed. In idiopathic cases associated with neuritis, in which some treatment would seem to be indicated, mechanical fixation alone is probably absolutely useless. If this treatment be thought worthy of trial, the arm should be fixed on an anterior splint, in almost full extension, in which position the nerve slips back into place, and a compress is placed over the nerve to assist in holding it in position. If after two

or three weeks it is found that the nerve is redislocated on flexion, operation is certainly justifiable.

Operators differ somewhat in their methods of securing the nerve in its place. Altogether there have been at least eight cases operated upon, the operators being Andral, Annequin, Poncet, MacCormac, Croft, Smith, Schwartz, and myself. With the exception of Andral's all the operations have resulted in cure. Andral resected 2 or 3 cm. of the nerve in his case, which was one of traumatism followed by neuritis, in which mechanical fixation had failed. The operation was unphilosophic according to our present knowledge, inasmuch as the nerve is not too long, and the shortening would only tend to bring it more tightly against the wall of the groove, and encourage its slipping out, and the result was a recurrence of the dislocation, but a cure of the neuritis. Most of the operators formed a bed for the nerve behind the internal condyle, by dividing the fascia between it and the olecranon, and suturing fibrous flaps over the nerve. Croft sutured the nerve to the surface of the triceps muscle, and MacCormac passed two loops of kangaroo-tendon around the nerve and through the fascial envelop of the triceps, the edges of the divided fascia being subsequently united over it in both cases. Schwartz formed a sheath in the usual manner. The wound should be closed without drainage, and the arm dressed in the extended position on an anterior splint. Three weeks' confinement to the splint is probably sufficient.

As Lange's case has not been included in any of the papers yet published, I give a short abstract of it.

The patient was a violinist, who, a week before consultation, and after an unusual amount of use of the arm at his vocation, began to suffer very severe pain in the muscles of the right forearm near the elbow-joint, in the region of the internal condyle. The pain was severe for a short time, and did not cease entirely, but increased during the next two days after repeated use of the arm, and on the third day it was so severe that every movement caused great pain. Upon examination there was found swelling and tenderness of the muscles of the forearm below the internal condyle, and luxation of the ulnar nerve at each movement of flexion. In the left arm the nerve was unusually mobile.

Lange recorded the case as one of myositis associated with habitual dislocation of the ulnar nerve. There were no evidences of neuritis. This case was apparently one of the spontaneous variety, in which, the predisposing factors being present, as shown by the mobility of the nerve on the left side, the constant movement of the arm in playing on the violin acted as the exciting factor in bringing about the luxation.

**PERSONAL CASE.**—T. S., a schoolboy, aged 12 years, was first seen on February 17, 1898, at the surgical dispensary of the Children's Hospital. He complained of severe pain over the internal condyle, which was at first attributed to a fall that he had had the previous day. He had also been busily engaged the day before in throwing snowballs, but, perhaps for his own reasons, did not lay stress on this at his first visit. There were pain and tenderness over the internal condyle, which was of normal size and shape; and a diagnosis was made of contusion, and a right-angled splint was applied to the arm. The subjective symptoms continued, however, and it was found at a subsequent visit that with

each movement of flexion of the forearm the ulnar nerve was dislocated over the internal condyle; the movements of the nerve could be both seen and felt. Pressure cause tingling in the distribution of the nerve, and there was also marked local pain and tenderness over the internal condyle. The relations of the nerve in the other arm were normal; nor did it appear to possess any abnormal mobility. The arm was then placed upon an anterior obtuse-angled splint, and a compress applied over the nerve. After a week's time this was removed, and the dislocation recurred. The boy now complained of pain in the wrist. In view of the persistent pain and disability, with the possibility of the development of a neuritis, it was thought advisable to recommend an operation, which was agreed to.

On March 17th the boy was admitted to the hospital, where, through the kindness and with the aid of Dr. Samuel Ashhurst, I had the opportunity of operating upon him. An incision was made over the usual seat of the nerve, which was easily exposed by dividing the fascia, about three inches of the nerve being freed above and below the elbow. The groove for the nerve was either absent or filled up, and the fascia enclosing the nerve seemed to have been separated from the olecranon. The fascia covering the heads of the flexor carpi ulnaris muscle between the olecranon and the internal condyle was divided, and a longitudinal incision was also made into the internal head of the triceps above, parallel with the edge of its tendon. The nerve was replaced in the groove thus formed, and two loops of kangaroo-tendon were passed through the tendon of the triceps and loosely around the nerve, and tied, care being taken not to cause any constriction of the nerve. Sutures of catgut were then used to unite the fascia over the nerve, between the olecranon and the internal condyle. The wound was closed without drainage, and the arm dressed in the extended position on a straight splint, with a little padding in the flexure of the joint, and with an extra pad over the internal condyle. Following the operation there was practically no pain. Careful watch was kept for sensory and motor changes in the distribution of the nerve, but beyond a little tingling in the ring and little fingers on the second day, felt only when the bed was jarred by someone walking across the ward, there was nothing of moment. The wound was dressed in a week and found practically healed, the sutures being removed a few days later. The patient was discharged on April 3d, and the splint removed on April 9th, three weeks after the operation. The nerve could be felt in the position where it was secured. Flexion was free up to a point somewhat beyond a right angle, when pain was experienced at a position corresponding to the tendon-stitches. This gradually disappeared, and when last seen, on May 30th, more than two months after the operation, the boy had regained complete use of the arm, the nerve was apparently firmly fixed in its natural place, and there was no pain or discomfort of any kind.

I append a list of the cases published up to the present time:

#### LIST OF CASES.

##### CONGENITAL, HABITUAL, OR SPONTANEOUS CASES:

- <sup>1</sup> Lutz: *St. Louis Medical and Surgical Reporter*, 1880, p. 570.
- <sup>2</sup> Zuckerkandl: *Medicinisches Jahrbücher*, Wien, 1881, p. 135, 3 cases, one in a cadaver.
- <sup>3</sup> Lange, F.: *Trans. New York Surg. Soc., N. Y. Med. Journal*, Feb. 23, 1884.
- <sup>4</sup> Poncet: *La Semaine Médicale*, 1888, p. 93.
- <sup>5</sup> MacCormac: *Trans. Amer. Surg. Assoc.*, 1895, p. 375; also reported by Stabb: *Lancet*, May 9, 1891, p. 1040.
- <sup>6</sup> Schilling: *Münchener med. Wochenschrift*, 1892, p. 679.
- <sup>7</sup> Quenu: *Bull. et Mém. de la Soc. de Chir. de Paris*, 1896, p. 211.
- <sup>8</sup> Colliet: *Bull. de la Soc. Anat. de Paris*, May 15, 1896, 13 cases.
- <sup>9</sup> Desmard: *Luxation et subluxation du nerf cubital*, Paris, 1896, 3 cases.

##### TRAUMATIC CASES

- <sup>10</sup> Blattmann: *Deutsche Klinik*, 1851.
- <sup>11</sup> Zuckerkandl: *Medicinisches Jahrbücher*, Wien, 1880, p. 135. In a cadaver.
- <sup>12</sup> Andral: *Inaug. Dissertation*, Greifswald, 1889.
- <sup>13</sup> Annequin: *Arch. de Méd. et de Pharm. Moderne*, 1890, vol. 5, p. 432.
- <sup>14</sup> Poncet: In Raymond's thesis, *De la luxation du nerf cubital*, Lyon, 1890.
- <sup>15</sup> Croft: *Trans. Amer. Surg. Assoc.*, 1895, p. 375. Also reported by Stabb, *Lancet*, May 9, 1891, p. 1041.
- <sup>16</sup> Cunningham: *British Med. Journal*, 1893, I, p. 116.
- <sup>17</sup> Smith, G. M.: *Ibid.*, 1893, I, p. 288.
- <sup>18</sup> Holden, G. H. R.: *Ibid.*, 1893, I, p. 288.
- <sup>19</sup> Tronson: *Ibid.*, 1893, I, p. 288.
- <sup>20</sup> Piquet: *Gazette des Hôpitaux*, Sept. 28, 1895, p. 1053.
- <sup>21</sup> Wharton: *Trans. Amer. Surg. Assoc.*, 1895, p. 281; also *Amer. Journal Med. Sciences*, October, 1895.
- <sup>22</sup> Schwartz: *Bull. et Mém. de la Soc. de Chir. de Paris*, 1896, vol. 22, p. 202; also, Drouard's thesis.
- <sup>23</sup> Anger: *Bull. et Mém. de la Soc. de Chir. de Paris*, 1896, vol. 22, p. 212.
- <sup>24</sup> Jalaguier: *Ibid.*, p. 219.
- <sup>25</sup> Drouard: *Luxation et subluxation du nerf cubital*, Paris, 1896, 2 cases.
- <sup>26</sup> Jopson: Personal case.



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**The Proposed War-Board Inquiry**, as we go to press, is in a very dubious condition of mind and existence. We will not say that it was conceived in sin, for that might be too harsh, but as the period of gestation is not yet complete we may hope that the delayed labor may not result in a *living* monster. Upon the President at last rests the responsibility of the alleged misconduct, for it is he who appointed the administrative officers. To appoint a commission to pronounce judgment upon one's own acts is futile, if not ludicrous. The commission cannot be paid, cannot be clothed with judicial authority, cannot summon or punish involuntary or obstinate witnesses, and, moreover, cannot investigate the chief of all offenders, our absurd and quackish Congress, which pushed us unprepared into the war, and which despises the medical profession, and which has cursed medical efficiency with red-tape and executive control. It is more than half suspected that the commissary, quartermaster, and transportation departments have sins of many kinds that will never be unearthed by any such Board of Inquiry as is planned, and those of the office of the Secretary of War will certainly not be reached by it. We have never prided ourselves upon our military and naval superiority to other nations, but we did think that no men of simple business, such, *e. g.*, as of the railway, were superior to those of our country. We stand before the world in concealed disgrace; we were not able to conduct a really small business matter or transport troops and supplies better than a barbarian tribe. Wholly unprepared, we went into a needless and useless war for a worthless lot of corrupt semi-savages, and showed ourselves incapable of buying provisions, or of transporting our men and materials in a land gridironed with railroads and boundlessly rich; we then come home from easy victories over a pitiable enemy to see our highest officials quarreling among themselves as to who is to blame, like a lot of school-boys. Finally, enraged at our national blundering, and stung by a deriding self-consciousness, the jingoes and yellows now seek to make a scapegoat of the medical departments. Certainly our soldiers have suffered more than was necessary, and there have been a greater number of cases of sickness and deaths than should have been. But the profession and its journals—those that are genuinely such—must see to it that the scapegoat theory shall be met by the truth.

**Cornell University Medical College** has received from Col. Oliver H. Payne the gift of one and one-half million dollars, and work is to be at once begun on the new building, five stories high, at First Avenue and 27th Street, New York, which it is proposed to build and endow. Colonel Payne, it will be remembered, formerly gave \$150,000, which, finally, after much discussion, benefited the medical department of the University of New York. The present magnificent gift will at once place the Cornell University Medical Department among the foremost of the country. The course will require four years, the first two of which may be taken at Ithaca. While heretofore money has been found for every other public institution, it has been strange how little benefactors have recognized the need of it for health, the most important of all things. The public ingratitude to the medical profession and indifference to its own physical well-being are the strangest of psychologic mysteries. It may be hoped that this incomprehensible stupidity is at last to end. The scandals of State appropriations and medical politics are becoming insupportable, even if there were no higher motive.

**Postprandial Oratory** is responsible, we believe, for more dyspepsia and suffering than even the excessive long-drawn-out feeding and drinking. The poor martyrs cast for parts in the dreary farce to come can neither eat calmly nor digest well on account of the terrors that approach, and the poor hearers know they have to suffer for the delights of the banquet by later listening, or by an impolite escape through the side-door. All are impaled and must suffer at the hands of a tyrannous and senseless fashion. Very few men are capable of entertaining an audience with spontaneous wit, and even these, if we but knew it, spend a sleepless previous night preparing and memorizing the bright extempore things that are struck out, *i. e.*, lugged in by the horns, as flashes of the jolly *esprit de corps* all pretend to feel. We are as kind as we can be; we laugh, at least we applaud most loudly, to encourage the trembling, wriggling fellow, who, when he sits down, does so with many an inaudible *Thank Heaven that's over!* Apropos of which our genial contemporary, *The Practitioner*, makes a most valuable and praiseworthy suggestion that as our singing is by artists hired for the purpose, why should not also our speaking be done for us by hired orators. *Verbum sap.!*

**The Prevention of Tetanus.**—Onewho has read the daily papers carefully of late must have been struck by the number of deaths from tetanus. Scarcely a week has passed without a record of one or two cases, and one week recently five deaths were reported. Compared with the mortality from many other causes this is not great, but by right there should be practically no deaths from this cause. Such a result is not to be brought about from the use of antitetanic serum, for the results from its use have not been particularly favorable. What is needed is greater care in the prevention of the disease. It is supposed to be a well-known fact among physicians that the bacillus of tetanus is anaerobic, that it is found mainly in the soil and other filth not exposed to the air. As a consequence of this, tetanus, if it occurs, usually follows punctured wounds, contaminated by dirt. This fact should be better known by the general public. The people should be told by their medical advisers of the dangerous consequences which may follow slight wounds of this character, and the physician, in case such wounds come to him, should never neglect to lay the wound open freely, under local anesthesia if necessary, and make certain of its thorough disinfection. These measures would do much, we believe, to reduce the number of deaths from tetanus to almost naught.

**Rights of the Insane.**—Despite the irritation that justly or unjustly Americans may feel toward Germany, we cannot resist paying tribute to the German government for the farsighted and beneficent sociologic reforms that since the Unification it has carried out with a singleness of purpose and a thoroughness of method that command our highest admiration. The government has just completed another magnificent piece of work, on the same lofty lines, which might well serve our legislative powers as an example, namely, the promulgation of uniform civil laws for the entire German nation. The new code will, in 18 months, supersede the antiquated and conflicting laws of the separate States and Principalities, and will give to all parts of the country a uniform judicial procedure, and will especially regulate the relations of the State to the insane and the rights of the latter before the law.

It is almost needless to urge here what has been so ably urged by the leaders of the judiciary, by eminent lay citizens, and by physicians interested in social progress—a speedy harmonization of the laws of the individual States of the Union with reference to divorce, the care of the insane, and expert testimony in criminal trials. Home-rule is not abrogated by the establishment of interstate harmony of legal codes, and the benefits are incalculable. We trust that those upon whom the responsibility and the privilege of initiating such reforms in this country devolves, will observe critically the workings of the new German code whose adoption marks an epoch in the domain of law.

**Trade-marks and Titles.**—We call attention to the report, reproduced in another column, as to trade-marks, etc. The following quotation from a respected correspondent also clearly sets forth the essential point of controversy. It is a controversy, however, about which we seem after endless discussion to be almost as far from agreement as ever, and it reminds of the anecdote of one who said, "There is only one person in the world besides myself whose opinion in this is perfectly orthodox and correct, and I have grave doubts if he is quite right on several very important points."

"The entire controversy turns on the definition of what is a trade-mark. The nostrum-manufacturers claim that the *titles* of their medicines are trade-marks, in defiance of the legal axiom that a title cannot be a trade-mark. Titles serve to distinguish between things, while trade-marks serve to distinguish between different brands of the same thing. It is therefore self-evident that a title cannot serve both as an appellative and a brand-mark at the same time. On this definition of terms hangs the entire legal protection of the nostrum-business. The nostrum-manufacturers claim that the titles of their medicines are trade-marks, and some of the lower courts have supported their position in a few instances. But trade-marks, to be accepted as such by the courts of final resort in the United States, France, England (and now in Germany, we believe), must be *used* as brand-marks, *not* as titles, to make them trade-marks.

"The science of medicine and the common language demands that each drug, chemical, and preparation shall have a name by which it may alone be recognized and identified, and that the name shall belong to the article, not to the person who named it. There is no law by which he can be protected in the exclusive use of such name; and any person who has a right to make and sell the article has an equal right to deal in it under its commonly accepted title, all claims of the nostrum-manufacturers to the contrary notwithstanding."

**The Murder of the Empress.**—We trust that the brutal assassination of the defenseless woman who wore the imperial crown of Austria will not give occasion to the criminal anthropologists to rush prematurely into print in order to vindicate the favorite tenets of their school. The crime does, indeed, at this time and distance, present every appearance of impulse and unreason. From her personality and the manner of her life, we should suppose that the Empress did not offer herself in any sense as a target for the hatred of the most rabid fanatic. Her station, to be sure, was her crime in the eyes of anarchy, but even anarchy is supposed to have sense enough to strike where its blow will not miscarry in an unoffending breast. Elizabeth was far removed from politics, both by choice and necessity, and did not even enter conspicuously into



the functions of the Court. Except for eccentricities of personal habits and tastes, which, of course, may have been cause of offense to some, she seems, especially of late years, to have led a retired life, which was not unmarked by charity and good-will. Why such a woman should have been chosen as the victim for assassination in order to check or to heal the diseases of the body politic, must remain unexplained even in the mind of the degenerate thug who killed her.

But crime is always unreason—especially brutal crime against the person. The theory that it is pathologic receives too often a specious support from its very illogicality—from the fact that it is so often the evidence of the activity of a perverted or stunted mind. The modern school of anthropologists traces crime by its antecedents, its ancestry even, and by the marks or stigmata which are sometimes its symbols even in the physique of criminals. They may cause us to forget, in the ardor of science and analysis, that human justice, after all, must be from the very nature of things a crude affair when it deals with the individual criminal for the protection of a whole community. The assassin of the Empress is the son of a harlot and the product of a degenerate cult, but his responsibility can not and must not be measured by his ancestry and his environment alone, but by the practical standard of human justice. It may be worth while to note, however, that by a strange coincidence he comes of a country that seems destined to furnish the chief assassins of Europe as well as the anthropological school of Lombroso.

In prison, Lucchoni, the murderer, has already, as usual, boasted of his crime, and, with due regard for his reputation and the susceptibilities of his fellow-anarchists, has addressed a letter to the newspapers protesting against being mistaken by Lombroso for a degenerate. Thus this criminal of approved type, who never knew his father or mother, and was turned loose on the streets when ten years old, has yet heard of and perhaps even read the distinguished professor of criminal anthropology. Although science may thus have even held the mirror up to the assassin, he evidently failed to catch his own reflection, and will probably persist till the end in regarding himself as a hero instead of the atrocious criminal that he is.

**A New Danger from Kerosene Oil.**—Consul Bedloe, who now represents the U. S. Government at Canton, China, is evidently fully alive to his official duties. According to a correspondent, he has just stopped a "boycott" on kerosene oil, and at the same time exposed a fallacy in hygienic science. It seems that some untutored Chinaman started a report in Canton that the germs of black plague were carried in kerosene oil. This report was published in a native newspaper, and, as the plague was carrying off hundreds of victims in China, the chances were great that kerosene oil would be widely avoided. As this oil is very

generally used by high and low in Canton as an illuminant, and is imported from America, a leading article of commerce between the two countries was threatened. Consul Bedloe immediately complained to the Viceroy, and this potentate replied that he himself never read the newspapers, and thought probably the consul attached too much importance to them. But the consul insisted that the "boycott" be stopped by viceregal edict, or else he, the consul, would, under the treaty between the United States and China, proceed to apply the *lex talionis*, and put the ban on something Chinese. This produced the desired effect on the Viceroy's mind, and he at once issued a sturdy proclamation, in which he warned all the natives that kerosene oil is a product of America; that the United States has a commercial treaty with China; that no one can prohibit the importation of products of the United States; and, finally, that no one is permitted (in China) to advertise rashly. All under penalty of being arrested and severely dealt with.

But in all this there was never a word about the plague! No one seemed to think it worth while to stop to ask whether it were true or false that the germs of plague have their natural habitat in kerosene oil. The Viceroy evidently did not believe in the newspapers, and needed no bacteriologist to demonstrate to him that what they published was nonsense. What he did believe in was a commercial treaty. And as the viceregal opinion goes in China for everything, whether in hygiene or commerce, the natives made no further objection to taking their kerosene oil and their plague together, if need be, according to edict and treaty. All of which proves that China is a great country, and that Consul Bedloe is the right man for the place.

**A Theater for the Employes of the Krupp Factories.**—Germany is the field of a great deal of advanced philanthropy, and not the least noticeable of the modern manifestations of "the fellow-feeling that makes us wondrous kind," is the agitation that has now been in operation for some years to furnish the "common people" not only "panem," but also "circenses,"—not only that which makes physical well-being possible, but also that which adds to existence something of enjoyment,—on the principle, perhaps, that not alone are the necessities of life required, but that it is really its luxuries that are indispensable. There is in Berlin a society that buys all the seats at the various theaters on certain days in the year, when the favorite play of the season or a German classic drama is presented, the audience consisting of those to whom the tickets have been distributed gratuitously by a special philanthropic (not charitable, note the distinction) bureau. It is announced that Arthur Krupp, one of the great German gun-manufacturers, is about to open on the estates near his Austrian gun-factory a handsome theater for his employes. The announcement may seem strange to

Americans, our millionaires being prone to forget the men who helped them to make their money. Philanthropy does not ordinarily take with us the form of something for mere amusement, especially of the working-classes, but the spirit that prompted the old Roman cry, "panem et circenses," at a stage of Roman civilization not unlike our own, has its origin deep in human nature. The clear-eyed old Romans, whose long contest between Senate and Plebs had familiarized them during centuries with social troubles, saw fit to respond at State expense. This treatment of a mind diseased in the body politic cannot be without its lessons for the present generation. Meantime these latest manifestations of German philanthropy are of special interest, and their effect in the midst of the intense practicality to which they are seemingly so opposed must be a subject for the earnest attention of medical men. In the midst of the industrial revival in Germany, the unrelieved tension of the struggle for life and its effect upon the nervous system is nowhere so manifest as in the prosperous manufacturing centers of Germany and Austria. The effect of this newer philanthropy, so eminently desirable with our American conditions, in relieving this nervous strain and ameliorating the neurotic features becoming everywhere so evident, is worthy of careful observation.

**A Way of Preventing Disreputable Lying-in Institutions** is that successfully pursued by the Women's Directory of Philadelphia. We recently commented upon the fact that so many institutions advertise in hypocritical ways, and with the plain object of making money out of the crimes of the unfortunate by further crimes of infanticide, etc. Dr. Charlotte Abbey, Superintendent of the Women's Directory, writes us, in part, as follows:

"Recently, and in consequence of facts that came to our knowledge regarding these private maternities, I was appointed special officer under the Board of Health for the purpose of ascertaining what becomes of the infants born at these places. They are, as a rule, advertised for adoption in the daily papers, but out of 12 cases which we investigated it was found that only the whereabouts of three could be traced—the remaining nine recorded in the books of these institutions being fictitious. It is easy to understand that in adopting an infant one would not wish the whereabouts to be known—but the fact that these addresses were many of them in low neighborhoods, proved that there was no care taken as to the child's welfare. Since the attention of the authorities has been called to the matter and more exact accounts of the disposal of infants required, several of these places have closed, but some of the most pretentious and questionable still exist in this city.

"Whilst recognizing and respecting the wish of any unfortunate girl to be screened from publicity, the fact of her motherhood demands that she be protected, in time of her greatest need of help, from falling into the hands of those whose only thought is to make money out of her very desperation.

"Experience shows that the unfortunate girls who come under our influence before or after maternity, are easily influenced to do their duty by their children when a friendly hand is outstretched to help them, and we also find that the mother who is worthy the name of woman will crave for the child which in her fear and desperation she has paid money to

have disposed of, and she will become more and more demoralized if the child cannot be recovered. In this we perceive the great difference between animals and human instinct; with the former affection decreases with time, with the latter it increases. Under wise guidance this paternal instinct becomes the strongest evolutionary force which we possess and no conventional consideration should be allowed to interfere with the natural maturing of its power.

"Hence those who value human ideals should see to it that the unfortunate mother has opportunity after the birth of her child to well consider the possibility of keeping the little one with her, and any attempt to interfere with the development of maternal instinct should be regarded as a criminal offense, a wrong against both mother and child, and also against society."

The work of the Directory consisted during the past year of aid in 784 cases. There was little difficulty in most of the cases in persuading the girl to care for her child. It is advised that the resident physicians and nurses in maternity hospitals or homes for women and infants should be chosen from those of good moral standing, and that individuals in private life should take an active interest in mother and child, during the mother's convalescence, helping to relieve her anxiety by providing for her immediate future, worry about physical necessities often driving her to desperate measures; and, finally, that the mother who goes to a situation, with her child, shall be corresponded with by individuals interested in her continued welfare, and wishing to see mutual good will between the employe and employer, and prevent the troubles that arise from impositions or cheap labor and the frequent incompetency of the employed.

#### "Incompetence, Indifference, and Servility."—

These are given as the reasons that the surgeons of the army "have not done their duty," by our highly esteemed contemporary, *The Gynecological and Obstetrical Journal*. The reason why they are "incompetent" is because the appointment of many has been due to "political jobbery." The reason given for the "indifference" is the "incompetence," plus obedience to authority. The reason, lastly, for the "servility" charged is that the regulations of the army make the medical officer subordinate to the higher military officers, without whose orders and permission the surgeon may not act. The logic of our usually accurate and acute contemporary seems to us faulty and his premises not the result of precise observation. We deny that proofs have yet been given of any general or exceptional incompetence, indifference, or servility upon the part of medical men. It has not been shown that what wrongs have been committed are not due either to the system under which they have worked, to our total unpreparedness for the campaign, or to the military conduct and conductors of the war. We deny the charges of incompetence and indifference, and would correct as to the third charge by saying that obedience is not servility, and that moreover obedience to superior authority is not a striking quality of us Americans. Indeed it may be said that we have entirely too little



of this military and civil virtue. With the "conclusion of the whole matter," however, as expressed by our contemporary, we are in hearty accord. Undoubtedly the want of professional unity is the root of many of the evils, civil and military, under which we suffer.

"What, then, is the message this war carries to us? What lesson is ours to learn? It is that in the army as in civil life we are a disunited body of men, incapable, owing to our want of union, to command either the respect or the obedience even of those inferior to us in knowledge and experience. Would the Surgeon General of this country, our only representative in the administration of this Government, the man to whom sixty or seventy millions of American citizens look for the preservation of the health and lives of our citizen-soldiers, continue to be merely an appanage of the Adjutant-General's office, if behind this man stood the influential voice of the one hundred thousand physicians in this land?"

In this connection we quote some sentences from a most excellent report of Dr. Benjamin Lee to the *Philadelphia Ledger*:

"There is rational red tape and there is idiotic red tape. And of all the idiotic red tape that ever was devised, that invented by the Congress of these United States for the regulation of the business side of the army approaches most nearly to the product of an asylum for idiots. In no branch of the service is this impertinent interference more seriously or disastrously felt than in the Medical Department. It seems to have been the especial delight of Congress to insult and hamper it in every possible way." \* \* \*

"The whole policy of Congress toward the Medical Department has been one of niggardly, cheeseparing parsimony, born of ignorance and fostered by the desire to assert a short-lived authority." \* \* \*

"The failures at Camp Wikoff have simply been a repetition of those of the entire war—failures in transportation and provisioning—and for those the quartermaster's and the commissary departments are, of course, responsible. The fighting end of the army has held up its end nobly—the business end has proved itself utterly inadequate." \* \* \*

"While I do not claim that the regular or volunteer surgeons are better than any other officers of the same grade, I do claim that they have shown in the recent conflict a degree of heroism, self-devotion, faithfulness, and conscientiousness in the discharge of duty equal to any. Criticism of their conduct and of their results is more properly to be directed to the system in whose meshes they are floundering.

"In conclusion, conditions have prevailed at Camp Wikoff such as to justify the severest criticism. These conditions are now so greatly improved that there is comparatively little avoidable suffering.

"The Departments charged with transportation and the Commissariat are those to which the responsibility attaches.

"The shortcomings of the Medical Department are principally due to the system which fetters it.

"Camp Wikoff cannot be considered by itself. It is simply one of many incidents of inefficiency in the business management of the war."

**Esophagotomy.**—B. L. Eistman (*Kansas City Medical Index*, September, 1898.) reports the removal of a silver dollar from the esophagus of a man, 19 years old. The coin was located by the fluoroscope about 1½ inches above the supra-sternal notch, and after the tissues of the neck were separated by blunt dissection, it was removed by tearing the esophagus near the carotid sheath; the wound was then packed. The wound in the esophagus had healed soundly at the end of ten days, and the patient left the hospital at the end of three weeks.

**The Plague in India.**—Throughout the Bombay Presidency, Mysore, and the Punjab, the plague is spreading rapidly, the recrudescence having begun August 6th. Since this time the mortality has steadily increased, until during the week before last, there were over 2,300 deaths from the disorder in the Bombay Presidency—there being 162 deaths in the city of Bombay itself.

## Selection.

### TRADE-MARKS, TITLES, NOSTRUMS, ETC.<sup>1</sup>

In regard to the resolutions from the Committee of the Pennsylvania Pharmaceutical Association, and the Minnesota State Pharmaceutical Association, which were referred to the Special Committee on National Legislation at the last annual meeting of the Association, the committee reports as follows:

These resolutions contained a request that the American Pharmaceutical Association should frame a bill abolishing copyright or trade-mark on medicinal products. There is no such copyright or trade-mark on medicinal products as these resolutions imply. There is no law protecting monopoly in medicinal products except the patent-law. For this reason the bill asked for is unnecessary.

The way in which the secret-medicine trade is endeavoring to prevent others from copying the medicinal products and preparations which they are exploiting is by registering their titles as trade-marks. Any protection secured by so doing is on account of a misunderstanding in regard to the intent of the law by those called upon to enforce it. Fortunately, much has been done lately by the courts of final resort to make clear its real meaning and intent. Reference is made to the Singer Sewing Machine case, decided by the United States Supreme Court in 1895, and referred to in a former report of your committee, and to the Castoria case, the latter having been finally decided on appeal by the United States Circuit Court of Appeals, Eighth Circuit, since the last annual meeting of the Association.

The point at issue in these cases was whether the word claimed as a trade-mark is the generic name of the thing manufactured and sold, or is a mark or name used to distinguish an article as made and sold by one manufacturer from the same article as put out by other manufacturers. In each case "it was held that because the word had become descriptive of the thing it could not be appropriated as a trade-mark," and the conclusion was summed up in these words:

The result, then, of the American, the English, and the French doctrine universally upheld, is this, that where, during the life of a monopoly created by a patent, a name, whether it be arbitrary or be that of the inventor, has become, by his consent, either express or tacit, the identifying and generic name of the thing patented, this name passes to the public with the cessation of the monopoly which the patent created. Where another avails himself of this public dedication to make the machine and use the generic designation, he can do so in all forms, with the fullest liberty, by affixing such name to the machines, by referring to it in advertisements and by other means, subject, however, to the condition that the name must be so used as not to deprive others of their rights or to deceive the public, and therefore that the name must be accompanied with such indications that the thing manufactured is the work of the one making it, as will unmistakably inform the public of that fact.

In this connection your committee calls special attention to the fact that Germany, as well as England, France, and the United States, has declared that the commonly accepted names of patented medicines, being necessarily descriptive, become the property of the public at the expiration of the patents on the products themselves, even though the same may have been fanciful names coined or invented by the introducers and registered as trade-marks.

The secret-medicine manufacturers try to derive comfort from this decision, claiming that it only applies to medicines which have been patented, and as their "patent" medicines are not "patented" medicines, therefore they are exempt. The point is not well taken, however, for the courts have decided again and again that a descriptive or generic name cannot be a trade-mark, and if the thing has only one name familiar to the public, it is evident that purchasers are forced to employ it in the generic sense.

It is not the monopoly of a brand, but monopoly of the thing itself which secret nostrum manufacturers seek. Neither are they satisfied with limited monopoly obtained by patent, but they are striving to establish a system of perpetual monopoly of secret medicines under a strained interpretation of the trade-mark law, and desire to secure higher

<sup>1</sup> Extracted from the Report of the Special Committee on National Legislation of the American Pharmaceutical Association.



privileges of protection than inventors of new and useful inventions can obtain by means of the patent-law.

The secret-medicine business being in direct competition with physicians in treating the sick, and with pharmacists in preparing the medicine, it is apparent that in proportion to its success the public is deprived of skilled service. It was the intent of the law-makers that those who are practising therapy and pharmacy in this illicit manner should be the ones to pay the war-tax. So many scientifically prepared pharmaceuticals are put up in packages for self-medication, however, that it is often a difficult matter to draw the line between legitimate and illegitimate. If the American Medical Association and the American Pharmaceutical Association could be induced to cooperate in devising a line of open-formula household remedies, to be dispensed by all pharmacists, under labels agreed upon by the professions, and to be used for the treatment of emergencies and those minor affections in which self-medication may be practised with comparative safety, it would do much to harmonize the interests of the two professions, and to discourage the sale of secret medicines advertised as specifics. This new class of preparations might with propriety be exempted from stamp-duty.

During the past year the American Pharmaceutical Association has been especially honored by the National Association of Manufacturers. The Chairman of the Committee on Patents of said Association invited the Chairman of your Committee on National Legislation to take part in the deliberation of said Committee on Patents. One of the most active and prominent members of that Committee is also Secretary of the National Association of Inventors and Manufacturers, and both Associations are acting in accord along similar lines. Three important and influential Associations have thus been brought into touch with a common purpose in view, viz., the proper interpretation and partial revision of the United States patent and trade-mark laws. Your Committee now reports that by the combined efforts of the three Associations referred to, aided also by other influence, the desired object is in the way of being accomplished; for the President of the United States has recently appointed a Commission to revise the United States patent and trade-mark laws. This Commission consists of Francis Forbes, of New York, Arthur P. Greeley, of New Hampshire (Assistant Commissioner of Patents), and Peter Grosscup, of Illinois.

The time is therefore ripe for pharmacists all over the United States to act in this matter. The question of patents and trade-marks as affecting medicinal products should be brought before every national, state and local medical and pharmaceutical society for discussion, and taken up with like intent by every medical and pharmaceutical college in the United States. The sense of each organization should be made known to the Secretary of the Interior in the form of proper memorials or resolutions, and he will refer the same to the Commission. Your Committee has already called the attention of the President to the work of the American Pharmaceutical Association in this connection, and the same has been referred to the Secretary of the Interior, who in turn referred the matter to the Commission; so that another of the objects of this Association in appointing a special committee on national legislation is likely to bear fruit.

Your Committee further calls attention to the importance of a special study of the patent and trade-mark laws by the pharmaceutical profession at this critical time. Ignorance in regard to the object of these laws and their nature has proved a great impediment in the way of your Committee in conducting its work. The Committee has had the aid of some of the best legal talent of the country, including Hon. John S. Seymour (of the law-firm of Seymour & Harmon), late Commissioner of Patents, Hon. Benjamin F. Butterworth, who recently died during his incumbency of the office of Commissioner, George H. Lothrop, of Detroit, Mich. (also deceased), and James B. Dill, of the well-known law-firm of Dill, Seymour & Kellogg, of New York, who several years ago was associated with Frederick Betts, Dr. Charles Rice, and the chairman of your Committee, all of the same city, in the celebrated Tonga case. The services of these gentlemen were freely given to this Committee and they are hereby publicly acknowledged.

The importance of clearly defining the problem now be-

fore the Association by the appointment of the Commission above referred to is very evident. It is time to drop vague terms and loose definitions and call things by their right names. The terms "patent medicine," "proprietary medicine," "secret nostrum," "trade-mark pharmaceutical," etc., will no longer suffice. We must define clearly our premises before we can satisfactorily enter into arguments with our opponents.

In the first place, it will be admitted that pharmacy is the art of preparing medicine to meet the demands of rational therapeutics. As such, it is a medical art, and the knowledge of it is a part of medical science. Pharmacy and therapy are two branches which relate to pharmacology or the science of drugs. This definition will be found correct by consulting such authorities as H. C. Wood,<sup>2</sup> Hermann,<sup>3</sup> and others. Your chairman recently conferred with the first-named authority, who unhesitatingly confirmed this definition, although the term "pharmacology" is so frequently used in the limited sense in reference to what may be more properly described by the term "pharmacodynamics," or the "physiological action of drugs."

Medical science requires that every drug and chemical, and preparation of the same, shall bear a name which shall belong to and identify it, shall mean that particular thing, kind and variety of it, and mean nothing else, and that exact knowledge of the article shall be published in language sufficiently explicit to permit its duplication by those who are skilled in the art to which it belongs or is the most nearly related. It is this knowledge and intimately associated knowledge on the same subject, which, when properly classified and protected by a changeless nomenclature, constitutes the science of drugs. It is to promote progress in science and the arts that the patent-law was devised, and it is unlawful to grant patents for medicinal products or preparations unless new and useful inventions, displaying a greater degree of skill than naturally to be expected from skilled physicians, pharmacists, and chemists in the practice of their respective professions, and unless the art of preparing them is fully published in the applications for patents. To those who confer a benefit on mankind by making such discoveries, and publishing full knowledge of the same for scientific and commercial purposes, the government, representing the public at large, may grant the right to prevent others from copying and dealing in their inventions as merchandise for a period of seventeen years.

The commonly understood meaning of the term "patent" medicine is "secret" medicine. The term is a misnomer when thus applied, for a thing patented is a thing divulged.

The common understanding of the term "proprietary" medicine is a medicine whose commonly accepted name is registered as a trade-mark. But, registering such name as a trade-mark does not make it a trade-mark, for a title which the public use to describe the article cannot at the same time perform the function of a brand-mark, to distinguish one make of the article from another make of the same article.

This point is put in very clear language in a little pamphlet issued by the Castoria Company. As the same is virtually the opinion of their lawyers, who so successfully fought the case to the finish on appeal to the court of final resort, it is worthy of a place in this report.<sup>4</sup> Such names belong to the articles themselves, not to their makers, and should fall at once into the public domain and be used as appellatives, not as trade-marks. During the monopoly created by a patent, no one but the patentee has a right to make and sell the

<sup>1</sup> A Treatise on Therapeutics, by H. C. Wood, M.D., LL.D., Third Edition.

<sup>2</sup> Experimental Pharmacology, by L. Hermann, Professor of Physiology in the University of Zurich.

<sup>3</sup> A trade-mark is a word, symbol, mark, or device which is used by a certain trader to distinguish his brand of a certain article from the same article as manufactured by others. And this mark must be, not something which the trader may have in his own mind as distinguishing his goods, not what he may have registered, but the mark which the public understand and use as the distinguishing mark. The very essence of a trade-mark right is the right to prevent the imposition upon the public of the goods of one trader as the goods of another; and consequently the mark can only be the one by which the public distinguish the goods, either from long association or by the advertisements of the owner of the mark.

No right can be acquired in the name which is used to designate goods. When a new article is invented and is placed upon the market for sale, a name must necessarily be given to it, otherwise the article could not be known or recognized. This name could not, under any circumstances, be a trade-mark; and if the process of manufacture is secret, or protected by a patent-grant, any person lawfully discovering the process of manufacture, in the case of a secret process, or upon the expiration of the patent-grant, may rightfully commence the manufacture and sale of the article, and would be upheld by the courts in the use of the name by which the article was known in the trade. There is no monopoly in the nature of a copyright or in the nature of a patent in the use of any name.



patented article, and hence the monopoly in one sense restricts the use of the name by the public for a limited time, but it does not prevent the name becoming at once a part of the common language, as a noun, to be used as the name of the article, nor interfere with its adoption by the Pharmacopeia as a title, nor hinder its free use as an appellation by writers who wish to refer to the article in text-books or other scientific literature. On the other hand, when the trade-mark name is the only name commonly known, writers are forced to specify a certain *brand* or *make* of an article when they write about it, and physicians are forced to specify the brand of individual manufacturers, or ignorantly do so when they may be opposed to the same on principle. As a trade-mark is a creature of natural right and common law, belonging to the makers of the articles in perpetuity, physicians, writers, and teachers alike, wittingly or unwittingly, thus join in an advertising scheme, and give them aid in perpetuating unfair monopolies; while all literature referring to the articles by trade-mark names, including periodicals, text-books and dictionaries, become standing advertisements of monopolized articles for which the manufacturers pay nothing. In this manner the educational interests of medicine are made to that degree subservient to the nostrum-trade. It is, indeed, "a trick of the trade."

A "secret" medicine is thus defined by the official Medical Board of Saxony: "Secret remedies are all those agents sold for the prevention and cure of diseases of men and animals of which the ingredients, percentage, composition, and method of preparation are not made public when first announced for sale. Such information must be complete and exact, in readily comprehensive language, and made known to all desirous of such information."

Taking the above facts into consideration, it is evident that a patented medicine is neither a "patent" medicine, a "proprietary" medicine, or a "secret" medicine. The object of the patent law is to promote progress in science and the useful arts. Can it be applied to medical science and the associated arts of pharmacy, pharmaceutical chemistry, and therapy, in a manner to realize this object? Owing to the impossibility of ascertaining the true value of a new introduction to the *Materia Medica* as a therapeutic agent, except by years of patient investigation by competent observers, working under different circumstances, with opportunities for freely criticising each other's work, untrammelled by commercial considerations, the granting of patents for inventions in the therapeutic art does not seem practical. There may be inventions in the art of preparing medicines which are patentable, but the patent-law requires that greater skill shall be displayed than naturally to be expected from skilled pharmacists and chemists, otherwise progress in the knowledge and practice of their arts will be hindered and not promoted. No one has the right to monopoly of products which show only the ordinary skill of practitioners in their respective arts. The free use of such products belongs by right to the profession, and those who seek to appropriate them unfairly have no right to characterize legitimate competition as "fraudulent substitution." Imitation of labels and trade-marks is fraud, but competing in the manufacture and sale of articles belonging by right to the profession, and selling them under their commonly accepted names, is perfectly legitimate.

If the profession, acting through the Patent Office, desires to reward inventors of new and useful inventions by granting them the right to prevent others from copying their

inventions as articles of merchandise for seventeen years, that may be a right thing to do; but it is a very wrong thing for inventors, and worse yet for those who claim to be inventors when they are not, to seek to throttle competitors by legal proceedings when they are pursuing their vocation in a legitimate manner. Such competitors show proper enterprise, and should be encouraged by the profession, not condemned.

The trade-mark law should so read as to make it necessary for every article of commerce, when first introduced, to have a name given it for public use as a part of the common language. It should also require that the common descriptive name of each article advertised should appear in advertisements equally prominent with its brand-name, so that the latter may be used by the public for the purpose of specifying a particular brand when desired, and the former employed to designate the article itself as such, irrespective of who is the maker. In describing trees as to natural order, genera and species, so is it in describing medicines; every kind of tincture, fluid extract, and pill must have a specific name by which it may be described, and if the introducer does not supply it he has no reasonable cause of complaint if the name claimed by him as a trade-mark ceases to perform its function as a trade-mark and falls into the public domain as a descriptive word or appellation. The trade-mark law should be so revised that its ambiguous wording will not protect those who desire to create perpetual monopolies of secret medicines by claiming that their commonly accepted names are trade-marks.

The trade-mark law, thus being made protective of scientific nomenclature, might find favor with scientific men, and the patent and trade-mark laws, properly interpreted and applied, might then work in harmony for the stimulation of progress in science and the useful arts, as it was intended by those who devised them. Then the term "patent medicine" might cease to be a term of reproach, and the patent might become the highest guarantee of quality and excellence.

The Patent Office was intended to be a great bureau of archives, or a kind of reference library with specifications and models, to be used freely by the public. Full knowledge of each article patented, in language sufficiently clear to enable those skilled in the art to duplicate and experiment therewith for scientific purposes, and to improve methods of manufacture, can be obtained from the Patent Office at nominal cost. It is said that patents are sometimes secured without complying with the terms of the Patent Law. Such patents are void, for a patent is a *contract* between the inventor and the government representing the public at large, compliance with the terms of which is necessary to make it binding. It is evident that if the Patent Office be supplied with competent examiners, and sufficient facilities to thoroughly test the claims of inventors, the number of patents for medical products can be restricted to truly new and useful inventions in the meaning of the patent law. This at present is a weak point in the Patent Office. Ex-Commissioner Seymour informed your committee that the facilities at the disposal of the Patent Office are entirely inadequate for the purpose. On account of the demands made upon the present force, the average time permitted for the examination of applications according to Mr. Seymour is only one hour, when in some cases days of experiment are necessary to determine whether an alleged invention is really a patentable invention in the proper meaning of the patent-law.

Here is an excellent field of work for those interested in original investigation—a work which the American Pharmaceutical Association can take up with profit. Let members of the American Pharmaceutical Association send to the Patent Office for copies of medical patents, and commence a campaign of investigation of the claims made by the patentees. In suits for infringement of patents, the publication of the results secured by such a campaign would furnish evidence of the most valuable kind. And the censorship over the entire subject of medical patents, properly exercised in this manner by the American Pharmaceutical Association, would do away with many of the abuses complained of.

Your Committee has been informed that the preamble and resolutions on the subjects of patents and trade-marks, which was presented by the American Pharmaceutical Association to the American Medical Association, and which was referred back to the American Pharmaceutical Association for final

Whatever name is used to designate goods, any body may use that name to designate goods—always subject to this, that he has not made any false representations that his goods are the goods of someone else.

The first introducer of goods, who by right of discovery or invention is for a time the only maker, often gives to his goods a new name, or, as is more frequently expressed, a "coined" name. Very many people, even manufacturers who use them, are under the erroneous impression that the coining of a name for a new article invests its originator with proprietary rights in the word itself. This fallacy is quite general, and many manufacturers have not been slow in grasping the opportunity to foster it, thereby deterring many persons from entering into a lawful and honorable competition.

It is not the coining of a word which is productive of rights in its use, but it is the manner in which that coined word has been used in connection with the goods manufactured. If a coined word is used as the name of a new article, it is public property, and, as such, may be rightfully and lawfully used by any person who manufactures and sells that article. If the person who coined a word were to be, perforce of such coining, allowed to monopolize that word as the name of a new article, every valuable invention would be monopolized in perpetuity. No patent-laws would be needed. The absurdity of this proposition is so obvious that it seems incredible that so many manufacturers have been allowed to monopolize the trade in certain goods, and stifle all competition. It is not legislation that is needed to remedy this evil, but it is litigation.



action, and returned after debate at the last annual meeting of the latter Association, was referred by the American Medical Association to its Section on Materia Medica, Pharmacy and Therapeutics. Said Section appointed a committee consisting of Prof. Warren B. Hill, of Milwaukee, and Dr. Robert G. Eccles, of New York, for further consideration of the document referred to. Your Committee is now informed that these gentlemen will doubtless suggest the formation of a committee on the nomenclature of Materia Medica titles, and your Committee therefore suggests that the American Pharmaceutical Association should also appoint a committee on nomenclature to cooperate in this important work.

In closing this report your Committee would urge pharmacists to obtain the decision of Judge Brewer, of the United States Circuit Court of Appeals,<sup>1</sup> in the now famous Castoria case, already referred to in the last annual report, and carefully study the principles which he has there so clearly enunciated. The pharmacist has his wrongs, but he also has his rights, and in grieving over his wrongs he should not forget to find out what his rights are, for in many cases by exercising his rights he can right his wrongs.

## Correspondence.

### FROM MACEDONIA.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

As I am probably the only full-blooded, irreclaimable irregular amongst your subscribers, and am assuredly one of the most active advocates of THE PHILADELPHIA MEDICAL JOURNAL, you will no doubt permit me to say, through your columns, in reply to your editorial paragraph of August 27th, that the American Institute of Homeopathy did not meet at Omaha prior to June 23, 1898, and that no such paper as the one mentioned by your Wisconsin correspondent was presented during its sessions.

In reply to your query concerning the dropping of sectarianism, some professed homeopaths of this city have recently published works in which their homeopathic society and college connections are very carefully omitted.

I am in perfect sympathy with much that you say concerning the abominations of sectarianism, but in certain matters of opinion and belief you are not very charitable with those who differ from you. Do you not think that as ethical professional men we have enough to do in combating the infamies of quackery without attacking each other and certain differences which, however deplorable, are, for the present at least, irremedial? Is it not, in conclusion, a sad reflection upon our poor human nature that the most uncertain branch in medical science should have given rise to more bitterness, more dissension, and more disgusting quackery than any other?

Yours for regularity, "regular" and "irregular,"

Chicago, August 30th.

HOWARD CRUTCHER.

### WATER-MOTORS AND ELECTRIC-MOTORS.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

As I have had numerous inquiries regarding the "water-motor storage battery" invented by me, demonstrated before the New York County Medical Association, and referred to in my recent article in the PHILADELPHIA MEDICAL JOURNAL, entitled "Some new practical pharmaceutico-therapeutic notes, and some new ideas in surgical instruments," I take the liberty of asking you to publish the description in detail, in order to avoid excessive communication.

My first requisite was a water-motor—something that would cause a wheel to revolve by water-power. The only apparatus of the kind with which I am acquainted is what is called "Bolgiano's Little Giant Water-Motor," made by the Bolgiano Manufacturing Company, Baltimore, Md., and patented by them. This is made of metal, painted red, is flattened from before backwards, and ovoid sidewise. It has a handle by which it is screwed to a wall; there are two tubular orifices, one at one side of the upper end, and a much broader one at the lower extremity (the tapering end). Above the center, on one flat side, there is visible a brass shaft, upon which a wooden pulley is screwed. It cannot be taken apart, therefore I do not describe its internal construction. To operate the apparatus, it is screwed in a convenient place near a pump-faucet. It measures 15 in. in its longest (perpendicular) diameter, and 8 in. in the transverse diameter at the widest part of the ovoid; it is 2 in. deep. Two rubber tubes come with the apparatus. The narrow one is attached by one end to the pump-faucet and by the other to the upper tubular opening; the broad rubber tube is attached by one end to the lower extremity, and the other end hangs loose in the sink. It is thus readily seen that when the water is turned on, it passes in at the upper end, around the shaft-mechanism in the middle, and out into the sink through the lower end; as soon as this is done, the pulley begins to revolve.

Now as to the electric-motor, it is of a size which fits snugly in a wooden box, 6 x 4½ x 5½ in. The one I have is called "The Midget," manufactured by The Electrical Apparatus Co., of Elbridge, N. Y. My size is called the No. 10, but this may mean the size of the lamp which it will light. The following directions go with it:

1. Do not run as a motor on lighting or power circuits. This would "electrocute" the machine.

2. To get the best results it is important that the brushes should be kept diametrically opposite each other.

3. To run well as a battery-motor, enough cells should be used to give a voltage slightly in excess of that indicated for the motor.

4. When run on a current from the model dynamo, it should be switched into the circuit after the larger generator has attained its proper voltage.

5. The 5-volt dynamo will light our special 6 c. p. lamp. Special lamps may be obtained for the various voltages.

6. As a generator it may be safely run at a speed of 3,000 per minute.

This electromotor has a shaft and pulley, and this pulley is connected to the pulley of the water-motor by means of a pulley-belt or cord. This puts the electromotor in motion, and produces the current. This current is carried through the electrode wires into a storage cell, or a battery of two cells, and from this whatever current is desired is obtained. Attached to a faradic apparatus, a faradic current is obtained. Of course a pure galvanic current could probably be obtained only by the use of a large number of storage cells. My two cells cost \$6 each. I have also attachments for cautery knives, etc., for throat electric lamp, and for depilatory needle. Also for my electric bell and door-opener.

To charge the storage cells, the electric motor must make at least 3,000 revolutions per minute. If the water-pressure is not sufficient to produce this, an extra wide water-pipe must be carried into the house from the street main or two motors might be used, attached to individual pump-faucets.

Yours, etc.,

SAMUEL F. BROTHERS.

227 Madison Street, New York.

<sup>1</sup> U. S. Circuit Court of Appeals, Eighth Circuit, No. 8,9, Dec. Term, S. D., 1897.



## American News and Notes.

**Yellow Fever at Santiago.**—Six cases of yellow fever have developed in Colonel Sargent's Fifth Immune Regiment.

**Dr. A. E. Street** has presented his resignation as a member of the Camden (N. J.) Board of Health, owing to the requirements of his private avocations.

**Dr. Edward C. Miller** has been given full charge of the didactic and practical laboratory teaching in anatomy in the Northwestern University Medical College, Chicago, with the title of professor.

**Dr. Joseph M. Mathews** has resigned the chair of surgery and the clinical lectureship on diseases of the rectum in the Kentucky School of Medicine, and has accepted a similar chair in the Hospital College of Medicine, in Louisville, Ky.

**Dr. Walter H. Allport** and **Dr. Thomas B. Schwartz** have resigned from the Chairs of Anatomy, and **Dr. John Leeming** from the Chair of Materia Medica in the Northwestern University Medical School (Chicago Medical College).

**New Board of Pension Examiners for Colorado.**—The Commissioner of Pensions has appointed a new board of Pension Examining Surgeons for Colorado, with headquarters at Denver. The new board is composed of Drs. W. M. Robertson, G. E. Tyler and M. H. Sears.

**The Josiah Simpson U. S. A. General Hospital.**—The new pavilion hospital now being erected near Fort Monroe shall be known and designated as Josiah Simpson U. S. A. General Hospital, in honor of Brevet-Colonel Josiah Simpson, Medical Department, who died March 3, 1874.

**The Largest Colored Woman in the World.**—Mrs. Mary Mazique, said to be the largest colored woman in the world, died September 7th, at Little Rock, Arkansas, aged 30 years. At one time she is said to have weighed over 700 pounds, and at the time of her death, 560 pounds.

**U. S. General Hospitals.**—The post hospital at Washington Barracks, District of Columbia; the Sternberg and Sanger field hospitals at Chickamauga Park, and the military hospital at Ponce, Porto Rico, have been designated as general hospitals, and are placed under the exclusive control of the Surgeon-General of the army.

**Chicago Gynecological Society.**—The 192d regular meeting was held September 16th, Dr. Newman presiding. Dr. Joseph Price, of Philadelphia, read a paper upon "Abdominal Versus Vaginal Section in Pelvic Surgery," and led in the discussion, followed by Drs. F. Henrotin, F. Martin, H. Byford, E. C. Dudley, and J. Etheridge.

**Winter Hospitals for the Troops.**—The new hospital, which has been in course of erection on the government reservation at Fort Monroe, is about ready for the reception of patients. It is built of lumber, after the style of regular barracks, and will accommodate 1,000 patients. In addition to this, anticipating the possibility of an extended occupancy of Cuban ports by the United States army, with the resulting requirements upon the Medical Department for the care of the sick soldiers, Surgeon-General Sternberg is planning for another hospital on an even larger scale at some of the Southern ports, probably Charleston or Savannah.

**Obituary.**—**DR. FRANCIS HUEBLER**, of Elysburg, Pa., was killed September 9th, by his carriage being struck by a freight engine of the Northern Central Railroad.—**DR. CHARLES CARTER**, of Blowing Rock, N. C., at Concordia, Delaware County, Pa., September 8th, aged 62 years.—**DR. THOMAS SETON ROBERTSON**, New York City, September 8th.

**Northwestern University Woman's Medical School (Chicago).**—The following appointments have been made: Dr. Christian Fenger, professor of surgery; Dr. William E. Casselberry, professor of laryngology and rhinology; Dr. K. L. Angell, professor of bacteriology. Dr. George F. Fiske has resigned from the Chair of Ophthalmology and Otology, and Dr. Frank Allport has been appointed to fill the vacancy.

**The Atlantic City (N. J.) Hospital** has been founded by the purchase of the necessary property, the awarding of the contract for the erection of the requisite buildings, and the selection of the medical staff. The latter is constituted as follows: Drs. B. C. Pennington, A. D. Cuscaden, Emery Marvel, Theodore Senseman, and A. W. Baily, surgeons, and Drs. W. Blair Stewart, F. W. Bennett, A. B. Sheimer, W. E. Darnell, M. L. Munson, and Walter C. Sooy, physicians.

**Examination of Surgeon's Reports in Pension-Claims.**—Assistant Secretary of the Interior Webster Davis has so modified existing rules in the Pension Office as to put aside the rule in force which excludes from a review of examining surgeon's reports, all persons, except the pension claimant or his recognized attorney. By the new ruling, the accredited representative of a pension-claim attorney will be granted the privilege of examining the surgeon's reports.

**The Care of the Insane in Atlantic County, N. J.**—A special committee from the Board of Freeholders visited the Atlantic County Asylum recently to investigate the advisability of the county caring for its insane. The buildings were inspected and the committee were favorably impressed with the system, as the county can care for these patients at a less cost than at the State institution. It is probable that the committee will report at the next meeting of the board.

**Exchange of Courtesies.**—We notice the commendable enterprise with which the *British Medical Journal* and the *PHILADELPHIA MEDICAL JOURNAL* have been exchanging notes. The former Journal has given fairly full abstracts of the most interesting papers which were read at the meeting of the American Medical Association, and the latter has published *in extenso* the Presidential addresses delivered at the British Medical Association Meetings in Edinburgh, being the earliest appearance of these addresses in America.—[*Montreal Medical Journal*.]

**The Results of the Examination Recently Held by the State Board of Medical Examiners of Pennsylvania.**—The following report of the results of the examination recently held by the State Board of Medical Examiners of Pennsylvania has just been published:

	No. Exam.	No. Totd.	Per cent Pass	Gen. Average
University of Pennsylvania . . . . .	55	1	91.6	82.3
Medical-Chirurgical, Philadelphia . . . . .	75	8	10.5	78.84
Woman's Medical, Philadelphia . . . . .	26	1	3.8	8.8
Baltimore Medical College . . . . .	25	6	24.0	76.71
Physicians and Surgeons, Baltimore . . . . .	2	1	50.0	76.71
Jefferson Medical College . . . . .	20	5	25.0	74.73
Western Pennsylvania . . . . .	1	8	38.1	72.39
Miscellaneous . . . . .	53	17	32.1	75.61

Total . . . . . 316 47 14.9 78.77

[*University Medical Magazine*.]

**Medical Library in Canada.**—We are pleased to note in the *Montreal Medical Journal*, indications of activity on the part of the Ontario Medical Library Association. This association has been in existence a short time and now possesses over 4,000 volumes, and 27 journals are regularly on file. It is intended to lend out books to medical men desiring them, but it has not hitherto received much support from the profession at large. Recently, however, substantial donations have been received from Doctors Wm. Osler and J. E. Graham, and prospects for the future are brightening.

**Investigation as to the Conduct of the War.**—President McKinley has invited the following gentlemen to form a commission to examine into the conduct of the Commissary, Quartermaster and Medical Bureaus of the War Department during the war, and into the extent, causes, and treatment of sickness in the field and in the camps: Lieutenant-General John M. Schofield, General John B. Gordon, General Grenville M. Dodge, President D. C. Gilman, General Charles F. Manderson, Robert T. Lincoln, Daniel S. Lamont, Dr. W. W. Keen and Colonel James A. Sexton. Already several of the gentlemen have declined the proffered appointment.

**Percentage of Quinin in the Different Salts of the Alkaloid.**—The following table, prepared by Tanret, is worthy of preservation:

	Per Cent.
Acetate . . . . .	87.34
Hydrate quinin precipitated and dried . . . . .	85.70
Basic chlorhydrate . . . . .	81.63
Lactate . . . . .	78.26
Basic bromohydrate . . . . .	76.00
Valerianate . . . . .	76.05
Basic sulphate (ordinary sulphate) . . . . .	74.30
Sulpho-vinate . . . . .	72.00
Neutral bromohydrate . . . . .	60.00
Neutral sulphate, or acid sulphate . . . . .	57.24
Tartrate . . . . .	20.00

—*Myer Bros. Druggist.*

**The Olmsted Yellow-fever Bill.**—It will be remembered that some time ago Dr. Olmsted, of Atlanta, Ga., presented to the city of Atlanta a bill for \$500 for services rendered the city in treating a case of yellow fever. The Board of Health refused to pay the bill on the ground that the charge was excessive. Owing to political vicissitudes and resignations the personnel of the Board of Health has recently been changed. The newly appointed Board of Health having unanimously recommended to the city the payment of the bill, the city refuses to liquidate Dr. Olmsted's just claim on the ground that the necessary funds cannot be taken from the appropriation to the Sanitary Department, and that there is no other available money with which to satisfy the account. A splendid commentary upon the appreciation of physicians' services!

**Army Hospital Regulations.**—It has been necessary to issue further instructions in regard to the 60-cent daily allotment to soldiers in hospitals. General Order No. 116, about which there has been so much discussion, does not do away with the hospital-fund, but applies to patients, who, in the opinion of the surgeons, are too sick to use the regular ration. For patients who can use the ration, and for the Hospital Corps, the savings of patients can be used, as has been the custom, and hospital-authorities are informed that they may still use funds and supplies furnished by aid societies.

Orders have been issued that a quartermaster shall be stationed at each general hospital, for the purpose of giving transportation to soldiers sent home sick. Sleeping-car accommodations are provided in all necessary instances.

### Sanitary Progress Among the Tonsorial Artists.

—The *Journal of the American Medical Association* states, quoting the *Chicago Record*, of August 25th, that the barbers and some of their friends in the medical profession will prepare a bill to present to the legislature, which, if it becomes a law, will require barbers to disinfect all tools, towels, sponges, brushes, and whatever articles may be required in the pursuit of their business. Under this law nothing but strictly antiseptic barber shops will be allowed in Illinois. The bill will provide that all barber shops shall be under the control of the State Board of Health, and each pay a license of \$10 a year. The license shall only be granted after a thorough examination of the applicant's shop has been made and its sanitary conditions approved. Each individual barber shall also pass an examination as to his knowledge of the trade and as to his knowledge of the use of disinfectants. The barber shall also have worked at his trade a certain number of years. The tools, brushes, towels, and other articles in use in the shop must be thoroughly sterilized after being used, according to regulations the Board of Health may make.

**Rush Monument Fund.**—*To the Editor:*—The following subscriptions to the Rush Monument Fund have been received:

June 21st, Maine Medical Association (through Dr. Chas. D. Smith, Secretary) . . . . .	\$ 100.00
June 20th, Committee of Arrangements, Philadelphia Meeting American Medical Association (through Dr. Thomas G. Ashton, Treasurer) . . . . .	185.68
July 20th, Subscriptions at Denver Meeting American Medical Association (through Medical Director Albert L. Gihon, Chairman):	
From Colorado . . . . .	2,000.00
From New York . . . . .	2,000.00
From Ohio . . . . .	336.25
From Indiana . . . . .	320.00
From Tennessee . . . . .	130.00
From California . . . . .	110.50
From Wisconsin . . . . .	78.00
From Texas . . . . .	36.50
From Med. Director Albert S. Gihon, U. S. N. . . . .	25.00

Total . . . . . \$5,322.83

Reported to American Med. Association at Denver . . . . . 4,424.27

Total expenditures . . . . . \$9,747.27

Total Funds in hand . . . . . 112.25

Total Funds in hand . . . . . \$9,635.02

The above sum, in cash and secured investments, has this day been transferred to Dr. Henry D. Holton, of Brattleboro, Vt., who was elected Treasurer of the Committee by vote of the Association at the Denver meeting. Dr. Holton will be glad to receive and acknowledge further subscriptions to the fund. GEORGE H. ROHÉ, Sec. Rush Monument Committee. BALTIMORE, Aug. 9, 1898. —[*Jour. Am. Med. Association.*]

### Interprovincial or Dominion Medical Registration in Canada.

—The movement in favor of interprovincial reciprocity or dominion registration of members of the medical profession in Canada is now well advanced. A committee composed of Dr. Roddick (chairman), Drs. J. A. Williams, W. W. Dickson, James Thorburn, J. A. Mullin, H. P. Wright, J. M. Beausoleil, (Hon.) D. Marci, H. Cholette, A. R. L. Marsolais, J. S. Gauthier, R. MacNeill, and W. S. Muir reported at the recent meeting of the Canadian Medical Association in Quebec, a comprehensive scheme looking toward the establishment of a uniform preliminary and professional curriculum which the various Provincial Medical Councils must exact of all teaching and licensing bodies, before the said Councils are authorized to proceed further to the organization of the Dominion Board of Registration.



The following Committee has been appointed to assist Dr. Roddick in bringing the matter prominently to the notice of the Government: Dr. McNeil, Prince Edward Island; Dr. Muir, Nova Scotia; Dr. Walker, New Brunswick; Hon. Dr. Marcell, Quebec; Dr. Williams, Ontario; Dr. Thornton, Manitoba; Dr. Bain, Northwest Territories, and Dr. McKechnie, British Columbia.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending September 10, 1898:

SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
NEW YORK:			
Livonia . . . . .	During July . . . . .	1	
Waverley . . . . .		5	
NEW MEXICO:			
Albuquerque . . . . .	Aug. 2 Sept. 4 . . . . .	52	
OHIO:			
Put-in-Bay . . . . .	Sept. 6 . . . . .	26	26 originated among negroes brought from Asheville, N. C.

SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Aug. 6-13 . . . . .	1	
	Aug. 13-20 . . . . .	2	1
BRAZIL:			
Rio de Janeiro . . . . .	July 22-29 . . . . .	2	
INDIA:			
Bombay . . . . .	Aug. 2-9 . . . . .	1	
Madras . . . . .	July 23-29 . . . . .	1	
JAPAN:			
Awamori Ken . . . . .	July 28-Aug. 16 . . . . .	44	9
Fukushima Ken . . . . .		1	
Oita Ken . . . . .		1	
Yamagata Ken . . . . .		1	
NORWAY:			
Christiania . . . . .	Aug. 13-20 . . . . .	1	1
RUSSIA:			
Odessa . . . . .	Aug. 13-20 . . . . .	2	
St. Petersburg . . . . .	Aug. 6-13 . . . . .	1	
Warsaw . . . . .	Aug. 6-13 . . . . .		6

CHOLERA.

INDIA:			
Calcutta . . . . .	July 16-23 . . . . .	6	
Madras . . . . .	July 23-29 . . . . .	36	
	July 29-Aug. 5 . . . . .	38	
JAPAN:			
Aichi Ken . . . . .	July 28-Aug. 16 . . . . .	8	5

PLAGUE.

INDIA:			
Bombay . . . . .	Aug. 2-9 . . . . .	80	
Calcutta . . . . .	July 16-23 . . . . .	10	

YELLOW FEVER—UNITED STATES.

LOUISIANA:			
Franklin . . . . .	Sept. 5 . . . . .	1	
" . . . . .	(12 cases to date and 1 death.) Sept. 6, 7 . . . . .	6	
" . . . . .	(3 in camp and 3 in town.) Sept. 8 . . . . .	1	
" . . . . .	(30 cases to date and 2 deaths.) Sept. 8 . . . . .		
MISSISSIPPI:			
Orwood . . . . .	Sept. 3 . . . . .	9	
" . . . . .	Sept. 5 . . . . .	3	
" . . . . .	Sept. 6 . . . . .	3	
Taylor . . . . .	Sept. 5 . . . . .	6	
" . . . . .	Sept. 6 . . . . .	4	
" . . . . .	Sept. 7 . . . . .	3	

YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro . . . . .	July 23-29 . . . . .	18	13
COSTA RICA:			
Port Limon . . . . .	Aug. 16-24 . . . . .	2	
JAMAICA:			
Kingston . . . . .	July 31-Aug. 6 . . . . .	1	1
MEXICO:			
Tampico . . . . .	Aug. 21-28 . . . . .	40	
	No. of cases not reported.		
Vera Cruz . . . . .	Aug. 18-25 . . . . .	4	

**Railway Accidents in 1897.**—From statistics furnished by the Interstate Commission, we learn that the total

number of casualties to persons on account of railway accidents in the United States, for the year ending June 30, 1897, was 43,168. Of these casualties, 6,437 resulted in death, and 36,731 in injuries of varying character. Of railway employees, 1,693 were killed and 27,667 were injured during the year. According to the three general classes these casualties were divided as follows: Trainmen, 976 killed, 13,795 injured; switchmen, flagmen and watchmen, 201 killed, 2,423 injured; other employees, 516 killed, 11,449 injured. The casualties to employees resulting from coupling and uncoupling cars were: Killed, 214, injured, 6,283. The corresponding figures for the year ending June 30, 1896, were 229 killed and 8,457 injured. The casualties from coupling and uncoupling cars were assigned as follows: Trainmen, killed, 147, injured, 4,698; switchmen, flagmen, watchmen, killed, 58, injured, 1,325; other employees, killed, 9, injured, 260. The casualties resulting from falling from trains and engines were as follows: Trainmen, killed, 325, injured, 2,726; switchmen, flagmen and watchmen, killed, 32, injured, 357; other employees, killed, 51, injured, 544.

The casualties to the three general classes of employees mentioned caused by collisions and derailments were as follows: Trainmen, killed, 250, injured, 1,327; switchmen, flagmen and watchmen, killed, 11, injured, 74; other employees, killed, 42, injured, 251. The total number of passengers killed during the year under review was 222, injured, 2,795. Ninety-three passengers were killed and 1,011 injured in consequence of collisions and derailments. Other than employees and passengers, the total number of persons killed was 4,522, injured, 6,269. Included in these figures are casualties to persons classed as trespassers, of whom 3,919 were killed and 4,732 were injured. From summaries showing the ratio of casualties, it appears that one out of every 486 employees was killed and one out of every 30 employees was injured during the year. With respect to trainmen, including enginemen, firemen, conductors and other trainmen, it appears that one was killed for every 165 employed, and one injured for every 12 employed. One passenger was killed for every 2,204,708 carried, and one injured for every 175,115 carried. Basing ratios upon the number of miles traveled, it appears that 55,211,440 passenger-miles were accomplished for each passenger killed, and 4,335,309 passenger-miles for each passenger injured. [*Boston Med. and Surg. Jour.*]

**Examination for Appointment in the United States Marine-Hospital Service.**—The Surgeon-General has issued the following notice: A board of officers will be convened at Washington, Wednesday, November 9, 1898, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine-Hospital Service. It is desired that applications for this examination be made before November 1st. Candidates must be between 21 and 30 years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: 1. Physical. 2. Written. 3. Oral. 4. Clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical must

share the responsibility with the medical department of the army for such suffering.

"The following letter was sent by me to every chief surgeon of a department or independent army in the field on June 9, 1898:

"The Secretary of War has approved of the following proposition made by the American National Red Cross Association, and the chief surgeons of army corps and divisions will cooperate with the authorized agents of this Association for the purposes indicated.

"We can put any desired amount of hospital supplies—ice, malted milk, condensed milk, Mellin's food, etc.—into any of the volunteer camps in a few hours. Will you be kind enough to bring this letter to the attention of Secretary Alger, and ask him if there is any objection to our appointing a Red Cross representative to report to the commanding officer and the chief surgeons in every camp, confer with them as to their immediate needs, and if anything of any kind is wanting, open there a Red Cross station and send in the supplies? We can do this, not in a few weeks or a few days, but in a few hours, and can furnish any quantity of any desired luxury or delicacy for hospital use. We hereby tender our aid and put our organization at the War Department's service for cooperation in this field."

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Lieut.-Col. ALBERT HARTSCHE, D. S. G., chief surgeon, will proceed to Fort Sheridan and inspect the regiment now stationed at that post, with a view of determining if it is in need of anything that might contribute to the health or comfort of the sick of the command. He will also inspect the post hospital at Fort Sheridan and determine if medical or other supplies are necessary in the case of the sick.

Acting Asst. Surgeon C. J. BARTLETT, now in this city, is assigned to duty at the division field hospital, the Presidio of San Francisco, Cal.

The following acting assistant surgeons will proceed from the places hereinafter designated to Montauk Point, N. Y., for duty: ORIN S. MILLS, from Gallipolis, Ohio; FREDERICK W. R. LAPSLEY, from Chicago, Ill.

Acting Asst. Surgeon WILLIAM O. CUTLIFFE will proceed to Montauk Point for duty.

Acting Asst. Surgeon GEORGE A. THOMPSON will proceed from Phoenix, Md., to Jacksonville for duty.

Acting Asst. Surgeon GEORGE A. CURRIEN will proceed from Chambersburg, Pa., to Fort Monroe for duty.

Acting Asst. Surgeon JAMES CARROLL will proceed from this city to Jacksonville for duty connected with the Medical Department. Major HENRY H. LEE, brigade surgeon, U. S. Vol., having accepted his appointment as such, Aug. 17th, is honorably discharged as surgeon 1st Vermont Vol. Inf., Aug. 16th.

Leave for 10 days on account of sickness is granted Acting Asst. Surgeon ARTHUR D. SNYDER, to take effect upon his arrival at Montauk Point.

Major PETER D. McNAUGHTON, brigade surgeon, will proceed from Montauk Point to Jacksonville, Fla., for duty.

Acting Asst. Surgeon JOHN A. TONNER will proceed from New York City to Montauk Point for duty.

Acting Asst. Surgeon CHARLES J. KENWORTHY, now at Montauk Point, will report at that place for duty.

Acting Asst. Surgeon ALFRED RICHARDS will proceed from this city to Fort Washington, Md., for duty.

Acting Asst. Surgeons RAPHAEL ECHEVERRIA and EDUARDO C. POEY will proceed from Montauk Point to Washington, D. C., and report to the Surgeon-General of the Army.

Acting Asst. Surgeon J. M. LINDSEY will proceed from Montauk Point to Santiago, Cuba, and, upon arrival there, will report to the commanding general for assignment to duty.

The following named medical officers are honorably discharged: Major THOMAS C. KIMBALL, chief surgeon, U. S. Vol.; Major EDWARD MARTIN, brigade surgeon, U. S. Vol.

Colonel CHARLES C. BYRNE, A. S. G., chief surgeon, will proceed to Camp Black, N. Y., and make an inspection of the hospitals.

Acting Asst. Surgeon JOHN R. CLARK will proceed to Fort Wadsworth, N. Y., for duty.

Acting Asst. Surgeon HENRY PERKINS MOSELY will proceed to Fort Hamilton for duty.

Leave for one month on account of sickness is granted Major PETER D. McNAUGHTON, brigade surgeon, U. S. V.

Acting Asst. Surgeon THOMAS W. JACKSON will proceed from Philadelphia to Camp Poland, Tenn., for duty as chief surgeon 2d Division, 1st Corps.

Acting Asst. Surgeon WM. R. S. GEORGE will proceed from Houston, Tex., to New York City, to await transportation by first steamer for Ponce, Porto Rico, and, upon arrival there, will report for duty.

Acting Asst. Surgeon HENRY B. LEE will proceed from New York City to Montauk Point, and report for duty.

Major R. STANSBURY SUTTON, brigade surgeon, U. S. Vol., is honorably discharged.

Acting Asst. Surgeon EUGENE W. DAVIS will proceed from Saginaw, Mich., to Jacksonville, Fla., for duty.

Acting Asst. Surgeon RAPHAEL ECHEVERRIA will proceed from this city to Tampa, Fla., for duty.

Acting Asst. Surgeon STANLEY WARREN will proceed from Montauk Point, N. Y., to this city, and report to the Surgeon-General of the Army.

The following acting assistant surgeons will proceed from the places hereinafter designated to Jacksonville, Fla., for duty: SAMUEL S. RODMAN, from Frankford, Ky.; DONALD P. McCORD, from St. Louis, Mo.

Captain ISAAC P. WARE, A. S., is relieved from duty as examiner of recruits in this city and assigned, for temporary duty, at the division field hospital, the Presidio of San Francisco, Cal.

A board of medical officers, to consist of Majors EDWARD B. MOSELEY, surgeon; W. S. H. MATTHEWS, surgeon 51st Iowa Vol. Inf.; Captain R. M. KIRBY SMITH, A. S., 1st Tenn. Vol. Inf., is appointed to convene at Presidio of San Francisco the 1st prox., to investigate the origin and spread of disease at Camp Merritt, this city, and Camp Merriam, Presidio reservation.

Captain THOMAS U. RAYMOND is detailed as a member of the board of medical officers instituted by par. 2, S. O. 122, c. s., these headquarters, vice Major W. H. S. MATTHEWS, surgeon 51st Iowa Vol. Inf., relieved.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon D. O. LEWIS, order of the 1st modified; detached from the "Harvard" and placed on waiting orders.

Passed Asst. Surgeon G. M. PICKRELL, orders of August 30th modified; detached from the "Yale" and ordered to the "Yankee."

Passed Asst. Surgeon W. F. ARNOLD, detached from the "Panther" and ordered to the "Newark."

Asst. Surgeon C. A. CRAWFORD, detached from the "Vermont" and ordered to the "Peoria."

Asst. Surgeon H. A. JOHNSON, detached from the "Peoria" and ordered home.

Asst. Surgeon F. S. FIELDER, detached from the "Cincinnati" and ordered home.

Asst. Surgeon H. A. DUNN, detached from the "Newark" and ordered to the "Cincinnati."

Passed Asst. Surgeon L. L. VON WEDEKIND, detached from the Pensacola Navy Yard and ordered to the Naval Academy.

Passed Asst. Surgeon H. N. T. HARRIS, detached from the "Stranger" and ordered to the Pensacola Navy Yard.

Passed Asst. Surgeon E. P. STONE, detached from the "Bennington" and ordered home to wait orders.

Passed Asst. Surgeon B. R. WARD, ordered to the "Bennington."

Asst. Surgeon R. G. LECONTE, detached from the "Lancaster" and ordered home.

Asst. Surgeon F. E. WAGNER, detached from the "Dale" and ordered to the "New Hampshire."

Asst. Surgeon D. B. KERR, detached from the "New York" and ordered to the "Stranger."

Asst. Surgeon J. G. FIELD, retired, detached from the Naval Hospital, Philadelphia, and ordered to the "Richmond."

Surgeon D. M. GUITERAS, retired, detached from the Naval Laboratory and the Department of Inspection, New York, N. Y., and ordered home.

Passed Asst. Surgeon W. F. ARNOLD, order of the 3d modified; detached from the "Panther" and ordered to the "Resolute."

Passed Asst. Surgeon C. E. RIGGS, detached from the "Newport" and ordered to the Navy Yard, New York.

Surgeon W. H. RUSH, detached from the Naval Hospital, Mare Island, and ordered to the "Boston" via steamer from San Francisco September 17.

Surgeon M. H. CRAWFORD, detached from the "Boston" and ordered home.

Passed Asst. Surgeon J. E. PAGE, detached from the "Olympia" and ordered home to wait orders.

Passed Asst. Surgeon J. M. MOORE, detached from the "Monadnock" and ordered to the "Olympia" immediately.

Asst. Surgeon J. S. CHAFFEE, detached from the Brooklyn Hospital and ordered to the "Monadnock" via steamer from San Francisco September 17.

Asst. Surgeon H. A. JOHNSON, honorably discharged.

Asst. Surgeon O. T. SMITH, detached from the "Montauk" and ordered home.

Asst. Surgeon D. C. BEERE, detached from the "Richmond" and ordered to the Naval Hospital, Philadelphia.

Asst. Surgeon H. C. CURLE, detached from the Mare Island Hospital and ordered to Puget Sound station.

Asst. Surgeon F. E. McCULLOUGH, ordered to the Mare Island Hospital.

The following officers are honorably discharged: "St. Louis;" Asst. Surgeon A. F. GRAF. "Yale;" Passed Asst. Surgeon R. L. PARKER.



## Foreign News and Notes.

**Dr. Bloch** has been appointed professor of otology at the University of Freiburg.

**Smallpox** is said to be rapidly on the increase at Johannesburg, South Africa.

**Dr. R. Kohn** has been appointed professor of pharmacology and medical chemistry at the University of Königsberg.

**The Fifth International Congress of Hydrology, Climatology, and Geology** will be held at Lübeck from September 25 to October 3, 1898.

**Dr. Antonio Amor y Rico** has been appointed professor of general pathology, and **Dr. J. de Paro Fyernandez**, professor of hygiene, at the University of Grenada.

**Diphtheria-Antitoxin.**—The medical report of the French army states that since the introduction of the serum treatment of diphtheria the mortality among cases of that disease had fallen from 11.3% to 6%.

**The German Society of Alienists** meets this year at Bonn, September 16th and 17th. The following subjects have been arranged for discussion: The various aspects of hysteria, the value of hydrotherapy, the pathologic anatomy of delirium tremens, and the utilization of pathologic material in asylums.

**The Indian Medical Service.**—A recent London Gazette publishes a warrant whereby officers of the Indian Medical Service receive the same full military titles that were recently granted to officers of the Army Medical Staff. It was known that similar treatment would eventually be extended to each branch of medical officers in the British Army.

**Tuberculosis in the Prussian Slaughter-Houses.**—The Prussian Minister of Agriculture and Forestry states, in his report for the year 1896, that the percentage of slaughtered animals affected with tuberculosis varied between 0.9% in the district of Osnabrück, and 39.5% in Schleswig. Of 812,731 slaughtered animals, 107,214, or 13.2%, were affected with tuberculosis.

**Obituary.**—**DR. EVART JULIUS BONSDORFF**, professor of anatomy and physiology in the medical faculty of the University of Helsingfors.—**GEORGE ROPER**, M.D., Aberdeen, M.R.C.P., London, formerly consulting physician to the Royal Hospital for Children and Women, London, and Vice-President of the Obstetrical Society of London, August 14th, at Southwold, Suffolk, England, aged 76 years.

**Medical Students in France.**—At the commencement of the year the total number of students in the several faculties and schools of medicine in France was 8,064, of whom 399 were women; of the whole number, 734 male and 168 female students were foreigners. The "extra-legal" schools of medicine outside the universities had 949 students, of whom 70 were women; while the medical schools at Algiers had 763, of whom 24 were women. There are in Paris 11,647 students, of whom 3,971 are students of medicine. Next to Paris in respect of student population comes Lyons, with 2,335, of whom 1,106, including 33 women, belong to the medical faculty. Bordeaux occupies the third place, with 2,144, of whom 737 are students of medicine. Toulouse, Montpellier, Lille, Rennes and Nancy have each over 1,000 students.

**The Queen's Health.**—A distinguished physician of the medical establishment of the Court being on one occasion called to an exalted personage had a notice posted up intimating to all whom it might concern that "Dr. —, having been summoned to Balmoral to see her Majesty, will be unable to lecture to-day." The effect of this announcement was rather spoilt by the fact that some one, with an inopportune display of loyalty, had written underneath "God Save the Queen!"—[*The Practitioner*.]

**Typhoid Fever in Belfast.**—The cases of typhoid fever in this city are daily growing smaller in number and the urban authorities believe that the epidemic has begun to abate. It has been a serious one while it lasted, but the mortality has not been particularly high; 785 cases of typhoid fever occurred during August, as against 560 in July. If the attention of the inhabitants is drawn by this outbreak of typhoid fever to the existence in Belfast of some particularly filthy slums and insanitary premises, the scourge will be a blessing in disguise.

**Pathognomonic Sign of Meningitis.**—At a recent meeting of the Société Médicale de Paris, Netter, referring to the sign first described by Kering, declared it to be a pathognomonic sign of meningitis. The sign consists of an inability to completely extend the leg of the patient when he is in the sitting posture, while in the recumbent posture no such difficulty is encountered. In the sitting posture the leg always remains at an angle of from 90 to 140 degrees. Although the reason for the sign was not known, Netter declared that it occurred in no other disease.

**Vaccination in Germany.**—According to the latest official reports, the total number of cases of smallpox in Germany during 1896 was 92, of which 10 were fatal. The cases occurred along the Russian and Austrian frontiers. We commend this record to our American and English readers as an excellent commentary upon the wisdom of thorough compulsory vaccination, and as one in marked contrast to those presented by Austria and Italy, in which countries the vaccination-laws are much less rigidly enforced than in Germany. In Austria there were 2,663 cases, with 410 deaths; in Italy, 9,036 cases.

**Smallpox, Cholera, and "Fevers" in India.**—The *Westminster Gazette* states that it appears from the vital statistics of the Indian empire for 1896-97, just issued, that the year in question showed a higher rate of mortality from smallpox than any year in the last decade. Some idea of what this means may be gathered from the return of 137,622 deaths from this cause, as against only 54,979 in the previous year, and 43,623 in 1894-95. Yet this only represents less than 3% of the registered population, while cholera, which in 1896-97 was not more than ordinarily deadly, carried off over 2%, and "fevers," over 20% of a registered population of some 217 millions.

**The Edinburgh Meeting of the British Medical Association.**—The *Practitioner* (London) states: "The annual meeting of the British Medical Association was one of the largest on record. The hospitality of our Scottish friends made a deep impression on the Southron, as well as on the foreigners, distinguished or otherwise, who were privileged to be present. One enthusiastic American was heard to declare that he had never seen anything like it in his own country—an admission 'significant of much,' as Carlyle would have said, coming from a citizen of the mighty republic which, with modest dignity, is wont to inform the world that it 'licks creation.'"

**Horseplay at the Glasgow Infirmary.**—A case which should certainly have been settled out of Court has been set down for hearing at the St. Rollox Police-court in Glasgow. One of the resident staff incurred the ill-feeling of his fellow-internes by objecting to the admission into a certain ward under his charge of patients who, he considered, should have found beds elsewhere. The junior staff held a mock trial over their disobliging colleague, found him guilty and sentenced him "to receive the Order of the Bath." Whereupon the unfortunate young man was ducked. There is no excuse to be offered for this vulgar horseplay among members of the medical profession holding responsible positions and, if young, quite old enough to have learned manners; but it is a thousand pities that the victim should be taking his persecutors to a police-court. To make a public scandal of the matter is to do grave damage to the institution.

**A "Record" Opinion.**—Speaking of the Prince of Wales' accident, the *New York Medical Record*, with characteristic accuracy of information and good taste, says: "As he has the misfortune to be an exalted personage, his surgeons will probably fear to treat his injury radically, with the result that the poor man will be lame for life." It is one of the misfortunes of exalted personages that more nonsense is written about them than about ordinary people—especially by American journalists. It is related that a philosopher once thought fit to favor Hannibal with his views on the art of war, a circumstance which induced the great general, with military bluntness, to say that the lecturer was the biggest fool he had come across. One is irresistibly reminded of this story on seeing Lord Lister, Sir William MacCormack, and Sir Thomas Smith treated to a lecture on surgery by the *Medical Record*. I commend to my able but impulsive contemporaries the example of Mark Antony, who only spoke of that which he did know. But for his comfort I may assure him that His Royal Highness was treated in the only way possible in the circumstances, and the progress of the case has fully justified the course taken by his advisers.—[*The Practitioner*.]

**"The Water-famine in Northeast London** still continues, and has become more acute. Unless there is soon heavy rain the condition of this part of the metropolis will be lamentable. The supply was cut down to-day from six hours to four hours, and it is confidently believed that still more stringent measures of restriction will be taken shortly." These are the words of a well-informed correspondent in a letter to us, dated September 3d. A water-famine of still more serious import threatened to make its appearance in Paris about the same date, but the citizens of that excitable capital have had so much food for conversation supplied to them by the Czar's suggestion for universal peace and by the extraordinary developments of the Dreyfus case that they have not found time to complain so bitterly as the Londoners have done. Yet Paris, if really attacked by a water-famine, would be in a worse plight than London, first because her condition would be less readily open to remedy, and, secondly, because the Parisian is wasteful of water. It has been stated recently that the daily allowance of water to each individual of the population in the great European cities calculated in liters stands as follows: Constantinople, 15 liters; Berlin, 70 liters; Vienna, 104 liters; London, 173 liters; St. Petersburg, 182 liters; Madrid and Budapest, 200 liters; and Paris 220 liters. These figures are from a French source, and possibly the Paris allowance is only a "paper"

one, representing what the city waterworks can do if they are up to the mark and not what they are called upon to do.

**Tuberculosis Among English Jews.**—Dr. Gaster, in a paper read before the Jewish Board of Guardians, states that among Jews tuberculosis mainly affects the intestines, and is due to the consumption of infected food and milk. This view is certainly not that held by most authorities. Pulmonary phthisis is generally regarded as the commonest form in Jews as in Gentiles, and it must be remembered that the Talmudic laws as to the inspection of meat render it almost impossible for a tuberculous carcass to be used as human food. The author quotes some valuable statistics showing that Jews suffer from consumption only about half as often as non-Jews. His results are based upon the burial returns of the United Synagogue from 1889 to 1893, as compared with those of the Registrar-General. He expresses his conviction, which is perhaps rather more patriotic than scientific, that the favorable condition of the Jew is due to race influences. He is, nevertheless, alive to the importance of preventing tuberculosis from seizing upon the Jewish race, and he gives some excellent rules to this end; those relating to the bringing up of children born of a tuberculous stock are particularly commendable. The Jewish Board of Guardians is doing good work in the interest of sanitation for the whole of the East End of London by the leaflets which it issues on this and allied subjects.—[*British Medical Journal*.]

**Proposed Law for the Extermination of Cattle-Tuberculosis in Denmark.**—The draft includes, according to the *Milch-Zeitung*, two principal parts: (1) in regard to the importation of cattle from abroad, and (2) in regard to domestic regulations. Further, the annual sum of 100,000 kr. shall be placed at the disposition of the Minister of Agriculture in order that he may distribute aid in the form of tuberculin-inoculation to cattle-owners, breeding and agricultural associations. Cattle from abroad can be imported only at certain places designated by the Minister of Agriculture. They must be brought immediately to quarantine-stations, and, at the latest, three days after arrival be subjected to a tuberculin-inoculation. Those animals, however, which are to be slaughtered within ten days after arrival are not subjected to inoculation. The cost of maintaining quarantine-stations and tuberculin-inoculations is to be borne by the government, because the tests are made in the interests of the general public.

The domestic regulations propose that cows with tuberculosis of the udder be slaughtered; further, that all milk-dealers and dairies shall sell only milk and buttermilk which has been warmed to 85° C.; the same regulation to apply to old milk and buttermilk imported from abroad. In regard to pasteurizing the buttermilk no provision seems to be made provided the cream is pasteurized.—[*Thierärztliches Centralblatt* and *The Journal of Comparative Medicine and Veterinary Archives*.]

**The Waste of Fish in London.**—Of all articles of diet, nothing, perhaps, is so much appreciated by the sick, and especially by the convalescent, as fresh fish. Fresh fish in London is never cheap, although it is no great geographical sketch to describe London as a seaboard town. As a matter of fact it is not the scarcity of the supply which keeps the price of this admirable food too high for the poor of London to enjoy it, as well as too high to make an unlimited supply of it the rule and not the marked exception in every hospital and workhouse infirmary of the city. This is shown by the fact that during August alone the quantity of fish



condemned in London as unfit for human food, simply because it remained unsold at its high price, has averaged nearly *ten tons a day*. Faults of storage and difficulties of transit may account to a certain extent for the necessity that fishmongers in London should ask a higher price for their wares than would at first sight seem reasonable, but popular opinion attributes the disparity between supply and price to a more sinister reason. All fish reach London through a central market, and it is believed that the wholesale merchants of Billingsgate—the market in question—have made a determined ring to keep the price of fish up, believing that it pays them better to have large quantities of their goods left on their hands and condemned as unfit for food than to sell any extra large consignments at a lower figure. Year after year the medical men of London groan at the thought of this wicked waste of wholesome food, but no one comes forward with the suggestion that hospitals at any rate should take the matter into their own hands, and should arrange, by combination, for a direct supply from the beach to the wards. Billingsgate is a convenience and not a necessity, and the sick and poor of London are paying too highly for the convenience.

**The New English Vaccination-Act.**—There is still trouble with regard to this unfortunate act. It will be remembered that compulsion was practically abolished by the introduction into the Act of a clause which said—to quote it in respect of London—that “no parent or other person shall be liable to any penalty if within four months from the birth of the child he satisfies a metropolitan police magistrate in petty sessions that he conscientiously believes that vaccination would be prejudicial to the health of the child, and within seven days thereafter delivers to the vaccination-officer for the district a certificate by such magistrate of such conscientious objection.” Conscientious objectors immediately presented themselves before the London magistrates, where they obtained a mixed reception. One magistrate said he was not “sitting in petty sessions”—a legal quibble not worth discussing; others did not know what would “satisfy” them (and the Act said they were to be satisfied) as to the conscientiousness of the antivaccinationist; others said they would have nothing to do with the objectors until a form of procedure had been generally adopted by all the magistrates; while all abused the Act as vague and faulty in its drafting. Later all the metropolitan magistrates met at Bow Street and came to the decision that every objector should *ipso facto* be considered to act “conscientiously” inasmuch as there is no compulsion on him to make objection, and no motive, it is fair to assume, except his conscience to lead him to do so. It was also decided to charge a shilling for each certificate issued in accordance with the Act. Whether this was wise remains to be seen. The magistrates are rightly charging for the clerical work, but it does not take much foresight to predict that this charge of a shilling will soon be regarded as a monstrous imposition by the antivaccinationists, who will then use it as a cause for renewed agitation as well as an argument in their proselytizing campaigns.

**Serum-therapeutics in Yellow Fever.**—Professor Sanarelli, the director of the Hygienic Institute of Monte Video, has made a further report of his experience in the treatment of yellow fever with a serum obtained from horses vaccinated with the bacillus *icteroides*. (*Annales de l'Institut Pasteur*, No. 5, 1898.) The horses were inoculated with a virus of gradually increasing intensity for a period of from 12 to 14 months. The serum was used in the case of 8

patients by Dr. Seidl in the St. Sebastian Hospital of Rio Janeiro. Five of them had reached the fourth day of the disease, and were in a highly critical state when the injections were commenced; 4 who had reached the stage of anuria and delirium died, and the fifth recovered after having received 80 cu. cm. of the serum. Of the 3 remaining patients 1 had reached the second day of the disease, and 2 the third day. They had all the symptoms of the earlier stages of virulent yellow fever, including albuminuria, but neither suppression of urine nor delirium, and they all recovered after vigorous serum-treatment. It was noticed that after each injection there occurred a fall in the temperature. At a later date, 2 children having the characteristic “black vomit,” one at the second day of the disease and the other at the third, were treated with the serum by Dr. Sanarelli; the fever and the albuminuria quickly disappeared, the other general symptoms more gradually, but convalescence was well established after the injection of 20 cu. cm. and 65 cu. cm. of the serum respectively. In another series of 6 cases occurring in an epidemic having a mortality of between 80 and 90%, 4 recovered and 2 died. In 14 other cases the serum was injected directly into a vein; 11 of these more or less rapidly recovered; of the 3 who died 1 had resisted the treatment, another had been delivered of twins a month previously and was very badly nourished, and the third was the subject of pronounced paludism. Thus 66%, or two-thirds of all the cases treated, recovered. The serum obtained from an ox, which was found to be less active than that from the horse, was used as a prophylactic in a severe outbreak in an insanitary prison. Four persons had died in the course of a few days. All who were not immune by reason of a previous attack were then injected, and no other case occurred, although the epidemic still raged in the adjacent town.—[*British Medical Journal*.]

**Vital Statistics of Italy.**—We read, in the *British Medical Journal*, that the *Annuario Statistico Italiano* has just appeared and furnishes some valuable facts as to mortality and disease in Italy. The mortality-rate shows a fairly regular and progressive decrease during a period of 25 years (from 1872 to 1896 inclusive)—the figures being for successive periods of 5 years (30.78 per 1,000 in 1872); 30.19, 29.18, 27.62, 26.84, and 25.30. The marriage-rate has declined but a fraction, and the birth-rate from 37 to a little over 35, so that the population increases. The only unfavorable sign is a decided increase in the number of still-births. During the last 10 years there has been a marked diminution in the number of deaths from almost all the infectious diseases. Thus, in the case of smallpox, the proportion per million has diminished from 551 to 65 (vaccination is general but by no means universal); in that of measles from 806 to 369; of scarlatina, from 496 to 104; of typhoid fever, from 925 to 526; of pertussis, from 378 to 213; of diphtheria, from 835 to 205. But croup and laryngitis have not decreased, a fact to be pondered on by those who refuse to recognize the clinical distinction between croup and diphtheria. Influenza and epidemic meningitis have varied extremely from year to year; the former was most severe in 1892, the latter in 1893 and 1894. The mortality from malarial fever and paludal cachexia seems to be declining slowly, owing probably to the draining of marshes and planting of the eucalyptus; but there are, of course, annual variations depending on the character of the seasons. Syphilis would appear to increase slowly, but perhaps this may be merely an affair of nomenclature. Malignant pustule and rabies decrease. The mortality from pulmonary tuberculosis does not diminish, being

about 1,030 per million. Chronic pneumonia appears to have fallen from 228 to 48; this is doubtless only due to changes in diagnosis and nomenclature. Marasmo senile (old age) is credited with 1,207 deaths to the million instead of 839. Pellagra, the scourge of the maize-fed peasantry of Lombardy, decreases very slowly. Fatal diseases of the nervous system show no remarkable variations. Bronchitis and pneumonia have both increased, the latter most distinctly; they are respectively third and second among the diseases specified in the order of mortality, slaying about 2,300 and 2,500 per million. The former seems to be more under the influence of the seasons. Enteritis, diarrhea, and dysentery are classed together, and rank first in the list with about 3,500 deaths; they are apparently on the increase. So, too, are diseases of the heart and of the kidneys. Alcoholism increases, but accidental deaths decrease; this is an anomaly. Puerperal accidents and diseases have declined from 235 to 116, which is a sign of advancing civilization. There is a slight decline in the numerous homicides, and a very decided increase in the suicides. Diabetes has increased from 17 to 27, and cancer from 428 to 496. In both cases improved diagnosis may be responsible, but the augmentations are rather large. Deaths among soldiers serving in Italy have declined much more than those among the civil population, and suicides among them have somewhat decreased. The physical condition of conscripts, however, does not appear to have improved materially. On the whole there is a good deal of evidence of medical activity and sanitary improvement among the Italians, though poverty and insufficient or bad food, as well as the ignorance of the people, may greatly hinder their beneficial agency.

## Philadelphia News and Notes.

**By the will of the late Harriet B. Evans, \$5,000** is bequeathed to the Presbyterian Hospital for the founding of a free bed in memory of the deceased's husband.

**By the will of the late Catharine Harrison, the** following charitable bequests are made: \$10,000 to the Home for Incurables, \$1,000 to the Baptist Home for Old Ladies, \$1,000 to the Baptist Orphanage.

**Obituary.**—DR. JAMES S. GILLIAMS, a graduate of the Pennsylvania College of Dental Surgery, of the Medical Department of the University of Pennsylvania, and one of the founders of the Academy of Natural Sciences, September 10th, aged 70 years.

**University Hospital-Trains.**—The University of Pennsylvania during the past week despatched a hospital-train to Knoxville, Tenn., and brought 60 sick and convalescent soldiers of the First Regiment to the city. A few days previously the University had despatched a train to Jersey City and brought to the hospital nine patients—members of Battery A and the Fourth Pennsylvania Volunteers.

**Haddock Memorial Home for Infants.**—To establish the Haddock Memorial Home for infants under the age of 3 years, one or both of whose parents may be dead, Mrs. Catharine L. Haddock bequeathed her house and lot at 806 Pine Street and \$125,000 in trust for maintenance. In addition Mrs. Haddock makes the following charitable bequests: Presbyterian Orphanage, \$20,000; Philadelphia Branch, Women's Union Missionary Society of America, \$5,000; Seaside Home

for Women and Children, at Cape May Point, \$5,000; Woman's Bible Readers' Society of Philadelphia, \$5,000; Presbyterian Home for Widows and Single Women of the State of Pennsylvania, \$3,000; and the income of \$3,000 to the Female Domestic Missionary Society for the support of the Gospel in the Almshouse.

**Vaccination-Certificates of School-Children.**—At a recent meeting of the 29th Section School-Board, Dr. Ott said he had every reason to believe that many vaccination-certificates filed by pupils at schools in the section were irregular. Because of this belief, he said, he had visited some of the schools to examine the vaccination-marks of the pupils, and had in a number of cases been refused an opportunity to do so. Some of the children, he asserted, stated that they had been instructed by their fathers or mothers not to permit such examination.

He offered a resolution which was unanimously adopted, that the principals of the schools be instructed to examine the vaccination-marks of the newly admitted younger children, and to compare the names of physicians given on the vaccination-certificates presented with the names in an accepted medical register.

He said he had talked with the principals, who were all capable of recognizing a successful vaccination-mark. The medical registers, he suggested, should be supplied by the Board.

**Vital Statistics of Philadelphia** for the week ending September 10, 1898:

Total mortality ..... 537  
Children under 5 years of age..... 172

Diseases.	Cases.	Deaths.
Cholera infantum .....	.....	50
Pulmonary tuberculosis .....	.....	37
Insolation .....	.....	48
Heart-disease .....	.....	31
Typhoid fever.....	222	28
Marasmus.....	.....	25
Senility .....	.....	25
Gastro-enteritis.....	.....	22
Eclampsia.....	.....	20
Apoplexy.....	.....	18
Inflammation of brain.....	.....	17
Carcinoma .....	.....	16
Pneumonia.....	.....	15
Uremia.....	.....	15
Nephritis.....	.....	12
Diphtheria.....	65	11
Inanition.....	.....	10
Scarlet fever .....	12	1

**Philadelphia Pathological Society.**—At the stated meeting, September 8th, DR. A. H. STEWART presented a communication upon **Widal's test**, and demonstrated the reaction with several specimens of blood from soldiers now under treatment in the city hospitals. He drew attention to the fact that the Widal reaction is in reality a triple reaction, consisting of a clumping of the bacilli, a stoppage of their motion, and a bacteriolytic action. The latter, to which particular attention was directed, was frequently overlooked. It is, in reality, not so common, nor does it occur so rapidly as do the others. It had been observed to be much more common in the blood of the soldiers from the Southern camps, than in patients who had been infected in the North. Speculation was indulged in as to the probable nature of this bacteriolytic action, and the suggestion made that temperature might be of some influence,—this action having been observed to be much more marked during very hot weather. It was noted that clumping was not marked in cases in which



the bacteriolytic action was excessive. It was thought that the bacteriolytic action kills the bacilli, and that this action is a specific one. The statements constitute a preliminary communication upon the **bacteriolytic action of the serum of typhoid-fever patients.** DR. A. C. ABBOTT suggested hypotheses as to the probable nature of the reaction. DR. DAVID EDSALL referred to a patient whose blood possessed a very marked bacteriolytic action, whereas the attack was very mild, if it were really typhoid fever. He referred to the views of Gruber, according to whom there are certain specific substances (agglutinins) and other non-specific substances (alexins) in the blood of patients ill with infectious diseases, and suggested that this bacteriolytic action was non-specific. DR. ALLEN J. SMITH (of Galveston, Tex.,) spoke of the clinical and anatomic differences between typhoid fever in the South and the North—the disease being much milder in the South—and suggested that the reaction might present differences depending upon whether infection took place in the South or the North. He also spoke of a mild Widal reaction (agglutination) in cases of dengue. The president, DR. WILLIAM E. HUGHES, said that the occurrence of the bacteriolytic action without agglutination suggested that the former was not due to the typhoid poison. DR. A. H. STEWART asserted that the Widal reaction is a reaction of immunity and not of infection, and thought it would be difficult to prove that the bacteriolytic action is not specific. The mild cases are more likely to give a marked reaction, and the severer ones possibly not until a relapse or as death approaches. He had noticed a diminution in the bacteriolytic action of the same specimen of dried blood, on successive days.

DR. JOSEPH SAILER exhibited a microscopic specimen of a **squamous epithelioma of the esophagus.**

DRS. J. P. ARNOLD and J. D. STEELE presented some **masses of fibrin from the intestine.** They were thought to be the results of mucous colitis, though the discharge in such disease is asserted to almost never contain fibrin. It was allowed that they might be old blood-clots. DR. DAVID EDSALL said they might be some product of degeneration of mucous cells of their secretion.

DR. DAVID RIESMAN presented a specimen of **aneurysm of the aorta**, from a man aged 31 years. The interesting features of the case were: (1) The cause of the aneurysm—a trauma; (2) the complete filling of left pleural sac with blood. The quantity of blood was so excessive that it was surmised that the leakage had been gradual; (3) the location of the aneurysm—the descending portion of the aorta; (4) inversion of the diaphragm, apparently due to paralysis of the phrenic nerve.

DR. H. L. WILLIAMS presented a specimen of **ruptured ectopic gestation.**

W. F. Boggess (*Archives of Pediatrics*, September, 1898) reports an **extensive congenital hernia into the umbilical cord.** When the child was delivered a tumor was found over the umbilicus as large as a good-sized orange; about 4 inches above the umbilicus was a cyst the size of a hen's egg, and an inch beyond that another smaller cyst. The sac was found to contain intestine, omentum and a part of the spleen enveloped in Wharton's jelly. The organs were reduced into the abdominal cavity and the cord ligated and cut. On examining the cut end of the cord it looked as if a knuckle of gut had been cut off. The child did well, however, and has 2 or 3 movements of its bowels every day, showing that the mass tied off could not have included intestine. At the Falls City Medical Society, when the paper was discussed, it was suggested that the structure cut off that looked like intestine might have been a Meckel's diverticulum which occasionally remains patulous.

## Selected formulas.

### For Irritable Bladder:

Salol..... 2 drams.  
Tincture of hyoscyamus..... 2 fluidrams.  
Infusion of buchu, enough to make 6 ounces.

Mix.—One tablespoonful three times daily.

—*Louisville Medical Monthly.*

### For Acute Tonsillitis:

Tincture of aconite.....  $\frac{1}{2}$  fluidram.  
Chloroform water..... 2 fluidounces.  
Distilled water..... 4 fluidounces.

Mix.—One teaspoonful every five minutes for twelve doses; thereafter, one teaspoonful every hour. If necessary repeat in the same manner.

—Foy (*Atlanta Med. and Surg. Jour.*).

### For Dyspepsia:

Sodium bicarbonate..... 15 grains.  
Tincture of nux vomica..... 15 minims.  
Tincture of calumba ..... 30 minims.  
Aromatic spirits of ammonia..... 30 minims.  
Compound infusion of orange to make..... 1 ounce.

Mix.—To be taken three times daily, one-half hour before meals.

—BURNEY YEO.

### For Acute Inflammation of Upper Air-Passages:

Eucaïn..... 10 grains.  
Cocain hydrochlorate..... 10 grains.  
Distilled water..... 6 fluidounces.

Mix.—Used as a spray is said to be almost a specific.

—*Practitioner.*

**Thymol as a Teniafuge.**—Unna Campi (*Journal de médecine de Paris*, July 26th) has employed thymol with success against *Ankylostoma duodenale*. He recommends the following method of administration:

1. Administer in the evening, some time after the last repast, 225 grains (about half an ounce) of castor oil.
2. Next morning administer first 120 grains of broken thymol, divided into twelve doses, one to be taken every quarter of an hour.

Follow with a second dose of castor-oil.

In order to combat the depressing influence of the drug, the author counsels the administration therewith of some stimulant. He asserts its curative action to be infallible.

—*New York Medical Journal.*

### For Anemia:

Protoxid of iron ..... 1 grain.  
Powdered rhubarb..... 1 grain.

Mix.—Make one cachet. Two or three to be given daily.

—*Practitioner.*

### For Hay Fever:

Acetic acid ..... 2 minims.  
Resorcin ..... 1.5 grains.  
Sodium chlorid ..... 4 grains.  
Water ..... 1 ounce.

Mix.—To be used frequently as a nasal douche.

In conjunction with the nasal douching large doses of hydrochloric acid are to be taken, well diluted with water. The treatment is said to be followed by most excellent results.

—STRANGWAYS (*Southwestern Med. and Surg. Jour.*).

### For Varicose Ulcers:

Carbolic acid..... 30 grains.  
Boric acid..... 2.5 drams.  
Camphor..... 2 drams.  
Ichthyol..... 5 drams.  
Oil of sweet almonds..... 2.5 drams.  
Ointment of oxid of zinc ..... 3.5 drams.

Mix.—To be applied locally.

—*Gaillard's Medical Journal.*

## The Latest Literature.

### British Medical Journal.

August 27, 1898. [No. 1965.]

This issue of the *British Medical Journal* is an Educational Number, and contains, in addition to leading articles on the following subjects: The Medical Profession and the Mode of Entering It; The Medical Curriculum; The Cost of Medical Education; The Royal Medical Services; Post-Graduation Study; varied information relating to British medical schools and hospitals and allied topics.

### Lancet.

August 27, 1898. [No. 3913.]

1. The Public Health of Dublin. CHARLES A. CAMERON.
2. An Address (Abstract of) on Ireland; Its Capital and Scenery. JOHN WILLIAM MOORE.
3. Electro-magnetic Extraction of Foreign Bodies From the Eye. J. JAMESON EVANS.
4. The Conservative Surgery of the Ovary. CHRISTOPHER MARTIN.
5. Vitality: an Appeal, an Apology, and a Challenge Addressed to Brother Practitioners. LIONEL S. BEALE. (Concluded.)
6. The Value of Oxygen in Poisoning by Morphin. DAVID T. PLAYFAIR.
7. The Action of Thyroid and Parathyroid Extracts Upon Metabolism in the Insane. C. C. EASTERBROOK.
8. Caries of the Spine; Modern Methods of Treatment. NOBLE SMITH. (Illustrated.)
9. The Treatment of Chronic Ulcer of the Leg. CHARLES HERBERT THOMPSON.
10. A Case of Obstructed Premature Labor. W. J. LUBECK.
11. A Note on Auscultatory Friction as an Adjunct to Auscultatory Percussion in Abdominal Exploration. WM. EWART and A. C. PEARSON.
12. Sarcoma of the Soft Palate, etc. JAMES WILSON.
13. Pyemia Due to Alveolar Abscess. JOHN EDMONSON.
14. A Case of Laryngeal Stridor; Removal of Adenoid Vegetations. (Under the care of Dr. EUSTACE SMITH.)
15. A Case of Acute Intestinal Obstruction; Latent Hernia; Laparotomy; Reduction of Hernia from Within; Drainage; Recovery. (Under the Care of Dr. ALEXANDER.)

3.—Evans cites in detail the series of cases of **extraction of foreign bodies from the eye** occurring in two years in the Birmingham and Midland Eye Hospital. In 16 cases the electro-magnet was introduced into the eye, but no foreign body was found. The instrument used was that of Snell, the current being from a secondary battery. In 4 cases the eye was lost and in 14 was saved. In the endeavor to explain the failure of the electro-magnet to extract a foreign body in the 16 cases, the possibility of no foreign body being in the eye is mentioned and skiagraphy is indicated as promising to supersede all other methods of localization.

4.—Martin remarks that the **physiologic value of the ovaries** may be best realized by noting the results of complete extirpation of both glands: (a) The woman becomes absolutely sterile; (b) menstruation ceases in about 95% of the cases; (c) the uterus, and to a less extent the vagina and vulva, undergo a process of atrophy; (d) the nervous symptoms of the menopause appear abruptly and violently; (e) in a considerable majority of cases there is a diminution or total abolition of the sexual instincts; (f) the patient has a tendency to obesity. Now, if one ovary, or even only a portion of one ovary be left behind none of these symptoms appear. There is physiologically no difference between a woman with half an ovary and a woman with two ovaries, while there is a great difference between a woman with half an ovary and a woman with none. In ordinary cystoma of one ovary the other ovary, being healthy, it is unjustifiable to remove both ovaries. In sarcoma of one ovary both organs should be removed. In inflammatory disease of one uterine appendage both ovaries should not be removed. In double pyosalpinx Martin removes the uterus as well as the

appendages. In chronic ovaritis he believes in trying the conservative operation of ignipuncture. He urges a fair and unbiased trial of conservative surgery of the ovary.

5.—Beale continues his discussion of **bioplasm**, particularly in regard to its inner life. He believes that this bioplasm is a peculiar substance in which vitality, or vital force, or, to use a word of his own coining, biokraft, manifests itself. This peculiar vital power belongs exclusively to the living world, and it may be developed more or less rapidly in centers of life that originate from others. He attacks the views of those who believe that fatal manifestations can be explained by the ordinary laws of dynamics, and he does not believe that the distinction between living and non-living substance will ever be obliterated.

6.—Playfair reports a case of **opium poisoning**, in which the patient swallowed a solution containing about 30 grains of morphin acetate, and was not discovered until 3 hours later. The pupils were contracted, the pulse was slow, and the respirations slow and shallow. The patient rapidly grew worse, and in spite of washing out the stomach, hypodermic injections of various stimulants, and the application of faradism, cyanosis became profound, and death seemed imminent. Oxygen was then procured and artificial respiration commenced; 6 hours later there was a slight attempt at respiration, and at the expiration of 2 hours more, shallow breathing was established, and artificial respiration temporarily discontinued; 15 hours after the first institution of treatment, and 18 after the ingestion of the poison, the patient was practically out of danger, and ultimately recovered completely. Playfair believes that this is the largest dose followed by recovery hitherto recorded, considering the fact that the drug was taken upon an empty stomach and no treatment employed for 3 hours. He also believes that the oxygen alone saved the patient's life.

7.—Easterbrook has experimented upon **insane patients**, administering to them **extract of the parathyroid** and of the **thyroid glands**. The former were removed from an ox, and administered either dried or fresh by the mouth, or in glycerin or ethereal extract hypodermically. No effects were produced. Thyroid extract was administered in doses of 60 grains every day for 6 or 7 days. The loss in weight usually amounted to 7 or 8 pounds. In about  $\frac{2}{3}$  of the cases there was subfebrile elevation of temperature, and in about  $\frac{1}{3}$  of the cases, a rise of from 2° to 3°. Perspiration was increased, the proportion of hemoglobin diminished; headache, tingling in the limbs, and tremors were observed, and palpitation and syncope were frequent. In some of the patients the respiratory rate was increased from 6 to 10 per minute. Thirst was commonly increased, the appetite diminished during administration but subsequently greatly increased. Menstruation was rendered more profuse. He concludes that the thyroid extract is a profound katabolic stimulant, and accelerates the oxydation of the tissues, and the symptoms indicate a specific stimulation of the nervous system.

8.—Smith endeavors to controvert the assertions, first, that in **spinal caries** "forced reduction of the deformity" cannot be otherwise obtained, and, second, that every portion of diseased bone in tubercular osteitis should be removed. The spine must be thoroughly fixed and apparatus efficient, adjustments being made with careful accuracy, in the first instance. With regard to tubercular areas, we cannot certainly define the exact areas to which the disease is limited, and even so, the disease might occur in other parts. Smith shows a section of spinal column affected by caries in the bodies of vertebrae not embraced in the deformity, in which are seen tubercular cavities.

9.—The treatment of **chronic non-specific leg-ulcers** of moderate size by strapping is regarded by Thompson as superior to other usual methods. Strapping of ordinary adhesive plaster, spread on stout, pliable holland, supplied in 12-yard rolls 16 inches wide, is cut into various lengths, according to size of each leg, each length being about 1½ inches wide, and applied so that the strips overlap by  $\frac{1}{2}$  inch. The foot should be included in the strapping, commencing at the base of the toes and carrying the strapping up the leg to 3 inches or 4 inches above the ulcer which is completely covered in. A strong calico bandage should be applied over all, from the toes to the knees. Zinc ointment may be applied to excoriations, the lint not being too close to the ulcer, and dressing changed twice a week. On the average, 12 strappings are



needed. After healing of the ulcer, Martin's bandage or an elastic stocking should be worn.

10.—Lubeck records an interesting case of **obstruction in a premature labor** due to an abnormally tough and thickened cervix.

11.—Ewart calls attention to the value of **surface friction** used in association with auscultation, for the purpose of delimiting the outlines of organs, particularly in tracing the boundary between such similar organs as the stomach and a distended colon.

12.—The subsequent history of a case of **recurrent sarcoma of the soft palate**, reported in the *Lancet* of June 27, 1891, is given by Wilson. The entire soft palate was here removed, after preliminary laryngotomy and plugging of the pharynx. Sections of the tumor and a neighboring gland showed "mixed glandular sarcoma resembling in structure the parotid gland."

13.—Edmundson gives an example of **pyemia from alveolar abscess** in a youth of 15. An incisor tooth was extracted, but the three adjoining teeth were all decayed. General symptoms of slight jaundice, cough, pain in the chest, hemorrhagic sputum, delirium, and great depression and emaciation. Hepatic or splenic enlargement was unappreciable. Temperature was 105° F., and pulse 140. Removal of the three carious teeth, incisions into the cellular tissue of the face, opening abscesses in the lower ends of the humerus and of the radius resulted in recovery ultimately after several months.

14.—Eustace Smith holds post nasal "**adenoids**" responsible for many more symptoms than was the case a few years ago, and cites the instance of a boy, 8 months old, evidently rickety, suffering from laryngeal stridor. Removal of the adenoid vegetations under chloroform-anesthesia resulted in about 3 weeks in the recovery from the attacks of stridor. Intelligence increased and general improvement followed.

15.—Alexander regards the ordinary **external incision** as best in **strangulation of inguinal or femoral hernia**, but abdominal section is preferable in an obturator hernia, since difficult dissection is needed. The local signs of a hernia being wanting, owing to the small amount of bowel involved, in cases of femoral or inguinal hernia, laparotomy offers the best chance of success. A case is instanced, which occurred in a boy of 15 years, in which exploration of the abdominal cavity disclosed a little knuckle of bowel, just sufficient to occlude its own lumen, was found tightly grasped by the right crural ring. The hernia was simply withdrawn, wound closed, and double cyanide gauze inserted through a glass tube into the peritoneal cavity. Recovery followed after a suppurative left orchitis was incised and healed. The case suggests, (1) the difficulty of diagnosing a small femoral hernia; (2) rarity of femoral hernia in boys; (3) left orchitis ensuing after right-sided incision of the abdomen; (4) the dangers of peritoneal infection from a hernial sac by the intraabdominal method.

### New York Medical Journal.

September 10, 1898. [Vol. lxviii, No. 11.]

1. The President's Address delivered before the American Laryngological Association at its Twentieth Annual Congress. THOMAS R. FRENCH.
2. A Note on the Surgical Treatment of Lupus and Tuberculosis of the Larynx in Connection with Tracheotomy. E. L. SHURLY.
3. Laryngeal Tuberculosis at the Loomis Sanitarium. WALTER F. CHAPPELL.
4. The Prevention of Sore Nipples. J. MILTON MABBOTT.
5. The Mechanical Treatment of Impotence in the Male. B. SCHEINKMAN.
6. The Points of Distinction between Cerebral Syphilis and General Paralysis of the Insane. Two Lectures delivered to the Medical Staff of the Illinois Eastern Hospital for the Insane. HUGH T. PATRICK. Lecture II.

2.—Shurly adopts preliminary tracheotomy before surgical interference in **lupus and tuberculosis of the larynx**, save where the lesion is slight. Chloroform may be used, although cocain-anesthesia is usually sufficient.

When caseation of the lungs; a great amount of bronchitis, or extensive pulmonary involvement exists, tracheotomy is contraindicated. Repetition of the operation is inadvisable. The tracheotomy tube should remain until the diseased tissue has been thoroughly and finally removed.

3.—After setting forth the advantages of the **Loomis Sanitarium**, at Liberty, N. Y., which admits only persons in primary pulmonary and laryngeal tuberculosis, Chappell gives observations extending over a period of 3 to 9 months, on the hypodermic administration on alternate days, in 10 minim doses gradually increased to 20, of anti-tubercle horse-serum prepared at the Biochemic Laboratory, Washington, D. C., for the United States Government. A brief résumé of the interesting points of these histories shows the following results: Laryngeal ulcerations healed, 8 cases; laryngeal ulcerations improved, two cases; laryngeal ulcerations unimproved, 2 cases; laryngeal thickenings improved, 7 cases. Subjective symptoms also showed marked improvement, the voice returning, cough subsiding, and pain ameliorating.

4.—Mabbott refers to the use of lanolin and the nailbrush for the prevention of sore nipples. A small portion of lanolin is thoroughly worked into each nipple with thumb and fingers. Lanolin resists saponification, but is to be removed each morning. The nipple is then to be brushed with a soft and well-soaked nailbrush and any mild, pure soap, afterwards rinsed with fresh water, and dried.

5.—Scheinkman finds lack of erectile capacity of the penis most generally met with among the refined and intelligent members of society or those following mental pursuits. It is characterized by extreme irritability, melancholy, loss of courage, aims and ambitions of life; the patient often neglects his personal interests and duties, and thus becomes not only a burden to himself, but frequently also to his community. Others again, in order to ameliorate their conditions, resort to all sorts of immoral and vicious practises, as self-abuse, etc. The facts prove that psychical influences have marked control over generative function and that psychical abnormalities of long standing are in the way of overcoming the difficulty. Scheinkman presents a devise which enables the natural function of the penis to be restored and gives the *modus operandi* of its use. He calls it a "potentor."

6.—Indications of **cerebral syphilis** are somatic signs usually pointing to focal disease. **General paresis** is a generalized brain-affection of graduated progress. Symptoms pointing to a distinctly localized brain-lesion indicate syphilis, more emphatically so when multiple focal disease exists. Gradual extension of a gross lesion is equally conclusive. The hemiplegia of dementia paralytica invariably attends an apoplectoid or epileptoid seizure. Syphilitic hemiplegia, on the other hand, is unattended by loss of consciousness and progresses "by jerks," without any general disturbance. The knee-jerk is not indicative in either disease. Local trophic troubles prevail in syphilis, general in paretic dementia. Othematoma, and fragilitas ossium allowing of spontaneous fracture belong to the latter. Outspoken sensory disturbance is more frequent in brain-syphilis. Analgesia of the legs and of the ulnar trunk (it is absent in syphilis) are frequent in general paralysis. Polydipsia and polyuria, though inconstant and variable, are frequent in lues—especially of the base of the brain. Bulimia is of no diagnostic worth and vomiting would indicate cerebral syphilis. Tremor is inconclusive, although coarser in syphilis. Temperature is of diagnostic value in connection with the various fits of paralytic dementia. Distinct aphasia can scarcely be said to be a symptom of general paralysis; it is frequent in cerebral syphilis. An isolated speech-defect would discriminate against dementia paralytica and for syphilis. In short, the earlier the aphasia occurs the more perfect it is; the more it appears as an isolated symptom, or associated with purely somatic signs, the more is it a sure sign of brain-syphilis. The more purely focal the character of the fit the more likely it is due to syphilis. Vertigo is a frequent and early symptom, not of general dementia, but of syphilis. Congestive attacks belong to general paralysis. The mental state after a fit is worse in paralysis, while a high degree of mental impairment after an attack is exceptional in syphilis. Elevation of temperature accompanies the fits of paralytic dementia. Attacks of prolonged narcolepsy indicate syphilis. (To be concluded.)



## Medical Record.

September 10, 1898. [Vol. liv, No. 11.]

1. The Eliminative Treatment of Typhoid Fever—A Reply to a Recent Criticism of this Method. W. B. THISTLE.
2. Trauma a Cause of Appendicitis. WILLIAM B. SMALL.
3. Adeno-Carcinoma of the Nose, with Report of a Case. MAX THORNER.
4. Diagnosis of Aneurysm of the Thoracic Aorta, Illustrated by a Case. PIUS RENN.
5. The Neurasthenic Symptoms of Gastro-Intestinal Disease. G. W. McCASKEY.
6. Some Advantageous Points in Operative Technic of Pelvic Surgery. JENNINGS P. CRAWFORD.

1.—Thistle once more insists upon the importance of his eliminative treatment of **typhoid fever** in order to prevent the absorption of the toxins, and to facilitate their elimination from the body and to prevent the multiplication of the bacilli in the intestine or to keep the intestines entirely free from them. He believes that the disease is entirely a local disease at first, but that subsequently infection of the organism occurs, and he also believes by his method of treatment typhoid fever can be, to a considerable extent, controlled. The mortality in the Toronto General Hospital in the 563 cases treated in the past 4 years has been 6.57%. He states, however, that not all the cases were treated on this plan, but the majority were treated either on this plan or by means of calomel or other purgatives. Thistle also lays claim to priority in the Woodbridge method, as he claims that his method was primary and was really the same as the Woodbridge method.

2.—Small mentions a number of cases of his own and others reported by other writers, or mentioned to him verbally, in which an attack of **appendicitis** followed immediately after an injury in the region of the appendix, or was delayed but a few days after such injury, and he insists upon the importance of trauma as a cause of appendicitis. He believes that catarrhal conditions of the bowels, perhaps due to the grip, are the cause of a considerable portion of the increase in the number of cases of appendicitis, but believes that injuries, strains, and severe work which causes strong contractions of the muscles of the abdominal walls, have a great deal to do with the greater prevalence of the disease in the male sex, acting by forcing bacteria-laden material into the appendix, the irritation or injury at the same time making a favorable soil for the growth of these bacteria. Usually a short period of incubation has to elapse before symptoms appear. He insists that this is a matter of medical-legal importance, and believes that insurance societies should be obliged to pay damage for illness from such cause as well as for other results of injury.

3.—Most writers mention **adeno-carcinoma of the nose** as infrequent. Thorner cites many authors and describes his own case of adeno-carcinoma, which occurred in a farmer of 47. The left side of the nose was obstructed, though nothing abnormal was to be seen about his face. Hearing in left ear was diminished, left side of the nose was entirely obstructed by a growth which extended from the vestibulum backward and filled completely the space between the choana and the Eustachian tube. Its color was grayish-red; its surface, slightly uneven, resembled somewhat a mass of cauliflower, was soft, and bled readily upon being touched with a probe. Its origin could not be ascertained, but it appeared to come from the middle meatus, which it completely obliterated. The septum was entirely free from any growth; no glands were enlarged. The patient was operated upon 11 times for this trouble before death. No postmortem was obtainable. If not a primary benign tumor, an adenoma, transformed by operations into an adeno-carcinoma, it is fair to assume that it was a form of adenoma, from the start malignant, although it could not histologically be differentiated from a benign innocent tumor.

4.—The case of **aneurysm** was that of a man of 47 who had been an alcoholic and was syphilitic. He had dyspnea, and, just before admission, a severe chill with intense pain in his left chest. The man was cyanotic, of anxious expression, and had a hacking cough. The left side of the chest showed the evidence of pleural effusion. The heart reached over to the right mammillary line, but the left border could not be outlined. There was a slight murmur, and the second pulmonary sound was accentuated. The liver was en-

larged. The left pleural cavity was punctured, and fluid was withdrawn. This happened upon a second puncture, and although the patient was somewhat relieved, he soon went into collapse and died. The difficulty in diagnosis had been very great, as there was no real evidence of aneurysm until the bloody fluid was withdrawn from the pleura. This was explained by the peculiar conditions found postmortem. The heart was but moderately enlarged, and had been greatly displaced to the right. The left pleural cavity contained a gallon of blood. The aorta presented an opening in its anterior wall, below the level of the left bronchus. This led into the aneurysmal sac, which was about the size of an egg. It opened into the posterior mediastinum and here was a second false sac lined by the pericardium and the right and left mediastinum walls. The previously-formed adhesions had shut off the cavities. Although the esophagus was the only organ which could have been pressed upon by this tumor, there was no history of any dysphagia.

5.—McCaskey mentions as the most important **neurasthenic symptoms with gastric or intestinal disease**, various kinds of pains throughout the body dependent upon toxemia and general failure of nutrition; headache, which may be of typical migrainous character; paraesthesiæ and pruritus; vertigo, which may be paroxysmal; muscular weakness; and a general mental state tending toward marked depression. He insists that while a large number of cases of neurasthenia have disease of the stomach or intestine, as a simple neurasthenic manifestation at first, this is apt to lead on to distinctly organic changes in the stomach and bowels. He mentions a number of cases showing marked neurasthenic conditions which were cured by treatment of the stomach or the intestines. He particularly insists upon the importance of inspecting the stools, and of washing out the bowel and inspecting the wash-water.

6.—Crawford first discusses the control of **hemorrhage** in removing growths from the broad ligaments, and calls attention to the anatomy of the pelvic organs. The strategic point to Crawford's mind is the preliminary shutting off of the blood-supply before beginning further operation. Ligation of the uterine arteries is advised to attain this. The other part of this preliminary step is tying off the uterine feeders at the superior angle of the uterus. This procedure possesses special advantages in the removal of pyosalpinx or hematoma with thickened walls.

## Medical News.

September 10, 1898. [Vol. lxxii, No. 11].

1. The Post Operative Use of Intravenous Saline Injections. EUGENE BOISE.
2. Surgery of the Pneumatic Sinuses of the Skull in Relation to Ophthalmic and Aural Surgery. ROBERT SATTLER.
3. The Etiology of Yellow Fever. FREDERICK G. NOVY.

1. The **intravenous use of saline solutions** in (1) post-operative hemorrhage, (2) shock, (3) sepsis, (4) uremia and (5) intestinal obstruction is indicated. The intravenous route is to be preferred, first, because it is not more dangerous than by other ways; second, because it is more speedy; third, because it directly stimulates the cardiac and arterial ganglia; and, fourth, because the effect on the heart-muscle is more immediate and pronounced. In all cases the apparatus should be as simple as possible. The part introduced into the vein should be of glass and narrow at the point, the air expelled from the tube, and the glass tube inserted while fluid is escaping.

2.—Sattler gives a brief synopsis of personal experience with practical **surgery of the pneumatic spaces of the skull**, particularly those cases within the scope of ophthalmic and aural surgery. The lesions of the pneumatic spaces of the frontal, ethmoidal and sphenoidal bones are disclosed by the almost uniform presence of characteristic symptoms on the part of the walls of the orbit, its margins or contents, and even if these uncommon cases have not attracted more general attention they, nevertheless, belong to the province of ophthalmic surgery. Unfortunately these cases have not received, even from the majority of ophthalmic surgeons, the attention they deserve and only in those unmistakable examples of disease in which these sinuses become the retention-cavities for pus, larvae, microorganisms, or tumors are the indications for rational surgery looked



upon as imperative. Chronic lesions are so often obscure that exploratory incision only discloses the lesion. The external opening is preferable to other methods of finding the extranasal opening of the infundibulum. The ethmoidal and sphenoidal sinuses are not so accessible, but the external method is preferable to reach these cavities. Chisel and mallet, using the inner orbital wall as a guide, in a slightly downward direction, are used by Sattler, to reach the anterior and middle ethmoidal cells.

3.—Novy conducted his investigations upon Sanarelli's bacillus and that of Havelburg partly in the Pasteur Institute and partly at Ann Arbor. He prefaces the paper by saying that the two organisms are certainly not identical, and that as to their relations to yellow fever, his investigations were unfavorable to both. The differences between the two are, that the bacillus of Havelburg is the thicker; it has no real motion, though it shows Brownian motion, while Sanarelli's is very motile; Havelburg's bacillus has no flagella, while that of Sanarelli has, and these are often very large; that in cultures of the bacillus of Havelburg the indol reaction is marked, while those of Sanarelli produce but a trace; Havelburg's bacillus coagulates milk, while that of Sanarelli does not. He describes the appearances of their cultures, and further states that they are well distinguished by the use of Stoddart's or His's medium. In the first the Sanarelli bacillus diffuses over the entire medium, while that of Havelburg never diffuses. Much the same result is seen with His's medium. With Elsner's medium, the bacillus of Sanarelli did not grow, while that of Havelburg did. Havelburg's bacillus grows abundantly with bouillon, and forms a heavy scum, while that of Sanarelli will scarcely grow in acid bouillon. The injection of the two bacilli into animals causes markedly different results. Havelburg's bacillus killed in 24 hours, while Sanarelli's caused death only after 5 to 7 days. Novy then compared the Havelburg bacillus with the colon bacillus, and says that the differences given by Havelburg are entirely insufficient; that their cultures on potato are really very similar, and that the bacillus of Havelburg is not more virulent than certain colon-bacilli, and he decides that this bacillus is a non-motile colon-bacillus which has perhaps been somewhat modified by contact with the HCl of the gastric juice, and that it is in no sense the cause of yellow fever.

### Boston Medical and Surgical Journal.

September 8, 1898. [Vol. cxxxix, No. 8.]

1. Talks on the History of Medicine. No. III.—Anatomy: Vesalius. DAVID HUNT.
2. Septic Peritonitis and its Surgical Treatment, Including Reports of Three Successful and Four Fatal Cases. FARRAR COBB.
3. A Case of Acute General Streptococcus Infection of the Peritoneum Following a Facial Erysipelas; Laparotomy and Extensive Washing of the Abdominal Cavity; Recovery. MAURICE H. RICHARDSON.
4. A Report of Ten Operations for General Peritonitis with Two Recoveries. F. B. LUND.
5. A Case of General Peritonitis; Operation, Recovery. WILLIAM T. SMITH.

2.—Cobb endeavors to indicate in what class of cases intervention is contraindicated in peritonitis. Peritonitis, he states, is always caused by bacterial invasion. Our present culture-methods are imperfect when causative organisms cannot be isolated, while overwhelming infection results occasionally in death before usual signs of peritonitis are evident. The bacillus pyocyaneus is not infrequently found with other bacteria. Gonococci alone are incapable of causing peritonitis. The keynote of treatment of general septic peritonitis must be the relief of the peritoneum and obstructed lymph-channels. Statistical study of operative treatment of peritonitis is almost worthless because of confusion in reported cases and of lack of evidence as to kind of general peritonitis found. Cobb gives 7 cases of general septic peritonitis, 4 having died and 3 recovered. He concludes that radical and thorough attempts at removal of the infection will be borne astonishingly well, subcutaneous salt-solution during and after operation being of great value. Operation is never more than a forlorn hope in septic peritonitis.

3.—Richardson thinks possible a classification in peritonitis, bacteriologically. It seems established that of the general peritoneal infections dependent upon appendicitis, those in which the colon-bacillus predominates are attended by a comparatively low temperature; those caused by the streptococcus pyogenes by a high one; that a mixed infection may show a high or a low temperature, according to the predominance of one or the other of these germs; that the progress of a streptococcus infection is rapidly fatal, of a staphylococcus comparatively slow, of a colon bacillus sometimes rapid and fatal and sometimes mild and favorable. As a rule, however, the milder the germ, the milder and more favorable the case. Recovery under any method of treatment is rather a matter of hope than of expectation. Erysipelas was the cause of infection in Richardson's case, the germ doubtless having been introduced through the blood, the channel being the menstrual flow and the Fallopian tube. The report of the pathologist is given.

4.—Lund calls attention to the lowering of vitality from absorption of toxins in general peritonitis, except in very early stages. Without primary disinfection and drainage, hope for recovery is vain, and even at the risk of shock it is worth the attempt to secure. Seven out of the 10 cases reported occurred in children.

5.—Operation on a case of general peritonitis performed in a farm-house with recovery is detailed by W. T. Smith. The temperature was normal 3 days after operation.

### Journal of the American Medical Association.

September 10, 1898. [Vol. xxxi, No. 11.]

1. The Surgical Treatment of Uterine Myomata. HENRY O. MARCY.
2. The Indications for Plastic Surgery upon the Cervix Uteri. Tracheloplasty with a New Method of Operating. H. P. NEWMAN.
3. Anterior Colpotomy with Removal of One Ovary and Both Tubes—Vaginal Fixation. WILLIAM N. SWIFT.
4. Some of the Causes of Nervous Disturbances. JOSEPH EASTMAN.
5. Nervous and Mental Diseases Following Pelvic Operations. HAROLD N. MOYER.
6. A Consideration of Some of the Remote Symptoms and Complications of a Pelvic Disease. H. D. NILES.
7. Pelvic Inflammatory Diseases. A. H. CORDIER.
8. Sigmoid Surgery from the Intra-abdominal and Intrapelvic Standpoint. J. G. CARPENTER.
9. The Treatment of Septic Peritonitis by Irrigation. T. J. MAXWELL.
10. The Medical Treatment of Appendicitis. ELMER LEE.
11. Colpoperineorrhaphy and the Structures Involved. BYRON ROBINSON.
12. The Invasion of Porto Rico from a Medical Standpoint. N. SENN.
13. Typhoid Fever in the Porto Rican Campaign. N. SENN.

1.—See this JOURNAL, Vol. I, p. 1146.

2.—“ “ “ “ I, p. 1145.

3.—Swift describes the operation for removal of one ovary and both tubes with fixation of the uterus, the fixation-sutures on each side passing through the peritoneum and vaginal mucous membrane. The retention of the left ovary is an interesting point, the mental effect being marked. Swift is convinced that leaving this ovary was beneficial, the well-being and happiness of the woman being increased.

4.—See this JOURNAL, Vol. I, p. 1093.

5.—See this JOURNAL, Vol. I, p. 1093.

6.—See this JOURNAL, Vol. I, p. 1146.

7.—Cordier touches on mooted points in the treatment of pelvic inflammatory diseases. The limit and character of the pathology should guide the character and extent of surgical procedure. A cancerous uterus should, as a rule, be removed, with tubes and ovaries. So with a tuberculous uterus. The vaginal-route operation is not easy nor is operation as quickly performed as by suprapubic incision. Pus is not always found in tubes and ovaries, even when removal is demanded. Prolapsed uterus is best treated by vaginal hysterectomy, the appendages being inflamed. In true pelvic abscess, removal of the uterus is unwarrantable. It is not sound argument to advance that a woman with vaginal operation can be up and about in 10 days.



8.—Carpenter shows that hemorrhage of diseases of the sigmoid has heretofore been mostly confined to malignant growths or benign neoplasms, possible stricture, ulceration, or fecal impaction. Divulsion of the anus is primarily a nerve-stretching and secondarily a muscle-operation. Volvulus of the sigmoid is difficult to diagnose. "The symptoms of volvulus of sigmoid are former constipation, difficult to relieve, attended with distention and tenderness of abdomen or alternating with diarrhea, or following free purgation; severe exercise; indigestible food in large amounts; age of patient as a rule about 20 years; more often in the male than female; palpation may outline the volvulus; vomiting is often a prominent symptom, accumulation of fluid in abdominal cavity at a late stage of the strangulation; failure of bowels to act from purgatives or rectal enemata, or inflation with air; inspection with Carpenter's sigmoidoscopy. Rectal enemata, even with patient in the Carpenter posture, will generally return if the hydrostatic pressure from the rectal side of volvulus does not distend and cure it. By sounding, air-inflation or hydrostatic pressure the sigmoid may become lacerated on its perineal side, torn, and leakage into the peritoneal cavity result, with infection of the comma bacillus communis and other microorganisms and toxins, and rapidly produce septic peritonitis." Stricture of the sigmoid demands life-saving surgery. The frequency with which sigmoid is complicated in tubal and ovarian diseases is commented upon, and some astonishing instances of adhesions are cited. To repair intestinal lacerations takes time, patience, perseverance, strong will-power and fortitude.

9.—Maxwell describes 2 cases of **septic peritonitis** treated by irrigation with hot (110° F.) salt-solution, poured into the abdominal cavity. In both cases temperature and pulse-rate rapidly fell. Free evacuations from the bowel ensued, vomiting ceased and thirst disappeared. An opening in the abdominal wall sufficiently large to admit the hand must be made, the inserted fingers detaching coagulated lymph by gentle friction, while a stream of the irrigating fluid is kept constantly circulating.

10.—See this JOURNAL, Vol. I, p. 1143.

11.—Robinson regards the muscles and fascias, in **colpoperineorrhaphy** as most important, and especially looks upon the levator ani fascias, superior and inferior, as involved in successful operations. He considers these muscles and fascias in detail. Few agree as to the insertion of the levator ani. Robinson says the origin and insertion vary as to the distinct muscular loops, as to the tendinous raphe and the precise relation to the vaginal wall. The levator ani fascia superior is the real visceral support. In many subjects it is membranous. The levator ani is stronger than the diaphragm, but its strength varies in different subjects; and it is analogous to the buccinator. The internal pelvic fascia is regarded in detail. (To be continued.)

12.—Senn states that the war in Porto Rico was conducted upon the most humane principles. Col. Greenleaf, chief surgeon of the army in the field, gave directions and advice before the army left Tampa, but they were not heeded and medical officers found themselves powerless to combat diseases owing to want of cooperation of General Shafter. The expedition was well supplied with medicines, hospital-stores and medical officers. The proportion of killed to wounded is smaller than in the Cuban war, as well as the number of seriously injured. Concerning typhoid fever in Porto Rico, there have been 250 cases at Ponce, 145 at Guayama. In most every instance, the disease had been contracted before departure from the United States.

13.—Typhoid fever was mild in character among the soldiers in the Porto Rico campaign, as shown by Senn, who investigates all the fever cases in the hospitals, 90% were genuine cases, and the infection was traced to the United States. The first symptoms appeared before leaving the U. S. in 8; on transports, 86, within 10 days after landing, 68, out of a total of 162.

As regards the place of infection the cases came from: Chickamauga, 90; Tampa, 48; Camp Alger, 23; Newport News, 1; total, 162.

In tabulating the symptoms the following facts appear:

Tongue.	Dry, coated, red at tip and margin.	10.
	Coated, white fur.	21.
	Coated, pale, flabby.	17.
	Coated, red tip and margin.	56.

Tongue.	Dry, brown and fissured.	20.
	Moist, glazed, red.	13.
	Sordes, lips and teeth.	12.
	Tympanites.	20.
Abdomen.	Tenderness and gurgling right iliac fossa.	71.
	Rose spots.	37.
	Spleen enlarged.	141.
	Spleen markedly enlarged.	20.
Epistaxis during prodromal stage.		28.
Diarrhea.		87.
Intestinal hemorrhage.		2.
Bronchitis.		20.
Delirium.		1.

The absence of delirium in all cases but one is remarkable. Nearly 200 of the more grave cases were transferred to the hospital-ship *Relief*, which sailed from Ponce for New York August 15th. Of this number 14 died en route and 12 were buried at sea. In 2 of these cases death resulted from complications. In 1 case gangrene of the penis, which assumed a progressive form, was the direct cause of death. In 1 case a fatal termination threatened during the third week of the disease from laryngitis and lobular pneumonia. A metastatic abscess of the submaxillary gland, which developed in one case, deserves mention as a rare complication of typhoid fever.

### Bulletin of the Johns Hopkins Hospital.

July, 1898. [Vol. ix, No. 88.]

1. Remarks at the Presentation of the Candidates for the Degree of Doctor of Medicine at the Commencement of the Johns Hopkins University. WM. H. WELCH.
2. Conclusions from Clinical and Bacteriological Experiments with Holocain. ROBERT L. RANDOLPH.
3. Observations on the Epithelium of the Urinary Bladder in Man. PERCY M. DAWSON.
4. A Case of Sarcoma of the Esophagus. L. E. LIVINGOOD.
5. Papilloma of the Fallopian Tube. J. G. CLARK.
6. The Histopathology of Herpes Iris, with Reports of Two Cases. LUCIUS CROCKER PARDEE.

2.—**Holocain** has proved itself to have sufficiently effective anesthetic properties to warrant its employment in operations upon the eye. It has been noted that following its use there is no drying of the cornea or desiccation of the epithelium, and no dilatation of the pupil, two properties that recommend it for office-use in the removal of foreign bodies. A solution of holocain in the strength employed in ophthalmic practice has been proved by experimentation to have distinct germicidal properties.

3.—A patient who was using injections of permanganate of potassium solution, which, contrary to instructions, he retained for a long time, began to have pain in the back and passed smoky urine containing several flakes, which proved to be epithelium shed from the mucous membrane of the bladder. When the flakes were carefully studied there were found, among other features, a large number of giant-cells. Whether these are normal to the bladder or were the result of irritation by the permanganate cannot be decided.

4.—Livingood reports a **spindle-cell sarcoma of the esophagus**, in a man, aged 55. The tumor had formed an adhesion to the right lung with a cavity in which it communicated. But few cases of sarcoma of the esophagus are on record, and there does not seem to be any marked clinical difference between sarcoma and carcinoma of the gullet.

5.—According to Clark, only 6 cases of simple, non-malignant **papilloma of the oviduct** have been reported up to the present time. Doran, who first called attention to the subject, inclined to the theory that this growth is not so much a neoplasm as a simple hyperplastic process, produced by chronic inflammation. Clark reports a case from the pathologic-anatomic laboratory of Chiari in Prague.

6.—The histopathology of **herpes iris**, which Pardee was able to study in two cases, is summed up as follows: There is an acute exudative inflammation of the upper half of the corium, with dilatation of the superficial network of blood-vessels and lymphatics (the latter being slight), accompanied by a considerable emigration of polynuclear leukocytes, which in one case became almost immediately disintegrated after leaving the capillaries of the papillae. The latter, as the process extended, became practically filled with nuclear detritus, and by the confluence of neighboring papillae similarly affected the vesicle was formed, the entire epidermis



being lifted from the papillary body. The contents of the vesicles consisted of coagulated serum, polynuclear and mononuclear leukocytes, occasional detached epithelial cells, strands of fibrin, and in one case much nuclear detritus. Infarcts of bloodvessels and hemorrhages were not noted. The sweat-apparatus, hair-follicles, and sebaceous glands were unaffected.

### Journal of Nervous and Mental Disease.

July, 1898. [Vol. 25, No. 7]

1. On Myotonia. GEORGE W. JACOBY.
2. A Case of Amaurotic Family Idiocy with Autopsy. FREDERICK PETERSON.
3. The Pathological Anatomy of "A Fatal Disease of Infancy, with Symmetrical Changes in the Region of the Yellow Spot" (Warren Tay), "Amaurotic Family Idiocy" (Sachs), "Infantile Cerebral Degeneration" (Kingdon and Russell). WILLIAM HIRSCH.
4. Pathological Report on the Eyes of Dr. Hirsch's Patient with Amaurotic Family Idiocy. WARD A. HOLDEN.

1.—Jacoby discusses the various forms of **myotonia**, and contends that all cases must not be included in the congenital form, which was originally described by Thomsen. A typical acquired case is reported as occurring in a man of 28, who had been somewhat delicate until his 18th year, when he had an attack of typhoid fever, during convalescence he had severe painless cramps in the calves of his legs, which gradually spread until they involved nearly all of the voluntary muscles, which increased in size and became hard. There was no alteration of the knee-jerks, except that they soon became exhausted, and sensory disturbances were absent. There was pronounced myotonia, which affected even the eyelids, the intrinsic muscles of the tongue and the masseters, as well as the extremities. There was also some involvement of the muscles of the thorax, so that after a full inspiration, it was necessary for the man to wait several seconds before he could empty his chest. The mechanical excitability of the nerves was not increased, but that of the muscles was greatly so, so that after strong blows, marked mounds formed. The electric excitability of the nerves was normal. The muscular contractions were slow. With a galvanic current, contractions were obtained with a weaker current than normal. The rhythmic contraction-waves, described by Erb, were present. Portions of the quadriceps were examined, and presented two different pictures. In one, the appearance was practically normal, excepting for some interstitial thickening and some round-cell infiltration, while in the other, the fibers were rounded and very much larger than normal; but the difference between these two specimens seemed to be due to the fact that the one which appeared abnormal had not been kept on the stretch when hardened, and had contracted, so that Jacoby considers this important evidence against the pathology of this disease, which had been previously advanced by himself and others, as it seems that the rounding off and enlargement of the muscle-fibers is probably not a pathologic lesion, but simply an evidence of the abnormal contractility of the muscles. The absence of heredity in this case, and the occurrence after an infectious disease make it necessary to give the condition some other name than congenital myotonia. In another case myotonia came on at the twenty sixth year and developed in all the muscles of the upper extremities when the patient attempted any forced movements. In this case, the symptoms appeared after injury and over-strain. To such cases, Jacoby would apply the term acquired myotonia, and to those cases in which there is only toxic spasm with active movements, and no other myotonic signs, he would give the name intention-spasm. A case of this nature strongly resembling myotonia, and perhaps well called transitory myotonia, was reported some years ago. A cigar-maker exhibited transitory myotonic spasm in the fingers on attempting to work, which interfered with his occupation, but the myotonic reaction was not present. The occurrence of the affection in one case after an attack of typhoid fever suggests that infectious diseases may be important in the etiology, and Jacoby believes that it is permissible to look upon the disease as an embryonal developmental disorder of the nerve-cells, which possess diminished resistance to toxic influences. The in-

toxications are then the direct producers of the disease, but only in predisposed individuals.

2.—Peterson reports the case of a child, 3 months of age when first seen, that died when 7½ months old. The family-history was unimportant. The child had seemed as bright as other children, but cried a great deal, and frequently pressed her hands into her eyes. Death occurred from gastro-enteritis. On postmortem examination the brain presented evidences of asymmetry and defective development. Microscopic examination disclosed, as the most striking feature, a marked deficiency in cells in the nervous system, with some deficiency in chromatin-substance. This was seen in the cortex of the brain, in the cervical cord, to a lesser degree in the lumbar cord; in the nuclei, and markedly in the corpora quadrigemina. The nerve-trunks and fiber-tracts were stained, and studied, and these seemed to show no distinct abnormalities. The most striking changes then were the great deficiency in cells, and the irregular distribution of the cells in the cortex (nearly all the vertical columns of cells in the cortex being absent, and the separation into longitudinal rows being deficient). This was most marked in the optic centers and ganglia. The examination of the eyes was unsatisfactory.

3.—Hirsch gives the main features of the disease that he discusses. The parents are usually strong and healthy, and without any distinct history of disease. They are usually eastern Jews. Several children are always affected, though they are born in good health, and usually appear to be normal until from 3 to 5 months of age. The muscles then become flabby; the child cannot sit up, or hold up its head. The extremities become rigid, or at times flaccid. Mental development is arrested, and the child is dull. Eyesight grows progressively impaired until there is complete blindness. In most cases there is hyperacuity, and, in some cases, hypersensitiveness to touch. The most peculiar change is in the retina, and consists in the development of a whitish opacity, with a cherry-red spot in the center, situated near the yellow spot. The disc finally atrophies. Hirsch reports a case presenting typical symptoms and terminating fatally at the age of 22 months. The autopsy disclosed slight abnormalities in the fissures of the brain. Microscopically, the chief evidence of disease consisted in enlargement of the ganglion-cells, with loss of the dendrites, while those remaining appeared broken off. The nucleus was displaced to the periphery, and surrounded by a dark zone, consisting of broken-up Nissl bodies, and about this, there was a very pale area in the cells. These changes were seen in both the anterior and posterior horns of the spinal cord, in the basal ganglia of the brain, in the cortex, and in the retina. The optic tract and chiasm showed complete degeneration. Hirsch believes that both the clinical and anatomic facts speak against the theory of arrested development, and ophthalmoscopic changes usually appear some months after birth. The total absence of changes in the bloodvessels excludes inflammatory processes, and the only remaining theory that has some degree of probability is that it is toxic; and such a theory corresponds with the picture seen in the sections. The origin of the poison is necessarily doubtful, but it is suggested that it is within the range of possibility that it comes from the mother's milk. Hirsch's findings in his sections differ from those of other observers in the widespread changes; others have found changes in the cortex alone.

4.—Holden reports the ocular changes in the case reported by Hirsch. These consisted chiefly in the vesicular layer of the retina, similar to those that have been described as occurring in the central nervous system. The swelling of the cells would be sufficient to occasion the ophthalmoscopic picture of the disease, as it is only at the macula lutea that the vesicular layer consists of more than one layer of ganglion-cells, and when the 6 or 7 layers that are present here become enlarged and opaque, they will produce the peculiar whitish opacity seen in these cases.

In the discussion of the foregoing two papers Sachs said that he did not believe that the disease could be toxic, as it usually begins at a definite period of life, and involves several members of the family, leaving others exempt; and against the theory of infections of the mother's milk, he cited his own first two cases in which the patients were raised on mother's milk. Koller believed that there were changes in vision very early in the child's life, perhaps even at birth,



judging from their peculiar behavior. Spiller reported a case that exhibited a condition bearing some resemblance to amaurotic family idiocy, but it was more like the pseudo-sclerosis of Westphal and Strümpell. It occurred in a child that had been well until he began school, when he seemed intellectually feeble, and exhibited slowness of gait and speech. Spastic symptoms developed and became marked, and there were exaggerated reflexes, intention-tremor, scanning speech, and, finally, loss of speech. There were also incoordination, muscular contractures, marked atrophy, and finally entire paralysis. Bilateral optic atrophy was seen at 13 years of age, 2 years before the child's death, but this may have existed earlier. There was distinct degeneration of the pyramidal tracts, with little change in the cells. The brain could not be examined.

### Münchener medicinische Wochenschrift.

July 12, 1898. [45. Jahrg., No. 28.]

1. Injuries of the Abdomen by Blunt Instruments. ADOLPH SCHMITT.
2. Fatal Fat-Embolism after Breaking up Contractures. ERWIN PAYR.
3. Cases in Lung-Surgery. ALFRED RIEDEL.
4. A Contribution to Lysol-Poisoning. G. KLUGE.
5. The Disfranchisement of Persons Affected with Nervous Diseases, According to the "Bürgerlichen Gesetzbuche" (Citizens' Legal Manual). GUSTAV ASCHAFENBURG.

1.—Schmitt has had an unusual amount of experience with **severe contusions of the abdomen**, having during the last year observed 7 cases with intestinal perforation. A review of the literature of the subject shows that with injuries from this source perforation is much more likely to follow if force be exerted upon a circumscribed than upon a diffuse area. From a mechanical point of view perforation may be caused in any one of three ways, either by pressure of the intestine directly upon the spinal cord, or by the sudden increase of tension, thereby rupturing the intestine, or at the mesenteric attachment. In some cases the trauma only produces contusions of the tissue, which in turn are followed by gangrene, and eventually by perforation. The seat of the perforation is in the majority of cases in the small intestine, and successively in the order of frequency come the large intestine, the stomach, and finally the duodenum. In some cases there is but a single perforation and its shape is usually rounded; occasionally, however, it may be oval in form, or a mere linear tear. Only in exceptional cases is the perforation in the intestine closed by adhesion to an adjacent knuckle of bowel. The physical signs that usually present themselves are tympany in the epigastrium from the accumulation of gas in that region, and an area of dulness in the lower portion of the bowel, from the escape of intestinal contents.

2.—While many cases of **death from fat-embolism** have been observed in the sequence of various fractures only five fatal cases following *brisement forcé* have been recorded, including the one here reported. In this instance death followed within 24 hours after forcible extension of the knee-joint, under ether, for preexisting contracture. The opinions of various observers as to the cause of death after fat-embolism differ widely. Payr contributes to this subject several ideas formulated from a review of hitherto reported cases. He has observed that following three cases of arthrectomy of the knee-joint there has been recorded an unusual degree of cardiac weakness with rapid pulse, associated with lipuria. The autopsy reports of the fatal cases following *brisement forcé*, show that in two the condition of status thymicus has been found, and the question arises whether there is any connection between death following fat-embolism and this condition. As yet too few cases have been recorded to allow of the expression of a positive opinion. It is suggested that perhaps some of the fatal cases that hitherto have been attributed to fat-embolism may on the contrary be due to the well-known dangers attending narcosis; in the presence of the condition of so-called status lymphaticus. It is well known that a certain amount of fat is taken into the system through the torn veins during opera-

tions upon bone; it may be that in the presence of the status thymicus the absorption of fat may be increased, and the danger from fat-embolism in such cases thus increased.

3.—Riedel reports 2 cases of **successful operation for abscess of the lung**. In one case the clinical signs were those of an empyema, but at the operation it was found that the pleural cavity was free from pus, and an exploration of the lung-tissue discovered a circumscribed abscess. The operations were attended with a considerable hemorrhage, but this was easily controlled by packing.

4.—To the 13 cases of **lysol-poisoning** recorded, Kluge adds one of his own. A woman, 35 years old, suffering from typhoid fever received a spoonful (about 10 grains) of lysol by mistake. The symptoms, as in most of the reported cases, were of two kinds—local and general. The former consisted of superficial necroses of a brownish gray color and painful, thus differing from those of carbolic acid, which are white and painless. The general symptoms were more serious, and consisted in rapidly occurring coma and profound cardiac weakness—thus corresponding with those of carbolic acid. The best remedy consists in thorough washing out of the stomach without delay. Sodium sulphate, which was used, is believed to be irritating to the stomach and capable of prolonging the gastric catarrh that is present.

5.—We merely give the more important laws pertaining to the **rights of the insane**, as stated by Aschaffenburg, and omit his comments: (1) An individual is of age at the completion of the 21st year. (2) One who is entrusted, in conformity with the law, with the supervision of a person that by reason of his mental state requires it, is compelled to make good the damage that this person illegally inflicts upon others. This responsibility does not exist if he has properly performed his duty as keeper or when the damage has been done in spite of adequate supervision. (3) One is incompetent to transact business [*non sui juris*] who is in a state of diseased mental action precluding the free exercise of his will, provided this state is not a transient one. (4) The declaration of one *non sui juris* is not valid. Any declaration, furthermore, is invalid that is made in a state of unconsciousness, or temporary disturbance of the mind. (5) Any one may be deprived of his civil rights, who, in consequence of mental disease or mental weakness, cannot attend to his affairs. (6) One who, by reason of mental weakness, has been declared *non sui juris*, is on a level with a minor who has completed the seventh year. (7) To make a declaration by which he not merely secures a legal advantage, a minor must have the consent of his lawful representative. (8) A contract made by a minor without the sanction of his lawful representative is considered active if the minor has effected the contract with means given him for the purpose by the guardian or, with the latter's consent, by a third party. (9) If the guardian empowers the minor, with the consent of the Orphans' Court, to conduct an independent business, then the minor is competent to transact any legal business that his occupation may entail. (10) If the guardian authorizes the minor to enter service or employment the minor is competent to enter into all legal relations that the entrance into or quitting of the service or employment or the performance of the duties arising out of the relation involves.

July 19, 1898. [45. Jahrg., No. 29.]

1. The Passage of Fragments of Bone through the Urinary Passages. G. B. SCHMIDT.
2. Concerning a Pathogenic Streptothrix Isolated from the Sputum. W. RULLMANN.
3. The Etiology of Pseudocroup. G. ZIMMERMANN.
4. The Relation between Affections of the Nose and Eye. SEIFERT.
5. Concerning Injuries of the Abdomen by Blunt Instruments. ADOLF SCHMITT.

1.—Schmidt reports the case of a man, 47 years old, who had been suffering from furunculosis, especially in the region of the pubic hair, with tumefaction and suppuration of the inguinal glands. Difficulty in urination arose and after the introduction of a metal catheter a quantity of pus was evacuated from the urethra. Several months later, a urethral discharge continuing, micturition again became difficult and finally ceased entirely. External urethrotomy was done and



a piece of bone—1.3 cm. long and 3 mm. wide—was removed. The explanation is suggested that the furunculosis had caused an osteomyelitis or periostitis, with the formation of a sequestrum. In a second patient, a man 21 years old, a piece of bone, 4x3.5x1.5 mm., was evacuated spontaneously through the urethra, with severe pain during urination. The cause seemed to be a tuberculous process on the inner side of the pelvis, which formed an abscess that ruptured into the bladder and freed the sequestrum. The first case is unique in being the only one in which the sequestrum entered the urethra directly; in all recorded instances it passed first into the bladder after becoming the nucleus of a phosphatic stone.

2.—From the sputum of a woman having a sacculated focus at the root of the right lung, Rullmann isolated a pathogenic *streptothrix*.

3.—Zimmermann believes that **spasmodic croup** is probably connected with the presence of adenoid vegetations in the nasopharynx. Mucus from the latter at night readily passes the entrance into the larynx and sets up spasm of the glottis. Violent cough relieves the closure, but only temporarily; with the cessation of the cough, the closure returns. Finally, when the carbonic-acid intoxication causes the contraction of the ventricular bands to relax, free respiration is restored. In six cases of pseudo-croup with adenoid vegetations, the croup ceased after operation. Only in one case was there a brief relapse 8 days after the operation.

5.—Continuing his remarks on **severe contusions of the abdomen**, Schmitt speaks of the marked variability in the manifestations of the subjective or objective symptoms; in some cases the patient presents immediately after the injury, no serious symptom, while in others shock may develop at once. The early diagnosis of severe contusions or lacerations of the intestinal wall can rarely be positively made; in most cases it is a matter of conjecture, as the characteristic symptoms are frequently absent. To be sure it is not difficult to make a diagnosis of intraabdominal hemorrhage, which, in addition to the signs of shock, is made manifest by the rapidly developing area of dullness in the abdominal region. Of much greater difficulty is it to recognize a perforation of the intestine, occurring simultaneously with the injury; under such conditions it has not infrequently been observed that the characteristic symptoms are altogether absent, thus rendering an early diagnosis of intestinal perforation almost impossible. The plan of Moty, that of encouraging the patient to drink water, is dangerous, as are the methods recommended by Senn and Mikulicz, of inflation of the intestine and exploratory paracentesis of the abdominal cavity. In Schmitt's experience the symptom most to be depended upon is tenderness, sharply circumscribed, localized, and greatly aggravated by direct pressure. Added to this, some reliance may be placed upon the development of a circumscribed area of tympanites, demonstrable almost immediately after the injury. This sign is of value only if the examination be made soon after the injury occurs. These, coupled with the other symptoms, will at best allow of only a probable diagnosis, that is in the early stages. Of course, when characteristic symptoms of intestinal perforation are fully developed the diagnosis is not difficult. The chances of recovery are then slight; the prognosis grave. Such being the case exploratory celiotomy, carried out perhaps under local anesthesia, is a perfectly justifiable procedure. The mortality, following the expectant plan (97.5%), is sufficiently high to condemn this mode of treatment; especially if it be compared with that of cases operated upon within the first 24 hours, (45%), or even that following operations after 24 hours have elapsed (66.6%). It is the surgeon's duty, therefore, in the great majority of abdominal contusions, attended with serious symptoms, with rapid onset, to at once explore the abdominal cavity.

July 26, 1898. [45. Jahrg., No. 30.]

1. The Therapeutics of Nutrition. G. TREUPEL.
2. Concerning Landry's Paralysis. WILHELM GOEBEL.
3. Directing Force for Medical Purposes. OTTO THILO.
4. What is the So-called Typical Inspiratory Stridor of Nursing Infants? GEORG AVELLIS.
5. Subcutaneous Injections of Iron. H. BIRGELEN.
6. A Contribution to Contusion-Pneumonia. ERNST BLOCH.

1.—Treupel maintains that subcutaneous nourishment has not proved satisfactory, and that not much can be expected from it at present; he believes that the most favorable outlook in the question of nutrition in difficult cases is in the study and use of albumin-preparations, made from either meat or milk. Preparations are needed that have a pleasant taste and are not expensive.

2.—Goebel gives a somewhat extensive review of the theories as to the causation of **Landry's paralysis**, from the time that the disease was first described, including that of Bernhardt that it is a form of intoxication, and that of Duchenne who would identify it with acute anterior poliomyelitis. He mentions the discovery by Baumgarten of anthrax-bacilli in one case, and some similar results by other observers, finally mentioning the view of Krewer that the disease is nothing more than the last stage of a chronic multiple neuritis, which has finally involved the spinal cord; thus once more reviving the theory that it is an infectious disease. (The paper is to be continued.)

3.—Thilo insists upon the value of his own apparatus for the determination of the **muscular power** of patients, and emphasizes the necessity for determining this in the small members, such as the fingers, as well as in the arms and legs.

4.—Avellis believes that the **inspiratory stridor of sucklings** may not be looked upon as a neurosis, but it is much more probably due to a constant adduction of the vocal bands, owing to bilateral paralysis. He reports 4 cases that resemble each other in the occurrence of stridor either at birth, or within 4 weeks afterward. The infants were not sick, but the stridor increased when they drank, or made rapid movements, and sometimes it became grave; it was not accompanied by eclamptic or tetanic spasms, and there were no actual paroxysms, but sometimes the condition increased gradually to a serious degree. Cough was entirely absent. Pressing the head backward sometimes increased the trouble. (The conclusions of the paper will follow.)

5.—After using **subcutaneous injections of iron**, in 4 cases, experimenting with both the citrate and the ammonio-citrate, Birgelen concludes that in one case there was more rapid improvement than is usually seen when other means of medication are employed. In 2 cases, however, the local irritation was so severe that the injections had soon to be stopped. The solutions should be kept aseptic, and should not be used when more than 8 days old. The paper includes a review of the previous work upon the subject.

6.—Bloch reports the case of a man, 41 years old, who fell, striking upon the lower portion of his right chest. On the next day, outspoken signs of pneumonia were present over the lower lobe of the right lung, with some evidence of pleurisy. The consolidation seemed complete. Crisis occurred on the fourth day, and was followed by exudative pleurisy. There was no initial chill. The possibility that the pneumonia was simply coincident with the trauma is considerable, because of the location of the disease, and its appearance immediately after the injury. There was probably no rupture of the lung-tissue, as there was no bloody sputum, and the pneumonia seemed to be due to compression of the lung, which caused moderate injury and gave opportunity for the invasion of the pneumococcus.

#### Berliner klinische Wochenschrift.

July 25, 1898. [35. Jahrg., No. 30.]

1. The Use of Tropon for Nourishing the Sick. D. FINKLER.
2. Investigations of Food-Preparations. C. POSNER.
3. The Differential Diagnosis Between Cystitis and Pyelitis. GEORG ROSENFELD.
4. Hereditary Unilateral Infantile Paralysis. S. PLACZEK.
5. Does Pepsin Possess an Antizymotic Power Opposed to Gastric Fermentations? LUDWIG ALDOR.

1.—**Tropon** is a fine albuminous powder, which Finkler has found useful in cases of acute gastric catarrh, ulcer and carcinoma of the stomach, acute and chronic appendicitis, etc. The substance leaves no solid residue, is readily absorbed, increases nutrition, and is devoid of any irritating properties. It is given in doses of 15, 30, or more grains a day, in bouillon, beer, etc., and causes a decided increase in weight. In cases of chronic relapsing appendicitis it is especially useful. A meat-diet in these cases forms too dry intestinal contents which decompose readily; a vegetable



diet, which as far as the mechanical action is concerned, would be useful, is too deficient in proteids. In such case tropon, together with puree of potatoes, etc., is indicated, and, combined with the cautious use of castor-oil in courses, has brought about cure in several cases that had been declared suitable for operation.

2.—The method of **color-analysis**, first introduced by Ehrlich for microscopic purposes, is also adapted for macroscopic differentiation. Schmidt has employed it in studying the sputum, and Posner suggests it for the examination of **artificial foods** and organic therapeutic preparations. The development of certain colors with the Ehrlich-Biondi tricolor mixture permits the assumption of the presence of albuminates, nucleins, and blood-pigment. The method consists in treating a small quantity of the substance (powder) to be examined with a little water and a few drops of the solution, agitating and then repeatedly washing to remove the uncombined stain. In the sediment it can readily be seen which and how much of the three colors has been fixed; microscopic examination can also be made. "Lichtgrün-Neutral-roth" can also be used, or neutralroth (neutral red) alone for proteids if differentiation is not desired. In the case of flour, color-analysis has long been in use in the employment of iodine to detect, qualitatively and quantitatively, the presence of starch. With regard to the vegetable albuminates, the nucleins and the pseudonucleins, knowledge is as yet so imperfect that care is necessary in the interpretation of color-reactions. If any kind of flour is treated with the stain, a large part remains unstained—that is the starch. The color of the other constituents varies with the kind of flour (wheat, rye, oats, bran, etc.) as well as its fineness. In the main, the color is greenish, and in the case of wheat mixed with red. The green color, as the microscope shows, is in the cells—in the membrane and contents—and it thus gives a clue to the proteid contents. Pure wheat-gluten yields a red color. The albumin content of artificial flours can also be determined with Biondi's stain. Aleuronat, an almost pure gluten, containing but little starch, yields a red color. Color-analysis enables also the determination of the relative quantities of free and combined albumin. In bran, *e.g.*, which has a high proteid value, and for that reason has been considered most nutritious, the albumins are contained in cells, and thus are not readily utilizable; and this explains the erroneousness of the popular belief in the nutritiousness of bran-bread. By treating preparations of flour, after staining the albumins with iodine and osmic acid, using in succession, osmic acid, neutral red, and iodine, very valuable pictures are produced. The soluble preparations of albumins for purposes of rendering them insoluble, are best treated with sublimate-alcohol before adding the stain. For the artificial preparations made from meat, and for meat albuminate and tropon (which contains 99% of albumin), the color-analysis is probably less valuable than microscopic study.

3.—The following axioms are laid down by Rosenfeld as governing the **differential diagnosis of cystitis and pyelitis**: (1) An alkaline reaction is not found with uncomplicated pyelitis; (2) the limit of albumin in the urine even with severest cystitis is 0.1% (maximum 0.15); (3) if nearly all the pus-corpuscles are crenated, the condition is pyelitis; (4) if the red corpuscles present are chemically or morphologically decomposed, provided the hemorrhage is only microscopic and there is no vesical tumor, pyelitis exists; (5) unless if small epithelial cells, not imbricated, favor the diagnosis of cystitis. The characteristic symptom for diagnosis is the relation of the albumin-content, which is from 2 to 2½ or even 3 times greater with pyelitis than with cystitis. A favorable word is spoken for Esbach's albuminometer.

4.—Placzek makes a contribution to the mooted question of the **heredity of infantile cerebral hemiplegia**, referring to two cases of the disease in brother and sister. In the second, one of cerebral monoplegia, the cause seemed to be a severe trauma of the mother's abdomen during pregnancy. Marie had previously reported an instance of the familial form of infantile cerebral palsy, and the existence of this form may be assumed as established. Placzek then describes two cases of infantile cerebral palsy in father and child. The former, at the age of 4, shortly after an attack of scarlet fever, was seized with left-sided cerebral palsy from which partial recovery took place. Epileptic convulsions

occurred until the fourteenth year. The child had a right-sided palsy that set in acutely with convulsions and fever, but there had not been, either before or afterward, any infectious disease. The type of this disease was indistinguishable from that of cases in which heredity was out of question. Placzek, nevertheless, thought that the affection was inherited from the father, but adds that he would not have maintained this view had he been able to find a positive cause, such as an infectious disease or an injury to the gravid womb.

5.—Aldor finds that **pepsin**, even in large quantities, has no inhibitory action on lactic-acid fermentation, and that whatever inhibition is exerted by native or artificial gastric juice, depends on the hydrochloric acid. Combined hydrochloric acid in large quantities also exerts such an action. Even on other forms of fermentation, pepsin has no hindering influence of any importance, at least none that can be compared with the antibacterial action of hydrochloric acid.

August 1, 1898. [35. Jahrg., No. 31.]

1. The Influence of Febrile Processes on Ganglion-Cells. O. JULIUSBURGER and E. MEYER.
2. Concerning Tetany with Dilatation of the Stomach. R. SIEVERS.
3. A Case of Tetanus with Unusual Cause. BANDISCH.
4. An Epidemic of Miliaria in Bremen and Vicinity. STEVESANDT and HÖCKE.
5. The Application of Tropon in Nourishing the Sick. D. FINKLER.

1.—Juliusburger and Meyer report the results of examinations in 9 cases in which death occurred after sepsis from phlegmons, tuberculosis, croupous pneumonia, and bronchitis; in all cases associated with fever. In only one case were there marked changes in the ganglion-cells, which appeared rounded and as if puffed out, and many had lost their processes. The cells appeared clear, having granules only at the periphery or about the nucleus. Some of them, not so much changed, showed distinct granules in their processes, and some cells were filled with fine granules irregularly scattered through the body. Some cells had lost their nuclei, and in others the nucleus was near the periphery. As there were no changes of importance in the other cases, it is believed that no special typical alterations take place in the ganglion-cells with increase in the body-temperature.

2.—Sievers reports 2 cases of fatal **tetany** in patients with **dilatation of the stomach** due to pyloric obstruction from the contraction of an old ulcer. The first patient, a girl 21 years of age, was brought into the hospital in a dying condition. The special symptoms of tetany were not investigated because of her condition, but she had tonic spasms in nearly all of the muscles, and the position of the hands, arms, and feet was typical. The second patient likewise was greatly prostrated upon admission, but she was quite rational. She had a spasm of tetany, and also Chvostek's and Erb's symptoms, but the Trousseau phenomenon could not be elicited owing to the constant muscular spasm. (The paper is to be continued.)

3.—Bandisch reports the case of a gardener who had carious teeth, and, as a result, frequently suffered from toothache which he treated by introducing splinters of wood, and boring about in the cavity until he caused blood to flow. He was first attacked with trismus, followed by opisthotonos, clonic spasms in the lower extremities, hyperesthesia, and increased reflexes. It was suspected that he was infected through a tooth, and this was extracted, and whether with this was removed the source of infection or not the man began, almost at once, to improve, and he recovered fully.

4.—Stevesandt and Hoche report an epidemic of **miliaria** that occurred in Bremen and in several neighboring towns, in which scarlet fever and measles, influenza, and some cases resembling röteln had been epidemic. The special epidemic reported affected children almost exclusively. In one town 38 children of 100 were affected, and in 21 instances more than one member of a family was attacked. There were 2 or 3 days of malaise, loss of appetite, and tendency to vomiting. On the third day an eruption appeared as a diffuse redness, most marked in the face; the red parts being covered profusely with white sudamina. There was slight difficulty in swallowing. The red eruption was not always present, but the miliaria were constant. The throat and the soft palate were usually brilliantly red. The



eruption vanished after a day or two, and was not followed by desquamation. These observations are in entire accord with those of Immermann, but the epidemic was peculiar in that the symptoms varied in the most remarkable degree; sometimes one, sometimes another, being the most outspoken. It was more widespread in the country-districts than in the city, and it soon disappeared after reaching the town. The etiology is not known, but there had been a great deal of rain and of fog preceding the epidemic, as has been the case with other epidemics reported. The contagiousness was perfectly evident, and the period of incubation extremely short. Among the most characteristic symptoms were a sensation of extreme constriction in the epigastrium, and respiratory oppression. These occurred with absolutely no abnormal signs in the lungs or in the heart. Other nervous symptoms were noticed—in one case delirium and hallucinations—and adults were often depressed after the attack. There was no albuminuria in any case, and the lungs were unaffected. There was often vomiting, and frequently constipation. The spleen was generally enlarged. The eruption varied, consisting sometimes of sudamina alone, sometimes of a redness of the skin that resembled the exanthem of scarlet fever or measles, but it was never hemorrhagic. There was no death. The redness of the throat, with the sudden pyrexia in the beginning, often caused the attack to resemble scarlet fever. The fever lasted 2 or 3 days, and was sometimes extremely high, but it then dropped to normal or subnormal. There was, occasionally, swelling of the joints.

5.—Finkler reports a number of cases, including severe enteritis, tuberculosis, typhoid fever, endocarditis, pleurisy, and general nutritive disturbances, such as anemia and albuminuria, in which he used **tropon** with good results, the patients taking the food-substance without objection and digesting it well, and their weight increasing under its use.

#### Wiener klinische Wochenschrift.

July 14, 1898. [11. Jahrg., No. 28.]

1. Some New Discoveries with Relation to the Bacillus of Tuberculosis and the Question of Prophylaxis and Cure of this Disease. J. FERRÁN.
2. The Question of Glaucoma in Lensless Eyes. CAMILLE HIRSCH.

1.—Ferrán maintains that the **tubercle-bacillus** can be transformed into another bacillus, and can assume saprophytic properties, and that in some respects it resembles the colon-bacillus. This last he believes to have shown for the colon-bacillus of cows, which, when obtained from the fresh dejecta, resists, after being stained, the decolorizing action of acids. The differences observed between acute and chronic tuberculosis in man do not seem to depend on differences of susceptibility, but on an as yet unknown difference in the behavior of Koch's bacillus. In his experimental studies Ferrán employed sputum and tuberculous lungs from cattle. The latter were preserved in open porcelain dishes, and occasionally underwent a peculiar fermentation, giving rise to a sperma-like odor. From such pieces he isolated a short, delicate, very motile bacillus, closely resembling the tubercle-bacillus. Several times sputa developed a similar sperma-odor, and the same bacillus could be isolated from it. The cultivation was made on liquid serum. On one occasion a bacterium very similar to the one described was obtained directly from the lung of a cow. The bacillus isolated from a lung smelling of sperma does not liquefy gelatin; and its colonies resemble those of bacillus coli, Eberth's bacillus, and the bacillus pyocyaneus; and on suitable media it produces endogenous spores. Its most striking peculiarity is its power to produce spermin in liquid media, in the abundant presence of air, wherefore Ferrán designates it *bacillus spermigenes*. When cultivated in dog's stomach-bouillon it develops an odor of yeast. So-called antituberculous serum promptly agglutinates and dissolves the bacillus. The tubercle-bacillus, after it had become accustomed to a saprophytic existence by growth in glucose, glycerin, and bouillon cultures, also produced spermin in one experiment; whence it is concluded that the two germs are identical. The identity is strengthened by Dubard's discovery that under certain circumstances (after growth in cold-blooded animals) the tubercle-bacillus is motile. The

virulence of the bacillus spermigenes is variable. By proper injection animals can be rendered tuberculous, and one finds in the tuberculous tissues the saprophytic bacillus transformed into the typical Koch's bacillus. This transformation seems to depend on a necrotizing action on the leukocytes. Immunization against the pathogenic action of the bacillus with filtered cultures failed, while it succeeded against the effects of the tubercle-bacillus. For this, however, it seemed necessary that a certain amount of tuberculous pus be present, *i. e.*, some of the tuberculous processes must break down before the prophylactic and curative effect can appear. Identical results were obtained with the toxins of the tubercle-bacillus transformed into a saprophyte and cultivated in liquid serum. Ferrán has also attempted to hyperimmunize animals in various ways, but without success. The sera obtained seemed, indeed, to increase the susceptibility of the animals injected. It was also found that the tuberculous cachexia was not produced by the toxins of the tubercle-bacillus, but by the solution of necrotic leukocytes. The toxins of the saprophytic tubercle-bacillus arrest tuberculous processes, but, as the product of the solution of the tubercles is toxic, the animals die of cachexia, without becoming tuberculous. Only the toxins of the bacillus spermigenes, cultivated in liquid serum, with free access of air, bring about cure, without producing scarcely any cachexia, and this different effect seems to lie in the presence in the serum of free spermin. Spermin, as Poehl has shown, exercises an oxidizing action. The toxin has proved useful in cases of early tuberculosis in man, but, as it has some toxic properties, its dosage must be carefully regulated. At the close of his long article, Ferrán reiterates his reasons for considering the bacillus spermigenes and the bacillus tuberculosis identical, and he offers samples of his cultures to all who are interested.

C. P. B. Clubbe (*Australasian Med. Gaz.*, June 20, 1898) records **four cases of operation for perforated gastric ulcer** with three recoveries. A woman of 21, who had suffered for some time with indigestion and epigastric pain, was taken with sudden abdominal pain whilst walking up stairs; the abdomen soon became distended, tender, tympanitic, and liver-dullness was lost. On opening the abdomen 5 hours later by a median incision above the umbilicus, free gas escaped, and inflammatory lymph was found on the anterior surface of the stomach. A perforation about  $\frac{1}{2}$  inch in diameter was found in an area greatly thickened by chronic inflammation. The opening was closed by catgut sutures, the abdomen washed with sterile water, a drainage tube and gauze were inserted, and the abdomen was closed. Nutrient enemata were given and liquid food by the mouth was taken on fourth day. An uneventful recovery followed.

A woman who had been suffering for some time with epigastric pain and vomiting, after four days severe pain became worse during the night. The abdomen was distended and tender, and liver-dullness was absent. The abdomen was opened in the median line above the umbilicus, and both the posterior and anterior surfaces of the stomach carefully examined. The organ appeared inflamed, but no perforation was found. The region of the appendix was also examined, but as nothing was found to account for the trouble, the abdomen was closed. The patient's general condition became worse and death followed the next day. At the necropsy a small perforation was found high up on the posterior surface of the cardia.

A girl of 19, who had suffered from epigastric pain and vomiting, occasionally of coffee-grounds appearance, was suddenly taken with violent pain and vomited blood. She became somewhat collapsed, the pulse was rapid, temperature normal, abdomen slightly distended and tender, liver-dullness was lost. Thirty hours after the onset of the symptoms the abdomen was opened in the median line above the umbilicus; the peritoneum was inflamed and coated with lymph, and in an inflamed area on the anterior surface of the stomach was a slit-like perforation. An opening was made below the umbilicus and the abdominal cavity was flushed; a tube was placed in the lower opening and the upper was drained with gauze. Nutrient enemata were given and liquid food administered at the end of a week. A rapid recovery followed.

Another case occurring in a girl was successfully operated upon, but full notes are not given.

## Original Articles.

REMARKS ON THE OPERATIVE TREATMENT OF  
CANCER OF THE BREAST, WITH A SYNOPSIS  
OF 27 CASES OPERATED ON.<sup>1</sup>BY RUDOLPH MATAS, M.D.,  
of New Orleans, La.

## I.

WHEN, in 1886, I visited Paris and gazed with admiration and amazement at the vast distribution and unsuspected resources of the peripheral lymphatic network, as displayed with startling effect by the hand of that consummate anatomist, Prof. Sappey, I was particularly struck by the preparations of the mammary region and of the uterus. I then realized, as never before, the reasons for the obstinate regional recurrences, the early dissemination and the general metastases of the malignant neoplasms when they primarily invade these regions. I then understood more clearly the reasons for the failure of surgery in this field and the pessimistic views held on the subject by the vast majority of the surgeons of the day. I then simply wondered that any of these patients ever recovered, and that operations, as they were then generally performed, sometimes did succeed in eradicating the evil. But discouraging as they first appeared, these injections and dissections of Sappey went far toward encouraging the hope of cure by surgical intervention. For, while they showed that the avenues of infection from the mamma and the skin, and thence to the axilla, were extraordinarily free and easy, they suggested the possibility of eradication by the total extirpation of the gland, with its overlying skin and the axillary contents, which were their main, if not exclusive, terminus. Another point in the lymphatic distribution of the mamma appeared also to have been made clear by Sappey (and before him by Sorgius), which was exceedingly favorable to radical treatment, and that was, that the lymphatic currents were directed throughout from the base to the apex and toward the nipple. According to this understanding, the retromammary region was not directly connected with the gland, and no fear of contamination with metastatic emboli had to be apprehended in this quarter, provided the retromammary space had not been primarily involved in the neoplasm.

According to Sappey, all the lymphatics of the gland itself ascend and converge to the nipple, where they form large trunks on the anterior aspect of the mamma, whence they travel upward and empty themselves into the axillary lymphatics. But, unfortunately for this view, the careful injections and histologic studies of Mascagni and Langhans, subsequently confirmed by Poirier, Rieffel, Gussenbauer, Küster, Heidenhain, Stiles, Joeress, and others, abundantly prove that Sappey's

teachings were only partially correct, and that the avenues for the dissemination of the cancerous emboli are indeed far more numerous than he or his followers suspected. In fact, according to the observers referred to, the anastomoses and connections between the retromammary network and the intraglandular lymphplexus are so free and intimate that the entire lymph-carrying system of the thoracic parietes, including all the mediastinal nodes, is apparently at the mercy of any malignant neoplasm that may be lodged in the parenchyma of the breast. One thing we have also learned from these recent researches, and that is, that the entire axillary, subscapular, and deep cervical groups may be infected primarily through the deep submammary lymph-canals that lie *in* and *under* the pectoral fascia, independently of the great highways of the lymph-currents that overlie the gland under the skin. Thus, contrary to older teaching, nothing like a thorough eradication of the lymph-tracts, from the breast to the axilla, can be contemplated, at least in deep glandular growths, without a total excision of the retromammary and paramammary connective tissue, including in this the whole suspensory apparatus of the gland, the pectoral fascia, and at least the sternal portion of the pectoralis major muscle. All of this has been so thoroughly understood since Volkmann, Küster, Halsted, Meyer, Watson Cheyne, Helferich, Rotter and other recent writers have described their methods and experiences that it would be superfluous to insist upon them on this occasion. But the point that I would dwell upon is that, while modern methods of histologic and pathologic research have improved, and as we have gained a clearer and broader insight into the mechanism of cancerous dissemination, the difficulties in the way of surgical relief have also increased, so that the purely technical problems that confront the conscientious operator who would be radical in his intervention have assumed far graver, more complex, if not more uncertain phases.

## II.

Thus far, the greatest bar in the way of the successful surgical treatment of cancer of the breast, as of other localities, lies in the inability of the operator to adequately estimate the full extent of the lymphatic involvement in the epithelial growths and of the internal metastases, the latter especially in cases of sarcomatous infection. It is in the utter impossibility of recognizing the microscopic and *impalpable* contamination of the lymph-tracts that always precedes the gross and *palpable* evidences of migration and metastasis that resides the chief and essential cause of uncertainty as to the final outcome of nearly every operation that is performed for this condition. The older surgery failed almost totally in its curative efforts chiefly because it disregarded the wide local and regional distribution of the migratory cells in the lymphatic network. At first,

<sup>1</sup> Communicated to the American Surgical Association and read by title at the meeting held in New Orleans, April, 1898.



timid, partial operations ruled the day, and their inevitable failure led to total amputation of the gland. As this also failed, the axilla was invaded and only *visibly* diseased lymphatics were removed. Then the truth gradually dawned upon the operator that the simple removal of visibly contaminated tissues was often insufficient, because beyond the area that was clearly diseased there was, as a rule, another zone that was almost certain to develop new centers of malignant recrudescence. It was this fundamental idea, coupled with the greater security given by asepsis, that led to the establishment of the surgical maxim that few operations for well-developed cancer can be considered radical unless the removal of the primary growth is accompanied by the *prophylactic* extirpation of its tributary lymphatic areas. Thus it is that prophylactic extirpation constitutes the keynote to the more aggressive procedures that are to-day designated as "complete" or "radical," and that, beginning with the operations of Moore (1867), Gross (1880), Volkmann, Gussenbauer, Küster, and Banks, have found their most exalted expression in the present and now well-known methods of Halsted, (1894), Meyer, Lane, Cheyne, Rotter, Helferich, and others. But, as our knowledge of what constitutes the tributary lymphatic areas has expanded, we find that the strict application of the principle of *prophylactic* extirpation has become more difficult, if not practically impossible, of realization in practice.

For example, if we admit that the migratory germ-cells from a carcinoma of the breast must be carried along the path of the lymph-current until their progress is temporarily arrested by the first lymph-nodes that lie in their way, then it is plain, in view of our present knowledge of the location of these outposts of the lymphatic system, that we would have to include in our preventive extirpation not only the axillary, the infraclavicular and the subscapular groups, but also the retrosternal, anterior mediastinal, deep cervical, intercostal and postmediastinal groups, with their intervening lymph-channels as well. This last provision is necessary, not only because we now know that there is a direct connection between the intramammary lymph network and all the aforesaid groups, but because it has been clearly proved by recent histologic investigations that the lymph-channels themselves are frequently plugged with cancerous emboli long before they reach the intermediary lymph-nodes. But if we were to follow this principle of prophylactic extirpation to its legitimate and logical conclusions we would be compelled to control part of the vascular (venous) channels that drain the region, as these are just as likely to serve as avenues of dissemination as the lymph-tracts. The impracticability of such a proposition is so grossly apparent that it would be absurd even to refer to it were it not that it demonstrates how imperfect and limited are our surgical resources to cope with this

elusive and far-reaching evil. These considerations also make it clearly apparent that surgical intervention for cancer of the breast, as well as in other localities, must always remain a tentative or, at least, an empirical procedure in the vast majority of cases as they present themselves to us in practice. Operations may be more or less aggressive, more or less complete as regards the thoroughness with which the diseased breast, its adnexa, and the extrathoracic lymph-tracts are removed, but in the strictly anatomic and surgical sense the operation is bound to be imperfect and incomplete.

In other words, even in the most favorable cases that come to us for treatment, we operate on the presumption that metastatic migration has followed the widest and most direct highway (the axillary route), and that the less frequented byways of travel have not yet been utilized by the enemy. Success in avoiding intrathoracic and visceral metastases must, therefore, remain, to a large extent, a matter of chance, *not of certainty* that all the avenues of escape from the primary focus have been completely cut off. Hence it is that the words constantly used to qualify the operation of the day, as "complete" and "radical," are anatomic misnomers, which serve solely to indicate evolutionary phases in the surgical technic, and are illusory if used in the sense that they root out the evil with any degree of certainty.

### III.

By the side of this decidedly gloomy and forbidding prospect presented to us by the study of the anatomic limitations that surround the surgery of cancer of the breast, we can hold up the results of clinical experience, as gathered in the last twenty years, as a contrast that more hopefully contradicts the preceding *a priori* considerations. Indeed, the experience of the last two decades, and more especially of the last ten years, has taught us several important and interesting facts. It has taught us, first of all, that by *more thorough* operating, the primary focus of infection can be eradicated with far greater certainty of non-recurrence *in loco* than was previously believed possible. The comparative statistics as to local and regional recurrence show this plainly. For instance, the results of the older operations, as worked out by Dr. Halsted, show that in Billroth's cases there were 85% of local recurrences; in Czerny's, 62%; in Fischer's, 75%; in Gussenbauer's, 64%; in Volkmann's, 59%; in Gross', in 1880, 68%. If we compare these figures with the extraordinary fall to 6% in Halsted's first 51 cases (1894), or even if we include his 8 cases of *regional* recurrence in the category of *local* recurrences, we would still have only 22% of local recurrences in the practice of this distinguished operator. That this is not an accidental improvement due to individual conditions is shown by the results obtained by subsequent operators, which are even better.

For instance, Watson Cheyne's cases (1896), after three years' observation, showed only 18% of local recurrence. Rotter (1896) notes only 14% of local recurrences in his cases; Dennis (1896), in a series of 45 cases observed for three years, only 5%. Even admitting that these are the records of individual operators who deal with comparatively small groups, and that they do not indicate the true average obtained by the majority of surgeons, we must admit that the demonstrated possibilities of surgical work in this direction are surprising and encouraging. I believe that Jörss' more recent estimate (1897) based upon a study of 76 cases operated on by four surgeons (Heidenhain, Rotter, Helferich, Watson Cheyne), yielded a result of 30.3%, which is much nearer the true general average of local recurrence that may be expected after the most aggressive modern operations. Up to 1894, my own results with an extensive operation, modeled on the lines laid down by Gross and Volkmann, which I performed up to that time, was 40% of local recurrences. Since that time I have operated exclusively by the procedure advocated by Halsted and Meyer, and thus far recurrence has taken place in 33.3% of the cases, though many have not yet reached the three-years' limit. This improvement is so slight by comparison, that I have been disappointed, though I believe the comparative lack of improvement in my last series of cases is susceptible of favorable explanation, as will be seen later. Nevertheless, taken as a whole, the improvement brought about by the present methods of operating are sufficiently encouraging to be a source of congratulation.

A far more important question than that of local recurrence is that which refers to the actual number of cures obtained by present methods. Here again, the statistical evidence is also encouraging. In the latest compilation presented by Bennett May (1897) we find the improvement in the percentage of recoveries that have stood the three-years' test to be as follows: Billroth, in 1876, claimed only 4.7% of cures; Küster, in 1881, 21%; Kœning, shortly after, 23%; Bergmann, 39%; while the average of Rötter, Helferich, and Watson Cheyne, in 1896, was 49.5%. Watson Cheyne found in a collection of 1,491 cases, collected from various sources and operated by older methods, that 14% had been cured. Compared with 111 recent operations that yielded 34% cures, the result in favor of the later methods is certainly marked. But these results are positively brilliant when we sum up the work of individual operators, though the value of their conclusions is minimized by the small numbers in each series. For instance, in 21 cases Watson Cheyne obtained 57% of cures. More remarkable are the results obtained by Dennis, who recorded 45% of cures in his first series, and in his last 15 cases (1896) 83% of cures that had stood the three-years' test.<sup>2</sup> These last figures are surprisingly brilliant, and no doubt show the absolute maximum of efficiency

that may be obtained by individual operators in limited and, no doubt, very favorable groups of cases. I can scarcely believe that they will ever indicate the general average of cures, even under favorable conditions, when larger compilations are obtained. My own experience with permanent cures has been decidedly contradictory, as far as showing the relative merits of the older and the new methods, as is shown in the synopsis of 27 cases that I have appended to this paper. It will be seen that up to 1894, when I operated by a method that is at present classed with the incomplete operations, though it differed only from the present in the fact that I did not remove the pectoral muscles or attack the post-cervical region, I obtained 41% of recoveries that have stood the three-years' test and over. Since 1894 I have performed the Halsted or the Meyer operation exclusively, and have to deplore 61.7% of failures (deaths from metastases and recurrences,) and can only claim 38.3% recoveries, none of which has passed through the three-year limit. These results simply show the unreliability of small groups for general statistical deductions, and should in no serious manner affect our comparative estimate of the old and modern operations. I will not dwell now upon this phase of my experience, but simply call attention to the fact, clearly established in my mind, that, notwithstanding all the fallacies of statistics, the *collective* evidence gathered in the last five years shows that a marked increase of permanent recoveries has followed the more thorough operations of the present period.

In the face of all the facts that we have considered we are now ready to ask ourselves the following questions: What are the prospects of advancement that the future holds in store for the surgical treatment of cancer of the breast? Has the operative technic reached its maximum of perfection? Can we expect still better results from more extensive and aggressive operations, or must we now depend solely upon earlier diagnosis, for early intervention and better opportunities to increase the effectiveness of present procedures? As far as I am concerned, and judging purely from my personal experience with Halsted's and Meyer's operations, I firmly believe that surgery has here nearly reached, if it has not already attained, its maximum expression of effectiveness, beyond which it is absolutely impossible to advance without great risk to life or with any further expectation of increasing the chances of permanent recovery. It is clearly fixed in my mind that all that surgery can do is to thoroughly eradicate the primary focus of infection in the breast, together with the most frequented extrathoracic routes of lymphatic contamination. Beyond this it is impossible to go further with any reasonable prospect of success unless it be in very exceptional and isolated cases. If such is the case, the success of surgery in coping with cancer of the breast must be estimated by the *future* statistics of the *present* operation. While we

<sup>2</sup> Dennis' Surgery, vol. iv, p. 932.



cannot consider the experience that has thus far accumulated as sufficient to afford an estimate for the best average results, enough evidence has been gathered to show that in the hands of the most experienced operators this *optimum* average will rarely exceed 50%. On this point I thoroughly concur with the opinion recently expressed by Bennett May:

"So far as is at present known our only hope of advancement lies in the direction of more thorough and more early operation. The limit of what is possible in the former direction will soon be reached, if it is not already reached. The result must carry conviction that we may hopefully anticipate a real cure in at least 30 or 40, or some would say, 50% of our cases. I would not like to place 30 as a rule, but it is with somewhat chastened hope that I look for anything beyond."

I would repeat that the real hope for improvement does not rest so much upon an extension of operative procedures and perfection in the technic, but in an early recognition and earlier extirpation of the primary focus of invasion. The best results are bound to follow the practice of that operator who, being skilful and conscientious, is fortunate enough to deal with the most intelligent patients, who will seek his aid promptly and who will give him the opportunity to attack the disease in its earliest stages, before metastases have had time to develop. It is this factor of early diagnosis and early operation that accounts most satisfactorily for the different experiences of different operators, and by the same operator in different series of cases. This fact is strikingly illustrated by my own limited experience, as shown by the synopsis herewith appended.

Since 1894 I have operated upon a series of cases by the most radical and complete of present methods (Halsted's, Meyer's) and yet I have against my record 67.7% of failures, whereas in the preceding series of 10 cases, treated by less severe methods, I have had 40% of recoveries, with only 33% of total failures. While the bald statement of these figures might at first sight appear to detract from the merit of the more extensive operations, they do not diminish my appreciation of their superiority under similar conditions and circumstances. The reasons for the greater number of failures in my last series of cases is best accounted for by the nature of the cases themselves, and by the fact that with the greater confidence and experience acquired in my early operations I unwisely undertook to operate on advanced cases, which I probably would have refused to touch formerly. I have now performed the more radical operation, as formulated by Halsted and Meyer, often enough to convince me that in very advanced cases (*i. e.*, those in which the upper axillary, subscapular, and posterior cervical lymphatics are markedly involved), it offers no more prospect of cure or chance of escape from internal metastases and secondary recurrences in the neck than the older and less mutilating operations.

The new operation will unquestionably greatly diminish the probability of *local recurrence*, but the pa-

tients will die, as a rule, just as quickly from regional and internal metastases as if a superficial operation had been performed. For this reason I now generally prefer not to operate in cases in which, in addition to marked axillary involvement, there is distinct, palpable enlargement of the deeper supraclavicular lymphatic chains. Another class of cases that I consider hopeless are those in which the base of the mamma is involved and has become fixed to the chest-wall; the prospect is still worse if, in addition, the sternal quadrant has been originally involved. In addition to these purely topographic conditions, which have impressed me as being of particularly bad omen, there are certain well-known histogenetic peculiarities of the growth itself, the extent of the axillary involvement, such as total infiltration of the axillary fat, with subscapular prolongations involving the vessels and nerves, the existence of disseminated lenticular deposits in the skin of the paramammary region, enlargement of the sternum, revealing the medullary infection so much insisted upon by Herbert Snow; the evidence of visceral metastases—all conditions that are justly regarded by nearly all operators as positive contraindications to operation.

#### IV.

Now, a few words as to the operation itself. Notwithstanding the fact that my best results have been obtained with an operation that carried out the earlier teachings of Gross, Volkmann, and Banks, I have unhesitatingly adopted the principles of Halsted's operation since he described it in 1894, and thus far I have seen no reason for returning to more primitive methods. By adopting Meyer's suggestion to detach the major pectoral from its humeral insertion in the start, I am satisfied that the operation is very much expedited, as the chief vascular supply of the field is thereby promptly controlled. The removal of both pectorals is a procedure that is surprisingly free from bad functional effects, for, apart from some stiffness and inability to raise the arm to the back of the head, the patients complain of comparatively little inconvenience. It certainly does not appear to add to the gravity of the operation. It does, on the other hand, greatly facilitate not only hemostasis, but also the prompt, complete, and safe exposure of the entire axilla, supraclavicular triangle, and subscapular space. It also permits the operator to remove *en bloc* the entire area of visible infection, from the axilla to the breast in a remarkably effective manner. I have given up trying to save any vessels or nerves in the axilla except the parent trunks and occasionally the long scapular and posterior thoracic. The axilla is thus cleared *in toto*, leaving the axillary plexus perfectly clean in the armpit. In clearing the supraclavicular fossa I have never found it necessary or justifiable to divide the clavicle. I have found the clearing of this space to be the most unsatisfactory

part of the operation, because I always feel that the deep trapezoid set of glands and the chains that accompany the subclavian vein are only partially touched. I have come to the conclusion that the thorough cleaning out of the space between the clavicle and the scapula and above it will do very well as a *prophylactic* procedure when the glands of this region are apparently normal; but when they are already *visibly* involved I feel confident that a zone of infection has spread beyond them, and that the key to the general lymphatic system has been hopelessly surrendered to the enemy. In conclusion, I would state that whatever the fallacies that underlie the so-called radical operation for cancer of the breast, as a curative procedure, we are under lasting obligations to Dr. Halsted for the suggestion and brilliant demonstration of an operation that synthetizes in itself all the resources that modern surgery can bring to bear against this most formidable disease.

## V.

SYNOPSIS OF 27 CASES OF MALIGNANT DISEASE OF THE  
BREAST OR ITS IMMEDIATE VICINITY, OPER-  
ATED ON FROM 1887-1898.

Twenty-six of these were in women, one in a man. Of the 26 women, 18 were multiparæ, 8 nulliparæ. The average age was 47 years. In 20 of the cases microscopic examination was made and revealed epithelial growths in 18, and sarcoma in 2. In the remainder the diagnosis was solely clinical, but the malignant character of the neoplasms was amply confirmed by the further course of the cases. All the patients made satisfactory and, the majority, excellent recoveries. There were no fatal cases from operative causes.

Of these 27 patients, 11 are living and well, though 1 has had three recurrences in three years and ten months; 1 is living but has now marked and inoperable recurrences and metastases, nearly four years after operation; 1 was well two years after the operation, but has not been heard from since; 2 have died from accidental causes not connected with the operation, and 12 from either local recurrence, metastases, or general dissemination.

Of the total of 27 patients 10 are living and well and free from recurrence (33.9%). There have been 14 recurrences, of which 12 have proved fatal already (51.7%).

The operations performed upon these 27 patients may be grouped as follows: 2 excisions of the breast, with simple exploratory incision into the axilla; 8 "Gross" operations; 17 complete (Halsted) operations: Total 27 operations.

*Summary of Results.*—(A) So-called incomplete operations performed prior to November, 1894. Two patients were treated by simple excision of the breast, with exploratory incision into the axilla: 1 survived two

years, but died finally from metastatic cancer of the uterus; 1 (a male) is still living, eight years after the operation, and is now free from local recurrence.

(B) Ten patients were treated by excision of the breast and extirpation of the axillary contents ("Gross" operation): 4 are living and have not had recurrence; 1, five years + three and one-half months after the operation; 1, four years + seven months after the operation; 1, three years + ten months after the operation; 1, three years + eight months after the operation. One is living three years and seven months after three operations for local recurrence, the last of which was performed two months ago. One is living, three years and two months after operation, but has inoperable recurrence in the neck and mediastinum. Three have died from local recurrence or metastasis. One was well two years after operation, which was performed ten years ago, but has not been heard from in the last six years.

Of a total of 10 cases treated by the Gross method, and if we include the 2 incomplete cases,—12 patients operated on prior to November, 1894,—5 have recovered completely without recurrence, fully beyond the three years' limit (or 41.7%). If we include 1 patient who is now well, after three recurrences, the recoveries equal 60%. There has been recurrence in 3 cases (33.3% of deaths) and 40% of recurrences. In one the result is unknown.

"COMPLETE" OPERATIONS SINCE NOVEMBER, 1894 (HAL-  
STED'S ORIGINAL METHOD OR MODIFIED BY  
MEYER'S SUGGESTION).

Two patients died from causes not connected with the operation, viz.: One a month after a complete Halsted operation (March 20, 1895), from the effects of extensive burns; one from acute softening of the brain caused by embolism, two years and two months after a Meyer operation, performed February 16, 1895. Eight cases have terminated fatally from local recurrence, metastases, or general dissemination (63.3%). The following is a synopsis of the cases:

CASE I.—A colored (mulatto) woman, aged 48 years, was operated in November, 1894. She had advanced acinous (scirrhous) carcinoma of the breast, with general involvement of the axillary glands. Complete extirpation was practised, including the pectoralis major, and minute dissection of the axilla and the supraclavicular space. Recurrence took place in the higher cervical glands, and lenticular nodules appeared in the neighborhood of the scar nine months after the operation.

CASE II.—A white religieuse, aged 50 years, presented advanced scirrhous of the breast, with marked axillary involvement. Halsted's operation was performed May, 1895. Recurrence took place in the axilla and the cervical glands. Death resulted from cervical diffusion and intrathoracic metastases thirteen months after the operation (recurrence was marked nine months after the operation).

CASE III.—An Israelite, aged 30 years, whose mother had died of primary mediastinal lympho-sarcoma, presented a rapidly growing adenosarcoma of the breast. A complete operation was performed, with the removal of both pectorals, February 23, 1895. Death took place twenty-three months



after the operation, from metastasis in the liver, which grew to a prodigious size. There was no local recurrence.

CASE IV.—An Israelite, aged 34 years, presented a tumor that appeared during pregnancy, and attained enormous proportions during lactation in the one breast that was utilized to suckle her infant. As the other had suppurated from mastitis, a complete operation, with the removal of both pectorals, was performed, April 10, 1895. Metastases took place in the lower jaw (central myelogenous sarcoma), with rapid involvement of the submaxillary region, in nine months. Death occurred nine months after the operation from ligneous infiltration of the neck, asphyxia, and mediastinal growths, which proved to be sarcomata.

CASE V.—A white woman, aged 39 years, presented scirrhus of the breast and axilla. Halsted's operation was performed December 12, 1894. In ten months nodular deposits had formed in the cicatrix. Death took place twenty months afterward from general dissemination, especially in the prevertebral and lower carotid groups.

CASE VI.—A white woman, aged 63 years, presented scirrhus of the breast and axilla. A complete operation was performed, but deep mediastinal metastases had developed one year and ten months after the operation. Death occurred, with marked edema of the face and upper extremities, especially the right upper limb, and great dyspnea and cyanosis from laryngeal compression, two years and four months after the operation. There had been no local recurrence.

CASE VII.—A white woman, aged 54 years, who was very fat, presented a tubular carcinoma of the breast (clinically of encephaloid appearance) and axilla. Halsted's operation was performed November 25, 1895. Recurrence was noted January 1896. A secondary operation was performed, but death occurred March, 1897, from local axillary and general metastasis.

CASE VIII.—A white woman, aged 32 years, presented carcinoma of a probably supernumerary mammary gland near the axilla, with marked involvement of the axillary contents. Halsted's operation was performed January 3, 1896. A formidable and nearly fatal attack of erysipelas occurred during convalescence. Recurrence was noticed in the neck and lower angle of the cicatrix, far removed from the original seat of growth, in December, 1896, with rapid distribution and fusion of the metastases in the neck along the carotid tract, and death took place in great agony eighteen months after the operation.

#### SYNOPSIS OF FIVE CASES IN WHICH THE PATIENTS ARE LIVING WITHOUT RECURRENCE AFTER "COMPLETE" OPERATION.

CASE I.—A white woman, aged 48 years, presented an acinous (scirrhus) tumor of the breast, with axillary involvement. Halsted's operation was performed January 10, 1896, with an excellent functional result, the patient being well at present, without any sign of recurrence, two years and three months after the operation.

CASE II.—A white woman, aged 63 years, presented a scirrhus in the axillary quadrant, with involvement of the axilla; an operation was performed January 25, 1896. The patient is now well, without sign of recurrence, two years and three months after the operation.

CASE III.—An Israelite, aged 54 years, presented a scirrhous carcinoma in the upper half of the left breast; a complete operation was performed February, 1897. The patient is now well and free from recurrence—one year and two months after the operation.

CASE IV.—A white woman, aged 58 years, presented a rapidly growing carcinoma of the breast, with axillary involvement; a complete operation was performed March 4, 1898. Over one month has elapsed since the operation; and the wound is healing.

CASE V.—A colored woman, aged 34 years, presented a scirrhus of the breast, with axillary involvement. A complete operation was performed April 2, 1898. The wound is healing.

If we exclude the 2 cases in which death resulted from accidental causes, not connected with the operation, we have a total of 13 cases to be considered. Five

of the patients are living and 8 are dead, *i. e.*, 38.3% recoveries (none beyond the three-years' limit), and 61.7% fatal cases. In 5 of the 8 fatal cases there was local recurrence alone or coincident with evidences of infection higher up in the neck or elsewhere—33.3% of local recurrences. In 3 death was caused by fatal metastases in the mediastinum, liver, or jaw (2 of these were sarcomas), without apparent local recurrences.

#### PLEURITIS IN THE NEWBORN INFANT. WITH THE REPORT OF A CASE.

From the Pepper Laboratory of Clinical Medicine.

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THE subject of pleuritis in the newborn infant was brought to my attention by an autopsy performed at the West Philadelphia Hospital for Women in the summer of 1897, upon a child who died in the Maternity Hospital, under the care of Dr. A. Helena Goodwin, to whom I am indebted for the clinical history. The child was 14 days of age, and nursed from birth until 24 hours after the mother showed mild symptoms of septic infection (the fourth day after delivery). It was then taken from the breast, and sickened almost immediately with vague symptoms, and died 9 days later. The pathologic diagnosis was catarrhal pneumonia of the right lung, empyema of the left pleural sac, acute parenchymatous nephritis, and acute gastro-enteritis. Cultures of the pus of the pleural exudate showed the streptococcus and the staphylococcus aureus. The notes of the case are given in full as No. 1 of the tabulated series.

A search in the literature of the diseases of the newborn infant and in that of the pleural sacs has resulted in the collection of the reports of 25 cases. The study of these reveals the fact that pleuritis in the first 15 days of life is not a primary affection. In a small percentage of cases it exists alone with pneumonia, but in the majority of instances it is merely part of a general infection. Indeed, the pneumonia of the newborn, as shown by the researches of Fischl, is probably a result of infection by common pyogenic microorganisms. A significant fact in support of this view is that in all of the cases in which data are given in regard to the condition of the mother, she invariably showed symptoms of puerperal infection, and in the cases in which her condition is not noted, postmortem examination of the child revealed undoubted evidences of general pyemia. A somewhat exhaustive search through the literature fails to reveal any case of pleuritis in the newborn that can be classed under the head of the so-called essential or primary pleurisies. The cause for this may be that

the newborn infant is very susceptible to pyogenic bacteria, and any infection by them tends to become general, and not to be localized to any point of lesser resistance. An analogy to this susceptibility may be found in the bacteremia produced in some of the lower animals by the pneumococcus, which, in the majority of human beings, produces a lesion confined to the lungs.

The statement that cases of idiopathic pleurisy do not exist under 15 days of life seems to be upheld by the opinion of the earliest writers upon this subject. Weber in 1852 said that pleuritis occurs only in children whose mothers are septic and is associated with inflammation of the other serous membranes. Hervieux, Villard, and Bednar report series of cases, in none of which does an instance of pleuritis occur that can be considered primary, but which is always associated with pneumonia and inflammations of the serous membranes. Gerhardt, Runge, Steffen, Ziegler, Ashby and Wright, and Holt consider the condition only under the head of the so-called puerperal infection of the newborn. Pleuritis of such a type that it deserves consideration as a disease of itself appears to be very rare in the first year of life. Bouvier, in a series of 59 cases, in which he evidently does not include the form of pleuritis occurring in the newborn infant, finds but 1 case of pleurisy between the 1st and the 6th month, 4 from the 6th to the 12th month and 86 from the 1st to the 14th year. Hervieux collected 128 cases in children from the 1st day to the 1st month; 36 from 1 month to 1 year; and 233 from 1 year to 15 years. This is a very decided falling off after the 1st month of life and it includes the cases of puerperal infection. We may conclude, therefore, that without exception the condition of the pleura appears to be merely part of the expression of a general infection with common pyogenic microorganisms. In every case there was evidence of widespread infection through the body, if not an outspoken pyemia. Such lesions were catarrhal pneumonia, inflammation of the other serous membranes, omphalitis, phlebitis, nephritis, and miliary abscesses. While these cases of so-called puerperal infection cannot be considered rare, the forms that include inflammation of the pleura appear to be very uncommon, as my search of the literature has resulted in the collection of 25 cases, which, added to the 14 cases collected by Hervieux, make a grand total of 39.

The morbid anatomy of the condition does not differ from that of other septic pleurisies and seems to depend upon the virulence of the infection and the susceptibility in the individual case. It may be fibrinous or sero-fibrinous, purulent or hemorrhagic.

As is natural, the majority of all cases are reported before the days of bacteriology, for as attention to asepsis increased, such affections have gradually disappeared from the literature. Hence, statistics as to the variety of microorganisms present are difficult to ob-

tain. In my series the bacteriologic examination is given in but 6, including my own. In these the microorganisms occurred as follows: staphylococcus aureus and albus, staphylococcus aureus, streptococcus pyogenes, bacillus enteritidis, pneumococcus, and staphylococcus aureus and streptococcus, each in one case. In three other cases cocci stained by Gram's method were found in the tissues.

Fischl has made an exhaustive study of 22 cases of puerperal infection in the child and finds staphylococcus aureus and streptococcus in all the cases. Holt thinks that the streptococcus is largely responsible for this condition, a view that has not been supported by other writers, though Hochsinger reports a case of puerperal infection in an infant in which this microorganism was found alone.

Thus it will be seen that a consideration of pleuritis in the newborn would be a review of the literature of the so-called puerperal infections of the first 15 days of life, a subject too broad to be treated in this article. It is perhaps worth while to consider the mode of entrance of the poison in such cases and to attempt to determine the pathogenesis of the cases reported, as this would seem to have an important bearing upon the prophylaxis of the condition—an extremely practical point. The work of modern writers has been particularly directed to this part of the subject, and in taking the cases collected as instances of undoubted general infection it will perhaps be profitable to compare their probable pathogenesis with the views of the most prominent authorities. The modes of infection are various. The most important point of entrance for the bacteria appears to be the umbilical wound and its vessels. The lesions in this condition are omphalitis, umbilical arteritis, or phlebitis. Runge, probably the leading authority upon the so-called puerperal infections of the newborn, states that in 340 autopsies there were 36 cases of general infection, of which 30 showed suppuration of the umbilicus or its vessels. He calls attention to the fact that the connective tissue surrounding the umbilical vessels may be the seat of suppurative inflammation that may defy detection except as the result of a very careful search. Müller's figures give 49% of all autopsies upon the newborn, probably a larger percentage than that given by Runge. In my list of 25 cases there were 12 instances of this form of infection, or about the percentage given by Müller.

Infection during intrauterine life is considered by many observers, especially the older writers, as Müller, Weber, Hervieux, and even by as recent an authority as Gerhardt in the last edition of this book (1897). Runge regards this as uncertain and gives as his reason the fact that septic infection before labor is rare, and also that cases of sepsis in the newborn are not rare since the days of asepsis—a condition that would not affect both mother and child before labor. Karliniski regards intrauterine infection as probably very



uncommon. Several cases in my list seem as if their pathogenesis could be explained only on the supposition that some infecting agency did pass from the mother to the child before birth.

In Case V, the mother was delivered during an attack of double pneumonia following influenza. In Case IX, the mother died of meningitis and the child was born by postmortem Cesarean section, being delivered five minutes after the mother's death. In Case XIII, the mother was sick at delivery and died three days later of peritonitis. In all three cases the child sickened immediately after birth and died within 3 days. The form of pleural inflammation in this variety of infection is usually hemorrhagic, though this was the case in but one of my series. In the other two cases it was fibrinous and sero-purulent.

Infection from some external wound is considered by Runge to be next in frequency to umbilical infection. Such wounds may be caused by forceps, the rite of circumcision, etc. Three of Runge's 33 cases were of this nature. No such case occurred in my series.

Infection through the mucous membrane of the oral region, or of the female genitalia, is mentioned by Runge and Müller, but again no such case appears in my series.

Aspiration of septic material from the birth-canal is recognized by most authorities as a cause. Runge considers it hypothetic, but he appears prejudiced in favor of wound-infection. Müller, in the last edition of Gerhardt, thinks it unusual. The principal lesion in such cases is a septic pneumonia. In my series 4 cases appeared to be best explained on the supposition that infection took place by aspiration of septic material. In Case II, the amniotic fluid was very foul and the mother developed sepsis soon after delivery. The child sickened immediately after birth. In Case VI, the amniotic fluid was very foul, the mother becoming sick soon after delivery, the child immediately after birth. In Case XV, the mother became septic. Silbermann remarks that this case was probably one of aspiration-pneumonia, and in the absence of other data it is so considered. In Case XIX, the child was born partially asphyxiated and revived only after a large amount of amniotic fluid was removed from its trachea. The secretion was examined and found "negative;" therefore Runge states that it could not have been a case of aspiration-infection, apparently without cause, for the mechanical irritation of a foreign substance would seem sufficient to produce a point of lesser resistance, if nothing more. The lesions in all of these cases are abscesses of the lung or catarrhal pneumonia, with more or less marked signs of pyemia. The pleuritis in one case was purulent, in three sero-fibrinous.

Infection from the milk drawn from the breast of an infected mother has been recognized as possible only in the last 12 years, as is perhaps natural from the fact that this period represents the most active years of

bacteriologic investigation. In 1885 Escherich found staphylococci in the milk of septic mothers and none in normal milk. Eitner found that by subcutaneous injection of septic material in nursing animals he could cause the death of the offspring. Meisner and Longard agree with Escherich, while Bumm found no bacteria in the milk of two septic women. None of the observers named noticed any bad effects upon the nursing child. Cohn and Neumann and Pallastre have found streptococci and staphylococci in the milk of normal women. The most convincing and the most valuable work upon this branch of the subject has been done by Karlinski in connection with the case mentioned later, which in itself would be almost sufficient to convince. In a series of experiments upon animals he produced by the injection of pyogenic microorganisms into the body of a nursing mother various septic lesions in the offspring; sometimes a fatal gastro-enteritis and sometimes a true pyemia, in the pus of which were found the same bacteria that he had used to infect the mother. The mother either remained healthy or had local abscesses. In the second series of experiments he fed young animals with milk infected with the staphylococcus aureus and obtained in the majority of cases a general infection and in all an acute gastro-enteritis. In another series he injected staphylococci into the vagina of nursing mother-rabbits and found the bacteria in the blood of the offspring. Fischl considers this form of infection to be probable and calls attention to the fact that puerperal infection in the newborn is very often associated with an acute gastro-enteritis. Runge considers it only as possible. Hervieux, as far back as 1868, remarked that the condition is frequently complicated by gastro-enteritis. Three of the cases of my series strongly suggest the possibility of primacy infection through the gastro-intestinal tract from the mother's milk. In Case XI (Karlinski) the child was healthy for 4 days; then mother and child were both seized with symptoms of sepsis. The mother recovered, but her milk contained the staphylococcus aureus and albus; the child died with lesions of acute gastro-enteritis and pyemia. In its blood were the same bacteria as in the mother's milk and no others. In Case XVII mother and child were healthy until the third day. Then the mother sickened with signs of sepsis. The child sickened and died on the tenth day. The mother's milk and the organs of the child contained the staphylococcus aureus, while the child presented lesions of an acute diarrhea and general infection. In Case I (my own case) mother and child were healthy until the fifth day. Then the mother exhibited symptoms of slight sepsis. The child soon sickened and died upon the fourteenth day, with acute gastro-enteritis and general infection. The tissues contained the staphylococcus aureus and the streptococcus albus. Unfortunately it was impossible to investigate the milk.

In all these cases the child nursed the mother after

she became infected. While it is undoubtedly a fact that many children nurse the mother without harm, I think the foregoing cases show that in some instances the child can become infected with the milk through the gastro-intestinal tract. It may be that the normal gastro-intestinal secretion is capable of rendering the bacteria harmless, and that the normal function of the stomach must be impaired before infection can take place. The discrepancy between the experiments reported and the fact that the child is so seldom infected while nursing a septic mother is apparently explained by the researches of Basch and Weleminsky,<sup>2</sup> who found that the mammary glands of nursing animals apparently act as a filter for most bacteria. Those microorganisms, however, that produce local hemorrhage in the gland, and hence a solution of continuity in the epithelium of the acinus, pass through readily into the milk. Streptococci and staphylococci do not pass through unless there is some such local lesion as would be caused by a localized abscess. The inference to be drawn from these experiments, when compared with the work of Karlinski and the rest, would seem to be that such local foci of inflammation, while not common, may exist without causing marked symptoms, and are unsuspected because they are very small, or because the gland has not been carefully examined.

Infection from the air of the room through the respiratory tract probably is controlled by some circumstance of locus minoris resistentiæ. Ullmann has shown that the air of an infected ward of a lying-in hospital contains pyogenic bacteria. Gärtner has found them in the bed-clothing. Fischl thinks that without doubt infection often takes place by the respiratory tract. The lesion is a pneumonia or a pulmonary abscess and a varying amount of general infection. But one of my series (Case III) seems to fall under this head. In this the child seemed perfectly well for 24 hours, then refused to nurse, became cyanosed, then comatose, and died upon the seventh day. The autopsy showed scattered areas of catarrhal pneumonia in both lungs and a small abscess in each.

The extremely interesting case reported by Lubarsch and Tsutsni apparently does not come under any of the foregoing classification. The child sickened 24 hours after delivery and died shortly afterward with diarrhea, cyanosis, and high temperature. The umbilicus was normal. There was bilateral pleuritis, hemorrhagic catarrhal pneumonia, and purulent bronchitis. The bacillus enteritidis was found in pure culture in spleen, kidney, liver, and heart. The mother developed parametritis after the death of the child, but recovered. Her secretion did not contain the bacillus.

The symptoms may commence at any time during the first 10 days; rarely, according to Holt, after the twelfth. In cases of apparent intrauterine infection they may com-

mence immediately after birth, though sometimes not until the second day. There is usually considerable elevation of temperature ( $103^{\circ}$  to  $104^{\circ}$ ) with intermissions, though this varies and fever may be entirely absent. There is rapid loss of weight, the child refuses nourishment, icterus is common and there may be purpura. Hemorrhages often occur from the umbilicus or from the intestines or skin. There is restlessness, twitching of the body and rarely convulsions. Much stress is laid upon the character of the cry, especially in cases of pneumonia and pleuritis, by Steffen, who says it is always whimpering or whining. Diarrhea is common, especially in cases of the gastro-intestinal type. Vomiting is somewhat less frequent; cyanosis develops as death approaches. The child becomes stuporous and exitus occurs in collapse with a subnormal temperature. The physical signs depend upon the distribution of the lesions and are usually somewhat indefinite. In the umbilical cases inflammation of that point is usually evident, though Runge calls attention to the fact that there may be suppurative inflammation of the connective tissue about the vessels, which is unsuspected during life. (Case XXIII.) Van Gieson reports a similar case.

In but 4 of my cases are the results of physical examination given. It may be interesting to mention these as showing how common error may be in determining the diagnosis by means of physical examination in the newborn. In Case XIV, the breath-sounds were suppressed and the percussion-note was impaired upon the right. The autopsy showed effusion on both sides and bilateral pneumonia. In Case VIII, rales were present on both sides, with fibrinous pleurisy and catarrhal pneumonia on the left. In Case IX, there were no signs of disease, and the autopsy disclosed bilateral fibrinous pleuritis. In Case XV, dulness was present on the right side, and at the autopsy there was right-sided pleuritis with effusion, the lungs being normal.

The course of the disease is very rapid. The average in 17 of my cases was 48 hours; the shortest 24 hours, the longest 6 days; and in 8 it was undetermined.

The prognosis is invariably bad and is usually stated to be fatal. Quinquaud states that mild cases may recover, but if the temperature reaches  $102.4^{\circ}$  ( $39^{\circ}$  C.) the child cannot recover. In this connection it may be interesting to mention a case reported by Holt, in which, in an infant three months old, firm fibrous adhesions were found in both pleura. It is possible that these were caused by puerperal infection, with pleuritis, and recovery has occurred. Hillier also found an encysted empyema in a child of 5 months that had evidently existed for some time.

The treatment is largely prophylactic. The disease occurs in children whose mothers are septic and is largely favored by uncleanness, bad ventilation, and overcrowding. It is sufficient to point out that it is certainly a safe precaution to forbid a child to nurse a



mother who shows signs of even a mild sepsis, for while it cannot be held that the danger from this source is very serious, still the cases analyzed strongly suggest the possibility of certain children becoming infected from the milk of a septic mother. It is an interesting fact that in all three of the reported cases the mother did not exhibit severe symptoms of sepsis and recovered promptly.

**CASE I.**—(J. D. Steele.) The child was born normally, of a healthy mother, in the summer of 1897, and nursed at the breast regularly after birth. On the fourth day the mother showed symptoms of septic infection of a mild type. Her temperature ranged from 100 to 101 F. and the vaginal discharge was somewhat foul. The child was taken from the breast 24 hours after the mother sickened. It remained well for 24 hours and then began to suffer with what appeared to be an acute gastro-enteritis, with green and mucous stools. There was little or no vomiting. The child suffered also from some dyspnea, and it grew cyanosed. It died in collapse on the fourteenth day of life. Nothing could be discovered upon physical examination. The mother recovered in about 10 days. An autopsy upon the child showed the body of a fairly well-preserved infant. The relations of the abdominal cavity were normal. The umbilical vessels were closed and perfectly normal, and there were no signs of inflammation about the umbilicus. The left pleural sac was filled with a sanguineo-purulent fluid. The pleura was the seat of much fibrinous deposit, especially upon the visceral layer of the upper lobe. The lung was much congested, but contained no area of consolidation. It was especially congested in the upper lobe, but there was no condition resembling pneumonia. The right pleural cavity was normal and contained no effusion. The upper and middle lobes of the right lung were normal, but the lower lobe was studded with areas of typical catarrhal pneumonia. The pericardium and heart were normal. The myocardium, however, was somewhat pale and suggested parenchymatous degeneration. The mucous membrane of the stomach was congested and covered with tenacious mucus and exhibited here and there small petechial hemorrhages. The large intestine contained much mucus and green material. Its mucous membrane was pale, but the follicles were distinctly enlarged and swollen. The mesenteric glands were somewhat enlarged. The spleen was somewhat swollen, dark red and soft. The adrenals were normal. The kidneys were swollen and pale at the center and the medulla congested. Liver, bladder, and brain were normal. Stained smear-preparation of pus from the lung contained numbers of streptococci in chains of about eight individuals, as well as staphylococci. Cultures upon agar and blood-serum of the pus from the empyema contained the staphylococcus pyogenes aureus and the streptococcus pyogenes.

**CASE II.**—(Küstner.) The child was born with instruments. The amniotic fluid was very foul. The mother died 4 days later with acute parametritis. The child sickened immediately after birth. It refused nourishment, was cyanosed, and had dyspnea, fever, and cough. It died three days after birth. The autopsy showed fibrino-purulent pleuritis on the right side, and a small abscess in the right lung.

**CASE III.**—(Orth.) The mother presented signs of sepsis immediately after labor, but soon recovered completely. The child seemed perfectly well for 24 hours; then it refused to nurse and became cyanosed. Its breathing was embarrassed. It soon became comatose and died upon the seventh day. At the autopsy were found scattered areas of catarrhal pneumonia in both lungs, and a small abscess in each lung. There was a large amount of sero-pus in the right pleural sac, with fibrinous deposits on both layers. The umbilicus and vessels were normal. Cocci were found in sections of the lungs and in the contents of the pleurae.

**CASE IV.**—(Viti.) The child was born at term and lived 67 hours. The mother was suffering with bilateral pneumonia following influenza, and died 29 hours after labor. An autopsy upon the child showed left-sided pericarditis, pleuritis, and acute splenic tumor. The pneumococcus of Fraenkel was found in pure culture in the blood from all the organs and in the inflamed membranes.

**CASE V.**—(Fischl.) The child was two weeks old. The autopsy showed ulcerative omphalitis, suppurative arteritis of the umbilical artery, multiple abscesses in the lungs, suppurative pleuritis, bilateral otitis media, abscesses in the kidneys, acute gastro-enteritis. Numerous cocci that stained by Gram's method were found in the pus.

**CASE VI.**—(Küstner.) The child was delivered with instruments. The amniotic fluid was very foul. The mother sickened soon after labor with endometritis and erysipelas. The child lived three days, refusing nourishment, and with much cough. Pus and fibrin were found in the right pleural sac, and small abscesses in the right lung. The umbilicus was normal.

**CASE VII.**—(Von Geigl.) The child was born partially asphyxiated after an instrumental labor. The mother died a few weeks after labor and showed at autopsy chronic tuberculosis of the lung and endometritis. The child sickened after 3 days and died in 24 hours. It refused to nurse and was very sallow. There were some rales on both sides. The autopsy revealed left-sided fibrinous pleurisy and catarrhal pneumonia.

**CASE VIII.**—(Von Hecker.) The child was delivered by Cesarean section, the mother dying soon after the operation. The child was well for the first day; it then sickened and died two days later. It refused to nurse, had high fever, and was very sallow. The autopsy showed right-sided sanguineo-purulent pleuritis, with the left pleura normal, and right-sided lobular pneumonia. The navel was normal.

**CASE IX.**—(Von Hecker.) The child was delivered by post-mortem Cesarean section five minutes after the death of the mother, who died of meningitis. The child died 34 hours later. At the autopsy there were found fresh adhesions between the pericardium and the pleura, with hemorrhagic inflammation of the left pleura and the pericardium.

**CASE X.**—(Lubarsch and Tsutsni.) The child seemed perfectly well for the first day and sickened 30 hours after birth with diarrhea, cyanosis, dyspnea, scanty and high-colored urine, and a temperature reaching 36.5° C. There were no signs of disease upon auscultation or percussion. Death occurred 24 hours later. At the autopsy the navel and its vessels were perfectly normal. There was a sero-purulent pleuritis on the right side and deposits of fibrin on the left pleura. The lower lobe of the left lung showed a hemorrhagic lobular pneumonia and purulent bronchitis on both sides. The bacillus enteritidis was found in pure culture in the spleen, kidney, liver, lung and heart's blood. The mother sickened after the death of the child, but recovered. Her secretions did not contain the bacillus enteritidis.

**CASE XI.**—(Karlinski.) The child was born healthy and remained so for 4 days. It then developed acute diarrhea and parotiditis, and died 6 days later. At the autopsy there were found bilateral sero-sanguineous pleural effusion, bilateral lobular pneumonia, and acute parenchymatous nephritis. The gastro-interstitial mucous membrane was swollen and covered with thick mucus. The umbilicus was normal. There were enlargements of the lymphatics of the neck. Staphylococcus pyogenes aureus and albus were found in blood of all parts of the body. The mother was perfectly well until the fourth day; she then presented symptoms of slight puerperal infection and later developed erysipelas, but soon recovered. Her milk contained the same microorganisms (and no others) as were found in the child's blood. The child nursed until too ill to suck.

**CASE XII.**—(Hervieux.) The child was born naturally. It nursed unwillingly from the first. The meconium was normal upon the first day, but became green upon the second. Upon the third day the baby's cry became whimpering, dyspnea developed, and the abdomen became distended, and its color was sallow. There was no vomiting. Death took place upon the fourth day. At the autopsy there were found blood-stained effusion into the left pleural cavity, and small abscesses in the left lung; there was no peritonitis.

**CASE XIII.**—(Hervieux.) The mother was sick at labor and died three days later with peritonitis. The child never seemed strong. It sickened on the third day. There were cyanosis and abdominal distention, but no vomiting, and a weak cry. The breath-sounds were suppressed upon auscultation on the right side and the percussion-note was impaired in the same area. Death followed 3 days later. At the autopsy there were found sero-purulent effusion in the right, serous effusion in the left pleural sac. The lungs were much

congested. There was an intermeningeal hemorrhage in the right frontal region, as well as fibrinous peritonitis. The spleen and kidneys were enlarged and congested.

CASE XIV.—(Hevioux.) The child was five days old upon admission. There was some scleroderma. There was also dulness on percussion over the right side of the thorax, and some dyspnea. Death took place on the fifth day. The autopsy showed hemorrhagic pleuritis on the right side, with normal lungs; and much congested mesentery and gastrointestinal tract.

CASE XV.—(Silbermann.) A child aged 2 days exhibited cyanosis and dyspnea. Death occurred 5 days later. The mother presented signs of sepsis, presumably following delivery, and died on the 7th day of colpitis and bilateral pleuritis. The autopsy in the case of the child disclosed bilateral catarrhal pneumonia, bilateral sero-fibrinous pleuritis, enlarged spleen and areas of hemorrhage in the cerebral cortex. The umbilicus and navel were normal. Cocci were found in sections from the lung. Silbermann states that the lesions in the lungs were probably due to aspiration-pneumonia.

CASE XVI.—(Babes.) The child died after an illness of 3 days on the fifth day of life, the autopsy showing umbilical arteritis. There were also infarcts of the spleen and the lung, and ecchymosis in all of the serous membranes. There was a fresh pleuritis and a purulent pneumonia of the right side. In the tissues of the body a bacillus was obtained that was pathogenic for lower animals. Streptococci were also found in the pus.

CASE XVII.—(Ehrendorfer.) A normal child was born normally of a primipara. The puerperium was normal until the third day when the mother's temperature rose to 104°. The child nursed steadily from the mother's breast. Three days later erysipelas developed in the mother. The child was taken from the breast after one day of nursing. It sickened upon the ninth day of life and died upon the tenth. At the autopsy there were found acute gastro-enteritis, pleuritis, and peritonitis. The milk of the mother and the blood and organs of the child all contained the staphylococcus aureus.

CASE XVIII.—(Runge.) A badly nourished child was born apparently healthy. Seven days after birth its breathing grew embarrassed, it vomited freely and death took place in 24 hours. The autopsy showed that while the umbilical vessels were normal the fibrous tissue about them was infiltrated by purulent inflammation. There was also right-sided pleuritis and pneumonia and an acute splenic tumor. The lochial discharge was foul for several days.

CASE XIX.—(Runge.) A well-nourished child was born apparently asphyxiated, but was revived after a large amount of secretion had been removed from its mouth and throat. It sickened almost immediately and died in three days. At the autopsy the navel and its vessels were normal. The right pleural sac was filled by a cloudy serous exudate and the layers of the pleura were coated by thick, yellow fibrin. The right lung contained scattered areas of pneumonia. The left pleural sac exhibited many ecchymoses and the left lung was atelectatic, but otherwise free from disease. The spleen was enlarged and soft. The lochial secretion was examined and found free from pyogenic microorganisms.

CASE XX.—(Runge.) The child was aged 2 weeks. The pathologic diagnosis was right-sided pleuritis, with cloudy serous effusion, scattered areas of catarrhal pneumonia in the left lung, and acute splenic tumor. Runge remarks that the condition suggests sepsis (septic inflammation of the umbilicus).

CASE XXI.—(Runge.) The child was 11 days old. The pathologic diagnosis was left-sided pleuro-pneumonia, umbilical arteritis, and acute splenic tumor.

CASE XXII.—(Runge.) The child was 10 days old. The pathologic diagnosis was left-sided fibrinous pleuritis, pneumonia of the upper left lung, and umbilical arteritis.

CASE XXIII.—(Runge.) The child was 17 days old. The pathologic diagnosis was pleuropneumonia of the upper lobe of the left lung, umbilical arteritis, and acute splenic tumor.

CASE XXIV.—(Runge.) The child was 10 days old. The pathologic diagnosis was right-sided empyema, acute parenchymatous nephritis, acute pericarditis, and umbilical arteritis.

CASE XXV.—(Runge.) The case was one of left-sided empyema, pneumonia of the left lung, and umbilical arteritis.

## REFERENCES.

- Bednar: *Die Krankheiten der Neugeborenen*, iii, p. 105.  
Müller: *Geburtsh. u. Gynäk. d. K. Krankheiten*, Editions i and iii.  
Bovier: *Journal de Gynécologie*, xi, 1865.  
Weber: *Beiträge zur pathologischen Anatomie der Neugeborenen*, 1852.  
Hevioux: *Journal de Gynécologie*, xi, 1864, p. 371.  
Steffen: *Klinik der Kinderkrankheiten*, ii.  
Runge: *Die Krankheiten des Kindesalters*, 2d ed., 1893.  
Runge: *Chirurgie*, 1897, 7 and 8.  
Kabus: *Beiträge zur Pathologie und Therapie der septischen Prozesse des Kindesalters*, Leipzig.  
Silbermann: *Deutsche Medizinische Wochenschrift*, 1884, 34.  
Fischl: *Zeitschrift f. Heilkunde*, Bd. xv, H. i.  
Kartuski: *Virchow's Archiv*, cxxv, p. 490.  
Kartuski: *Pathologie*, 1890, 12, and 1891, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23.  
Isenhardt: *Pathologie*, 1885, 8.  
Bull: *Pathologie*, 1887, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.  
Cohen and Neumann: *Virchow's Archiv*, cxxvi.  
Küstner: *Archiv f. Gynäkologie*, 1877, 11.  
Viti: *Riforma Medica*, 1890, 26 and 28.  
Von Hecker: *Archiv f. Gynäkologie*, 1876, 10.  
Lewandowski: *Virchow's Archiv*, cxxvii.  
Flügel: *Quoted by Runge, Die Krankheiten des Kindesalters*, 2d edition.  
Bass and Weinmusk: *Journal of Clinical Medicine*, April 15, 1898.

## THE BACILLUS PYOCYANEUS AS A PATHOGENIC FACTOR IN HUMAN PATHOLOGY, WITH THE REPORT OF THREE CASES.

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SINCE the publication of the admirable researches of Charrin<sup>1</sup> on the bacillus pyocyaneus, renewed attention has been directed to its study, not only experimentally, but also with regard to its relation to certain morbid phenomena encountered from time to time in human pathology. At the time of Charrin's experiments practically nothing was known of this organism in its experimental manifestations, or of its association with diverse disease-processes in man. Its causative relation to green or blue pus had already been made known by the work of Gessard,<sup>2</sup> who designated it the bacillus of blue or green pus.

In his experimental studies upon rabbits, Charrin had been able to observe with remarkable constancy a marked disposition to the production of a definite clinical evolution, with symptoms of the highest suggestive order. To this clinical picture he gave the name "maladie pyocyannique." Subsequently to this valuable work there have been published instances of infection with this microorganism not only in other animals, but also in human beings. Schäfer<sup>3</sup> and Cadéac<sup>4</sup> studied pyocyanic infection in the dog, with interesting and instructive results, although the rabbit is the animal par excellence from the point of view of susceptibility. Infections with this bacillus in man bear a striking resemblance to the experimental forms studied in animals.

The three cases included in this report were encountered in the course of the bacteriologic examination of

<sup>1</sup> *La Maladie pyocyannique*, Paris, 1889.<sup>2</sup> *De la Pyocyanie*, Thèse de Paris, 1882.<sup>3</sup> *Beitrag zur Lehre von den pathogenen Eigenschaften des Bacillus Pyocyaneus*, Dissertation, Berlin, 1891.<sup>4</sup> *Comptes Rendus de la Soc. de Biol.*, 1890, p. 41.



100 consecutive autopsies. I am indebted to Drs. W. G. Macdonald and W. J. Nellis, of Albany, for the clinical notes that are abstracted herewith.

CASE I.—Miss Elizabeth M., an unmarried woman, 19 years old, entered the Albany Hospital on August 31, 1897, complaining of pain in the abdomen and general weakness. Her grandfather had died of tuberculosis; her mother was suffering from curvature of the spine, and her father was living and well. She had had measles, chickenpox, and parotiditis when a child. The catamenia began at the age of 15; the discharge was moderate, irregular and painful. There was no history of chorea, pneumonia, malaria, or typhoid fever. The patient dated her illness from May 27, 1897, when she was seized with general abdominal pains, fever, chills, nausea and vomiting. In four days there was complete cessation of the symptoms, and in three weeks she was out of bed. At the next menstruation, June 24th, the symptoms returned, the vomiting and nausea being particularly distressing. During this attack there supervened marked diarrhea. The temperature ranged between 99° and 103° F. Since this period the patient remained in bed, complaining of abdominal pain, tenderness and weakness.

On entrance into the hospital, August 31, 1897, the patient was found to be an extremely emaciated woman, with flushed face, pale mucous membranes, a temperature of 102.4°, a pulse of 120, the pupils dilated and equal, the tongue tremulous, the heart and lungs normal, the spleen palpable; the abdomen markedly tender over the right pelvic region, where a large indefinite fluctuating mass could be felt. The urine contained a small amount of albumin and an occasional hyaline and granular cast. The patient was operated upon a few hours after admission, an incision being made into the peritoneal cavity over the right iliac region. A drainage-tube was inserted into the wound, which was packed with iodoform-gauze.

On September 2d, the patient complained of headache, moderately severe diarrhea (from eight to ten movements in the twenty-four hours) and much pain over the abdomen. She was apathetic, and there was marked tympanites, and a fine, papular rash over the trunk and limbs. The temperature ranged between 101° and 103.4°, and the pulse was 116.

On September 3d, the girl's condition was practically unchanged. The rash was almost entirely invisible. The symptoms continued unabated. The heart-sounds were muffled, and moist râles were heard over both lungs.

On September 4th, death occurred at 5.30 A.M., and the autopsy was held five hours after death.

The following is an abstract from the autopsy protocol:

*Anatomic Diagnosis.*—Purulent circumscribed collection in Douglas' pouch, general purulent peritonitis, pyosalpinx, acute bronchitis, acute splenic tumor, subpericardial hemorrhages, acute hemorrhagic enteritis, with superficial ulceration of the small and the large intestine, cloudy swelling of liver and kidneys, general pyocyanic infection.

The body was 141 cm. long, markedly emaciated, and rigor mortis was well marked in both extremities. There was postmortem lividity of the dependent parts. Over the right iliac region was an open wound 8 cm. long containing a glass drainage-tube and packed with iodoform-gauze. The wound contained greenish pus and communicated with the peritoneal cavity. The subcutaneous fat was practically absent; the muscles of thorax and abdomen were very much wasted and pale red-brown in color.

The peritoneal cavity contained about 250 cu. cm. of purulent, yellowish-green material; both layers of peritoneum were very much injected and dull. The intestinal coils were much distended with gas, and covered with a greenish layer of fibrino-purulent exudate. The appendix was 6 cm. in length and normal. The intestinal coils were bound by moderately firm adhesions in the lower abdominal region to the abdominal walls, uterus and bladder. On tearing the adhesions Douglas' pouch was seen to be filled with a greenish pus. The heart, lungs, liver, kidneys, pancreas, aorta, adrenals, bladder, uterus, appendages, and esophagus showed nothing particularly remarkable in their appearance.

The spleen was free from adhesions and enlarged, measuring 13 x 7.5 x 4 cm.; its capsule was smooth and not wrinkled; its consistency was firm, and on section the cut surface presented a uniform deep reddish-brown color; the trabeculae

were not increased in amount; the pulp was increased; the Malpighian bodies were very prominent.

The stomach was distended with gas, though not enlarged. It contained a small quantity of partly digested food. Its walls were not increased in thickness; the mucous membrane was smooth, and covered with a moderate amount of sticky mucus; many pin-point to pin-head size discrete submucous hemorrhages were distributed over the surface, and there was moderate congestion of the pyloric half of the organ.

The small intestines were distended with gas; the mucous membrane was uniformly congested in its entire length and contained very many minute punctiform hemorrhages, which were most marked in the ileum and the jejunum, particularly in the former. In addition to the hemorrhagic areas many small superficial losses in the intestinal mucosa could be seen. These rarely exceeded 0.5 cm. in diameter, and were usually smaller; their edges were generally clear cut, but not always so. The mucous membrane of the large intestine was congested in its upper portion, and showed here a few losses of substance similar to those seen in the small intestine.

Microscopic examination of the heart, liver, kidneys, pancreas, and lungs added nothing to the macroscopic examination of these organs. Sections of the spleen showed the characteristic lesions of acute swelling. The epithelium of the stomach was covered with a small quantity of granular material, but it was otherwise normal in appearance. A section through one of the hemorrhagic areas showed a quantity of blood largely situated in the submucous coat, but partly between the epithelial cells of the mucous membrane.

The epithelial layer of the large and the small intestine was in places normal and covered by a small quantity of granular material. In other places the epithelial cells were replaced by irregular diffuse areas of broken-down epithelial cells and granular debris. In still other places circumscribed losses of tissue could be seen, leaving ulcers with abrupt edges in some instances, and in others ulcers with sloping margins. These losses penetrated in almost all instances to the submucosa or the muscular layer. The base of these ulcers was covered with broken-down tissue, made up of polynuclear leukocytes and granular material. Elsewhere in the sections areas of blood could be seen, as in the section of the stomach. The tissues around the ulcers and superficially necrotic areas were markedly infiltrated with small round cells and some polynuclear leukocytes. The muscular coat appeared normal. The serous coat was covered by exudate made up of fibrin, debris, and polynuclear leukocytes. Sections from the spleen, liver, kidneys and intestines stained for bacteria showed in all of the specimens, and most abundantly in the spleen and intestines, slender bacilli of moderate length.

Cultures taken from the heart's blood, lungs, liver, spleen, general peritoneal cavity, Douglas' pouch, wound, kidneys, and intestinal ulcers, contained one common organism, which morphologically resembled that seen in the sections. This organism was present in pure culture in the heart's blood, lungs, kidneys, spleen and wound. In the cultures from the general peritoneal cavity, Douglas' pouch, liver, and intestinal ulcers, another organism also was present, which morphologically was a short, thick bacillus.

The organism common to all the cultures presented the following behavior on the different media:

On agar slant, a profuse moist growth, the agar being discolored green or bluish-green within 36 hours; on litmus-milk, acidification and precipitation of casein; on bouillon, uniform turbidity, with the production of a slightly greenish film on the surface; on potato, a profuse brown, or at times greenish, growth; on Dunham's medium, a uniform turbidity. The test for indol was positive. In a gelatin stab-culture there was liquefaction with, at times, the development of a green color in the liquefied portion.

In a hanging-drop preparation from a 24-hour bouillon-culture the organism was seen to be actively motile.

Intravenous inoculation of 1 cm. of a 24-hour bouillon-culture into a rabbit produced death in 30 hours. Cultures from the blood and principal organs showed the same organism just described.

The bacteriologic diagnosis was: *Bacillus pyocyaneus* (Gesard).

The short thick bacillus found in some of the cultures gave all the cultural characteristics of the *Bacillus coli communis*.

CASE II.—Mr. L., a widower, 59 years old, came under ob-



servation October 26, 1897, complaining of cough, dyspnea and pain on the left side. The family history was negative.

The patient had had the ordinary diseases of childhood, and pleurisy at the age of 22. He denied syphilitic infection. His illness had begun August 26, 1897, when he was seized with oppression of the chest, and severe hemoptysis. Two days subsequently he was attacked with pain in the left chest, fever, cough and diarrhea of moderate severity. When seen by Dr. Nellis, on October 26th, eight days before his death, he was very weak, his pulse was rapid and feeble (140 per minute), and the heart-sounds were muffled. There was consolidation of the lower lobe of each lung. Vomiting and delirium set in shortly and persisted until dissolution.

On October 31st, the symptoms were unchanged, and there was marked Cheyne-Stokes respiration. Death occurred November 2, 1897, at 6 P.M.; and the autopsy was made 24 hours later.

The following is the abstract from the autopsy-protocol (only a description of the lesions that directly relate to the subject of the paper is given):

**Anatomic Diagnosis.**—Arteriosclerosis affecting the aorta and coronary arteries; marantic thrombi in the apex of the left ventricle; chronic interstitial myocarditis; multiple hemorrhagic infarctions of both lungs; hemorrhagic infarction of the right kidney; sero-fibrinous pleuritis on both sides; bilateral cholesteatoma of the choroid plexus; hydrocephalus externus; edema of the brain. *Bacillus pyocyaneus* in the infarctions, and in the pleural exudate on both sides.

The pericardial cavity contained about 30 cu. cm. of slightly blood-stained fluid; the right ventricle showed pin-head subpericardial hemorrhages. The left lung was bound down by adhesions. At the apex there was a localized area of firm cicatricial tissue not involving the lung-substance. The upper lobe, and the upper portion of the lower lobe were emphysematous, and had a cushiony feel. On section there was no excess of blood nor edema in the upper lobe. The lower portion of the lower lobe showed two well-marked areas of consolidation. The pleura over these had lost its gloss, and was covered by a fine fibrinous exudate. The consolidated areas were of a deep blood-red color; and on section somewhat wedged-shaped, the base of the wedge being at the periphery of the lung. The cut surface was blood-red and granular. The pulmonary bloodvessels leading to these areas were plugged with antemortem clots.

The upper lobe of the right lung was soft and moderately crepitant. On section it contained an excess of serous fluid. The middle lobe was pale, erepitant, and, on section, emphysematous. The pleura of the lower lobe had lost its gloss and was covered here and there with a small amount of fibrinous exudate. The lobe itself was enlarged and consolidated, particularly in its lower part. On section the lower part of the lobe was occupied by a blood-red wedged-shaped area, similar to those seen on the other side. The upper portion of the lobe was extremely edematous. The pulmonary vessels leading to this wedged-shaped area were blocked by thrombi. The bronchi on both sides contained frothy mucus; their mucous membrane was congested.

On microscopic examination of the consolidated portion of the lung, on the surface of the pleura a small amount of pink-staining granular material containing red blood-corpuscles, a few desquamated epithelial cells, and an occasional polynuclear leukocyte were found. The vessels in the pleura were dilated and filled with blood. The alveoli were dilated, and were completely filled with an exudate almost exclusively made up of red blood-corpuscles. There were present also a few desquamated epithelial cells and an occasional dust-cell. The majority of the cells, both in the walls of the alveoli and in the exudate, seemed to be fairly well preserved. A large bloodvessel supplying this area of the lung was completely blocked by a mixed clot, in which no signs of organization could be made out. Sections of this portion of the lung were stained for bacteria, and there was found in the pleural exudate, the pleura, and the alveoli a small number of bacilli, which appeared usually as moderately long, slender rods.

On bacteriologic examination cover-slips from the right pleura showed a few long, slender bacilli. The cultures from the heart's blood, spleen and liver yielded negative results. The cultures from the kidney, and the renal infarct, showed a short thick bacillus that culturally resembled in every respect the *bacillus coli communis*. The cultures from the infarct in the lower lobe of the right lung, and also from the overlying

pleura, showed an organism morphologically similar to that seen in the cover-slips from the pleura. On media the organism was practically identical in its behavior with that isolated in Case I, and identified as the *bacillus pyocyaneus*.

**CASE III.**—John L., an unmarried man, 26 years old, was admitted to the Albany Hospital, January 19, 1898, for necrosis of the tibia. His family-history was negative.

Fourteen years previously the right leg had been crushed, with a resulting fracture of both bones. Healing did not take place, and an operation was performed four years later, after which the healing was perfect, and the leg caused no further trouble for nine years, when it became much swollen and painful, ulceration finally occurring with sinuses leading to the bone. At the time of the present operation there was extensive bone-implication, as well as extensive ulceration of the soft parts, with an absence of fever. The urine contained a moderate amount of albumin, and also tube-casts. The operation performed on January 22, 1898, consisted in the amputation of the leg below the knee-joint.

On January 24th there was sharp darting pain in the amputation-stump. The dressings were changed, and were found to be stained a bluish-green color. The heart and lungs were normal; the spleen slightly enlarged. The temperature was 101.4° F., the pulse 82. On January 27th the wound showed granulating surfaces at its outer angles, covered by a small amount of yellowish-green pus. The dressings were stained as before. The urine contained albumin and casts. A culture taken from the wound contained the *bacillus pyocyaneus*, with the *staphylococcus pyogenes aureus*.

From January 30th to the time of the patient's death, on February 5th, he complained of violent headache, epistaxis on three occasions, vomiting, pain in the abdomen, and diarrhea (from 6 to 9 movements daily).

On February 2d a fine purpuric rash appeared over the chest, abdomen, scrotum and thighs. Death occurred on February 5th, and was preceded for a short time by delirium. From January 30th to the time of death, the temperature ranged between 100° and 102.8° F. The pulse varied from 80 to 124, the respirations from 26 to 38.

The autopsy was made 4½ hours after death. The following is an abstract from the notes:

**Anatomic Diagnosis.**—Chronic parenchymatous nephritis (large mottled kidney); slight chronic adhesive pleuritis at the right apex; slight swelling of the follicles of the spleen; chronic passive congestion of the liver; chronic gastritis; acute hemorrhagic inflammation of the ileum and colon; necrosis and ulceration of intestine; hypertrophy of the left ventricle; subpericardial hemorrhages; general pyocyanic infection.

The body was 161 cm. long, moderately well built, and fairly well nourished. There was well-marked rigor mortis. The surface of the body generally was pale. The pupils were dilated and equal. The mucous membranes were of a fair color. The body was still warm. The right leg was amputated 12 cm. below the knee-joint; the amputation-stump was, for the most part, healthy. At each angle of the wound was a sinus packed with iodoform-gauze, lined with healthy granulation-tissue and out of which a small quantity of pus could be squeezed.

The peritoneal cavity was dry; both layers of the peritoneum were smooth; the omentum was delicate; the appendix was 11 cm. long, and normal. Both pleural cavities were free from fluid. Both layers of the pericardium were smooth, and beneath the epicardium were numerous pin-head-sized hemorrhages. The heart, lungs, liver, gall-bladder, adrenals, ureters, aorta, stomach, testicles and pancreas showed nothing particularly remarkable in their appearance. The spleen was free from adhesions; its capsule was somewhat wrinkled; its consistency was firm; on section the pulp was not increased, the trabeculae were not increased, and the Malpighian bodies were prominent.

The fatty capsule of the left kidney was moderate in amount. The fibrous capsule was not particularly adherent. The surface of the organ was mottled, the prevailing color being red, and the mottling due to circumscribed grayish areas; the consistency was increased. On section the kidney still had a mottled appearance; the cortex was swollen and its markings indistinct; the glomeruli were only occasionally visible. The pelvis of the kidney was normal. The right kidney presented the same appearance as its fellow.

Both the large and the small intestines contained greenish-



gray fluid. The mucous membrane, particularly in the lower portion of the ileum and in the colon, was intensely congested. Peyer's patches were somewhat prominent. The solitary follicles were not apparent. Beneath the mucous membrane of the colon there were in places a number of pinhead-sized hemorrhages. In places in the upper portion of the colon, and in the ileum, there were somewhat irregular, very superficial, losses of substance, none having a diameter exceeding 3 mm. The mucous membrane of the lower colon was only slightly congested. The mucous membrane of the duodenum was moderately congested, as was that of the jejunum. The mesenteric glands were swollen, but not markedly so.

Microscopic examination of the heart, lungs, liver, pancreas and kidneys added nothing to the macroscopic findings. Both the ileum and the upper colon presented the same appearances. The lining epithelium was in many places normal; in other places it was desquamated, and the subjacent tissues were distended with an exudate containing polynuclear leukocytes. The interglandular tissue was exceedingly infiltrated with a great abundance of small round cells. Now and then greatly dilated glands could be seen in the section, containing polynuclear leukocytes.

Elsewhere in the sections the changes were of a different character, and consisted, in many cases, of necrosis of the epithelium, which was replaced by a finely granular material, disintegrated cells, and polynuclear leukocytes. In still other portions sharply circumscribed losses of structure, extending to either the submucosa or the muscular coat, were present in the sections. The edges were somewhat abrupt and the surrounding tissues were infiltrated with small round cells and many polynuclear leukocytes. The base was clean or covered with a small amount of finely granular material in which there were a number of polynuclear leukocytes. The polynuclear collections within the glands were very abundant in the ileum, and assumed the aspect of miliary abscesses originating in the gland-structure. The solitary follicles showed an increase in their cell-elements, but, otherwise, they presented no apparent deviation from the normal. The muscular and peritoneal coats were normal. Sections of the intestine stained for bacteria showed many to be present, mostly thin bacilli of moderate length; other short, thick bacilli were likewise present in the sections. The thin bacilli were very abundant in the small miliary abscesses and ulcers, less so in the normal portions of the intestine. Other sections similarly stained for bacteria, from the liver, kidneys, lungs, and heart, contained a few slender bacilli, similar to those in the intestine.

On bacteriologic examination cover-slips from the drainage-tract in the stump showed many polynuclear leukocytes and a few slim bacilli. The latter occurred singly, sometimes in pairs, sometimes in groups; they were moderately long and thick, showing no disposition to any particular arrangement.

Cultures from the heart's blood, lung, liver, spleen, kidneys, intestinal ulcers and stump-wound contained a common organism, which in its morphology resembled the predominating organism seen in the tissues. The cultures from the kidneys and the ulcers contained, besides, a short, thick bacillus, culturally corresponding in its behavior to the bacillus coli communis. The organism common to all the cultures behaved in a similar manner to that described as the bacillus pyocyaneus in the two preceding cases.

Crystals in pyocyan were separated by Charrin's method. Half a cu. cm. of a 24-hour bouillon-culture introduced into the auricular vein of a full-grown rabbit caused death in 19 hours, demonstrating the great degree of virulence of the organism.

Bacteriologic examination of the heart's blood, and of the principal viscera of the rabbit showed pure cultures of the bacillus. The pathologic lesions presented a typical picture of "maladie pyocyaneque."

The bacillus pyocyaneus, like many pathogenic micro-organisms, is occasionally found in a purely saprophytic role in various situations in the human economy. It has been found in the saliva by Pansini,<sup>5</sup>

in sputum by Frisch,<sup>6</sup> and in the the sweat by Eberth<sup>7</sup> and Andonard.<sup>8</sup> Abelous<sup>9</sup> demonstrated its presence in the stomach as a saprophyte. Its existence in suppurating wounds has long been known, and Koch<sup>10</sup> early detected its presence in tuberculous cavities, regarding it as an organism incapable of playing any pathologic role. The etiologic relation of the organism to certain cases of purulent otitis media in children was pointed out by Martha,<sup>11</sup> Maggiora and Gradenigo,<sup>12</sup> Bábes,<sup>13</sup> Kossel,<sup>14</sup> and others. H. C. Ernst<sup>15</sup> obtained it from a pericardial exudate during life. G. Blumer<sup>16</sup> demonstrated its presence in practically pure cultures in a case of acute angina, clinically simulating diphtheria; Jadkewitsch,<sup>17</sup> B. Motz,<sup>18</sup> and Le Noir<sup>19</sup> obtained the bacillus in cases of urinary infection. The cases of Triboulet,<sup>20</sup> Karlinski,<sup>21</sup> Oettinger,<sup>22</sup> Ehlers,<sup>23</sup> and Barker,<sup>24</sup> are interesting instances of its role in cutaneous lesions. In addition to these lesions other morbid processes have been associated in some cases with the bacillus of blue pus, such as meningitis and bronchopneumonia by Monnier,<sup>25</sup> diarrhea in infants by Neumann,<sup>26</sup> Williams,<sup>27</sup> Thiercelin and Lesage,<sup>28</sup> and other observers; dysentery by Calmette<sup>29</sup> and by myself, and general infection by Ehlers,<sup>30</sup> Neumann,<sup>31</sup> Oettinger,<sup>32</sup> Karlinski,<sup>33</sup> Monnier,<sup>34</sup> Krannhals,<sup>35</sup> Calmette,<sup>36</sup> Finkelstein,<sup>37</sup> and L. F. Barker.<sup>38</sup>

Two of the cases included in this report are examples of this last class of infection. Instances are reported of hepatic abscess by Kraus and Pasquale,<sup>39</sup> and of ovarian abscess, esophageal lesions, ureteritis, and pyelonephritis by Barker.<sup>40</sup> In Case I, reported in this paper, the infection may have been primary in the pelvic culdesac, with extensions to the general peri-

<sup>5</sup> *Arch. f. Path. Anat. und Phys.*, Band LXVI, Heft 2.

<sup>6</sup> *Med. Centralblatt*, 1873, and *Arch. f. Path. Anat. Phys.*, Virchow, Band LXIV, 1875.

<sup>7</sup> *Jour. de Med. de l'Univ.*, 1874.

<sup>8</sup> *Phis. de Montpellier*, 1888.

<sup>9</sup> Cited by Legars, *Tr. de B. Path.*, 1895.

<sup>10</sup> *Arch. f. Med. Exper.*, 1892, p. 100.

<sup>11</sup> *Annales de l'Institut Pasteur*, Tome V.

<sup>12</sup> Corral et Bábes, *Les Bactéries*, p. 486.

<sup>13</sup> *Zentralbl. f. Bact.*, 1894, vol. XVI.

<sup>14</sup> *American Jour. of Med. Sciences*, 1894, vol. LV, p. 396.

<sup>15</sup> *Johns Hopkins Hospital Bulletin*, 1895.

<sup>16</sup> *Bull. de l'Acad. de Med.*, 1895, p. 555.

<sup>17</sup> *Comptes Rend. de la Soc. de Biol.*, 1896, p. 128.

<sup>18</sup> *Comptes Rend. de la Soc. de Biol.*, January, 1897.

<sup>19</sup> *Comptes Rend. de la Soc. de Biol.*, October 22, 1897.

<sup>20</sup> *Prag. med. Woch.*, 1891, No. 20.

<sup>21</sup> *Semaine Médicale*, 1890, p. 385.

<sup>22</sup> *H. f. Path. Anat. und Phys.*, 1890.

<sup>23</sup> *Jour. Amer. Med. Assoc.*, July 31, 1897.

<sup>24</sup> Cited by Legars, *Tr. de B. Path.*, 1895.

<sup>25</sup> *Arch. f. Kinderheilkunde*, 1891, xii, xlii.

<sup>26</sup> *Montreal Medical Journal*, 1895.

<sup>27</sup> *Bulletin de la Société de Médecine*, November, 1894.

<sup>28</sup> *Arch. de Méd. Navale et Coloniale*, 1893.

<sup>29</sup> *Op. cit.*

<sup>30</sup> *Op. cit.*

<sup>31</sup> *Op. cit.*

<sup>32</sup> *Op. cit.*

<sup>33</sup> *Arch. f. Path. Anat. und Phys.*, 1890, p. 100.

<sup>34</sup> *Arch. f. Path. Anat. und Phys.*, 1890, p. 100.

<sup>35</sup> *Arch. f. Path. Anat. und Phys.*, 1890, p. 100.

<sup>36</sup> *Charité Annalen*, 1896, p. 346.

<sup>37</sup> *Op. cit.*

<sup>38</sup> Cited by Barker.

<sup>39</sup> *Op. cit.*

toneal cavity, operation-wound, and into the system; but it seems probable that the original infection existed in the genital apparatus. This case and those of Barker demonstrate the possibility of acute, peritoneal pyocyanic infection. Case II is unique in the literature of the bacillus pyocyaneus. It is possible that this case may have been originally a general infection, and might rightly be classed in that category of cases mentioned by Barker, in which the bacilli are rapidly filtered out of the blood. Case III is particularly instructive in so far as the original nidus of infection in the operation-stump was apparent, and from this atrium the general systemic infection took place. This, and other more or less similar observations, demonstrate the necessity of keeping in mind, in cases in which the bacillus pyocyaneus is found in the pus of apparently trivial lesions, the possibility of serious complications, with disastrous results.

Pyocyanic infection, although by no means common, occurs with much greater frequency than is generally believed. Some instances, undoubtedly, escape recognition, owing to the fact that the organism frequently fails to produce its green pigment for some days, or, perhaps, not at all until after its transmission through animals. This latter procedure will invariably result in the reproduction of the pigment-producing powers.

In the bacteriologic study of 200 cases of suppurating wounds Jadowski<sup>41</sup> observed the organism only twice. As the result of the systematic bacteriologic study of 800 consecutive autopsies, made at the Johns Hopkins Hospital, Barker was able to find 11 cases of either local or general pyocyanic infection. The three cases that I have reported were discovered, as already mentioned, in the bacteriologic examination of 100 consecutive autopsies.

The clinical evolution of the "maladie pyocyanique" in man resembles, in a general manner, the other better-known forms of septicemia, and some of the acute febrile diseases. The general symptoms are those of all infectious maladies—weakness, prostration, and fever characterizing the onset of the trouble. The temperature, while in no manner presenting a characteristic course, usually remains high—between 103° and 105.5° F.; and irregular oscillations are not infrequent. In addition to those already mentioned, certain other symptoms will make themselves manifest, depending upon the localization of the microorganism. Pulmonary disturbances occasionally occur as specific affections, either as bronchopneumonia or as pleurisy, etc. The circulatory system usually exhibits nothing characteristically noteworthy. Epistaxis has been observed. Tympanites is present as a rule, and is generally attributed to paralysis of the intestinal wall. The spleen is enlarged, and the urine sometimes contains a small amount of albumin. Intestinal disturbances occur with greater frequency in this form of septicemia than in others and

exhibit themselves by the occurrence of diarrheiform symptoms. The diarrhea presents nothing characteristic clinically, but the dejecta are, in some instances, of a more or less green color, or become so in a variable time after exposure to the air. Occasionally the stools are blood-stained. The acute enteritis may appear quickly after the inception of the disease and persist until death, or it may disappear; in other cases it appears much later in the disease. Vomiting is frequently observed and the vomitus sometimes contains blood. Cutaneous manifestations are remarkably frequent and appear in the form of either bullous eruptions or petechiæ, or, more rarely, as a papular rash. The distribution of these eruptions is generally on the trunk, limbs and scrotum, and the time of their appearance in the disease is very variable, in some cases being late and in others early.

The bullous eruptions contain serous fluid, frequently slightly blood-stained, and from this the bacillus pyocyaneus has been isolated in a few instances, as in those reported by Ehlers, Oettinger and Karlinski.

As in the experimental study of pyocyaneus-infection several forms are produced, so, in man, the clinical evolution assumes several distinct types deserving special consideration. Legar's classification into the acute and chronic forms is better than the creation of many types, which depend upon the predominance of one particular symptom over another. Such a classification is not only cumbrous, but it is not practical. The symptomatology of the acute form corresponds with the description already given, *i. e.*, prostration, occasionally albuminuria, high fever, acute splenic tumor, cutaneous eruptions, diarrhea, and vomiting, in addition to certain complicating and special features. The acuity of the course of the disorder is remarkable, death occurring in from 48 hours to 4 or 5 days; and in a few cases later. The chronic form of the disease is rare, and has been best studied experimentally. Neuritis, myelitis, hemorrhage into the hemispheres, peduncles, and bulb, paraplegia, monoplegia, contractures, muscular atrophy, trophic disturbances, disturbances of a reflex order, vasomotor phenomena, anesthesia, sensory accidents and spinal epilepsy have been met with in such experiments. Thus far the nervous forms of this infection in man have rarely been observed, but future observations will undoubtedly reveal some of the types experimentally produced.

Jadkewitsch<sup>42</sup> has reported an interesting case of the nervous type. The patient had at the time of observation a chronic eczema of both legs which had lasted 10 years. This was complicated three times by ulceration, the purulent secretion being blue, and at these times the patient manifested certain peculiar nervous symptoms. The first time the blue suppuration lasted for three months. At the end of this period there gradually developed paresis and anesthesia of the whole right

<sup>41</sup> *Zentralbl. f. Bacteriologie*, 1893, vol. 15, p. 475.

<sup>42</sup> Baumgarten's *Zeitschrift*, 1890.



arm, which disappeared under electrical treatment. Five years later the blue suppuration returned and lasted 3 weeks, following which there occurred a period of weakness and emaciation, with dyspnea and rapidity of pulse (140), lasting 4 months, when recovery took place. Three years later the blue suppuration once more returned and lasted with intermissions about 4 months. Accompanying this there occurred diarrhea, slight increase in temperature ( $38^{\circ}\text{C}.$ ), a pulse of 120, paresis of both legs, and disturbance of sensibility, which spread gradually to the skin of the scrotum, the penis, the gluteal region and anal region; the lips and tongue were also anesthetic. In this stage of the disease Jadcwitsch isolated from the urine the bacillus pyocyaneus.

The pathologic ensemble of cases of pyocyanic septicemia or intoxication in man resembles the experimental forms so very closely that the two may be considered identical in their presentation: vasomotor disturbances, focal necroses, hemorrhages, lesions in the parenchyma of heart, liver, spleen and kidneys. Intestinal lesions are common. The intestinal features observed in the course of systemic infections in man occur usually as lesions similar to those described in Cases I and III. These lesions, although present in both the small and the large intestine, apparently show a predilection for the small bowel, where they are usually not only more numerous, but are found with greater frequency. The pathologic changes in both portions of the intestine are practically identical in their nature. In some instances the process scarcely exceeds a degree of superficial necrosis of the mucous membrane, sometimes diffuse, and at other times more or less circumscribed. Ulceration of the intestine apparently occurs more often in the less acute cases. Rarely involving more than the mucous membrane, these ulcerations have never been known to cause perforation. The common occurrence of pyocyanic lesions, in the intestine, in the various forms of infection, may be emphasized by the citation of some of the reported cases, some of general infection and intoxication, others of infection of a very local character.

Calmette,<sup>43</sup> in his pathologic and bacteriologic studies of the Cochín-China dysentery, found ulcers in many cases; Neumann, likewise, observed these anatomic lesions, and Baker, in his most valuable contribution, also calls attention to these changes. In addition to ulcerative changes there may exist acute hemorrhagic enteritis, with or without the ulceration of the mucous membranes. The stomach is commonly the seat of acute hemorrhagic inflammation. The other organs show varied lesions, depending upon the type of infection, virulence of the organism, etc.

Parenchymatous degeneration of liver and kidney, acute splenic tumor, focal necrosis of liver, swelling of the follicles of the intestine, and minute hemorrhages

into serous membranes are common findings in these cases. The bacillus pyocyaneus is usually found in the heart's blood and in the viscera in cases of general infection. At other times it may be present in one or two organs only. Some writers are inclined to the belief that pyocyanic infection is practically only found in children, but the cases reported by Barker, Monnier, Krannhals, Calmette, Jadcwitsch, myself, and others, conclusively show this to be erroneous. It is true, however, that infection with this organism is more frequent in children than in adults, but just as some other forms of infection are more frequent, owing to increased susceptibility through the small power of resistance that children possess.

The diagnosis of local infections can only be made by bacteriologic study, as they offer nothing clinically of very practical utility for their recognition. The presence of green or blue pus, as shown by the dressings, will, of course, facilitate the diagnosis in some instances. Cases of general septicemia are likewise extremely difficult to recognize, owing to their clinical resemblance, in the main, to other forms of infection, and, occasionally, to acute febrile maladies; but if one is on the alert for such forms, the intestinal features, if present, or the existence of blue or green pus at some local lesion, may be suggestive. The Widal test may prove serviceable to distinguish typhoid fever from these cases. In some instances of this nature the bacillus pyocyaneus has been detected in the urine, and bacteriologic examination of the urine or intestinal dejecta may clear up the diagnosis. Experimentally, the serum-diagnosis in pyocyanic infection is a demonstrated fact, and its clinical application might prove of practical utility.

It is quite likely, as already mentioned, that a certain number of cases escape detection owing to the fact that the bacillus fails to produce its characteristic green pigment, but careful bacteriologic study of autopsied subjects, I believe, will show that infection with the bacillus pyocyaneus is far more frequent than is generally believed at the present time.

## ENDEMIC LEPROSY IN LOUISIANA.

With a Logical Argument for the Contagiousness of this Disease.\*

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THE origin and course of leprosy in Louisiana have only been touched upon in passing by the historians who have made the history of this State. The notice has been sufficiently emphatic, however, to have demanded a more complete medical record than does exist. The question of endemic, or indigenous, leprosy

\* At the International Leprosy Conference, at Berlin, in October 1897.

<sup>43</sup> *Op. cit.*

in Louisiana is so important that I have made a study of the available historical and medical data bearing on this point, and in this communication I have brought the subject down to the present day.

The first mention of leprosy in the Southern States was made by Bernard Romans,<sup>1</sup> who refers to its introduction from the West Indies, a conclusion more than probable, as at least one series of cases in the State of Louisiana can be traced to Martinique. The disease is usually accredited to the immigration of the Acadians from Nova Scotia between 1756 and 1760, and to their settlement in the "Lafourche" and "Téche" districts, so named after the bayous that are known by these terms. At any rate, Xavier Martin<sup>2</sup> relates the erection of a hospital for the indigent lepers who were found in the streets begging and exposing all to the contagion, even at that time appreciated. This was accomplished in 1785, under Miro's administration. On the tomb of Don Andres Almonester, at the St. Louis Cathedral in New Orleans, a slab bears an inscription, among other benefactions related, of the fact that this hospital was founded by him.

The hospital erected by the cabildo stood "on a ridge of land (now known as Metairie Ridge) in the rear of the city, between it and the Bayou St. John, which is probably the ridge that in ancient times separated the waters of the Mississippi and those of Lake Pontchartrain."\* Gayarré<sup>3</sup> refers to this hospital and its site as known by the name of *La terre des lepreux*, where "in a few years the number of patients gradually diminished, either by death or by transportation, the disease disappeared almost entirely, the hospital went into decay, and Leper's Land remained for a considerable length of time a wild-looking spot." In the last decade of the eighteenth and the first decade of the nineteenth century, the leper-hospital underwent awful vicissitudes, gradually became deserted and its site was abandoned to other uses.

In 1800, Dr. Luis Giovellina, impressed with the necessities of the hospital, and realizing the urgency for its better care, addressed a letter to the cabildo, or city council, strongly pleading for the prompt attention of this body.† Among other things he said:

"The inmates, numbering not less than seven, are made to undergo much discomfort from restricted space and the faulty condition of the building, as well as from the absence of efficient nurses to administer to their wants, attend to the cooking and maintain cleanliness in their quarters; and whereas these objectionable conditions obviously preclude any possibility of further accommodating patients similarly afflicted, hailing from the city, or its surroundings, who from the very contagious nature of the disease would endanger public health, your informer, complying with the obligations of his trust, deems it his duty to lay this matter before your worship, so that being thus apprised, you would be induced to adopt proper measures to remedy existing evils.

"These measures, beyond doubt, should necessarily be directed toward repairing and enlarging said hospital, in-

creasing the number of its attendant personnel, allotting separate quarters to patients with due regard to their sexes, providing each individual patient with his own nurse, in order to more satisfactorily carry out certain indications and, finally, improving the adjoining road, which, at the present time, cannot be at all traveled over. Should the hospital's resources now prove inadequate generous help from private quarters will amply supplement the pecuniary deficiency, especially for the purpose of defraying the monthly salaries of a negro and negress whose services will be strictly required in nursing the sick, maintaining cleanliness throughout the building, and attending to the kitchen and laundry.

"Your informer, furthermore, volunteers his services not only in attending patients of said hospital with unremitting solicitude, as circumstances may require, but also to gratuitously furnish the drugs it may require, with the conviction that his medical brethren in the city will not hesitate to follow in his wake, and especially lend him assistance in the event of his being prevented from carrying out his promise. Wherefore I beg your worship that you should lend your attention to this matter, which is one of so great importance as much to the cause of suffering humanity as to that of public safety, by thus averting the evils which a disease of this kind might beget were its presence tolerated in this city and its environs. May, then, your accredited patriotic zeal and noteworthy philanthropy provide means to avert the fatal serious results which might arise were this pestilential evil allowed to pursue its course of propagation.

"New Orleans, September 18, 1800.

"Signed GIOVELLINA."

How much more reasonable, then, to conclude that the neglect of the patients, and the abandonment of the care of the hospital, either for repairs or management, were the reasons that no more lepers were observed, than to believe, with Gayarré, that the patients "died or were transported." Giovellina states specifically that the building was out of repair, that more space was needed for the inmates then confined and for others (of which he must have been informed) at large. Further than this, he implies that the patients were without medicine and without medical attention, and that the road to the hospital was in bad condition. We must consider also that these inmates were indigent lepers, taken off the streets, and we have no record of the cases, which must have existed, able to take care of themselves or to be cared for at home.

That the effort of Giovellina and his warning went unheeded are readily evident from the following letters (quoted in part), in 1807, from Mayor James Mather to the Council.

#### I.

... "Authorization is asked by residents on the Bayou Road to remove earth from the grounds belonging to the Leper Hospital, by digging a canal which will drain their road into the rear of that property.

"The following questions obviously suggest themselves:

"1. Have you a legal right to remove this earth, and should not its use be strictly applied to the improvement of the location allotted to this hospital, barring such of it as may be required for the repairs of the public road in its front?

"2. Can you fasten upon this institution a servitude from which it was originally exempt? Besides, were you to decide to rebuild this hospital, have you ever considered the noxious results arising from the stagnant water around it and their influences upon the patients? It seems to me strictly essential, gentlemen, that this property should, in compliance to the spirit which guided its foundation, be improved to the utmost.

"New Orleans, April 22, 1807.

"Signed JAMES MATHER, Mayor."

\* Martin, op. cit.

† Kindly translated from the Spanish for the author by Dr. J. J. Castellanos, of New Orleans.



## II.

"I have the honor to inform you, gentlemen, that the guard-house attached to the Lepers' Hospital, the roof of which is still in good condition, is now open on all sides, and is the headquarters of a band of Indians who have already all the lumber which could be detached therefrom without destroying the roofing. They will, no doubt, ultimately accomplish its total destruction. I deem it, gentlemen, of interest to the city's rights in the matter that the police-station be preserved and repaired at once, and that we should dedicate the land to some particular use. It may be offered to the Parish Judge as a public Pound, or we may lease it to some one for gardening, etc. At the present time the whole neighborhood is complaining of the annoyance they experience from the sojourn of the Indians about them, and you may well conceive the disorder which such vagabonds are apt to commit.

"June 3, 1897.

"Signed J. MATHER, Mayor."

No attempt was made to restore the hospital, and the community quietly drifted into a blindly apathetic indifference to the presence of the disease, which could not have been eradicated or kept under control by such loose methods. I could find no definite history of prevalent leprosy from this time until 1878, a period of over 70 years. In this time cases were constantly admitted to the Charity Hospital.

The total number found in the Charity Hospital Records,<sup>6</sup> of which there was not a complete file, was 112, of these, however, it is hard to determine how many have been entered more than once; for these cases remained in the hospital at times for several years, and often were admitted and readmitted several times in the year. These cases are separately tabulated, then, and are not held as "definite" cases. The evidence they bring is only correlative, to show that during the period from 1807-1878, leprosy still existed, and that there were cases so far advanced as to require hospital aid and treatment, arguing for an endemic disease. At that time a gradually increasing alarm had led to a sense of obligation on the part of the State Board of Health, until finally its President, Dr. Joseph Jones,<sup>7</sup> decided upon an investigation of leprosy in Louisiana.

So much publicity had been given this proposed movement that little assistance could be obtained by this officer of the public health. He is apologetic for the report he does make, and in reporting a total of 37 cases collected from 1877 to 1880, from all sources, he states that the popular impression that the Board of Health proposed seizing all lepers found and transferring them to some island in the Gulf of Mexico and then abandoning them caused a general attempt at concealment. From these cases the conclusion was drawn that the disease had existed for some time, as there were in one family 5 cases, and 2 other patients of the 37 reported were living in the neighborhood of these and were quite intimate. In several other families the disease had been known for two or three generations.

Giovellina's warning had been slowly prophetic. The disease had grown steadily in several districts, notably

in New Orleans, and in the Lafourche district, without knowledge of contact with other cases, and in different families, more or less removed—all cases, however, appearing in sections where the disease had had a legendary existence for years.

In 1879, in a paper read before the State Medical Society, Dr. L. F. Salomon<sup>8</sup> reported 6 cases in New Orleans. All doubt as to the prevalence of the disease was now removed, and soon measures were taken by the city of New Orleans to isolate those affected with the disease. A pest-house was arranged, to which these victims were sent, under a vile contract, by which the contractor profited and the patients suffered.<sup>9</sup>

In 1880, Harang<sup>10</sup> called attention to the inaccuracy of Dr. Jones' investigation, and in 1881, Bruns<sup>11</sup> reported cases, but in his published article the table was omitted.

In 1883, D. T. Smith<sup>12</sup> reported two cases of leprosy in Gretna, one of the outlying suburbs of New Orleans, across the Mississippi River. Both patients were natives of Louisiana.

In 1885, Jamison<sup>13</sup> reported 5 patients in children, all natives of Louisiana.

In 1883, Dr. H. W. Blanc<sup>14</sup> began the first systematic study of the disease undertaken in the State. His work was carefully done, and his cases carefully recorded. After less than three years' observation, he reported 42 cases, and called particular attention to the large proportion of patients born and living in the Third District—not far removed from the old leper-hospital site. His conclusions bore large evidence of the relation of foreign parentage to the occurrence of the disease, and he noticed among his cases the comparatively large number of foreign birth.

In 1890, a vagrant leper was found on the streets of New Orleans, and was arrested and sent to the Parish jail, notwithstanding his condition.<sup>15</sup>

In 1891, Bergé<sup>16</sup> reported four patients treated with chaulmougra oil, two of whom were of foreign birth.

In 1892, Blanc<sup>14a</sup> reported 83 cases, 41 in addition to those previously recorded.

Meantime, as many as 10 patients had been collected at the pest-house, where they lived a doubtful existence. Their medication was scarcely administered and their food scantily supplied. As a result of this state of things, and through the persistent effort of the daily press, the legislature of 1894 passed a bill, after several amendments, creating a board of control, which should establish and maintain a home for lepers, while the act also provided for the detention of lepers and other proper commitment.

As at first framed, the bill was arranged for political profit, but by a systematic effort on the part of the profession this was defeated. The resolutions adopted by the Orleans Parish Medical Society, and referred to the legislature, were finally adopted and framed in the bill as passed. These resolutions formed the concluding

portion of a report that I read in June, 1894, before the Orleans Parish Society, in which argument was made for discriminate legislation. In this report 25 cases were recorded.<sup>17</sup>

The leper-home was finally established, in spite of the difficulty of securing a site, and the 10 patients from the pest-house were removed to the new home, situated in one of the country parishes (Iberville), about 80 miles from New Orleans. Systematic medical management was established, and a methodic system of treatment adopted.

In the first report,<sup>18</sup> published in 1896, by myself, then president of the Board, the resident physician (Dr. L. A. Wailes) reported 31 cases, 23 of whom were born in Louisiana.

In June, 1896, owing to restrictions in the medical offices at the Home, and to the presence of politics within the Board of Control, I resigned. Since then 5 cases have been admitted to the Home—all since January, 1897—4 since May 1st.<sup>19</sup>

In addition to the 25 cases referred to, I have recorded 91 cases, not including those of my cases embraced in the list of the leper-home, a total of over 116 cases seen in 5 years. In addition to these, in the month of August, 1897, Dr. Kibbe,<sup>20</sup> of Abbeville, La., sent me a list of 4 cases, and he reports 2 cases in children of one of the four as suspicious.

Dr. W. F. Harang, of Raceland, La.,<sup>21</sup> has reported 16 cases, 3 dead, with the following significant commentary: "There are some dozen cases of recent date, all contracted among the families above mentioned."

The total number of cases then reported since 1800 to September 10, 1898, is 277; since September 10, 1897, to July 31, 1898, 18 cases; a total of 295 in all, of which 131 are presumably living.

The infected areas in Louisiana are widespread, involving the following parishes:

Orleans Parish—New Orleans	Ascension Parish
Jefferson Parish	Assumption Parish
St. Bernard Parish	Caldesieu Parish
Vermillion Parish	Iberia Parish
St. John the Baptist Parish	Lafayette Parish
St. James Parish	Lafourche Parish
St. Landry Parish	Plaquemine Parish
Livingston Parish	St. Martin's Parish
Iberville Parish	St. Mary's Parish
Feliciana (East) Parish	St. Tammany Parish
Acadia Parish	Tangipahoa Parish

or 22 parishes of 59.

#### CONCLUSIONS:

1. Leprosy has existed in Louisiana probably since 1750.

2. Leprosy has existed in Louisiana positively since 1778.

3. The original cases were located at a special point in the city of New Orleans, now the Bayou Road, not far from North Rampart Street; other cases were rumored to be in the Lafourche district and in the Têche district, the home of the Acadians.

4. Most of the cases since recorded have occurred in these districts or the subjects have been exposed to contact in these districts.

5. There is *no instance of imported leprosy*, the patients recorded being *born in Louisiana*,\* or having lived in Louisiana for a period of years, none less than 10 years. There is one instance in which leprosy ancestry existed (Blanc).

6. There is no instance of heredity. When family-leprosy occurs, it occurs after the age of five or six, and more often in adults.

7. Cases have developed in notably large numbers in those foreign born.

8. There are 21 instances of consanguinity—many with a history of contact.

9. There are 45 instances of parents and children affected.

(a) Parents affected first, 3.

(b) Children affected first, 3.

(c) There was no instance in which either parent was affected *before the birth of the child*.

10. There are 61 instances of constant exposure to contagion:

(a) Man and wife, 6.

(b) Brothers or brothers and sisters, 27.

(c) Cousins, 5.

(d) Aunts and nieces or nephews, 4.

(e) Friends, 1.

(f) Parent and child, 26.

(g) Unusual by office, 2.

(h) Of nurse, 1.

(i) Of priest, 1.

(j) Venereal infection (supposed and believed), 2.

(k) Accidental inoculation, none.

11. In New Orleans most of the cases have occurred in the Second and Third Districts, adjacent to old leper-hospital.

12. The predominant type of disease was the anesthetic; 57 mixed; 58 anesthetic; 39 tubercular; 18 trophic—in the rest of the cases the type is not stated.

13. The habits of diet varied with the people, and that means a variety of diet of all sorts and kinds; in other words, I do not believe that diet determined the disease in any way.

14. Only exceptionally was there poverty or approximation to it (in my own cases). Most of the patients were either able to take care of themselves or were cared for by some relative.†

The disease in Louisiana, then, occurs in individuals

* Born in Louisiana,	171
Born elsewhere in U. S.,	8
Born in Europe,	39
Parents born in Louisiana,	40
Parents born elsewhere in U. S.,	1
Parents born in Europe,	47 (Sweden 1.)
Parentage not given,	206.

New Orleans is particularly free from the pauper class of the large cities, as it has honeycombed the population with benevolent associations, which on account of large memberships can exist on small dues. The "society" member never becomes destitute.



of all races, some preferred (German and French notably, of foreign races), all classes, independently of habit, independently of occupation, after a residence in Louisiana of varying periods. Neither age nor sex determines the disease, which has increased steadily, and rapidly in number since 1878.

Leaving aside the question of the bacillary origin and the theory deduced from this that the bacillus causes the disease, the foregoing arguments, arranged tabularly, are urged for the contagiousness of the disease, at least in Louisiana, where an observation of over a hundred cases in less than five years has made me believe utterly in this method of spread, so natural to a disease of the habits of lepra.

# APPENDIX.

A list of cases recorded in such Annual Reports of the Charity Hospital, New Orleans, as have been preserved.

DATE OF REPORT.	COLOR.	REMARKS.
1857	2 whites, 1 black.	No reports preserved to 1857.
1858	1 white.	
1859	2 whites.	
1860	2 whites.	
1861-1868	.....	Reports missing.
1869	None.	
1870-1873	.....	Reports missing.
1874	1 white.	
1875	4 whites.	
1876	5 whites.	
1877	5 whites.*	
1878	.....	Missing.
1879	7 whites.	
1880	7 whites.	
1881	None.	
1882	3 whites.	
1883	3 whites, 2 blacks.	
1884	6 whites, 2 blacks.	
1885	5 whites, 1 black.	
1886	1 black.	
1887	5 whites, 1 black.†	
1888	9 whites, 3 blacks.	
1889	4 whites, 2 blacks.	
1890	2 whites.	
1891	2 whites.	
1892	4 whites, 3 blacks.‡	
1893	2 whites, 3 blacks.	
1894	1 white, 1 black.	
1895	2 whites, 3 blacks.	
1896	3 whites, 2 blacks.	

\* From 1877, or even 1876, these cases are more than likely already enumerated under Dr. Jones' cases, as he was connected with the Charity Hospital at that time. Dr. Salomon, also, in 1880, reported 3 of his cases from the Charity Hospital.

† These cases are most likely identical with those reported by Blanc, as he was dermatologist to the Hospital at the time.

‡ All of these cases are only useful in this report as correlative evidence of the existence of the disease, and, therefore, an argument for the endemic nature of the disease.

*Comments.*—It would be impossible to say how many of these cases have been re-entered from year to year, or have been re-admitted several times in one year. I recall a case of elephantiasis arabum in my own service (dermatologic), which has for three years been entered at least once every two months on the hospital-records and each time it goes down as a new case. For

example, if the man left the hospital four times in one year and was readmitted four times, the hospital-records at the end of the year would show 4 cases of elephantiasis arabum, when, in reality, there had been but one case. Of the 112 cases, then, we cannot conclude that even half or even one third are bona fide cases. In fact since 1892 I have seen 4 cases of leprosy in the hospital (all recorded here), whereas the table herewith accounts for 21 cases, and as I have been almost always asked to confirm the diagnosis, or to see the cases, I cannot report these cases as authentic, or as real cases, as they may be numerically extensive through the repeated entering on the books of the hospital, with a false conclusion. This readily explains the apparently large list.

# BIBLIOGRAPHY.

- 1 Bernard Romans, *Compend Natural History of East and West Florida*, 1818, New York.
- 2 F. Xavier Martin, *History of Louisiana from its Earliest Period*, Vol. II, Gayarre, History of Louisiana, Spanish Domination.
- 3 Dr. Luis Grove Iria, Personal Letter to Cabello, September, 1860.
- 4 James Mather, Mayor of New Orleans, Communication to City Council, April, and again in June, 1807. J. J. Chisholm, *Case of Elephantiasis Græcorum*, *Seattle, J. Soc. Med. Sc.*, 1867, p. 201.
- 5 Charity Hospital Annual Reports, to 1897, inclusive. H. D. S. Landry, *Leish. Med.*, 1881, pp. 225-251. *Charity Med. Jour. and Trans.*, 1882, pp. 357-358. J. N. Hyde, *The Distribution of Leprosy in North America*, *Am. J. Med. Sc.*, 1894, pp. 252-261.
- 6 Jos. Jones, *Observations on African Yaws and Leprosy in Insular and Continental America*, 1878, *New Orleans Med. and Surg. Jour.*, Results of Investigation of Leprosy on Bayou Lafourche. Report of Louisiana State Board of Health, 1880.
- 7 L. F. Salomon, Report to Louisiana State Medical Society on Existence of Leprosy in Louisiana, *New Orleans Med. and Surg. Journal*, 1879, p. 1-30.
- 8 Dyer, *Leprosy Question in Louisiana*, *New Orleans Med. and Surg. Journal*, July, 1891. *Leprosy*, *Paris Med. Journal*, May, 1894.
- 9 W. F. Harang, *Louisiana Leprosy*, *Med. and Surg. Reporter*, vol. 43, 1880.
- 10 J. H. Bentes, *Some Cases of Leprosy*, *New Orleans Med. and Surg. Journal*, 1880.
- 11 H. D. Burns, *A Clinical Study of Leprosy*, *Archives of Med.*, 1881. G. E. Underhill, *Remarks on Leprosy*, *New Orleans Med. and Surg. Journal*, 1881.
- 12 D. T. Smith, *Two Cases of Leprosy in Grenada*, *New Orleans Med. and Surg. Journal*, 1882-1883.
- 13 David Jamison, *Five Cases of Leprosy in Children*, 1885, *New Orleans Med. and Surg. Journal*.
- 14 H. W. Blanc, *One Year of Dermatology in New Orleans*, *New Orleans Med. and Surg. Journal*, 1887-1888. *A Few Cases of Leprosy in New Orleans*, *New Orleans Med. and Surg. Journal*, 1889.
- 15 H. W. Blanc, *Orleans Par. Med. Soc. Proc.*, 1890. *Synopsis of Leprosy Question*, *Journal Leprosy Invest. Committee*, London, 1891, No. 2, February, p. 97. *A Review of Five Years of Dermatological Practice in New Orleans*, *New York Med. Journal*, March 12, 1898. *The Leprosy Question*, *Journal Am. Med. Assoc.*, 1892, XVIII, pp. 507-510.
- 16 *New Orleans Daily State*, November 18, 1890. *Account of Leper Arrested*, etc.
- 17 Bergé, *Chalmougra-Oil in the Treatment of Leprosy*, *New Orleans Med. and Surg. Journal*, 1891.
- 18 Dyer, Report of Chairman of Section on Dermatology, *Louisiana State Med. Soc. Proc.*, 1895. *Leprosy*, Loomis' *American System of Practical Medicine*, 1897, Vol. I. *Leprosy*, *American System of Genito-Urinary and Skin Diseases*, 1897.
- 19 First Annual Report of the State Board of Control of the Louisiana Leper-Home to the Governor and General Assembly of the State of Louisiana, etc. 1896.
- 20 Report of Visiting Physician to the Leper-Home.
- 21 Kröbe, Personal Letter. Reported Cases Embodied in Jones' Report.
- 22 W. F. Harang, Personal Letter.

# FORMALDEHYD AS A DISINFECTANT,

**Especially in its Practical Application to the Disinfection of Infected Dwellings, Bedding, Clothing, Books, etc.**

[From the Bacteriological Laboratories under the Supervision of the Department of Health of the City of New York.]

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(Concluded from page 519.)

No results were considered conclusive in which the controls failed to grow, or in which there occurred a contamination of the test-cultures that seemed to cast

a doubt upon the effect of the disinfectant. The following experiments present an average illustration of the conditions under which the investigations were made and of the results obtained, the tabulation of the whole of which, many in number, would take up too much space.

#### SERIES I.

This series of experiments was conducted in the Reception-Wards of the Willard Parker Hospital. The walls and floors of the rooms are tiled. There are closely fitting windows at one end, double doors, registers and ventilators; these are the only openings, all of which were closed and the cracks stuffed with cotton or pasted over with paper, to make the rooms as airtight as possible. The wards were furnished, the furniture consisting of enameled iron bedsteads, chairs and tables—rubber-covered mattresses, and pillows, blankets, etc., being on the beds. The conditions existing in these wards, accordingly, were much better than would ordinarily be found in house-disinfection. The rooms contained 2,600 cubic feet of space, being nearly square, with ceilings 14 feet high.

#### EXPERIMENT I.

**APPARATUS:** The Moffat Formaldehyd Generator or Lilly Lamp (12 tubes). *Quantity of wood-alcohol consumed per 1,000 cubic feet:* 3 pints. *Time of exposure:* 1, 2, 3 and 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli in coarse threads  $\frac{1}{8}$  inch thick, after 1 and 2 hours' exposure, not killed; after 3 hours' exposure, killed. (2) Staphylococcus pyogenes aureus in coarse threads, after 1, 2, 3 and 24 hours' exposure, not killed; in fine threads and cotton gauze, after 24 hours' exposure, killed. (3) Typhoid and diphtheria bacilli in fine threads  $\frac{1}{8}$  inch thick, placed in paper envelopes, after 24 hours, killed; same bacteria under one layer of cotton spread or woolen blanket, after 42 hours, not killed. (4) Anthrax-spores in coarse threads, after 24 hours' exposure, not killed. *Controls all grew.*

In this experiment a larger quantity of wood-alcohol was used than is ordinarily considered necessary by the manufacturers of the apparatus for the disinfection of a room of this size. This was done to test the penetrative power of the gas in large volumes, should such be generated. The test-objects were distributed about the room, exposed or protected, on the floor, on the furniture, and near the ceiling. Some of them were arranged so that they could be removed through a window without entering the room and with the least possible escape of gas. The diffusion of the gas, according to the results, was about equal in all parts of the room. With the consumption of 3 pints of wood-alcohol per 1,000 cubic feet, the common non-sporebearing bacteria, with the exception of the staphylococcus pyogenes aureus, when freely exposed to the gas generated, were killed in 3 hours. The last-named organism was killed after 24 hours' exposure. The penetrative power of the gas was slight. This experiment was repeated several times, with similar results. Other experiments made with a smaller quantity of wood-alcohol were less satisfactory.

#### EXPERIMENT II.

**APPARATUS:** The Trillot Autoclave. *Quantity of Formochloral consumed per 1,000 cubic feet:* 12 ounces. *Time of exposure:* 1, 2, 3 and 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus in coarse threads, after 1, 2, 3 and 24 hours' exposure, killed. (2) Anthrax-spores in fine threads, after 24 hours' exposure, killed. (3) Typhoid and diphtheria bacilli in cotton-gauze, placed under one layer of woolen blanket, killed; under two layers, not killed. (4) Typhoid-bacilli in cotton-gauze, placed

at the bottom of a sterile glass tube 18 inches long and open at one end, not killed. *Controls all grew.*

As in the last experiment, a larger quantity of the material to produce the gas was consumed than ordinarily is considered necessary. Though the results of this are better than in the last experiment, as regards surface-disinfection, the penetrative power of the gas was not materially increased. In this case a large volume of gas was generated; on opening the room, it could not be entered for three-quarters of an hour after ventilation. The surface-disinfection was as complete within 1 as it was after 24 hours. There was some penetration, but it was by no means complete. Other experiments made with half the quantity of formochloral gave practically the same results in superficial disinfection after 1 and 2 hours' exposure; the penetrative power of the gas was still less and more irregular in its action.

#### EXPERIMENT III.

**APPARATUS:** The Sanitary Construction Company's Generator. *Quantity of Commercial Formalin consumed per 1,000 cubic feet:* 6 ounces. *Time of Exposure:* 1, 2, 3 and 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus in fine and coarse threads, after 1, 2, 3 and 24 hours' exposure, killed. (2) Same bacteria placed under one layer of blanket, killed; rolled up in bundles of clothing, not killed after 24 hours' exposure. (3) Anthrax-spores, after 24 hours' exposure, not killed. *Controls all grew.*

Experiments made with less than 6 ounces of formalin per 1,000 cubic feet were not so satisfactory, though diphtheria-germs were killed when exposed, by the evaporation of 4 ounces of formalin. Anthrax-spores were killed only by an exposure of 24 hours to double the volume of gas.

#### EXPERIMENT IV.

**APPARATUS:** Schering's Disinfectant. *Quantity of Formalin-Pastils consumed per 1,000 cubic feet:* 45, equivalent to 45 grams. *Time of Exposure:* 1, 2, 3 and 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus, in fine and coarse threads, after 1 and 2 hours' exposure, not killed; after 3 hours' exposure, killed. (2) Anthrax-spores after 24 hours' exposure, not killed. (3) Typhoid and diphtheria bacilli in cotton-gauze, placed under one layer of blanket, killed; under more than one layer, not killed after 24 hours' exposure. *Controls all grew.*

Experiments made with 30 pastils to 1,000 cubic feet, as recommended by Aronson, gave about the same results in superficial disinfection. In either case the penetrative power of the gas was slight.

#### EXPERIMENT V.

**SULPHUR FUMIGATION** by burning sulphur in an open pan. *Quantity of Sulphur consumed per 1,000 cubic feet:*  $3\frac{1}{2}$  pounds. *Time of Exposure:* 20 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus, in cotton-gauze, after 20 hours' exposure, killed. (2) Same bacteria placed in sealed envelopes, not killed; under one layer of blanket, not killed. (3) Anthrax-spores, exposed, not killed. *Controls grew.*

At the time of this experiment there was considerable moisture present in the wards, as evidence of which the paper used in pasting over the registers and ventilators was colored yellow by the sulphurous acid formed. The results, though not so favorable as those obtained from the formaldehyd-disinfection by any of the other methods, show that under suitable conditions of temperature and moisture, sulphur-dioxid gas is an effective surface-disinfectant for ordinary non-sporebearing bacteria. Its penetrative power is next to nil even under these conditions.

#### SERIES II.

Another series of experiments was carried on in the Scarlet-Fever Wards of the Willard Parker Hospital. These are long and lofty wards, containing between thirty and forty thousand cubic feet of air-space, having a number of windows on one side, several large



doors, some opening into the hall and others directly into the yard, three or four small rooms attached at either end of the ward, and large ventilators in the ceiling. The beds, bedclothing, etc., remained in the wards. Some of the doors opening into the yard were partially sealed up with paper; but other doors, and the windows and ventilators were only closed; many of these did not fit tightly. Moreover, the apparatus employed for generating the gas was not large enough to furnish the necessary amount of gas for such unfavorable conditions as were here present.

#### EXPERIMENT VI.

With the consumption of about 4 ounces of formalin-solution per 1,000 cubic feet (for both gave practically the same results) and exposures of 1, 2, 3 and 24 hours, the following results were obtained: (1) Diphtheria-bacilli in fine and coarse threads, after 1, 2 and 3 hours' exposure, killed; typhoid and staphylococcus pyogenes aureus, with the same exposure, not killed. (2) Typhoid-bacillus and staphylococcus pyogenes aureus in positions where the gas freely circulated, killed; in other positions, not killed as a rule, though in all cases the growth was remarkably inhibited, after 24 hours' exposure. (3) The same bacteria in coat-pockets or under one or more layers of blankets, etc., not killed. *Controls grew.*

In these experiments it was noticed that test-objects that were moist at the time of the disinfection were more readily affected by the gas than those that were nearly dry. The gas seemed to be diffused over all parts of the wards, though the apparatus was placed outside of the door at one end only, the wards being 60 or more feet long.

#### SERIES III.

A third series of experiments was made in tenement-houses where, by order of the Division of Contagious Diseases, apartments were to be disinfected after scarlet fever, diphtheria, etc. Both sulphur dioxid and formaldehyd-gas were used in these disinfections, in order to compare their results when employed under the conditions usually observed in the routine work of Department of Health disinfectors. One experiment was also made in a private house, to test the effect of formaldehyd-gas on handsome upholstery, paintings, ornaments, etc.

#### EXPERIMENT VII.

SULPHUR-FUMIGATION in tenement-house apartment, two rooms containing about 2,500 cubic feet of space. Disinfection for diphtheria. *Quantity of Sulphur consumed per 1,000 cubic feet: 3 pounds. Time of Exposure: 8 hours. RESULTS:* (1) Diphtheria-bacilli in cotton-gauze distributed about the rooms freely exposed, killed. (2) Typhoid-bacilli and staphylococcus pyogenes aureus exposed, not killed. *Controls grew.*

The sulphur-dioxid gas was produced in the usual way by burning sulphur in an open pan. This was set in a dish of water upon the floor of the room, a little alcohol poured on the sulphur, which was then ignited and left to burn out, after the windows were pasted over with paper and the door closed and sealed up on the outside. Another experiment made with 20 hours' exposure gave the same result, viz.: that, with the exception of the diphtheria-bacilli, no other pathogenic organisms were killed by the  $\text{SO}_2$ .

#### EXPERIMENT VIII.

FORMALDEHYD-DISINFECTION in tenement-house apartment, two rooms containing 2,000 cubic feet of space. Disinfection for diphtheria. *Quantity of Formalin consumed per 1,000 cubic feet: 6 ounces. Time of Exposure: 2 hours. RESULTS:* (1)

Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus in threads, exposed in front room, killed. (2) Staphylococcus pyogenes aureus placed under a cotton scarf on mantel-piece, killed. (3) Same bacteria in gauze, placed under one layer of blanket and in the pockets of a coat hanging up in back room, killed. (4) Same bacteria, placed under a pillow on the bed, not killed. *Controls grew.*

The Sanitary Construction Company's apparatus was used in this experiment. It required 30 minutes to evaporate the 12 ounces of formalin used for this disinfection (6 ounces per 1,000 cubic feet). On opening the door, the gas was so strong that it was with difficulty that the room could be entered to raise the windows. Within 15 or 20 minutes, however, after a current of air had blown through the rooms, they could be entered without inconvenience. In 2 or 3 hours the occupants were able to return to them. Though the gas was present in sufficient quantity to exhibit some degree of penetrative power, a number of roaches and flies were observed alive and active immediately on opening the door of the room. Experiments made with less than 6 ounces per 1,000 cubic feet of formalin were not so satisfactory. Other experiments made with formalin-pastils, 30 or 40 per 1,000 cubic feet, in Schering's Disinfectant, gave fairly good results.

#### EXPERIMENT IX.

FORMALDEHYD-DISINFECTION in private house. *Quantity of Formalin consumed per 1,000 cubic feet: 4 ounces. Time of Exposure: 2 hours. RESULTS:* (1) Diphtheria and typhoid bacilli in threads, exposed on tables, bed, lounge, mantel-piece, picture-frames, etc., killed; staphylococcus pyogenes aureus, not killed. (2) Same bacteria placed under the carpet, not killed. *Controls grew.*

This was a four-story and basement house, completely furnished but unoccupied in summer, the owner of which desired that it should be "fumigated to purify the air." The rooms on the second floor were selected for the tests. The three large rooms opening into one another were handsomely fitted up with upholstered furniture, plush draperies, ornamental pieces of bronze and marble, oil paintings in gilt frames, etc. There was absolutely no effect of any kind to be seen on these articles of furniture, as a result of the exposure. The rooms were not sealed up, the open fireplaces, even, being only partially closed by means of newspapers.

#### SERIES IV.

A fourth series of experiments was performed in the iron chambers of the Disinfecting Station of the Department of Health. The former series of experiments were made at the ordinary room-temperature of inhabited apartments, viz., 52° and 75° F. At these temperatures no appreciable difference in the results obtained could be observed, as regards surface-disinfection; but the penetrative power of the gas under these conditions was very slight, even when large volumes of gas were used. These experiments in the Disinfecting Station were undertaken with the view of ascertaining whether, and to how great an extent, the penetrating action of formaldehyd-gas was influenced by elevation of temperature and the assistance of a partial vacuum. This series of experiments was made with especial reference to the disinfection of articles of bedding, clothing, leather, furs, etc., which cannot without injury be sterilized by steam or dry heat at 230° F.

The disinfecting chambers in which the experiments were carried on are rectangular in shape, made airtight, and contain 286 cubic feet of space. They are furnished with steam coils of sufficient capacity to give the required temperature for steam and hot-air disinfection, and a vacuum apparatus that produces a vacuum

equal to 18 inches of a column of mercury. The formaldehyd-gas was supplied by a generator placed outside of the chambers, into the interior of which the gas was conveyed by means of a tube passed through an opening in the side of the chamber. Experiments were made at various temperatures between 80° and 120° F., and with different volumes of gas and times of exposure, both with and without the aid of a vacuum.

#### EXPERIMENT X.

**DISINFECTION IN CHAMBER WITH FORMALDEHYD-GAS.** *Quantity of Formalin consumed per 1,000 cubic feet:* 120 ounces. *Temperature:* 80° to 85° F. *Vacuum:* 9 inches. *Time of Exposure:* 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli and staphylococcus pyogenes aureus in threads, exposed, killed. (2) Same bacteria, placed inside of a hair mattress rolled up and tied tightly, not killed. (3) Same bacteria placed in a cotton quilt and rolled up, not killed. (4) Same bacteria placed under two layers of wool blanket spread out, killed; under four layers of blanket, not killed. (5) Tubercle bacilli<sup>1</sup> in spleen of guinea-pig made into paste and spread on filter-paper, exposed, killed; in pockets of coat hanging up loosely, killed; rolled up in quilt, not killed. (6) Anthrax-spores in thread exposed and under two layers of blanket, killed; under four layers of blanket, not killed. *Controls grew.*

Delicate-colored fabrics of silk, plush, velvet, cotton and woolen goods, and shoes, leather bags, furs and ladies' hats trimmed with feathers and artificial flowers placed at the same time in the chamber and exposed to the action of the gas for 24 hours, were not visibly affected, in either color or texture.

#### EXPERIMENT XI.

**DISINFECTION IN CHAMBER WITH FORMALDEHYD-GAS.** *Quantity of Formalin consumed per 1,000 cubic feet:* 120 ounces. *Temperature:* 110° to 120° F. *Vacuum:* 9 inches. *Time of Exposure:* 4 hours. **RESULTS:** (1) Typhoid, diphtheria, and tubercle bacilli, exposed, killed. (2) Staphylococcus pyogenes aureus placed in rolls of carpets, killed. (3) Typhoid and diphtheria bacilli placed in rolls of hair and cotton mattress, killed. (4) Same bacteria as No. 3 placed in roll of cotton quilt, killed. (5) Anthrax-spores and staphylococcus pyogenes aureus placed under four and six layers of blankets, killed. *Controls grew.*

From this experiment it would appear that with a large volume of gas, or twenty times as much formalin as was sufficient for superficial disinfection in rooms, at a high temperature—110° to 120° F.—and with the aid of a partial vacuum, a high penetrative power was developed, so much so that all the test-objects were completely sterilized even when placed in the center of rolls of mattress, quilts, etc. The same quantity of formalin and degree of temperature, without the aid of a vacuum, as proved by other experiments, did not develop quite as great penetrative power; that is, the results were not so constant.

#### EXPERIMENT XII.

**DISINFECTION IN CHAMBER WITH FORMALDEHYD-GAS.** *Quantity of Formalin consumed per 1,000 cubic feet:* 60 ounces. *Temperature:* 110° to 120° F. *Vacuum:* 9 inches. *Time of*

<sup>1</sup> In some instances in which the paste made from tuberculous spores was spread in thick layers upon Petri dishes, the vitality of the tubercle bacilli was not destroyed, even when freely exposed to the action of the gas, though the growth was evidently markedly inhibited, that is to say, the guinea-pigs afterward injected with an emulsion of this paste finally died of tuberculosis after three months, while controls died within eight weeks. Other animals injected with an emulsion of the paste spread on sterile filter-paper and exposed to the gas or placed in coat-pockets remained uninfected. This shows the slight penetrative power of formaldehyd-gas through animal tissues.

*Exposure:* 3 hours. **RESULTS:** (1) Typhoid, diphtheria, and tubercle bacilli and staphylococcus pyogenes aureus placed between two and three folds of blanket spread out in such a manner that the gas could circulate freely above and below it, killed; placed in bundles of blanket and quilts rolled up, diphtheria-bacilli, killed; other bacteria, not killed. (2) Same bacteria, placed in pockets of coats hanging up, all killed. *Controls grew.*

The same experiment repeated, but without the aid of a vacuum, gave less satisfactory results; so also with a smaller quantity than 60 ounces of formalin per 1,000 cubic feet.

This result would seem to show that if the bedding, clothing, etc., are spread out or hung up in the chamber, so that the gas can circulate freely around them, sufficient penetrative power is developed to destroy the vitality of bacteria contained within them, by the evaporation of 60 ounces of formalin per 1,000 cubic feet (or ten times the quantity used in room-disinfection) and an exposure of 3 hours, when the temperature of the chamber is not lower than 110° F., and a vacuum is employed.

#### EXPERIMENT XIII.

**DISINFECTION IN CHAMBER WITH FORMALDEHYD-SPRAY.** *Strength of Solution:* 20%. *Time of Exposure:* 24 hours. **RESULTS:** (1) Typhoid and diphtheria bacilli in threads, placed in the pockets of a coat sprayed with the solution of formaldehyd and hung up in closed chamber, killed; staphylococcus pyogenes aureus, not killed; same bacteria exposed in Petri dishes, killed. *Controls grew.*

In this experiment a 20% solution of commercial formalin was used. The chamber was sprayed with the solution, and the test-objects, placed in the pockets of a coat, also sprayed with formalin, which was then hung up in the closed chamber for 24 hours. On removing the coat the odor of formaldehyd was very strong, but on sprinkling the coat with a dilute solution of ammonia, this odor soon disappeared. Delicate-colored fabrics sprayed at the same time with formalin solution were unaffected by this operation. The results of this experiment were fairly good, but the disinfecting power of the solution of formaldehyd used in the form of spray proved to be much inferior to that of the gas as produced by any of the methods now in use for generating it.

#### SERIES V.

Finally a special series of experiments was instituted to determine whether books could be satisfactorily disinfected by means of formaldehyd-gas.

From our knowledge of the properties of gases and of the impermeability of paper, it was at once evident, on undertaking these experiments, that the gaseous disinfectant could not be expected to sterilize a mass of books packed closely together, as upon the shelves of a bookcase, or piled one upon another. Several mechanical devices, therefore, occurred to our minds, and some were suggested by others, which had for their object the separation of the leaves so as to expose the books as freely as possible to the action of the gas. These consisted generally of special apparatus in which the books were to be placed and the leaves blown apart by a current of air, or separated by the rotary motion of the machine in which the books were to be centrifugally suspended. Apart, however, from the cost of such apparatus, they would require to be made very large and unwieldy, in order to hold a sufficient num-



ber of books to make them of practical utility; and, besides, it was by no means certain that the process employed would not be injurious to the books. It was, therefore, decided to simply place the books on perforated wire shelves in the chambers, so arranged that the gas could circulate through them as freely as possible, without the aid of any mechanical device.

In making experiments octavo books of from 150 to 800 pages, and of different bindings (paste-board, cloth, sheepskin and morocco) were selected. These were artificially infected by smearing every ten or twenty pages, in circumscribed spots, with pure cultures of the most common pathogenic bacteria, and threads saturated with the same cultures were also placed within the books near the edges of the leaves and upon the covers. The books were placed upon the shelves, some standing open; that is the covers extended as far back and the leaves were as widely separated as possible, without clamps or other device for holding them open; others, again, were partially closed, and still others were quite closed and laid, singly, flat down upon the shelves, no one book being placed upon another. They were then subjected to the action of the formaldehyd-gas in different volumes, temperatures and times of exposure.

A large number of experiments were made, but the following tables represent an average of the results obtained under different conditions:

EXPERIMENT XIV.

CONDITIONS OF EXPERIMENT.				TEST-OBJECTS.		
BOOKS.	Quantity of formalin consumed per 1,000 cubic feet.	TEMPERATURE.	TIME OF EXPOSURE.	DIPH. BAC.	STAPH. P. A.	TY-PHOID BAC.
Open.....	120 ounces.	80°—85° F.	48 hours.	×	×	×
Partially open .....	do.	do.	do.	×	—	—
Closed .....	do.	do.	do.	—	—	—
Covers and edges....	do.	do.	do.	×	×	×
Controls .....				GREW	GREW	GREW

Effect on books .... Books uninjured in any way.

EXPERIMENT XV.

CONDITIONS OF EXPERIMENT.				TEST-OBJECTS.		
BOOKS.	Quantity of formalin consumed per 1,000 cubic feet.	TEMPERATURE.	TIME OF EXPOSURE.	DIPH. BAC.	STAPH. P. A.	TY-PHOID BAC.
Open.....	60 ounces.	110°—120° F.	3 hours.	×	×	×
Partially open .....	do.	do.	do.	×	×	×
Closed .....	do.	do.	do.	×	—	×
Covers and edges....	do.	do.	do.	×	×	×
Controls .....				GREW	GREW	GREW

Effect on books .... Books uninjured in any way.

EXPERIMENT XVI.

CONDITIONS OF EXPERIMENT.				TEST-OBJECTS.		
BOOKS.	Quantity of formalin consumed per 1,000 cubic feet.	TEMPERATURE.	TIME OF EXPOSURE.	DIPH. BAC.	STAPH. P. A.	TY-PHOID BAC.
Open.....	No formalin	220° F.	3 hours.	×	×	×
Partially open .....	(dry heat.)	do.	do.	×	×	×
Closed .....	do.	do.	do.	×	—	×
Covers and edges....	do.	do.	do.	×	×	×
Controls .....				GREW	GREW	GREW

Effect on books .... Books considerably damaged; binding warped and twisted.

× = No growth; or vitality destroyed. — = Growth; vitality not destroyed.

It will be seen from an examination of these tables that by the evaporation of 120 ounces of formalin and an exposure of 48 hours at a temperature of from 80° to 85° F., the test-objects were disinfected in the open books and on thin covers and edges of the leaves. In the partially open books, the diphtheria-bacillus was killed, but not the staphylococcus pyogenes aureus, nor the typhoid bacillus. By the evaporation of 60 ounces of formalin and an exposure of three hours at a temperature of from 110° to 120° F., all the bacteria were killed, except the staphylococcus pyogenes aureus in the closed books.

Books subjected to disinfection by dry heat alone at 220° F. were sterilized in 3 hours; but they were considerably injured, more especially those which were bound in sheepskin and morocco. Books subjected to disinfection by steam were ruined in a few minutes.

The results of these experiments would seem to show that books may be satisfactorily disinfected by formaldehyd-gas in volume, as generated by the evaporation of 60 ounces of formalin per 1,000 cubic feet, when they are freely exposed for 3 hours to the action of the gas at a temperature of 110° to 120° F. Other experiments made with a smaller quantity of formalin and a shorter exposure did not give as good results. The presence of a vacuum aids the operation.

As a result of these investigations the conclusions reached may be summarized as follows:

#### I. DISINFECTION OF INFECTED DWELLINGS.

Dwellings may be superficially disinfected by means of formaldehyd-gas, all apertures being tightly closed, when employed in the proportion of not less than 1% by volume strength, the time of exposure to be not less than two hours, and the temperature of the apartment not below 52° F.

Under these conditions the common non-sporebearing pathogenic bacteria are surely and quickly destroyed, when freely exposed to the action of the gas. Spore-bearing bacteria, such as anthrax-bacilli, are not thus destroyed; they require at least twice the volume of

gas at the same temperature for their destruction. But these are of such rare occurrence that in house-disinfection they may practically be disregarded, and if present, special measures can be taken to destroy them.

The penetrative power of formaldehyd-gas at ordinary room-temperature, even when used in double the strength necessary for surface-disinfection, is extremely limited. Articles, therefore, such as bedding, carpets, upholstery, clothing and the like, should be subjected to steam, hot air or formaldehyd-disinfection in special apparatus constructed for the purpose.

## II. DISINFECTION OF BEDDING, CARPETS, UPHOLSTERY, CLOTHING, ETC.

Bedding, carpets, clothing, etc., may be disinfected by means of formaldehyd-gas in the ordinary steam disinfecting chamber, the latter to be provided with a heating and vacuum apparatus and special apparatus for generating and applying the gas. The gas should be used in the proportion of not less than 10% by volume strength, the time of exposure to be not less than three hours, and the temperature of the chamber not below 110° F.

In order to insure complete sterilization of the articles, they should be so placed as to allow of a free circulation of the gas around them; that is, in the case of bedding, clothing, etc., these should either be spread out on perforated wire shelves or loosely suspended in the chamber. The aid of a partial vacuum greatly facilitates the operation. Upholstered furniture and other articles requiring much space should be placed in a large chamber; or, better, a room which can be heated to the required temperature.

The most delicate colors and fabrics, furs, leather, and other articles which are injured by steam, hot air at 230° F., or other disinfectants, are unaffected by formaldehyd.

## III. DISINFECTION OF BOOKS.

Books may be satisfactorily disinfected by means of formaldehyd-gas in the ordinary steam chamber as previously described, and under the same conditions of volume of gas, temperature and time of exposure. The books should be arranged to stand as widely open as possible upon perforated wire shelves set about one or one and a half feet apart in the chamber. A chamber having a capacity of from 200 to 250 cubic feet would thus afford accommodation for about 60 books at a time.

Books cannot be satisfactorily disinfected by formaldehyd-gas in houses or libraries, or anywhere except in special apparatus constructed for the purpose, because the conditions required for their disinfection cannot thus be complied with.

The bindings, illustrations, and print of books are in no way affected by the action of formaldehyd-gas.

## IV. ADVANTAGES OF FORMALDEHYD-GAS OVER SULPHUR DIOXID FOR THE DISINFECTION OF DWELLINGS.

Formaldehyd-gas is superior to sulphur dioxid as a disinfectant for dwellings (1) because it is more efficient and rapid in its action; (2) because it is less injurious in its effects on household goods; (3) because it is less toxic to the higher forms of animal life; (4) because, when supplied from a generator placed outside of the room and watched by an attendant, there is less danger of fire.

Apart from the cost of the apparatus and the greater time involved, formaldehyd-gas, generated from commercial formalin, is not more expensive than sulphur dioxid, viz., from 7 to 8 cents per 1,000 cubic feet being the cost of the disinfectant in either case.

## V. IN CONCLUSION.

Formaldehyd-gas is the best disinfectant at present known for the disinfection of infected dwellings. It is inferior in penetrative power to steam and dry heat at 230° F.; but for the disinfection of fine wearing apparel, furs, leather, upholstery, books and the like, which are injured by great heat, it is better adapted than any other disinfectant.<sup>2</sup>

### REFERENCES.

- Trillat: La formaldehyde et ses applications pour la désinfection des locaux contaminés. 1896.  
Nouveaux usages de désinfection par les vapeurs de formaldehyde. *Nord Médical*, 1897.  
Pottevin: Recherches sur le pouvoir antiseptique de l'aldehyde formique. *Annales de l'Institut Pasteur*, Nov. 25, 1894.  
Walter: Zur Bedeutung des Formalins, bezw. Formaldehyds als Desinfectionsmittel. *Zeitschrift f. Hyg. und Inf.-Krankh.*, Vol. xxi, 1896.  
Rosenberg: *Zeitschrift f. Hyg.*, Vol. xxiv, 1897.  
Pfuhl: *Ibid.*, Vols. xxii and xxiv, 1897.  
de Schweinitz: *The Year-Book of the U. S. Department of Agriculture*, 1896.  
Kim-youn: *Public Health Reports*, Vol. xii, No. 5, 1897.  
Horton: Disinfection of Books. *Medical News*, Aug. 8, 1896.  
Harrington: The Possibilities and Limitations of Formaldehyd as a Disinfectant. *The American Journal of the Medical Sciences*, Jan., 1898.

**Rapidly Fatal Diabetes Mellitus.**—R. G. Cookson (*Australasian Med. Gaz.*, July 20, 1898) reports a case of diabetes occurring in a man who stated that he had been in perfect health up to two months previously, when he consulted a physician for a gumboil. Since then he had grown rapidly thinner and weaker and had taken to his bed. For some weeks he had suffered from great thirst and had passed large quantities of urine. The temperature was subnormal; the skin was harsh and dry; and there were boils on the face and neck. The urine was pale in color and contained large quantities of sugar. Coma supervened a few hours after the patient was first seen, and death followed in about twelve hours.

**Stab-wound of the Thoracic Duct.**—W. H. Lyne (*Va. Med. Semi-Monthly*, Aug. 26, 1898), reports the case of a man, 24 years old, who had received a stab-wound one inch deep above and behind the clavicle, parallel with the outer border of the sternomastoid muscle. There had been considerable hemorrhage and an abundant escape of milky fluid from the wound. The wound was cleansed and packed with iodoform-gauze and about seven hours later the oozing and escape of chyle had ceased. The patient was allowed a light diet. There was slight suppuration, but recovery was prompt and complete.

<sup>2</sup> The Sanitary Committee recommends the adoption of the formaldehyd method of disinfection.

WM. T. JENKINS, M.D.,

Chairman Sanitary Committee.

Adopted at a meeting of the Board held May 11, 1898.

M. C. MURPHY,

President.



# The Philadelphia Medical Journal

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**Responsibility in the Medical Department of the Army,** is the title of a statement the Surgeon-General has felt compelled to issue in self-defence, in answer to the thousands of criticisms that have been showered upon his department. It all amounts to what we have repeatedly urged, that the faults, whatever they may have been, of the medical conduct of the war have been beyond the Surgeon-General's control and the legalized powers under which he has acted. Better "swear at large" than at the wrong man.

**A Mechanical Appliance for Treating Headache.**—A metal spring band for encircling the head, with pads for pressing upon the temples, is described and pictured in a recent number of a German medical journal. The device was suggested by the fact that patients with frontal headache frequently find some temporary relief by pressure with the hands against the aching parts. But why not find out what causes the headache, and cure that? It is because in Germany, the birth-place of refraction, there are no refractionists.

**Disease-Breeding Schools** seem to be another added to the many sins of the political rulers of Philadelphia. In one school-section alone the president reports that of the 6,000 pupils over half are on half time, the schools being overcrowded, and foci for the dissemination of diphtheria and other diseases. The *Press* editorially says that:

"Our city schools are disgracefully deficient, all of them, in sanitary precautions. The wraps of children are huddled together in closets. School books are imperfectly disinfected, if at all, and the system of city books passes them from hand to hand and child to child. No sanitary inspection of children exists. No adequate cooperation has been arranged between the Board of Health and the Board of Education, so that each contagious case reported to one shall aid the other in protecting healthy children from contagion. Lastly, there are no school physicians."

"Boston and New York, like German cities, have arranged for a daily school medical inspection. Doctors visit the schoolhouses each day and examine cases about which suspicion arises. The wraps need to be placed in isolated and carefully disinfected lockers. School-books call for more careful disinfection. House-reports of contagion are needed. A school sanitary service would save the eyes and the health of thousands and the lives of hundreds of children."

"Lastly, if an assorted number of obstructive Councilmen could have the typhoid they inflict by keeping up a poor water-supply and the diphtheria, scarlet fever and measles they diffuse by denying new schoolhouses which would relieve overcrowded schools, Philadelphia would be a healthier and happier place, though there would be a number of vacancies in Councils."

**Suggestions to Writers, No. 9: Paronyms Plurals.**—One wonders why it is considered better English to ape the language from which a word may have been derived by grafting upon the acclimatized word the foreign and illogic form of plural. Those who should be, or who pretend to be, concerned for the purity and logicity of our tongue are frequently the worst enemies of purity and simplicity, delighting in hodge-podge and outlandishness. There are those who even now contend for *lentes*, *atlantes*, *animalia*, etc., instead of *lenses*, *atlases*, and *animals*, and they would certainly stickle for *irides*, *enemata*, *carcinomata*, *fasciæ*, etc., etc., instead of the shorter, more idiomatic, more natural, and in every way better, *irises*, *enemas*, *carcinomas*, *fascias*. It is the hypocrisy of culture, the ignomines' pretense of classicism, which keeps up the delusion that the straightforward English formation is less worthy than the transplanted variety. The regular English style of forming the plural is held to be good enough for ninety-nine-hundredths of our nouns; why not also for the remaining one-hundredth of them?

**Mushroom Poisoning.**—In the present number will be found an article on "mushroom poisoning." The importance of this subject and the increasing frequency of deaths from this cause is sufficient to justify calling special attention to the subject. This was recognized last fall by the United States Department of Agriculture, when two cases of such poisoning occurred in Washington, D. C., by which the Count de Vecchi, of the Italian Legation, lost his life. The Division of Botany, under the direction of the Secretary of Agriculture, published a valuable monograph on the subject for the information and warning of the public. It is only a few years since an attache of the Chinese Legation at Washington was killed by eating the Death-cup (*Amanita phalloides*), which he had mistaken for an edible mushroom. And recently (August 28th) comes a report from Shippensburg, Pa., of the fatal poisoning of the wife and daughter of a Lutheran clergyman of Philadelphia. The father himself also ate of the "toadstools" and barely escaped with his life. They had been walking in the woods and unfortunately gathered the two most fatal species, the Fly Amanita and the Death-cup.

The Death-cup is especially attractive, being a white and handsome mushroom. The Fly Amanita also is a

very beautiful mushroom, being large, usually perfect in form and the top of the cap of a handsome yellow or orange color. These are the two most dangerous species and the United States Department of Agriculture deserves thanks for disseminating among the people at large a knowledge of their deadly character.

**The Great Calf-Issue**, called also the "burning issue," "overshadowing every other issue," in New York State politics, springs from the fact that the last legislature enacted a law that calves should not be sold by farmers for killing when under four weeks of age. Hence the farmer is required to be at the expense of feeding the calf for this time, and he proposes to punish the party guilty of passing the iniquitous measure. "They haven't forgotten that the Republicans made the law, and they intend to get even this fall if you don't do something to appease them." Whether the meat of new-born calves is healthful or not, whether the law is founded upon sanitary wisdom, and conduces to the public health or not—to all this the voter is indifferent. The fact illustrates the essential vice of democracy and gives point to the aristocratic and royal criticisms of our form of government. But if we had a united profession, and if that united profession should speak out upon matters of public health, would not such illustrations as the great and burning calf-issue be soon rendered impossible?

**Does License to Practise Medicine Permit the Practice of Oral Surgery?**—A curious case for medico-legal decision has arisen in the State of Rhode Island, where registration for medical practice is granted upon application to the State Board of Health by graduates of recognized medical colleges, while dentists are required by a recent enactment to pass an examination before the State Board of Registration in Dentistry. A graduate in dental surgery, and in medicine, after having been registered by the State Board of Health, and securing his license, engaged in the practice of medicine, including dental and oral surgery. He was forthwith arrested for infraction of the law requiring examination and license for the practice of dental surgery, and the case now awaits judicial decision. Logically it would be reasoned that one qualified to practise medicine and so authorized to do by State authority, would at the same time be conceded the qualification and the license to practice any part of medicine, ophthalmology, otology, obstetrics, gynecology, oral and dental surgery, etc. To ask a qualified and licensed medical man to pass a special examination in oral and dental surgery, would not be more ridiculous than to ask him to pass a special examination and secure a special license for the practice of midwifery. It would seem, further, from the legal point of view, that when there is conflict in letter between existing legislation the spirit must be followed, and surely no one would

contend that the part is greater than the whole. The question in Rhode Island seems a very simple one, and the solution should be attended with no difficulty or complication. It all revolves about the point whether an approved graduate in medicine shall be permitted to practise all branches of it.

**"Look Here, Upon this Picture, and on This."**—Our jingo-congress, which flung us wholly unprepared into the Spanish war, and which had hampered and red-taped the medical departments with stupid and ridiculous laws, should read, and perhaps learn something by the reading, of the arrangements made for the sick and wounded in the English Egyptian expedition at the battle of Omdurman. The English and Egyptians lost in all some forty men, while the dervishes are known to have perished to the number of 12,000, and some of the war-correspondents put the figure at nearly 20,000. The mad rushes of the children of the desert availed nothing against the terrible precision of modern musketry, and the followers of the Khalifa were mowed down in hundreds without ever getting within a quarter of a mile of the hated white man. The victory was a triumph of organization, and the same attention to detail that marked the Sirdar's military maneuvers marked also the medical arrangement for the care of the sick. Five stationary hospitals were established, of varying capacities, on the banks of the Nile between Assouan and Atbara, and a service of barges was arranged to ply between the scene of war and the most southern hospital, and thence down the Nile, preparations being made on a scale much larger than has fortunately been necessary. Twelve field-hospitals were arranged to deal with the cases on the field of battle as they arose, and a stretcher-service placed these field-hospitals in communication with the barges. As a result of these accurate and deliberate plans the Sirdar was able to telegraph, only a day or two after telegraphing that he had won a great battle, that all the British and Egyptian wounded, some 250 men, were already comfortably housed in a well-formed hospital provided with all the usual equipment of a hospital and many miles from the scene of action. The forethought which has been shown in the matter of the sick and wounded has earned those responsible for the campaign great credit in medical circles. What is the opinion of the world as to American forethought?

**A Story of Chickamauga**, by Dr. R. Stansbury Sutton, published in the *Journal of the American Medical Association* of September 17th, should be read by every critic of the Medical Department of the army. We regret that we cannot reproduce the article in full. Dr. Sutton makes it abundantly clear that far from deserving blame, the heroism of the medical officers has been the means of saving numberless lives otherwise inevitably doomed by the unpreparedness for war, the





pointment to the positions mentioned. Col. D. D. Wheeler, Chief Quartermaster at Tampa, says, "that most of the volunteer quartermasters stationed under him at Tampa and Chickamauga are utterly incapable of carrying on the work intrusted to them. The result is that their duties are performed by others, sometimes by officers, and even by enlisted men, who really had no concern in such matters; at other times the work is undone, and there is consequent confusion, annoyance, and hardship. The worst of the whole business is, that these political quartermasters, in some instances, seem unable to learn anything." In other cases he reports there is evidently an absolute unwillingness. Fitness, experience, age, character—of what use are these things when choosing men to provide and to care for the health of the American soldier?

**Decrease of Bovine Tuberculosis in Pennsylvania.**—Dr. Leonard Pearson, State Veterinarian, has recently made a preliminary report on the results obtained among tuberculous cattle in Pennsylvania. According to this report a decrease of bovine tuberculosis in this State seems to be indicated by statistics. The number of cattle tested up to June 1, 1897, was 9,108, and the number of those found to be tuberculous was 1,839. This gives a percentage of 20.39. The number tested during the following year was 4,887, of which 671, or a percentage of 13.73, were tuberculous. This would indicate a decrease at the rate of about 33% of diseased animals. This is certainly a very satisfactory showing, but it is so extraordinary that we cannot but wonder whether the figures are indicative of the actual facts. Statistics are often misleading unless compiled with great care and skill, and properly controlled, and in view of this fact we should prefer to see the tables for a longer number of successive years, and to be assured that the tests covered the State generally, before we accept the results as conclusive.

Dr. Pearson's report gives interesting glimpses into the vastly important work which he and the State Live-Stock Sanitary Board are doing. It is highly satisfactory to note that an intelligent appreciation of the value of this work begins to prevail in the farming communities of the State, and that the Board meets apparently with little opposition. The farmers begin to realize that they cannot afford to keep diseased cattle and to have it said that they supply the public with infected milk. The motive underlying this feeling may not be more in some cases than a selfish or commercial one, but no fault need be found with this. Sanitary measures that lead to the destruction of a man's property require to be clearly stated in terms of dollars and cents—and in this respect the farmers are much like other people. They are now compensated by the State for the loss of the diseased cattle, and this fact, together with the improved business status given them by a clean bill of health from the State authorities, reconciles them

to what at first must have seemed like inquisitorial measures. Not a little of the credit for this result must be due to Dr. Pearson and his colleagues because of the tact and intelligence with which evidently they prosecute this work. The problem before the State Sanitary Board, Dr. Pearson says, is one that taxes the knowledge and ingenuity of the officials in a high degree. There are many interests to be consulted, prejudices to be overcome, rights to be respected, and errors to be avoided. But the success of the work is summed up in the significant words, "The farmers in Pennsylvania want healthy herds."

Tuberculosis seems to be most prevalent in those districts where new cattle are being introduced by purchase, that is in the older dairy districts. Hence Dr. Pearson advises the dairymen to buy cattle only that have been submitted to the test by tuberculin. This wise counsel, if followed, will evidently make every farmer an inspector, as it were, working in harmony with the Board. The movement of cattle from one part of the State to another, and from other States into this, is discussed also in the report. It has been found already that in these movements in the cattle-trade the animals sell better when sold with certificates. Hence the inspection directly increases the market-value of sound cattle. But the cost itself of inspecting and testing does not add greatly to the expense.

The tuberculin used for tests in this State is made by Mr. Ravenal in the laboratory of the State Board, and is said by Dr. Pearson to be reliable. The tuberculous cows that have been killed have all been examined postmortem, and thus an immense mass of facts in bovine pathology has been secured. In all cases the tests have been verified by the demonstration of the lesions of tuberculosis.

Altogether, the report is one of great public interest, and appeals strongly, by its clear statement of most important facts, to the members of the medical profession. Tuberculosis must be eradicated or controlled, if possible, in cattle, before we can expect a very marked decrease of it in the human family.

**Testamentary Capacity in Cases of Aphasia.**—This important medico-legal subject was discussed at the recent meeting of the British Medical Association at Edinburgh. The principal speakers were Sir William T. Gairdner, of Glasgow, and Dr. Wm. Elder, of Leith. There was a clear understanding reached that no general principle can be applied in determining this question, but that each case must be decided on its own defects. But while Sir Wm. T. Gairdner gave his assent to this proposition, his remarks were in the main so diffuse and generalized that they did not avoid this very fault. He failed to grasp the whole subject, largely because he took too much time and space to tell his audience that he did not intend to tell them some of the very things that are essential to be known.



His generalizations about testamentary capacity from a legal standpoint were curious examples of reasoning in a circle, such as are commonly resorted to by legal writers. It certainly does not help the question to say that if a person knows what he wants to devise he is, therefore, competent to make a will. This may do for lawyers, but not for scientists. The questions are, (1) does an aphasic know what he wants to will? and (2) can he express his wants? These questions can be easily confused and quibbled about, but they must be kept distinct, for the second one is practically the more important of the two. In fact, a sound doctrine might be laid down to the effect that if a testator cannot in some way express his wants, those wants cannot be certainly known. This is the main point as to the testamentary capacity of apasies.

Dr. Elder perceived this point clearly and gave an admirable analysis of the subject. He proceeded by examining the various forms of aphasia with reference to the capacity of the patient to make himself understood. Obviously this is the question; for if an aphasic cannot make clear to others how he wants to dispose of his property, it becomes a question of secondary importance whether he knows what he wants to do. He may know perfectly, but others cannot know what he knows. The disqualifying effects of the different forms of aphasia vary in this respect; and these variations were pointed out by Dr. Elder in a truly masterly way.

That auditory aphasia is the most disabling will seem almost self-evident when it is recalled that the auditory center is really the primary center for speech. It is in the auditory center that language is first acquired, and the integrity of this center seems almost essential for the right action of the others. Complete auditory aphasia, according to Dr. Elder, disqualifies a person for making a will. This form of aphasia not only causes word-deafness but also impairs the faculty for reading and for uttering and writing words. If the patient speaks at all he is likely to be paraphasic, *i.e.*, to use the wrong words and, hence, to speak a kind of gibberish. A man thus disabled could not communicate his thoughts intelligibly, and hence, even supposing that his intelligence were unimpaired (which would be doubtful), he could not make a valid will.

Proceeding thus by analyzing the speech-defects in every form of aphasia, Dr. Elder arrived at certain clear and logical conclusions, and also made it evident, as already said, that each case must be judged by itself. It must be judged, moreover, by the ability alone of the patient to communicate his thoughts.

The lesion in a particular case (as, for instance, a cerebral hemorrhage) might, of course, impair the brain to such an extent that the patient, independently of his aphasia, might be gravely incapacitated in his mind; but in such a case the question no longer hinges on the aphasia, but becomes one simply of mental incapacity. In cases, however, in which the aphasia is

the predominant and controlling symptom, the process of analysis pursued by Dr. Elder can alone lead to legitimate and safe results.

While complete auditory aphasia is the most disabling, there are other forms that practically impair a man's testamentary capacity. Thus pictorial word-blindness, pictorial motor aphasia, and graphic aphasia, all due to cortical lesions, render a patient incapable of making a will, not from his being necessarily mentally incapable, but from the difficulties of carrying out the legal formalities, *i.e.*, expressing his intentions unmistakably. Cases of some other forms of aphasia, largely of the subcortical group, do not necessarily invalidate a patient for making a will.

This important subject is too much ignored by most of the systematic writers on aphasia, so that Dr. Elder's brief but searching analysis of the questions involved is valuable, not only in itself, but especially as indicating the only proper method for proceeding in the study of this complicated problem in medical jurisprudence.

## Selection.

### DR. LINDHEIM'S FATE.

DR. GEORGE W. LINDHEIM, the young surgeon of the Eighth New York Volunteers, who died Sept. 16th of typhoid fever, was a victim of public hysteria. Sensational journalism was responsible for the hysteria. The condition of some of the Southern camps was a very proper subject for criticism, since it is only by plain language about abuses that they can be cured; but there has seldom been so much reckless lying on any subject of public concern as there was about our sick soldiers and the care of them. Granting that things were bad enough, it was unpatriotic and criminal to distort them until a mania seized the people to make a victim of almost every medical officer who had anything to do with arrangements for the nursing and transportation of patients. Dr. Lindheim, although a young man, had distinguished himself as an army surgeon by ability of a high order and self-sacrificing zeal. At Chickamauga everybody spoke well of him, and nothing proved his indefatigable devotion to the sick more than his selection to take the invalided men of the Eighth Regiment home. The country ahead of him was ablaze with indignation over the reported neglect of the sick in every camp, and it really required moral courage for a man to hint that perhaps things were not so black as they had been painted.

At Cleveland Dr. Lindheim was denounced because he would not consent to the transfer of several typhoid patients to a local hospital, and he was written and talked about very much as though he were an accessory to wholesale murder. His judgment was that it would be better for the sick in his charge to be carried right through to New York, where they would be among their own friends in hospitals which are certainly as well conducted as any in the country. No doubt there were patients on the train who found fault with the young doctor and poured tales of suffering into ears acutely and passionately sympathetic. But a lightheaded patient is not always a trustworthy witness. The story of Dr. Lindheim's alleged brutality of course preceded him everywhere, and the abuse which was heaped upon him broke his spirit. Weakened by his unselfish labors among the sick he fell a prey to typhoid fever. In his delirium he raved about the misrepresentation from which he had suffered. Investigation had already vindicated him. He is now dead, and it may be truly said that he gave his life for his country. The sick soldiers whom he brought North are well to-day or convalescent. The only victim was the man whose treatment and good judgment went far toward saving their lives. In George W. Lindheim the medical profession had an associate whose memory it should honor.—[*The Evening Sun.*]

## American News and Notes.

**Dr. Fehleisen** has been appointed surgeon to the German Hospital, San Francisco, to succeed the late Dr. J. F. Morse.

**Dr. L. Bozet** has been appointed to fill the vacancy in the San Francisco Board of Health, made vacant by the death of Dr. J. F. Morse.

**Dr. E. Emmet Reid**, of Johns Hopkins University, has been appointed professor of chemistry and physics in the Medical College of Charleston, S. C.

**Sickness among the troops at Santiago** is reported on the increase. It is asserted that fully one-sixth of General Lawton's command is on the sick list. Fatalities are, however, few.

**Dr. L. Harrison Mettler** has been appointed professor of physiology of the nervous system in the College of Physicians and Surgeons of Chicago (Medical Department of the University of Illinois).

**Miss Agnes M. Claypole**, Ph.B. (Buchtel), M.S. (Cornell), has been appointed assistant in microscopy, histology, and embryology in the Cornell University Medical College. Miss Claypole is the third woman appointed to a teaching position in Cornell University, and the first one in the Medical Department.

Through the agency of Dr. Philip King Brown, the library of the late Dr. Hall, of New York, has been presented to the Medical Department of the University of California by Mrs. Hall. The library includes about a thousand bound volumes and a very large number of unbound journals.

The Medical Department of the University of Buffalo was opened September 12th with an introductory address delivered by Dr. A. A. Hubbell, professor of clinical ophthalmology, late occupant of the same chair in the Niagara University. The address was a strong one, emphasizing well the sentiment of unity possessing the teaching ranks in Buffalo, and forecasting a bright future for the University.

**The Early Diagnosis of Diphtheria.**—The Chicago Department of Health has begun providing the usual culture-outfit with a clean glass slide, over the middle of one side of which the physician is requested to rub the infected swab after having inoculated the culture-media. It is hoped that an early diagnosis of diphtheria may often be possible by microscopic examination of the dried film, without waiting for the incubation of the inoculated culture-tube.

**"That Blessed Word, Mesopotamia!"**—The following are the opening sentences of an original article on "Nervous Disorders of the Heart" in the September number of the *Eclectic Medical Journal*:—

"Thou center of life! home of the affections, where love has its birth, and where malice and hatred take up their abode! Thou fountain from which may flow pure aspirations, holy and altogether lovely, or from whose portals may creep designs most devilish and dire! Thou lump of flesh through whose gateways pours the rich current of life, and upon whose faithful work and diligence untiring our very existence depends! Thou arbiter of destinies, whose fibrous veils separate the fluid of life and exuberant existence from Lethe's liquor carbon laden!—to thee we now do humble homage pay, and to thy subtle action homage give."

**The will of Miss Arethusa L. Forbes** was filed for probate in the Surrogate's office in Brooklyn, last week. She made several bequests to relatives, and the residuary estate is left in trust with instructions "to apply the net income of all my estate which shall remain after the payment of my debts to the payment of the tuition and instruction of meritorious young women at the Woman's Medical College of the New York Infirmary."

**Pure Milk and Infant Mortality.**—The Chicago Department of Health has published graphic charts showing a decrease in the infant mortality of the city, from 1894 to 1897 inclusive, occurring coincidentally with a marked improvement in the city milk-supply, the latter being the direct result of the supervision of the milk-supply carried on by the department. The marked improvement in the quality of the milk-supply is thought to be at least one probable cause, among others, of the decreased infant-mortality.

**Wine for American Soldiers.**—Recently Heinrich Nohn, of Waldhildersheim, Kreuznach, Germany, a personal friend of the late Prince Bismarck, made an offer through Ambassador White, at Berlin, to send a consignment of wine to the American soldiers. This offer was acknowledged by Mr. White, who said he was directed by Secretary Alger to accept it on behalf of the President and people of the United States. A cable despatch received in this city, announces that 1,000 bottles of German red wine were shipped to this country, through Consul-General Mason, as a gift to the sick American soldiers.—[*New York Evening Post*.]

**A new bill for the establishment of a State Board of Medical Examiners in Illinois** is projected. It differs from the usual bills in force in various parts of the country, in that it proposes that licenses shall be renewed each year, and that the Board of Medical Examiners may refuse to issue any license, whether an original or renewal license, if it shall appear that the person applying therefor has been guilty of persistent inebriety, or the practice of criminal abortion, has been convicted of a crime involving moral turpitude, or has, by false or fraudulent representations, obtained practice in his or her profession, or by the false or fraudulent practice of his or her profession has obtained money or any other thing of value; Provided, however, no person shall be finally refused a license until after the applicant for the same has been given at least 30 days' notice of the grounds for such refusal, and opportunity given the accused for a hearing before the Board to show cause why the Board shall not finally refuse his or her license, at which hearing the accused shall be entitled to be represented by counsel.

**Obituary.**—DR. EUGENE S. FORMAN, Auburn, N. Y., September 13th, aged 51 years.—DR. WILLIAM LINDSLY MUSSEY, of Cincinnati, at Paris, France, September 8th.—DR. GEORGE R. TROWBRIDGE, New York City, September 10th, aged 44 years.—DR. JAMES E. H. NICHOLS, of New York City, at Saphire, N. C., September 10th, aged 41 years.—DR. JOSEPH H. KUHN, Brooklyn, N. Y., September 12th, aged 34 years.—DR. E. S. TYNER, acting assistant surgeon, U. S. A., at Santiago, Cuba, September 9th, of yellow fever.—DR. SAMUEL S. FRIES, Doylestown, Penna., September 12th, aged 70 years.—DR. A. M. COOPER, Doylestown, Penna., ex-president of the Lehigh County Medical Society, September 15th, aged 68 years.—DR. GEORGE S. HANNA, Martinsburg, W. Va.—DR. GEORGE W. LINDHEIM, corporal of the Eighth Regiment, New York Volunteers, and one of the Red Cross Society's surgeons who



had charge of a hospital-train carrying 265 sick soldiers of that regiment from Chickamauga to New York, died at his residence of typhoid fever, September 16th, aged 27 years.—**DR. HENRY OTTO CLAUSS**, New York City, September 19th, aged 72 years.—**DR. ABRAHAM M. OWEN**, one of the organizers and first officers of the First Pan-American Medical Congress, Evansville, Ind., September 19th, aged 49 years.

**Health-Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending September 17, 1898:

## SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
MICHIGAN:			
Oshtemo	Sept. 10	reported	
		present.	

## SMALLPOX—FOREIGN.

BRAZIL:			
Rio de Janeiro	July 20-27	2	
INDIA:			
Bombay	Aug. 2-9	1	
Calcutta	July 31-Aug. 6	2	
NORWAY:			
Christiania	Aug. 20-27	1	
RUSSIA:			
Odessa	Aug. 13-20	2	
	Aug. 20-27	4	
Warsaw	Aug. 13-20	3	

## CHOLERA.

INDIA:			
Calcutta	July 24-30	2	

## YELLOW FEVER—UNITED STATES.

LOUISIANA:			
Franklin	Sept. 5-13	42	2
MISSISSIPPI:			
Jackson	Sept. 10	2	
Orwood	July 30-Sept. 1	41	

## YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro	July 20-27	18	13
MEXICO:			
Veracruz	Aug. 10-Sept. 1	4	

## PLAGUE.

INDIA:			
Bombay	Aug. 2-9	85	

**Chicago Medical Society and the Chicago Society of Internal Medicine.**—At a joint meeting held September 21st, **DR. D. R. BROWER** read a paper upon **acute cerebral meningitis**, in which he insisted that the classification should be based upon the pathogenesis. The seven or more causative microorganisms which make clinical histories so similar that differentiation is often impossible will constitute the essential basis of the classification. Especial emphasis was laid upon lumbar puncture and the examination of the cerebrospinal fluid, and special stress placed upon the Skeer sign. In reference to treatment, quiet in a dark well-ventilated room, mitigation of pain by antipyrin-injections, and the reduction of temperature, were especially emphasized, as also free catharsis, shaving the head, administration of ice-bags, leeches over the mastoid regions, and incisions in the scalp of mixtures of lanoline (10%). **DR. Brower** reported 32 recoveries in a series of 45 cases.

**DR. ADOLPH GEHRMANN** read a paper upon the results of **Widal's test** in the diagnosis of typhoid fever from dry-blood specimens. His statements were based upon an analysis of 340 examinations, from which he concluded first that dry-blood specimens gave results sufficiently accurate for public health purposes, contrary to the opinion of some writers. This method is in vogue in the city health depart-

ment of which **DR. GEHRMANN** is chief bacteriologist. Second, that this method is the simplest means for obtaining and transporting material for examinations. Third, that development of any method employed is of more importance than slight changes of technic, as regards accuracy of result. Fourth, that the test is not an early sign and does not give the general conclusion before the end of the first week.

**Disinfection of Pullman Cars.**—The following directions, which have the approval of the Chicago Department of Health, have been issued by Assistant General Superintendent, **MR. E. A. JEWETT**, of the Pullman Palace-Car Company, for the disinfection of the cars of the company with formalin:

Close outside doors of the car, and all windows and deck sash, leaving open locker, drawing-room, buffet, heater, swing and toilet-room doors.

Lower all upper berths, loosen and disarrange the bedding. Remove lower mattresses and place them over backs of seats between sections. Hang blankets over fronts of upper berths, allowing them to hang down about 24 inches in front to protect woodwork from the fluid. Remove pillows from pillow-boxes, placing them on the seats. Hang up in the body of the car, on the bell-cord, four sheets lengthwise, allowing the sheets to lap each other some two inches. Fasten sheets to bell-cord with spring clothes-pins, about six to a sheet.

Fill the formaldehyd sprinkler, which holds some twenty-two or more ounces of liquid, up to the glass ring near the cork.

Sprinkle sheets with the liquid by compressing the rubber bulb, taking care to see that none of the liquid gets on the woodwork. If by chance a little of the fluid should get on the woodwork, wipe it off at once with a chamois skin.

When using the sprinkler, place the thumb over the top of the open tube in the cork; make the same tight by slight pressure until the requisite amount of fluid has been used; then remove the thumb and the liquid will cease to flow from the sprinkler.

The formaldehyd vapor will not injure any fabric or metal; it is not poisonous, and can be inhaled for a few minutes without any detriment whatever to a person. It is not an insecticide.

It ought not to take over five minutes to thoroughly sprinkle the sheets, and when the work is done, the operative should leave the car and see that the outside door is closed after him.

The car should remain closed for four hours or more before it is opened—the longer the better.

A large number of cars can be fumigated in a day.

**Buffalo (N. Y.) Academy of Medicine.**—The following program, 1898-99, has been issued:

September 27th. Obstetrics. Some Common Mistakes in Gynecology, **M. D. MANN**.

October 4th. Surgery. Concussion of the Brain, **ROSWELL PARK**. On the Use of Chloroform in Adenoid Operations, **F. W. HINKEL**.

October 11th. Medicine. Cardiac Diseases. Subject to be announced, **ALLEN A. JONES**. Remarks on Prognosis and Cause of Death in Cardiac Diseases, **JOHN H. PRYOR**. Serious Heart Disease without Rheumatism, **A. L. BENEDICT**.

October 18th. Pathology. Devitalized Teeth, **W. C. BARRETT**.

October 25th. Obstetrics. Purulent Ophthalmia, **LUCIEN HOWE**.

November 1st. Surgery. Gonorrhea, **W. H. HEATH**. Surgical Kidney, **M. HARTWIG**.

November 8th. Medicine. The Pathogeny of an Epileptic Fit, **L. PIERCE CLARK**, **CRAIG COLONY**, **SONYEA**, **N. Y.** Frænkel's Movements in the Treatment of Locomotor Ataxia, **WM. C. KRAUSS**. Discussion, **FLOYD S. CREGO**, **JAMES W. PUTNAM**.

November 15th. Pathology. Carcinoma of the Duodenum, **C. D. AARON**, **DETROIT, MICH.** Pathology of Vertigo, **CHARLES G. STOCKTON**.

November 22d. Obstetrics. Multiple Pregnancy, **THOMAS F. DWYER**.

December 6th. Surgery. Quarterly Meeting of Academy. Subject to be announced, **N. JACOBSON**, **SYRACUSE, N. Y.**

December 13th. Medicine. Treatment of Cases of Pulmonary Tuberculosis that Cannot Leave Home, **DELANCEY ROCHESTER**. Essential Asthma, **GEORGE N. JACK**, **DEPEW, N. Y.**

December 20th. Pathology. The Tests of Renal Insufficiency by Methylene-Blue and Iodin, **RICHARD C. CABOT**, **BOSTON, MASS.** Exhibition of Lantern-slides of Various Skin Affections, **GROVER W. WENDE**.

December 27th. Obstetrics. Subject to be announced, **C. C. FREDERICK**.

January 3d. Surgery. Burns, Scalds, and Frost-bites, A. E. Diehl. Colles' Fracture, Edward M. Dooley.

January 10th. Medicine. Insanity, Arthur W. Hurd, Harry A. Wood, Henry P. Frost, Helene Kuhlmann, C. J. Patterson.

January 17th. Pathology. The Pathology of Catarrhal Deafness, F. W. Hinkel. Discussion opened by H. Y. Grant.

January 24th. Obstetrics. Subject to be announced, M. A. Crockett.

February 7th. Surgery. Incarcerated Inguinal Hernia, Treatment by Non-operative Methods, W. C. Phelps. Treatment of Stricture of Nasal Duct by Electricity, B. H. Grove.

February 14th. Medicine. The Status of Pharmacy To-day and its Possible Improvements, Eli H. Long. Discussion by Allen A. Jones, Willis G. Gregory, G. W. York, Mr. George Reimann, Mr. J. A. Lockie, and H. C. Buswell.

February 21st. Pathology. Pathology of Alcoholism, J. W. Grosvenor. Discussion opened by H. R. Hopkins. Intraocular Tumors, B. H. Grove.

February 28th. Obstetrics. The Epoch of Maternity and its Influence on the Mind. William P. Spratling, Craig Colony, Sonyea, N. Y.

March 7th. Foreign Bodies as Ligatures, Chauncey P. Smith. Subject to be announced, John W. Whitebeck, Rochester, N. Y.

March 14th. Medicine. Differentiation of Renal Diseases, Thomas B. Carpenter. Acute Bright's Disease, J. Henry Dowd. Chronic Bright's Disease, Albert H. Woehner. Primary Nephritis (Infantile). George A. Himmelsbach.

March 21st. Pathology. Quarterly meeting of Academy. Subject to be announced, Frederick Peterson, New York.

March 28th. Obstetrics. Subject to be announced. H. E. Hayd.

April 4th. Surgery. Acute Osteomyelitis, Roswell Park. April 11th. Medicine. Diseases of the Skin. Alfred E. Diehl, Grover W. Wende, Frank J. Thornbury.

April 18th. Pathology. Our Present Knowledge of the Inflammatory Processes. H. R. Gaylord. Subject to be announced, Prof. Charles W. Dodge, Rochester, N. Y.

April 25th. Obstetrics. Subject to be announced, Charles E. Congdon.

May 2d. Surgery. Subject to be announced.

May 9th. Medicine. The Use of Alcohol in the Treatment of Diseases, Joseph W. Grosvenor, Henry R. Hopkins, A. L. Benedict, E. L. Frost, Sydney A. Dunham, J. Grafton Jones.

May 16th. Pathology. Pathology and Diagnosis of Certain Spinal Diseases, Floyd S. Crego. Pathology of Epilepsy, Wm. C. Krauss.

May 23d. Obstetrics. Subject to be announced, Stephen Y. Howell.

June 6th. Surgery. Cystitis and Urinary Infection. J. Henry Dowd.

June 13th. Annual meeting of Academy.

June 20th. Pathology. Subject to be announced. Herbert M. Hill, Ph.D.

June 27th. Obstetrics. Quarterly meeting of Academy. The Umbilical Cord, P. W. Van Peyma. Proper Management of an Obstetrical Case, H. C. Buswell.

The following are the officers: President, Roswell Park; Secretary, Thomas F. Dwyer; Treasurer, Charles S. Jewitt. Trustees, Benjamin G. Long, Marcel Hartwig, DeLancey Rochester.

Section of Medicine. Chairman, William G. Ring; Secretary, Fridolin Thoma.

Section of Surgery. Chairman, John Parmenter; Secretary, J. Henry Dowd.

Section of Obstetrics and Gynecology. Chairman, William G. Taylor; Secretary, Nelson G. Russell.

Section of Pathology. Chairman, A. L. Benedict; Secretary, Arthur G. Bennett.

Council: The above officers and the President of the Academy of the previous year, Dr. Lucien Howe.

**The American Electro-Therapeutic Association** held its 8th annual meeting at Buffalo, N. Y., September 13th to 15th, with a good attendance. One of the lecture-rooms of the Society of Natural Sciences was used for the sessions, while a large number of electrical exhibits were displayed in an adjoining room.

Dr. Charles R. Dickson, of Toronto, Canada, presided at

the meetings. The forenoon of the first day was principally devoted to executive business, after divine invocation had been asked by Rev. O. P. Gifford. An address of welcome was delivered by Dr. Conrad Diehl, Mayor of Buffalo, and this was responded to by Dr. Francis B. Bishop, of Washington.

The papers presented were as follows:

Phlebitis: A Clinical Study. By Dr. Margaret A. Cleaves, New York.

A High Frequency Oscillator for Electro-Therapeutic Purposes. By Mr. Nikola Tesla, E.E., New York, N. Y., read by Dr. White, of Boston.

New Uses of the Undulating Current in Gynecology. By Dr. Georges Apostoli, Paris, France.

Electricity in the Treatment of Uterine Fibromata. By Dr. Felice La Torre, Rome, Italy.

Electro-Therapeutics in Gynecology. By Dr. Georges Gautier, Paris, France.

The Treatment of Uterine Fibroids by Small Currents Administered Percutaneously. By Dr. Richard J. Nunn, Savannah, Ga.

Treatment of Menorrhagia by Weak Current and Silver Internal Electrode. By Dr. Adelstan de Martigny, Montreal, Quebec.

The Method for Using Cataphoresis in Certain Forms of Conjunctival Inflammation. By Dr. Lucien Howe, Buffalo, N. Y.

Electricity in Deafness and Stricture of the Eustachian Tube. By Dr. Robert Newman, New York, N. Y.

Electricity in Acne Vulgaris and Acne Rosacea. By Dr. Grover W. Wende, Buffalo, N. Y.

Cases of Lightning Stroke Causing Diseases of the Eye. By Dr. G. Sterling Ryerson, Toronto, Canada.

The Diagnostic and Therapeutic Relation of Electricity to Disease of the Central Nervous System. By Dr. A. D. Rockwell, New York, N. Y.

High Tension Current in Neuritis. By Dr. Francis B. Bishop, Washington, D. C.

Electricity in the Treatment of Goitre. By Dr. Charles R. Dickson, Toronto, Canada.

The Effect of Electricity upon Tissue-Metabolism. By Dr. J. H. Kellogg, Battle Creek, Mich. Read by Title.

Electro Diagnosis. By Dr. John Gerin, Auburn, N. Y.

Surgical Uses of Electricity. By Dr. Charles R. Dickson, Toronto, Canada.

Electricity in the Treatment of Certain Diseases of the Eye. By Dr. G. Herbert Burnham, Toronto, Canada.

Electricity in Genito-Urinary Diseases. By Dr. Robert Newman, New York, N. Y.

Treatment of Malignant Growths by Means of Electricity. By Dr. G. Betton Massey, Philadelphia, Pa.

Orthopedic Uses of Electricity. By Dr. Louis A. Weigel, Rochester, N. Y.

Functional Diseases of the Nervous System Treated by Electricity. By Dr. A. D. Rockwell, New York, N. Y.

The Hydro-electric Bath with Sinusoidal Current in Disease. By Drs. Georges Gautier and J. Larat, Paris, France.

The Use of the Hot-Air and Light-Bath in Disease. By Drs. Georges Gautier and J. Larat, Paris, France.

The Electric-Arc Bath: A Clinical Report. By Dr. Margaret A. Cleaves, New York, N. Y.

The Electric-Light Bath. By J. H. Kellogg, Battle Creek, Mich. Read by title.

Some Suggestions on the Possibilities of Cataphoresis. By Mr. John J. Carty, E.E., New York, N. Y.

The Effect of High Tension Discharges upon Microorganisms. By Drs. J. Inglis Parsons and C. Slater, London, England.

The Action of X-rays upon Tuberculosis. By Dr. J. Bergonie, Bordeaux, France. Read by title.

Two Years of Practice in Radiotherapy. By Drs. Georges Gautier and J. Larat, Paris, France.

The Alternating Dynamo Current. By Dr. Francis B. Bishop, Washington, D.C.

Dr. Ernest Wende, Health Commissioner of Buffalo, had charge of the local arrangements, and the only fault was that the members attended so assiduously to business that they could not find time to partake of all the pleasures pro-



vided. Two receptions were tendered the members of the association, one at the University of Buffalo, on the evening of the first day, and one at the residence of Dr. Lucien Howe, on the second evening. A trolley-ride was tendered the party to the Buffalo street-railway powerhouse, where everyone was much interested in the manner in which electric power is received from Niagara Falls, the largest electrical storage-battery in the world, and other electrical apparatus. A yacht trip on Niagara River to Grand Island and Niagara Falls, including a dinner, ended the social features of the meeting.

Officers were elected as follows:

President, Francis B. Bishop, Washington, D. C.; first vice-president, Ernest Wende, Buffalo, N. Y.; second vice-president, Wm. H. White, Boston, Mass.; secretary, Dr. John Gerin, 68 North Street, Auburn, N. Y.; treasurer, Dr. Richard J. Nunn, Savannah, Ga. Executive Council: Dr. Robert Newman, New York City, N. Y., Dr. G. Betton Massey, Philadelphia, Pa., for three years; Dr. William J. Morton, New York, N. Y., R. A. D. Rockwell, New York, N. Y., for two years; Chas. R. Dickson, Toronto, Can., Frederick Schavoir, Stamford, Conn., for one year.

The next meeting will be held in Washington, beginning on the 3d Tuesday in September, 1899.

**Program of the Mississippi Valley Medical Association.**—The 24th annual meeting, to be held October 11, 12, 13, and 14, 1898, in the Capitol, Nashville, Tenn.:

*First Day*—Tuesday, October 11th.—Address of Welcome; Reports of Officers and Committees; Executive Business; President's Inaugural Address.

The Relations of the Gynecologist and the Neurologist. W. H. Humiston, Cleveland, O. Discussion opened by C. H. Hughes, St. Louis, and Jos. Price, Philadelphia, Pa.

Diagnostic and Therapeutic Uses of Tuberculin. Chas. W. Aitken, Flemingsburg, Ky.

Immunity. Chas. T. McClintock, Detroit, Mich.

Hygiene versus Drugs in Pulmonary Tuberculosis. Charles L. Minor, Asheville, N. C.

Some of the Factors that Predispose to Tuberculosis. L. P. Barbour, Tullahoma, Tenn.

The Bicycle from the Medical Standpoint. I. N. Love, St. Louis, Mo.

Therapeutic Value of Marmoreck's Serum. W. L. Baum, Chicago, Ill.

Tumors of the Parietal Lobe of the Cerebrum. T. A. Davis, Chicago, Ill.

Unguentum Hydrargiri or Blue Ointment Administered by the Mouth. Albert Bernheim, Paducah, Ky.

Wounds of the Lacrimal Apparatus: Report of Operation for Restoration of Canaliculi Obliterated by Traumatism. Geo. F. Keiper, Lafayette, Ind.

Mastoiditis: When to Operate and How. Andrew Timberman, Columbus, O.

Prophylaxis in Diseases of the Nose and Throat. J. Homer Coulter, Chicago, Ill.

Three Anomalous Cases of Mastoid Disease. J. L. Minor, Memphis, Tenn.

Report of Holocain as a Local Anesthetic in Ophthalmic Surgery. E. C. Ellett, Memphis, Tenn.

Incarceration of the Iris Relieved by Eserine: Report of a Case. Frank Trester Smith, Chattanooga, Tenn.

A Case of Bilateral Glioma of the Retina: Operation, Non-recurrence in Seventeen Years. A. G. Sinclair, Memphis, Tenn.

Tonsillitis or Quinsy: Cause and Treatment. J. A. Stucky, Lexington, Ky.

Remarks on Hydrophthalmus, with Report of Two Cases. James Moore Ball, St. Louis, Mo.

Conservatism in Oral Surgery. Truman W. Brophy, Chicago, Ill.

Neuralgias Due to Nasal Origin. Edward T. Dickerman, Chicago, Ill.

Headache as a Symptom in Eye-Disease. W. H. Wilder, Chicago, Ill.

*Second Day*—Wednesday, October 12th.—Reports of Committees; Appointment of Nominating Committee; Address in Medicine. James T. Whittaker, Cincinnati, O.

Complete Inspection of the Rectum by Means of Newer Mechanical Appliances. Thos. Chas. Martin, Cleveland, O.

The Relationship Between the Genito-Urinary Tract and Rectum: In Operations Upon the Female, Which Should Receive Priority? John L. Jelks, Memphis, Tenn.

Rectal Fistula. J. R. Pennington, Chicago, Ill.

The Surgical Management of Complex Progressive Ischio-Rectal Fistulae. Leon Straus, St. Louis, Mo.

Hydrotherapy in Stomach Diseases. Geo. D. Kahlo, Indianapolis, Ind.

Phases of Toxemia from Disturbed Metabolism. Thos. Hunt Stucky, Louisville, Ky.

The Vascular Dermatoneuroses. A. E. Brayton, Indianapolis, Ind.

A Clinical Report of a Case of Abscess of the Liver. Edwin Frazer Wilson, Columbus, O.

The Importance of Early Diagnosis in Surgical Cases. J. C. Morfit, St. Louis, Mo.

Gonangiectomy and Orchidectomy for Hypertrophied Prostate in Old Men. George W. Johnson, Dunning, Ill.

Why I Have Abandoned the General Practice of Vaginal Hysterectomy. B. Sherwood Dunn, Boston, Mass.

Why I Do Vaginal Ablation in Pus Cases. Wm. R. Pryor, New York City.

A Consideration of the Limit to Operative Gynecology. Shelby C. Carson, Greensboro, Ala.

The Limits of Operations for Cancer of the Uterus. L. S. McMurtry, Louisville, Ky.

Cancer of the Uterus. Louis Frank, Louisville, Ky.

Surgical Treatment of Pus in the Pelvis. Joseph Price, Philadelphia, Pa.

Some Pathological Conditions of the Ovaries Causing Pain. G. W. Halley, Kansas City, Mo.

A Case of Abdominal Hysterectomy with Stercoraceous Vomiting; Recovery. H. Hatch, Quincy, Ill.

A Plea for Pelvic Cellulitis and Peritonitis. F. F. Bryan, Georgetown, Ky.

The Diagnosis of Gonorrhea in Women. J. Rilus Eastman, Indianapolis, Ind.

Care and Repair of the Female Perineum. E. L. Larkins, Terre Haute, Ind.

Clinical Contribution to Ectopic Gestation. W. W. Taylor, Memphis, Tenn.

Retro-Displacements of the Uterus and Their Treatment. A. Morgan Cartledge, Louisville, Ky.

Evening: General Reception, Maxwell House.

*Third Day*—Thursday, October 13th.—Reports of Committees. Address in Surgery. Geo. Ben Johnson, Richmond, Va.

Observations on Surgery of the Kidney. Charles A. L. Reed, Cincinnati, O.

Direct Diagnosis of Diphtheria. William K. Jaques, Chicago, Ill.

Diphtheria and its Logical Treatment. A. M. Osness, Dayton, O.

Suprapubic Cystotomy versus Perineal Section. James M. Parrott, Kingston, N. C.

When Shall We Operate for Appendicitis? Edwin Walker, Evansville, Ind.

Some Clinical Phases of Intestinal Obstruction. A. H. Cordier, Kansas City, Mo.

Practical Side of the Treatment of Gunshot Wounds of the Abdomen. H. Horace Grant, Louisville, Ky.

Surgical Treatment of Ophthalmic Goiter. Bayard Holmes, Chicago, Ill.

Some Forms of Gangrene and their Treatment. J. S. Nowlin, Shelbyville, Tenn.

Sub-periosteal Removal of Caries from the Pelvic Basin, with the Report of a Case. S. E. Milliken, Dallas, Tex.

Surgical Treatment of Infantile Paralysis. Alex. C. Wiener, Chicago, Ill.

Interesting Surgical Cases. M. Goltman, Memphis, Tenn.

Neurasthenia and its Treatment. H. C. Sharp, Jeffersonville, Ind.

A Unique Case of Hernia: Operation. Spencer Graves, St. Louis, Mo.

Some More About Drainage. Arch Dixon, Henderson, Ky.

The Triple Operation for Pyloric Stenosis. N. Stone Scott, Cleveland, O.

Report of a Case of Obstetrics with Complications. R. C. Pratt, McKenzie, Tenn.

Pichi. H. W. Whitaker, Columbus, O.

A Few Practical Points in the Treatment of Posterior Urethritis. A. Ravogli, Cincinnati, O.

Varicocele. F. E. Kelly, LaMoille, Ill.

Syphilis. John M. Batten, Pittsburg, Pa.

Prevention of Venereal Disease. David Lieberthal, Chicago, Ill.

Fourth Day—Friday, October 14th.—Report of Committee on Nominations. Installation of Officers-elect.

The Neuro-Hypothesis of Rheumatoid Arthritis. Frank Parsons Norbury, Jacksonville, Ill.

Intermingling and Change of Type in Diseases. W. Gaston McFadden, Shelbyville, Ind.

Mercury: Its Action. Wm. F. Barclay, Pittsburg, Pa.

How Should we Treat Typhoid Fever? T. Virgil Hubbard, Atlanta, Ga.

The Arthritic Diathesis. R. A. Bate, Louisville, Ky.

A Trilogy of Diseases: Acute Articular Rheumatism, Endocarditis, Chorea. Albert E. Sterne, Indianapolis, Ind.

Cardiac Murmurs. S. W. Fain, Chatanooga, Tenn.

The Artificial Production of the Plasmodium Malaria and the Rational Treatment for the Removal of Same in Malaria. L. H. Warner, Brooklyn, N. Y.

Opium in the Treatment of Epilepsy. Frank C. Hoyt, Chicago, Ill.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 Days Ended September 15, 1898.

Surgeon R. D. MURRAY to rejoin station at Mobile, Ala., Sept. 2. To proceed to New Orleans, La., for special temporary duty, Sept. 6.

Surgeon H. R. CARTER to proceed to Taylor, Miss., for special temporary duty, Sept. 2.—To rejoin station at New Orleans, La., temporarily. Sept. 13.

Surgeon C. E. BANKS granted leave of absence for 22 days from Sept. 12, on account of sickness. Sept. 14.

Surgeon A. H. GLENNAN to proceed to Tortugas Quarantine Station for special temporary duty. Sept. 12.

Surgeon EUGENE WASPIN relieved from duty at Santiago, Cuba, and directed to return to the United States by the first conveyance. Sept. 3.

Surgeon S. D. BROOKS granted leave of absence for four days. Sept. 10.

Passed Asst. Surgeon W. P. MCINTOSH to proceed to Grand Junction, Tenn., for special temporary duty. Sept. 6.

Passed Asst. Surgeon G. M. MAGRUDER to close Montauk Point, N. Y., Quarantine Station, then to rejoin station at Memphis, Tenn., reporting to Bureau en route. Sept. 14.

Passed Asst. Surgeon J. J. KINYOUN relieved from duty at Montauk Point, N. Y., and directed to rejoin station, Hygienic Laboratory, Washington, D. C. Sept. 4.

Passed Asst. Surgeon J. O. COBB to report at Bureau, Sept. 2.—To proceed to Jackson, Miss., for special temporary duty, Sept. 3.—To proceed to Taylor, Miss., for special temporary duty. Sept. 5.

Passed Asst. Surgeon G. B. YOUNG to report at Bureau for special temporary duty. Sept. 6.

Passed Asst. Surgeon W. G. STIMPSON to proceed to Grand Junction, Tenn., for special temporary duty, Sept. 6.—To proceed to Hollow Springs, Miss., for special temporary duty. Sept. 8.

Passed Asst. Surgeon W. J. S. STEWART granted leave of absence for three days from Sept. 6. Sept. 3.

Passed Asst. Surgeon E. K. SPRAGUE granted leave of absence for two days upon being relieved from duty at Montauk Point, N. Y., then to rejoin station, Hygienic Laboratory, Washington, D. C. Sept. 14.

Asst. Surgeon H. S. CUMMING upon closure of the Montauk Point, N. Y., Quarantine Station, to rejoin station at New York, N. Y. Sept. 14.

Asst. Surgeon S. R. TABB to proceed to Reedy Island Quarantine Station, Del., and report to commanding officer for duty. Sept. 6.

Asst. Surgeon HILL HASTINGS to proceed to St. Louis, Mo., and assume temporary charge of service. Sept. 13.

Asst. Surgeon C. H. LAVINDER to report at Bureau for instructions, Sept. 14.—To proceed to Egmont Key Detention Camp, Port Tampa, Fla., and report to commanding officer for duty. Sept. 15.

Asst. Surgeon H. B. PARKER assigned to duty as Sanitary Inspector on U. S. transport "Minnewaska." Sept. 3.

Assistant Surgeon M. H. FOSTER to proceed to Savannah, Ga., and await orders. Sept. 5.

Asst. Surgeon L. L. LUMSDEN to proceed to Delaware Breakwater

Quarantine, Del., and report by letter to commanding officer for duty and assignment to quarters. Sept. 6.

Asst. Surgeon MARK J. WHITE to rejoin station, Immigration Service, New York, N. Y. Sept. 8.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon W. H. RUSH, when discharged from the Mare Island Hospital, ordered home and granted sick leave for three months.

Passed Asst. Surgeon J. A. GUTHRIE, ordered to the Norfolk Naval Hospital.

Passed Asst. Surgeon I. W. KITE, detached from the Norfolk Naval Hospital, September 26th, for examination for promotion, then ordered home to await orders.

Passed Asst. Surgeon C. F. PECKHAM, detached from the "Minnesota" and ordered home.

Medical Director G. F. WINSLOW, detached from Medical Examining Board, Washington, and ordered to the Boston Navy Yard.

Surgeon M. H. CRAWFORD, order of the 8th inst. modified; detached from the "Boston" upon reporting of Surgeon L. W. ATLEE.

Surgeon L. W. ATLEE, detached from the Naval Home, Philadelphia, and ordered to the "Boston" via steamer from San Francisco September 17th.

Surgeon W. H. RUSH, order of the 8th modified; ordered to remain at the Mare Island Hospital for treatment.

Surgeon F. A. LOVERING, detached from the "Oregon" and ordered to the "Lancaster."

Surgeon F. B. STEPHENSON, detached from the "Lancaster" and ordered to the "Oregon."

Surgeon W. A. MCCLURG, detached from the "Richmond" and ordered to Washington as member of the medical examining board.

Asst. Surgeon C. P. KINDLEBERGER, ordered to the Philadelphia Hospital.

Asst. Surgeon C. M. HOWE, detached from the League Island Navy Yard and ordered to the "Detroit."

Passed Asst. Surgeon J. S. KING, honorably discharged.

Asst. Surgeons A. HEGER and C. N. BARNEY honorably discharged.

Passed Asst. Surgeon R. F. O'NEIL, detached from the "Catskill" and ordered home.

Asst. Surgeon S. V. MERRITT, honorably discharged.

Surgeon V. C. B. MEANS, detached from the "Detroit" and ordered home to await orders.

Passed Asst. Surgeon J. C. MACEVITT, honorably discharged.

Passed Asst. Surgeon M. S. GUEST, detached from the "Helena" and ordered to the "Detroit" immediately.

Passed Asst. Surgeon L. MORRIS, detached from the Portsmouth Navy Yard and ordered to the "Helena."

Surgeon A. G. CABELL, detached from the Puget Sound Station and ordered to report at Mare Island for examination for retirement; then to proceed home and wait orders.

Passed Asst. Surgeon J. SAILER honorably discharged.

Passed Asst. Surgeon W. F. ARNOLD, order of the 6th modified; ordered to the "Resolute."

Asst. Surgeon E. J. CROW, ordered to additional duty at the Marine Rendezvous, Boston.

Asst. Surgeon P. S. RIEG, detached from the Marine Rendezvous, Boston, and ordered to the "Alexander."

Asst. Surgeon R. G. LECONTE, honorably discharged.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon L. B. BLUITT will proceed from Quincy, Ill., to New York City and report to Lieutenant-Colonel J. Morris Brown, D. S. G., to await transportation by U. S. Steamer "Yucatan" to Santiago, Cuba, and upon arrival will report for duty with the 8th Illinois Volunteer Inf.

Acting Asst. Surgeon JOHN GILBERT will proceed from Philadelphia, Pa., to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon THOMAS H. KEARNEY will proceed from this city to Camp Poland, Knoxville, Tenn., and report for duty.

Acting Asst. Surgeon GEORGE DOCK will proceed from Ann Arbor, Mich., to Montauk Point and report for duty.

Acting Asst. Surgeon W. L. COLEMAN, having reported to the Surgeon-General of the Army, will proceed from this city to Fort Point, Galveston, Tex., for duty.

Major JOHN D. HALL, surgeon, is relieved from duty at Fort Wadsworth and will proceed to Jacksonville, Fla., and report for duty.

Leave for 14 days on account of sickness is granted Acting Asst. Surgeon C. L. G. ANDERSON, September 6th.

Acting Asst. Surgeon MATTHEW LEEPERE will proceed from Milan, Mo., to Lexington, Ky., and report for duty.

Acting Asst. Surgeon MURRAY F. MUDGE will proceed from Gaines, N. Y., to Jacksonville, Fla., and report for duty.

1st Lieutenant LEHIGH A. FULLER, A. S., will proceed from New York City to Fort Monroe, Va., for duty.

Par. 26, S. O. 181, Aug. 3, as relates to Acting Asst. Surgeon GEORGE E. LAWBRASON, is amended so as to read Acting Asst. Surgeon GEORGE B. LAWBRASON, and to direct him to proceed from New Orleans, La., to Tampa, Fla.



Major EDWARD MARTIN, brigade surgeon, U. S. Vol., is honorably discharged September 15.

Major GEORGE T. VAUGHAN, brigade surgeon, U. S. Vol., is honorably discharged September 16.

Major EUGENE L. SWARTZ, brigade surgeon, U. S. Vol., upon the abandonment of the camp at Lithia Springs, Ga., will proceed to Montauk Point, N. Y., and report for duty.

Major EDWARD BOECKMANN, chief surgeon, U. S. Vol., is honorably discharged September 7.

Acting Asst. Surgeon JAMES W. HART will proceed from this city to Sheridan Point, Va., and report for duty.

Acting Asst. Surgeon HENRY J. HINKEL will proceed from Baltimore, Md., to Lexington, Ky., and report for duty.

Acting Asst. Surgeon THOMAS W. BATH will proceed from Normal, Ill., to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon DANIEL C. COONEY will proceed from this city to Jacksonville, Fla., and report for duty.

1st Lieut. JESSIE ROWE, Asst. Surgeon, 1st Ill. Vol. Cav., will proceed to Chickamauga Park, Ga., and report for duty.

Captain BENJAMIN L. TEN EYCK, Asst. Surgeon, will proceed from Newark, N. J., to Willets Point, N. Y., for temporary duty.

Acting Asst. Surgeon MELCHOR G. KOCKEY will proceed from Bellevue, Kan., to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon GEORGE DOCK will proceed from Montauk Point to Chickamauga Park, Ga., and report to the surgeon in charge of the Sternberg Hospital for duty.

Acting Asst. Surgeon WILLIAM L. ROBINS will proceed to Bedloe's Island, N. Y., and report to Asst. Surgeon L. P. SMITH, U. S. Army, for duty.

Acting Asst. Surgeon HENRY H. PELTON, will proceed to Fort Hamilton, N. Y., and report for duty.

The following named officers will report on October 3d to Col. Dallas Bache, A. S. G., president of the examining board appointed to meet at the Army Medical Museum Building, Washington, D. C., by S. O. 212, September 8, for examination as to their fitness for promotion: Major WM. H. ARTHUR, chief surgeon U. S. Vol.; Major GEORGE E. BUSHNELL, chief surgeon, U. S. Vol.

Leave for fourteen days, from September 3d, is granted 1st Lieut. LEIGH A. FULLER, assistant surgeon.

The leave granted Captain NORTON STRONG, assistant surgeon, is extended two months on account of sickness, September 8.

Leave granted Major PHILIP F. HARVEY, surgeon, is extended one month on surgeon's certificate, September 8.

Acting Asst. Surgeons CHARLES V. BUTTLER, CHARLES G. EICHER, FRANCIS R. PIERVAL, FRANK W. ROSS and JOHN T. H. SLAYTER are relieved from duty at Camp Alger, Falls Church, Va., and will proceed to Jacksonville, Fla., and report for duty.

Major GEORGE H. TORNEY, surgeon, will turn over the command of the U. S. hospital ship "Relief" to Major ALFRED E. BRADLEY, brigade surgeon, U. S. Vol.

Leave for 20 days is granted Major GEORGE H. TORNEY, surgeon, September 8th.

Leave for one month is granted Lieut.-Col. BENJAMIN F. POPE, chief surgeon, U. S. Vol., September 8.

Acting Asst. Surgeon WILLIAM J. BOYD will proceed from Pavilion, N. Y., to Lexington, Ky., and report for duty.

Acting Asst. Surgeon PHILIP P. PARRISH will proceed from Afton, Va., to Lexington, Ky., and report for duty.

Acting Asst. Surgeon WALTER S. CHAPMAN is relieved from duty at San Carlos, Ariz., and will proceed to Fort Monroe, Va., and report for duty.

Acting Asst. Surgeons W. T. HAMILTON and STEPHEN M. LONG will report at Montauk Point for duty.

Lieut.-Col. JOHN VAN R. HOFF, chief surgeon, U. S. Vol., is relieved from duty as chief surgeon, Third Army Corps, and will proceed to this city and report to the Surgeon-General of the Army for orders.

Acting Asst. Surgeon JAMES B. STEWART will proceed from Bradford, Pa., to Lexington, Ky., and report for duty.

Major FRANK BRUSO, brigade surgeon, U. S. Vols., is relieved from duty with the Third Army Corps, and will proceed to Camp Meade, Middletown, Pa., and report for duty.

Lieut.-Col. PETER J. A. CLEARY, D. S. G., chief surgeon, Dept. of the Gulf, will proceed to Charleston, S. C., and Savannah, Ga., for the purpose of selecting a site for a general hospital of 1,000 beds in the vicinity of one or other of the cities named.

1st Lieut. MARSHALL W. CLOUD, A. S., now on sick leave of absence at Atlanta, Ga., will proceed to Fort McPherson and report to Major BLAIR D. TAYLOR, surgeon, in charge of U. S. General Hospital at that post for duty.

Acting Asst. Surgeon JAMES S. KENNEDY, upon the expiration of his present sick leave of absence, will proceed from Chambersburg, Pa., to Montauk Point, and report for duty.

Major CHARLES M. GANDY, brigade surgeon, U. S. Vol., is relieved from further duty at Tampa and will proceed to Montauk Point and report for duty.

Acting Asst. Surgeon JOHN R. DEVEREUX is relieved from duty at the Leiter U. S. General Hospital, Chickamauga. He will proceed to Fort Monroe, Va., for duty.

Major JOHN D. HALL, surgeon, is relieved from duty at Fort Wadsworth and will proceed to Mount Gretna, Pa., and await orders.

Acting Asst. Surgeon JOHN W. THOMAS will proceed from Montauk Point to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon FREDERICK W. FABRICIUS will proceed from New York City to Fort Monroe and report for duty.

Acting Asst. Surgeon CHARLES H. FISCHER will proceed from Detroit, Mich., to Montauk Point and report for duty.

Major ADRIAN S. POLHEMUS, brigade surgeon, U. S. Vol., is relieved from duty with the Third Army Corps, and will proceed to Montauk Point and report for duty.

Major DAVID C. PEYTON, brigade surgeon, U. S. Vol., is relieved from duty at Camp Meade, Middletown, Pa., and will proceed to Philadelphia, Pa., and assume supervision of the sick in that city.

Major HENRY I. RAYMOND, brigade surgeon, U. S. Vol., is relieved from duty at Chickamauga Park, Ga., and will proceed to Montauk Point and report for assignment to duty.

Major WILLIAM C. GORGAS, surgeon, is relieved from duty at Santiago, Cuba, and will proceed to Ponce, Porto Rico, and report for duty as chief surgeon.

Major JAMES M. JENNE, chief surgeon, U. S. Vol., is relieved from duty with the Third Army Corps and will proceed to Fort Monroe, Va., and report to Lieut.-Col. ALFRED A. WOODHULL, deputy surgeon-general for duty.

The following-named officers are relieved from duty with the Third Army Corps and will proceed to Jacksonville, Fla., and report to Major General Fitzhugh Lee, commanding Seventh Army Corps, for duty: Major GEORGE A. SMITH, brigade surgeon, U. S. Vol.; Major BIAL T. BRADBURY, brigade surgeon, U. S. Vol.; Major MILO B. WARD, brigade surgeon, U. S. Vol.

Lieut.-Col. HENRY R. TILTON, deputy surgeon-general, chief surgeon, will proceed to and inspect the sanitary condition of Fort Snelling, Minn., including the camp of the Fifteenth Minn. Vol. Inf.

Acting Asst. Surgeon W. H. SPELLER, U. S. A., will proceed to Fort Wadsworth, N. Y., and report to the commanding officer for duty.

Par. 12, S. O. 210, Sept. 6, relating to EDWARD MARTIN, late major and brigade surgeon, U. S. Vol., is revoked.

Colonel WILLIAM H. FORWOOD, A. S. G., is relieved from duty at Montauk Point, N. Y., and will return to his proper station at the U. S. Soldiers' Home, Washington, D. C.

Major SIMON P. KRAMER, brigade surgeon, U. S. Vol., is relieved from duty at Montauk Point, and will proceed to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon CHARLES E. V. KENNON will proceed from Camp George H. Thomas, Chickamauga Park, Ga., to North Easton, Mass., and await orders.

Captain BENJAMIN L. TEN EYCK, assistant surgeon, will proceed at once to Fort Riley, Kan., and report for duty.

Captain ISAAC P. WARE, A. S., is relieved from duty at Benicia Barracks, Cal., and assigned to duty at Presidio, San Francisco.

Major PHILIP F. HARVEY, surgeon, now on sick leave of absence at Fort Wadsworth, will proceed to Fort Snelling, Minn., and report for duty.

Captain ASHTON B. HEYL, A. S., now on sick leave of absence at Hyde Park, Cincinnati, Ohio, will proceed to Fort Thomas, and report for duty.

## Foreign News and Notes.

**The Italian Congress of Hygiene meets in Turin** from September 29th to October 1st, under the presidency of Professor Pagliani.

**Dr. Eijkmann**, director of the Pathologic Institute in Batavia, has been appointed professor of hygiene at the University of Utrecht.

**Dr. Johann Rille**, privat-docent at the Vienna University, has been appointed professor of dermatology at the University of Innsbruck.

**The Italian Congress of Internal Medicine meets at Turin**, September 30th and October 1st, under the presidency of Professor Baccelli.

**The Hyrtl Monument.**—A monument to the memory of the late Dr. Josef Hyrtl, the distinguished anatomist, has been erected in Mödling, Vienna.

**Dr. Voges**, assistant in the Institute for Infectious Diseases, in Berlin, has been nominated for the vacant directorship of the Bacteriologic Institute in Buenos Ayres.

**A Strange Objection to Calf-Lymph.**—At the meeting of the Chard (Somerset) Board of Guardians, held on August 22d, a member mentioned a rumor that children vaccinated with calf-lymph were in the habit of "blaring" at night.—[*British Medical Journal*.]

**Vaccination in France.**—It is well known that in France vaccination is enforced by strict regulations, which meet with no opposition on the part of the public. A movement is now afoot to extend the beneficent effects of these regulations to Tunis and ultimately to all the French colonies.

**The Saltpêtrière Centenarian.**—Madam Henriette Simonnet, née Lafosse, is dead at the age of 105 years and 6 months. She was born February 26, 1793, and in 1810 married M. Simonnet, who died November 18, 1890, at the age of 100 years less 3 days. After his demise, Madam Simonnet entered the Saltpêtrière with her daughter, who is now 78 years of age.

**Sanitarium for Pellagra Patients.**—As a consequence of the considerable extension of pellagra in South Tyrol, the district officials have determined upon the erection of a sanitarium near Rovereto, wherein patients ill with pellagra only will be treated. It is intended to admit the patients in groups, alternately men and women, and subject each group to systematic treatment for three months. It will be possible thus to treat 80 patients yearly.

**Obituary.**—DR. ALEXANDER LINDSAY, formerly professor of medical jurisprudence in Anderson's College, Glasgow, Scotland, August 14th, aged 82 years.—DR. DIEDRICH HERMANN KARL NASSE, professor of surgery at the University of Berlin, September 1st, the result of an accident while mountain-climbing.—DR. JOHN WALLACE, professor of midwifery in the Liverpool University College and consulting gynecologic surgeon to the Royal Infirmary, Liverpool, September 1st.

**Pulmonary Streptococcus Infection.**—At a recent meeting of the Académie de Médecine de Paris, Clozier (*British Medical Journal*) reported a very interesting case of what at first appeared to be acute pulmonary tuberculosis. The illness, however, was due to streptococcus infection and was cured by the use of Marmorek's serum. The patient, a boy aged 18 years, had previously been in good health and there was nothing of note in either his personal or his family history. After coming in from a bicycle-ride in the rain, he was seized with shivering, his temperature ran up, and he had a cough. Auscultation revealed small crepitations over the whole of both lungs. The sputa, which were muco-purulent, contained none of Koch's bacilli, but plenty of streptococci. His condition became more and more serious despite free stimulation and active revulsive treatment. At last he was given a hypodermic injection of 20 c.c. of anti-streptococcic serum, followed by an injection of 10 c.c. for the next three days. He continued to get worse and there were heard on auscultation tubular breathing, large bubbling râles, and pectoriloquy. The three following days the dose of serum was increased to 20 c.c. Finally, three days later than this, a pulmonary abscess lying at about the angle of the scapula emptied itself and all the signs of a cavity became audible. One more injection was given and from that time rapid convalescence ensued.

**A Year's Inquests in London.**—The report for 1897 of Mr. A. Spencer, Chief Officer of the Public Control Department of the London County Council, was issued during the first week of September last and contained some interesting information concerning the inquests held in the city during 1897. It appears that 7,428 coroner's inquests were held in London during the year, which is at the rate of 1.6 per 1,000 of the estimated population. Of these, 4,477

were on the bodies of males, 2,948 were on the bodies of females, 2 were on skeletons—presumably of children—in which the sex could not be determined, and 1 was on treasure-trove, for the coroners in England hold investigations into the ownership of buried treasure, silver, coins, etc., with the same formalities which they enquire into the causes of sudden death. At 43 of the inquests a verdict of wilful murder was returned, while the undermentioned verdicts were recorded in other cases: natural causes, 3,616; accidental death, 2,405; neglect and exposure, 518; suicide while insane, 431; and found drowned, 164. The balance of verdicts among other returns included 21 cases of manslaughter and 9 of justifiable homicide, while in 56 cases the cause of death was unascertainable. The cases of neglect and exposure were very generally complicated with alcoholic excess, while it is noticeable that all the suicides were supposed to be mad, the old verdict of *felo de se* not having been once returned. Nearly one-quarter, *i. e.*, over 500, of the inquests where the verdict of death from accident was returned were held upon infants found suffocated in bed with their parents, and this in spite of the repeated requests from coroners that all infants should be provided with some sort of cot. It is generally believed by the medical profession in London that a verdict of murder would fit many of these cases, but it is almost impossible to bring the crime home to the parents.

**The Water-Famine in North-East London.**—“This famine is growing acute,” writes a correspondent on the spot under date of September 10th, “and if it is not speedily relieved by natural or artificial means there may be an *émeute* of the population, so exasperated are they against the company whose supineness has put them to such great inconvenience and subjected them to great risks of epidemics.” It is practically certain now that the London water-question will be among the early ones to be dealt with by Parliament next session. The Conservative Government has been credited, perhaps with justice, of having a tender feeling towards monopolies, but the East London Waterworks Company has shown itself so entirely unable to keep faith with its customers that it has now not a friend left in either House, at any rate not a friend who dare avow himself as such. If the monopoly enjoyed by the East London Waterworks Company is broken down, it is possible that the other companies may be treated in the same way, and that the citizens of London may be able to obtain control of their own water-supply. From a medical point of view this is a most important matter, for the medical profession have long felt that it is wrong that any private company run for the profit of a group of shareholders should have the irresponsible management of the water-supply of the metropolis, bearing in mind the importance of the water-supply of a city both as an adjuvant to hygiene and as the frequent medium for the spread of disease. The Royal Commission which is now sitting—or, rather, resting from its sittings—on this important subject cannot fail to be impressed by recent events in East London, and whereas the bias of the commission has appeared so far to be in favor of the companies continuing to manage their own affairs, a report may be now expected with confidence recommending the amalgamation of all the companies into one central scheme under the control of a public body, perhaps the London County Council.

**Preventive Inoculations Against Plague in the Khoja Community of Bombay, during the Epidemic of 1896-97.**—We abstract the following from the *Indian Lancet*: His Highness the Aga Khan's Inoculation



Station at Mazagon, was opened December 27, 1897. From that date to April 20th, 5,184 Khojas were inoculated. In the comparative analysis, the mortality in the inoculated is considered as having occurred not among 5,184 individuals, which is the number reached on the last days of the inoculations, but among 3,814, the daily average. The approximate, probably exaggerated, number of the uninoculated at the same time was 9,516. This number includes those inoculated during the preceding year, but not reinoculated during the epidemic of 1897-98. By calculating upon an exaggerated strength of the uninoculated, the risk of exaggerating their death-ratio during the epidemic under consideration is avoided. During the 16½ weeks between December 27, 1897, and April 20, 1898, 184 deaths in all occurred in the Khoja community. Of these, 6, including 2 of plague, took place in Khojas inoculated in the epidemic of 1896-97, and not reinoculated since; 7 deaths, including 3 of plague, occurred in the 5,184 Khojas inoculated or reinoculated this year; and 171 deaths occurred in the uninoculated Khojas. By comparison with corresponding periods of previous years, it is learned that of the total 184 deaths, 102 may fairly be attributed to causes other than the plague. Of the 102 deaths attributable to other causes, 4 occurred in inoculated this year, 4 in inoculated last year, and the rest, 94, in uninoculated. Of the 82 deaths attributable to plague, 3 occurred in inoculated this year, 2 in inoculated last year, and 77 in uninoculated. The distribution of deaths among the inoculated and uninoculated is as follows: 9,516 uninoculated (probably exaggerated number) had 77 deaths from plague and 94 deaths from other causes. 3,814 inoculated this year (accurate number) had 3 deaths from plague and 4 deaths from other causes. Admitting that among the uninoculated not more than the above proportion of deaths was due to plague, and supposing that the inoculated had remained, after inoculation, as susceptible to disease as were the uninoculated, they should have had, according to their relative strength, 31 deaths from plague and 38 deaths from other causes. Among the 77 uninoculated who died of plague, there was a babe below 3 years of age, and 4 people above 60, giving a total of 5 deaths. Among the 94 uninoculated who died of other causes than plague, there were 33 deaths in babies of 3 years and below, and 23 in people above 60, giving a total of 56 deaths. The proportion of individuals of these two extremes of ages, who were inoculated, was very considerable, but smaller than their proportion among the uninoculated. In order to eliminate this source of possible error, the 5 deaths from plague and 56 deaths from other causes, which occurred in uninoculated outside the age of 3 to 60 years, may be excluded from the comparison altogether, and after that the figures are still as follows: 9,516 uninoculated (probably exaggerated number) had 72 deaths from plague and 38 deaths from other causes. 3,814 inoculated (accurate number) had 3 deaths from plague and 4 deaths from other causes. This represents a difference of 89.7% of deaths from plague in favor of the inoculated part of the community, and of 73.3% of deaths from what has been returned as other causes, in favor of the same part of the community. After making all allowances for inaccurate classification of deaths in the uninoculated group, with which the inoculated is being compared, and admitting that a part of the excess of deaths in the uninoculated may be due to a certain number of sickly people having abstained from inoculation, the result still contains an indication that, besides the protection against plague, this inoculation influences also favorably the resistance to certain other diseases than

plague, a fact with regard to which exact material is since some time being accumulated in the Research Laboratory. Thus does Professor Haffkine furnish a most triumphant vindication of preventive inoculation in plague epidemics.

## Philadelphia News and Notes.

**Obituary.**—Dr. LOUIS T. GRUEL, a graduate of Jefferson Medical College, and formerly Grand Medical Examiner of the Knights of St. John and Malta, September 19th, aged 28 years.

**A hospital for convalescent soldiers** has been established at 413 North Fourth Street by the Pennsylvania Women's Emergency Relief Association. It will be under the medical direction of Dr. Gans, assistant-surgeon of the Twentieth Infantry, assisted by Dr. M. V. Leof.

**The School-Children's Hospital-Fund**, a fund to be collected by the voluntary contributions from the school-children, the contributions to be limited to one cent from each child contributing, is expected to be ready for distribution among the various hospitals of the city toward the end of the present month.

**The will of the late Catharine Thorn**, recently admitted to probate, devises \$5,000 to the Episcopal Hospital for the endowment of a bed to the memory of her mother, a like amount to the Pennsylvania Hospital for the endowment of a bed to the memory of her brother, George W. Thorn, and \$3,000 to the Home for Incurables.

**The resignation of Dr. John B. Roberts**, as president of the Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, was on Sept. 20th accepted by the board, with expressions of great regret. Mr. William E. Donovan, who has been a corporator of the institution since 1889, and a trustee for several years, was elected to succeed Dr. Roberts.

**The army hospital-ship "Relief"** arrived in port, September 15th, from Montauk Point, carrying 248 soldiers, most of whom were convalescents belonging to the regular army. They were distributed among the hospitals as follows: To St. Agnes' Hospital, 100; Jefferson Medical College Hospital, 35; German Hospital, 30; St. Joseph's Hospital, 25; Polyclinic Hospital, 15; and Hahnemann Hospital, 15.

**Sick Soldiers in Philadelphia Hospitals.**—The following are the statistics relative to the sick soldiers under treatment in the principal hospitals of the city to September 20th:

Hospitals.	No. soldiers treated.	Deaths.	Discharges.	Remaining.
Medico-Chirurgical	478	8	129	277
St. Agnes	210	0	0	15
University	172	0	82	90
Pennsylvania	141	0	65	76
St. Joseph's	137	0	0	10
Jefferson	90	0	21	72
Presbyterian	88	0	5	87
German	94	1	27	66
Episcopal	70	2	18	50
St. Mary's	60	2	0	51
Hahnemann	50	0	14	28
Polyclinic	40	0	0	17
Methodist	20	1	5	14
Orthopedic	10	1	0	8
Jewish	10	0	0	10
Women's	0	0	0	10
Total	1,000	24	243	1154

**Vital Statistics of Philadelphia** for the week ending  
September 17, 1898 :

Total mortality ..... 362  
Children under 5 years of age..... 119

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	54	
Cholera infantum.....	25	
Nephritis.....	22	
Senility.....	20	
Marasmus.....	19	
Gastro-enteritis.....	18	
Diphtheria.....	89	15
Typhoid fever.....	255	15
Carcinoma.....	13	
Casualties.....	12	
Pneumonia.....	11	
Inanition.....	11	
Apoplexy.....	10	
Heart-disease.....	10	
Cerebrospinal meningitis.....	1	
Scarlet fever.....	8	0

**Philadelphia County Medical Society.**—At the meeting, September 14th, DR. JOHN B. ROBERTS presented a communication entitled: Three Recent Cases showing the Necessity for **Early Operation in Intestinal Obstruction**. He drew attention to the fatal delay in postponing operation in such cases, and remarked upon the value of prompt interference. The first case was one of intestinal obstruction due to the impaction of a small portion of the gut in a congenital opening in the mesentery. Operation was followed by rapid recovery. The second case was one of obstruction at the internal inguinal ring; the third, obstruction due to remnants of the omphalo-mesenteric duct. In both, operation was not permitted for five days, and the patients died. DR. JOHN C. DACOSTA endorsed the statements of Dr. Roberts. DR. JOHN A. SWAN referred to a case of intestinal obstruction, of which the acute symptoms had been on several occasions relieved by medicinal treatment, but when operation was finally resorted to, the obstruction was found dependent upon an annular carcinoma of the sigmoid. He queried as to the prognosis in cases of intestinal obstruction. DR. GEORGE I. MCKELWAY advocated prompt operation. DR. GEORGE ERETY SHOEMAKER referred to the differential diagnosis between obstinate constipation and intestinal obstruction. DR. S. SOLIS-COHEN spoke of questions relating to the diagnosis, and of some cases in which medicinal treatment had proved most efficacious.

DR. S. SOLIS-COHEN read a paper entitled: **The Treatment of Exophthalmic Goiter with Suprarenal Substance**, and presented three patients in whom the treatment had been followed by the most marked results. DR. BRICK spoke of the probable nature of the disease, and of its medical and surgical treatment. DR. J. CHALMERS DACOSTA said that surgical treatment of the disease was unreliable, and that the affection was distinctly a medical one. He spoke of a recent report to the London Society of Anesthetists in which it was asserted that suprarenal substance had been found the most efficacious remedy in combating the fall of blood-pressure and preventing fatalities in chloroformization. DR. MATTHEW WOODS asserted that he had cured four cases of exophthalmic goiter by the use of electricity and tonics, and expressed his skepticism as to the value of suprarenal substance.

**The Department of Agriculture** estimates the annual loss in 354 cities from the waste of sweepings in street-cleaning, at \$3,000,000.

## Selected formulas.

**To Purify the Air in a Room :**

Guaiacol.....	10 drams.
Eucalyptol.....	8 drams.
Carbolic acid.....	6 drams.
Menthol.....	4 drams.
Thymol.....	2 drams.
Oil of clove.....	1 dram.
Alcohol (95%).....	170 drams.

Mix and dissolve.—To be frequently and plentifully sprayed about the room. Especially valuable in case the room be occupied by a phthisical patient.

—*Practitioner*.

Formalin (40%).....	600 minims.
Creosote (beechwood).....	150 minims.
Turpentine.....	375 minims.
Menthol.....	60 grains.

Mix.—Twenty to thirty minims to be heated on a metal platter as occasion demands.

—*Riforma medica*.

**For Pertussis :**

Guaiacol.....	} of each.....	1 dram.
Eucalyptol.....		
Sterilized olive-oil.....		10 fluidrams.

Mix.—Thirty-five minims to be injected subcutaneously daily.

—*Centralbl. f. d. gesammte Therapie*.

**For Constipation :**

Aloes.....	30 grains.
Resin of jalap	} of each.....15 grains.
Resin of scamony	
Turpeth root	} of each...2.3 grains.
Extract of belladonna	
Extract of hyoscyamus	
Medicinal soap.....	a sufficiency.

Mix and divide into 50 pills. One or two to be taken at bedtime for two weeks or a month.

—*Clinica moderna*.

**For Asthma :**

The celebrated "Cigarettes d'Espic" are said to be made of the following ingredients:

Belladonna leaves.....	5½ parts.
Hyoscyamus leaves.....	2¾ parts.
Stramonium leaves.....	2¾ parts.
Phellandrium aquaticum.....	1 part.
Extract of opium.....	½ part.
Cherry-laurel water.....	q. s.

The dried leaves, stripped of their stems, are cut small, well mixed, and then moistened with the opium dissolved in the cherry-laurel water. The paper used for making the cigarettes is also soaked in an infusion of these leaves in cherry-laurel water. Usually, in making these cigarettes, a little nitrate of potash is added to the infusion to make them burn freely.

The "Carton fumigatoire" of the French codex—a very useful preparation—is thus made: Take 7 ounces of gray unsized paper and 2 ounces of powdered nitre; take of belladonna leaves, stramonium leaves, digitalis leaves, and lobelia leaves, each 75 grains; take of powdered myrrh and powdered oliban, each 150 grains. Tear the paper in pieces and soak it in water, then add the powders previously mixed, and pound and beat them all together. Then spread out the soft paste in tin molds, and dry it in a stove. Finally, cut this quantity into thirty-six pieces, each 6 centimeters long and 4 centimeters wide. One of these is burnt in the patient's room.

The following is given as Himrod's cure :

Lobelia powdered,	} of each, 1 ounce.
Black tea powdered,	
Stramonium leaves powdered,	

Pour upon this mixture 2 ounces of a saturated solution of nitrate of potash, mix thoroughly and dry.—BURNES YEO : "A Manual of Medical Treatment."—[*Practitioner*.]



## The Latest Literature.

### British Medical Journal.

September 3, 1898. [No. 1966.]

1. A Discussion on Aphasia, in Relation to Testamentary Capacity. WILLIAM T. GAIRDNER, WILLIAM ELDER, and T. S. CLOUSTON.
2. A Discussion on the Plea of Insanity in Criminal Cases. CHARLES A. MERCIER, JOHN F. SUTHERLAND, GEO. F. BLANDFORD, JOHN GLAISTER, ALEX. ROBERTSON, WM. T. GAIRDNER, and T. S. CLOUSTON.
3. A Discussion on the Agglutinating or Sedimenting Properties of Serums and their Relation to Immunity. HERBERT E. DURHAM, A. S. F. GRÜNBAUM, E. J. McWEENEY, G. SIMS WOODHEAD, and DONALD H. HUTCHINSON.
4. Post-Diphtherial Paralysis. G. SIMS WOODHEAD.
5. A Note on the Local Action of Crude Diphtheria Toxin. J. J. DOUGLAS. (*Illustrated.*)
6. On Neisser's Diagnostic Stain for the Diphtheria-Bacillus. RICHARD T. HEWLETT.
7. Normal Serum in Relation to the Diagnosis of the Typhoid Bacillus. S. R. CHRISTOPHERS.
8. On an Epidemic of Gastro-Enteritis Associated with the Presence of a Variety of the Bacillus Enteritidis (Gärtner), and with Positive Sero-Diagnostic Evidence (*in vivo* and *in vitro*). HERBERT E. DURHAM.
9. The Pathologic Effects of Dead Tubercle-Bacilli. PROF. STEWART STOCKMAN. (*With Charts.*)
10. A Discussion on the Nature and Significance of Leukocytosis. ROBERT MUIR, W. S. GREENFIELD, D. J. HAMILTON, G. SIMS WOODHEAD, T. EDMONSTON CHARLES, W. S. LAZARUS-BARLOW, HERBERT E. DURHAM, and T. H. MILROY.
11. The Blood-Changes after Experimental Thyroidectomy. ALFRED G. LEVY.
12. On Pleural Irritation and Pleurisy. W. S. LAZARUS-BARLOW.
13. The Pathological Effects of Breathing Oxygen at a High Tension. J. LORRAIN SMITH.
14. A Demonstration of the Granules Precipitated in the Blood by Chloride of Ammonium. ALEXANDER HAIG.
15. Malformation of the Kidney and Displacements without Mobility, with Illustrative Cases and Specimens. DAVID NEWMAN.
16. Diphtheria in London, 1896-98. F. A. DIXEY.
17. The Etiology of Return Cases of Scarlet Fever. C. KILLICK MILLARD.
18. Clamp and Ligature in Vaginal Hysterectomy for Malignant Disease of the Uterus. F. J. McCANN.
19. A Table of Cases of Induction of Premature Labor. JOHN MOIR.
20. The Use of Holocaine in Ophthalmic Practice. JAMES HINSHELWOOD.
21. Case of Polypoid Growth from a Meibomian Cyst. J. FALLOWS.
22. On the Surgical Treatment of Cataract. ERNEST F. NEVE.
23. A Case of Cavernous Angioma of Orbit. C. H. USHER.
24. A Demonstration of a New and Original Method of Making Casts. GEORGE A. PETERS. (*Illustrated.*)
25. Cases of Diphtheria Treated by Injection of Antitoxic Serum, in University-College Hospital, during 1896 and 1897. SIDNEY MARTIN and G. BERTRAM HUNT.
26. Further Note on Bile as an Antidote to Venoms and Disease-Toxins. PROFESSOR FRASER.

1.—See editorial page 580.

2.—An editorial abstract will be found in a succeeding number.

3.—Durham classifies the **three applications** of the principle of **specific immunity** into the protective; the lysogenic, causing rapid degeneration of the bacterium; and the agglutinative. Certain normal and heterologous serums have, in some cases, distinct protective properties. Many varieties of serums produce more or less clumping, even in dilute solutions. Complete degeneration of the microbes, as for example, in the peritoneal fluid, does not invariably mean that the animal will survive infection. It does not appear that there is no relation, as has been claimed, be-

tween agglutination and protection, but a certain amount of loss of protective power may occur without loss of sedimentation. Durham experimented with 16 varieties of vibrio, of which 6 were cholera, 7 were not cholera, and 3 doubtful, and found that complete sedimentation and permanent protection were invariably associated together. A considerable degree of difference in sedimentation may be due to individual reaction of certain bacilli, and this may occur in different individuals from the same culture. Serum with high clumping potency upon the micrococcus melitensis is unfavorable to the growth of the microorganisms in the blood. Durham has carried out a series of experiments in order to test the sedimenting action of the agglutins in the reagent glass, and in the body, and finds that the results were practically the same. The agglutins and the protective substances have certain physical resemblances; thus, they are both destroyed by prolonged heating at 60° F; both resist long keeping fairly well. Although an animal in whose blood large quantities of agglutin are present may die of the infection, this does not necessarily indicate that a protective influence does not exist. In conclusion, Durham states that agglutin free from inhibitory and protective influences has never been obtained. In the discussion of this paper, Grünbaum stated that agglutination was probably a physical process, because inanimate subjects were susceptible to it, and even nonmotile microorganisms would show less of Brownian movements. McWeeney has observed that when the typhoid bacillus is grown in broth containing typhoid serum, it forms long nonmotile convoluted chains which were susceptible to clumping. Woodbridge believes that there are several actions in serums that are similar up to a certain degree. He agreed that a high agglutinating power could hardly be associated with a low immunizing power. Hutchinson, experimenting with his own blood after the production of artificial immunity, observed that the earliest action of the serum was to paralyze the bacteria.

4.—Woodhead quotes Müller, who found, that the **onset of post-diphtherial paralysis** was primarily in the muscles of the palate, then in those of the eye, the other muscles of the body, and finally in the muscles of the heart. These paralyzes occur usually after the fourth day, but comparatively early. Experimentally, in addition to the lesions of the peripheral nerves, alterations in the cells of the spinal cord have been noted. Experimental paralyzes are comparatively rare. They usually occur where the local reaction has been severe with production of a necrotic area. The majority of cases appear on the eighteenth to the twenty-third day after injection. Woodhead reports 13 cases of post-diphtheric paralyzes occurring in guinea-pigs in which it is evident that the date of onset bears no relation to the severity of the local process. The symptoms are an early, slight rise of temperature, followed, during the paralytic stage, by a fall. This appeared to be due to the injection of the albumoses. The author holds that the subject requires further study. In the discussion Mott reported the examination of the nervous and muscular tissues of 5 cases, finding fatty degeneration of the muscles and sometimes Wallerian degeneration of the nerves. Baginsky stated that he believed that post-diphtheric paralysis was less common than formerly. In a case examined by his assistant advanced degeneration was found in all parts of the nervous system. Goodall stated that the paralyzes had increased since the introduction of the antitoxin treatment, but ascribed this to the greater frequency of recovery. Woodhead, in concluding, believed that antitoxin could not of itself produce paralysis. Cases of paralysis are now less frequent and less severe than before the employment of antitoxin.

5.—Douglas has studied the local effects of **diphtheric antitoxin and toxin**, using the toxin alone, the toxin and a half neutralizing dose of antitoxin, and toxin and a fully neutralizing dose of antitoxin. The animals were killed at various periods from 20 minutes to 30 hours after the injection. The series treated with toxin alone showed edema at the end of 5½ hours that increased up to 24 hours. The fixed connective-tissue cells were swollen, and many of them took the stain faintly. The number of wandering cells varied directly with the length of the period after injection. Many of them stained uniformly with hematoxylin. The nucleus was usually single until 5½ hours, but after this period, multiple nucleated cells with eosinophile granules began to appear. Cells of endothelial character were present in all



sections, particularly in the latest. The half neutralizing dose showed the presence of edema at the end of 5½ hours. The changes were similar to those already described. The same applies to the series treated with the fully neutralizing dose. A number of illustrations accompany the paper. In the discussion Muhr asked whether control-experiments with antitoxin had been made. Lazarus-Barlow believed that more careful investigations would show the presence of edema before 5½ hours.

**6.**—Hewlett has tested Neisser's latest method of staining the diphtheria-bacillus. The solutions consist of acetic acid, methylene-blue, and a solution of benzoin. The cover-glasses are stained in number one for a few seconds, and then counter-stained in number two. The bacilli appear as slender long rods stained blue, and contain usually a dark granule at either pole and sometimes a third in the middle. The pseudo-diphtheria-bacillus does not give the granulations. This reaction does not occur in the cases of bacilli obtained from the throat.

**7.**—Christophers calls attention to the fact that **two errors** may be present when a positive **Widal reaction** is obtained. The first is the mutual interaction of the typhoid and Gärtner's bacilli. The second, the fact that normal serum may, with certain typhoid microorganisms, give a reaction to the so-called specific one. He has tested the reaction upon a number of typhoid and color-like microorganisms isolated from shell-fish, milk, and water, and found that in many cases a dilution of 1 to 200 normal serum caused marked agglutination. This was not a specific reaction to human sera, but was equally true of sera obtained from other animals, and Christophers is led to conclude that it is due to a peculiar susceptibility on the part of the organisms. In the discussion McWeeney stated that he had repeatedly isolated coliform bacilli from drinking water that clumped with all specimens of normal and pathologic sera.

**8.**—Durham reports an epidemic involving about 185 persons in which the specific organism appears to have been the **bacillus enteritidis**. In 29 cases the serum of individuals who had recovered from the disease caused agglutination in dilutions of 1 to 100 or higher of a culture obtained from the liver of a fatal case. Of 8 samples of serum from convalescents, 6 had marked protective and agglutinative action, and also gave Pfeiffer's test.

**9.**—Stockman has injected dead **tubercle-bacilli** in large or small quantities into various animals. A dog was first injected with tuberculin without causing fever. Then glycerin broth from which the bacilli had been separated by filtration was injected in ascending doses, and when 95 cu. cm. was employed, there was a slight rise of temperature. No local reaction occurred. A thick emulsion of tubercle-bacilli killed by three hours' steaming was then injected under the skin. An abscess formed, which broke three days later. A second injection was also made, and from it were obtained tubercle-bacilli that gave the typical staining reaction. Glycerin-agar tubes, however, remained sterile. When tuberculin was injected, a rise of temperature occurred. He concludes, from this experiment, that dead bacilli are far more active than their soluble products. Ten months later an intravenous injection of an emulsion of bacilli was made, causing a considerable rise of temperature that persisted for four days. A second dog was taken, and some dead bacilli injected into the saphenous vein. Twenty days later, small grayish nodules were found in the lungs and small cellular collections in the liver. A pony that had failed to react with tuberculin was injected with two cultures of the bacillus tuberculosis that had been killed by boiling. There was an immediate marked rise of temperature, which gradually declined by lysis. Subsequently, a higher rise took place after the injection of tuberculin. The animal was subsequently killed, and the lungs were found filled with small miliary tubercles. A small nodule was also found in the vein at the site of injection. Numerous bacilli were present in the nodules. A large nodule was produced, made up of epithelioid cells and a few giant-cells. Two cats were fed with dead tubercle-bacilli without any results. Stockman believes that the giant cells represent the caseation of the protoplasm of a number of cells and their subsequent coalescence, the nuclei persisting for a longer time. He believes that milk containing dead bacilli may be drunk with impunity. In the discussion, McFadyean did not believe that the formation of giant-cells corresponded to caseation. Woodhead stated

that dead bacilli caused local lesions in which stainable bacilli were found, but from which no secondary lesions were produced. Greenfield asked if some of the supposedly dead bacilli in these bacilli might not have maintained their vitality. McWeeney was of the opinion that the virulence of the bacilli in the living state should have been determined. Mott suggested that inoculation experiments should have been made from the nodules that had been found.

**10.**—Muir opened the discussion upon the **nature and significance of leukocytosis**. He applies the term to any condition in which there is either a local or general excess of the leukocytes in the body. The causes are, infectious conditions, bacterial products, organic extracts, and many organic compounds. In nearly all of these general forms the polymorphous neutrophilic leukocyte is in excess. The chief sites of multiplication are the lymphatic tissues and the bone-marrow. In the former the cells are small; in the latter they are somewhat larger. As, however, no cells containing fine granulations and an oval nucleus are found in the blood, Muir is of the opinion that multiplication of the nucleus occurs in the bone-marrow, and that only the fully-formed cells reach the blood-stream, there being no evidence to prove that the polymorphous neutrophilic leukocyte is formed in the blood. Local leukocytosis, for example—that produced by the injection of staphylococci—is associated, as Muir has shown, with an absorption of the fat in the bone-marrow, while the large, finely-granular cells are increased in number; that is to say, there is a local increase of finely-granular leukocytes, a general increase of the same cells in the blood, and an increase in the marrow of the cells from which these are derived. Therefore, if the local leukocytosis is assumed to be an important means of defense, the proliferative changes in the bone-marrow are the means by which it is produced, and the leukocytosis in the blood is an indication of its maintenance. Leukopenia is produced: 1. By the injection of various chemic substances that cause the accumulation of leukocytes in the organs, particularly the lungs. 2. Sudden extension of an inflammatory process may act locally in the same way, and produce a general diminution of leukocytes in the circulation. 3. There may be enormous degeneration of the leukocytes in septicemic and toxic conditions. 4. There may be interference with the proliferative changes in the bone-marrow. 5. It is possible that certain substances prevent the passage of the leukocytes from the bone-marrow to the blood. In some cases myelocytes may appear in the blood-stream, and it is usually an unfavorable sign. Finally, in certain diseases, such as chlorosis, the leukocytes may be decreased. It is possible that the eosinophile cells found locally, and often generally in various conditions, may be derived from the eosinophile cells of the bone-marrow. Hamilton believed that there might be forms of leukocytosis which were not protective in nature. He was not convinced that an excess of leukocytes might occur in the blood in mass. Chemotaxis he regards as a theory, at present supported by evidence of a flimsy and unstable nature. Finally, he suggested that certain poisonous substances cause leukocytosis, by stimulating the corpuscle-forming lymph-glands to excessive secretion. Woodhead believed that both chemotaxis and phagocytosis, although not definitely proved, were excellent working hypotheses. Charles called attention to the fact that in Malta fever the polymorphonuclear leukocytes were absent from the blood. This, he believes, would serve as a valuable differential point between Malta and typhoid fever. Further, in cases of appendicitis, as long as a leukocytosis is present, the patient must be kept in bed. Lazarus-Barlow regards the nongranular-cell leukocytosis as one of very doubtful significance. Durham believed that the enormous number of leukocytes which appear after injections in immunized animals, was due to the changes in leukoblasts of the bone-marrow described by Muir. Milroy called attention to the absolute and relative increase in  $P_2O_5$  during the leukocytosis, caused by the injection of nucleic acid. In conclusion, Dr. Muir believed that chemotaxis was the only agent that would explain many of the phenomena.

**11.**—Levy has removed the **thyroid glands** from a number of dogs, taking particular care to remove the parathyroids. The anemia that occurs is never intense. Leukocytosis invariably occurs, although it is of fluctuating character. The amount of fibrin is always increased; the specific gravity is lowered; the proteids diminished; the total solids



are reduced. All these **blood-changes** seem to bear little relation to one another, and do not resemble those ordinarily seen in cachexia. In the discussion, Muir stated that he had found slight leukocytosis in several cases of myxedema.

**12.**—Lazarus-Barlow having examined microscopically a number of varieties of experimental and morbid **pleurisy** found that there were **three distinct forms**: (1) A fibrinoid degeneration with marked infiltration of the pleura by cells; (2) a form with general increase of the connective tissue without marked cellular infiltration; (3) a form in which the inflamed pleura consists of highly vascular and very young cicatricial tissue. Endothelium may cover the false membrane or degenerate, and form a part of it; in the human pleura this is the usual condition. The cells consist of the polymorphonuclear type, although later they degenerate. Woodhead, in the discussion, called attention to the fact that the young fibrous tissue exhibited was really well-formed fibrous tissue. McFadyean stated that in his experience there was a remarkable constancy between the nature of the changes and the irritant causing them. Muir believed that many of the irritants employed were direct cell-poisons, and therefore caused peculiar changes. Welsh deprecated the confusion of fibrinoid and fibrous tissue, and of the changes in the pleura itself and in the exudate.

**13.**—Smith found that **oxygen-breathing** at a tension of 130% produced pneumonia in the lungs of mice in 60 hours; at a tension of 180% death occurred in 24 hours; at 300% in 5 hours; in birds at 270% tetanic symptoms developed in about 10 minutes. If the tension be gradually increased, tetanic symptoms do not occur until 450% is reached. In mice, tetanus also occurs at 450%. The results are due to the tension because the admixture of CO<sub>2</sub> does not affect them.

**14.**—Haig describes the method of precipitating granules from the blood by chloride of ammonium. A minute drop of blood on the slide is mixed with an equal quantity of 10% solution of sodium carbonate and with the same quantity of a 20% solution of chloride of ammonium. It is then covered and allowed to stand for 30 minutes. The granules slowly increase in number. All the granules and all the red cells in a given field are then counted, and the proportion obtained by dividing the former by the latter. The common relations are—1 to 10 in the morning; 1 to 20 in the evening; 1 to 1, to 1 to 5 in Bright's disease; 1 to 30, to 1 to 40 in fever. Similar results may be produced by the action of drugs.

**15.**—Newman reports a number of interesting cases of **malformation and displacement of the kidney**. (1) The right kidney was found fixed above Poupart's ligament; (2) the left kidney was displaced downward and forward, the upper border lying just above the level of the crest of the ileum; (3) the right kidney was displaced downward, the shortened ureter entering the apex of the bladder; (4) the right kidney was found on the brim of the pelvis, the blood-vessels were anomalous; (5) the right kidney was small and without ileum, and  $\frac{1}{2}$ -in. to the right of the promontory of the sacrum, the left kidney was in the left iliac fossa; (6) the right kidney was supplied by two arteries and situated at the brim of the pelvis; (7) the right kidney was pressed against the diaphragm by a perinephritic abscess. He also mentions a case in which a small supernumerary kidney, with separate artery and a branching of the ureter was found close to the upper margin of the left kidney; (8 and 9) the left kidneys and their ureters were absent, the right were hypertrophied; (10 and 11) extreme atrophy of the left kidneys; (12) atrophy of the right; (13) simple hypertrophy of the left kidney, the right being normal; (14, 15 and 16) various forms of horse-shoe kidney.

**16.**—Dixey, in a paper upon **diphtheria in London**, particularly its seasonal relations, the influence of school attendance upon its spread, and its relation to so-called croup, showed by the statistical reports that the holiday periods have a distinct tendency to increase the spread of the disease. All figures bearing upon croup show a very close correspondence to the figures concerning diphtheria, although, of course, the number of fatal cases of croup returned is very much less than those of diphtheria. Antitoxin appears to be of considerable value, for, in spite of the fact that the notifications have not markedly decreased, the percentage of deaths from 1893 to 1897 has fallen from 24 to 17.7%.

**17.**—Millard has collected 4,910 cases of **scarlet fever**, of which 158, upon their return home, appeared to have carried infection, and to have caused 171 new cases. The greater proportion of infection occurred during the first week and diminished pretty rapidly until the 6th, when there was but one. As these cases were isolated for an average period of 8.3 weeks from the initial symptom, it appears that this period is insufficient. Of these cases, however, those that were isolated for more than 9 weeks, conveyed less than half as much infection as the others. Age appears to have no effect. Females seemed to be more likely to carry infection than males. The so-called returned cases are usually of the severe type. The source of infection may be either the nasal discharge, the discharge from the ear, or the desquamated skin.

**18.**—McCann believes that recurrence is best prevented by a free excision of the broad ligaments, and for this purpose **clamps** are undoubtedly more serviceable. Ligatures cannot be applied close to the pelvic walls, as there is great difficulty in tying the knot deep in the pelvic cavity. The ligature is most suitable as a means of temporarily arresting the hemorrhage from the growth by securing the uterine arteries in the bases of the blood-ligaments. The objections to the use of clamps for this purpose is that they occupy more space, and thereby hinder the further steps of the operation. The less the malignant growth is scraped or cut the better for the patient. Such a procedure may favor dissemination. For this reason he is opposed to the method of splitting the anterior wall of the uterus, and still more to morcellation.

**19.**—Moir emphasizes the advantages of the practice of **gradual dilatation of the os and cervix** over the modern practice of forcible dislocation of these parts. He believes that the latter mode of practice is attended with great risk to the mother and danger of ulterior damage, such as prolapsus and its consequent evils.

**20.**—**Holocain** in ophthalmic practice has led Hinshelwood to observe the following facts: 1. There is complete anesthesia of cornea and conjunctiva produced in from 15 to 30 seconds after instillation. 2. The anesthesia produced lasts about 10 minutes. 3. There is immediately after instillation a slight feeling of burning, which rapidly passes off. 4. There is produced shortly after instillation a slight hyperemia of the bulbar and palpebral conjunctiva, which rapidly passes away. 5. There is no alteration in the size of the pupil. 6. There is no disturbance of accommodation. 7. There is no alteration in the tension of the eye. 8. The corneal epithelium is not changed in the slightest, but retains its normal appearance. In short, to put it concisely, holocain seems to have no other effect upon the eye than rendering it anesthetic. Hinshelwood has used holocain in 154 cases of operative interference with no toxic or disagreeable effects whatever. Its peculiar value lies in the fact that no further effect on the eye than anesthesia ensues. A 1% solution was used. In the discussion on the paper, Argyll Robertson said a 2% solution had been found by him inferior to cocain as a local anesthetic.

**21.**—Fallows gives the instance of a **polypoid growth** from a meibomian cyst in a girl of 19, which developed after an attack of eczema, and thinks a close connection exists between these cysts and eczema.

**22.**—In the surgical treatment of **cataract**, Neve states that success is due to selection of cases and to antisepsis. Previous disease affected the success, old iritis being very prejudicial. Iridectomy and capsulotomy were advantageous in those of the 677 successful cases of cataract treated by him. Inflammatory sequelæ resulted, with panophthalmitis in 5 cases, septic infiltration of the cornea in 3 cases, iridocyclitis in 1, and glaucoma in 5. In 60 cases iritis occurred, ending in recovery in 41 cases, in occlusion in 13 cases, and in partial occlusion in 6 cases.

**23.**—Usher describes a case of **cavernous angioma** of the orbit in a farmer of 40, the eye never having been injured.

**24.**—Peters describes an **apparatus for making casts** of paraffin wax. One disadvantage is its cost, and it is cumbersome. The process is one of spraying melted paraffin over the whole surface, strengthening the mold with plaster-of-Paris. Cuts of the apparatus and of section of the ejector, with illustration of the mold in process of being formed accompany the article. Both the apparatus and the process



are defined in full detail. An illustration of a cast of a guinea-pig with intestines exposed shows no evidence of any compression whatsoever of the air-inflated intestines. A cut of a cast of a hand shows unusual minuteness of detail. Peters asks if it has hitherto been possible to cast such an object as the intestines, air-inflated, as above described, and again, with such delicacy and such absolute absence of compressing effect.

**25.**—Out of 185 cases of **diphtheria**, admitted into the diphtheria-wards of University-College Hospital in 1896 and 1897, 7 were unavailable; 5 recovering without antitoxin; 2 (1 fatal), because it was given only by the mouth. The severity of the cases was above the average. The diphtheria-bacillus was found in 149 cases; in 18 cases, the bacillus was not found, and in 11 cases no record exists. In all these cases, subcutaneous injections of antitoxin were given within 12 or 24 hours after admission. The total mortality has fallen from between 38 and 43% to 28, 17.7 or 17% for the three past antitoxin years. A table of mortality is contained in the article, as is also a table of tracheotomy and intubation cases. Of the 31 fatal results, 11 died between the 3 and 11 days, with suppression of urine, usually accompanied with vomiting. In all cases, the membrane had disappeared before death. Eight cases, all after tracheotomy, died with membrane in the bronchial tubes. In 1897, six-sevenths of the cases received over 6,000 normal units, and each patient, on admission now receives a dose of not less than this amount. The effect of antitoxin on temperature is shown by a table. Its effect on paralysis was not to reduce its frequency. It is impossible to speak definitely of the effects of the antitoxin on the duration of the membrane in the throat, albuminuria, and other symptoms. In 49 cases out of 178, rashes were observed. Conclusions are: (1) Antitoxin-serum reduces the total and tracheotomy mortality; (2) full doses only bring the full benefit of antitoxin; (3) antitoxin should be administered without waiting for a bacteriologic diagnosis, since it has little effect on mortality when given after the fourth day; (4) antitoxin lessens the severity of the disease in cases which recover; (5) the effect of antitoxin is chiefly seen in its specific action on the diphtheritic membrane.

**26.**—Fraser has found that **the bile of venomous serpents** is a powerful **antidote to the venom**. It is not, however, the rule, that the bile of any particular species is most efficient against its own venom; thus, the bile of the crotalus and several other species is more efficient against cobra-venom, than that of the cobra itself. If, instead of venom, the toxins of infectious disease be employed, it is found that the bile is a more or less efficient antitoxin. This quality is shared, however, by the bile of rabbits, and to a less degree by that of many other animals. It appears that, as toxins and venom are excreted by the intestinal tract, the bile is most favorably situated for acting upon them, and remedies, therefore, stimulating hepatic secretion should increase the resistance of the animal. Moreover, toxins introduced into or generated in the intestinal tract are those neutralized. It is probable that the particular constituent is, in part, antitoxin or antivenom that has been eliminated from the blood into the bile. In conclusion, Fraser reiterates his view regarding the chemic or physical, and not biologic action of antitoxin.

#### Lancet.

September 3, 1898. [No. 3914.]

In this, the Students' Number, a few words of advice are offered to those who are about to enter on their medical studies.

#### New York Medical Journal.

September 17, 1898. [Vol. lxviii, No. 12.]

1. The Implantation of an Artificial Vitreous as a Substitute for Enucleation of the Eyeball. FRANK C. TODD.
2. The Anatomy and Physiology of the Nervous System and its Constituent Neurones, as Revealed by Recent Investigations. LEWELLYS F. BARKER. (Continued.)
3. The Points of Distinction Between Cerebral Syphilis and General Paralysis of the Insane. Two Lectures Delivered to the Medical Staff of the Illinois Eastern Hos-

pital for the Insane. HUGH T. PATRICK. Lecture II. (Concluded.)

4. Foreign Body in the Larynx and a Modification of Kirstein's Autopsy. E. FLETCHER INGALS.
5. Hydatidiform Mole. JAMES C. KENNEDY.
6. Some Results of a Year's Experience with Superheated Air. A. GRAHAM REED.
7. A Contribution to the Study of Hysteria in Childhood as it Occurs in the United States of America. HERMAN B. SHEFFIELD.

**1.—Implantation of an artificial vitreous** in cases reported by Todd, demonstrates the advantages of this procedure over enucleation. Four cuts accompany the article. Silk was used to stitch the sclera, and caused no irritation.

**2.**—Barker continues his comments on the neurones. Speaking of *tabes dorsalis*, he believes that it is due to a slow influence of some toxin, either on certain sensory regions of the cord or on the spinal ganglia, or on the whole of the peripheral sensory neurones. Certain ones only of the peripheral neurones being affected, at least at first, only certain fibers of the dorsal funiculi in the cord become involved. The neurone, as a whole, is a trophic unit; injury to any part affects the entire neurone. Reference is made to the possibility of the regeneration of injured neurones, but no positive opinion is expressed. Regarding the irritability of the neurone, the author regards it as the result of chemical and physical changes, though, in another paragraph, he admits the possibility of the existence in the nervous system of forms of energy which do not exist outside the animal body. The neurone is constantly active; some of the centripetal impulses are below the threshold of consciousness, and some of the centrifugal impulses are insufficient to call forth visible muscular contractions. The importance of the afferent stimuli for the proper discharge of centrifugal impulses is noted. Indeed, the limits of spontaneity of action on the part of the neurones are very narrow. (To be concluded.)

**3.**—Patrick continues his consideration of the distinction between paretic dementia and cerebral syphilis. The mode of onset is usually different; general paresis develops insidiously, cerebral syphilis more suddenly. The paretic may still retain considerable intellectual capacity in certain lines, for example those with which he was previously familiar. Cerebral syphilis nearly always commences with stupor that deepens more or less gradually. The onset of syphilis is, moreover, usually very irregular and may, indeed, sometimes simulate an infectious disease, such as typhoid fever or miliary tuberculosis. The patient may be destructive, filthy, and even violent. A paretic is rarely more than restless. The character of the syphilitic stupor is illustrated by 2 cases, both of which Patrick observed. The first, a man of 43, was unconscious but could be aroused and made to give rational answers; and the second, a young man, could also be aroused by vigorous stimulation, and was then violent; both recovered completely on specific treatment. Delusions of grandeur are less common than is generally supposed. In the last 25 cases seen by Patrick, none presented this symptom. Sometimes, moreover, the syphilitic may present this symptom, as in a case of Patrick's in which a man believed he was a great inventor and on the eve of making a fortune. The paretic is easily influenced in his judgment. The syphilitic is likely to be an aggressive opponent to any opinion expressed to him. In cerebral syphilis there may be periods of complete loss of memory that are permanent; this is rare in paresis. The therapeutic diagnosis is always doubtful. If specific treatment is used in inadequate dose, the patient may, even during its administration, develop the cerebral symptoms. If, on the other hand, heroic medication is employed it is of course incapable of repairing a destructive lesion. A factor rendering the diagnosis still more uncertain is the fact that many paretics improve on specific treatment. "Nevertheless, the indiscriminate administration of large doses of mercury or iodids \* \* \* is to be condemned."

**4.**—Five days after swallowing a shoe-fastener, a child of 3 years was operated on by **laryngo-tracheotomy**, which divided the cricoid cartilage and two upper rings of the trachea, and the foreign body removed. Pneumonia of the lower lobe of the right lung developed. Recovery ensued in 2 weeks. A modification of Kirstein's laryngeal tongue, depressor is shown. It often enables removal of tumors or



foreign bodies through the natural passages which otherwise would demand tracheotomy or thyreotomy.

**5.—Hydatidiform mole** occurring in a Norwegian of 22 years, a mother of two children, is reported by Kennedy. The mole was large enough to fill an ordinary tin basin. Daily uterine irrigation with a 1 to 2,000 mercuric chlorid solution for 7 days was practised, when pulse and temperature were normal and remained so.

**6.—**Reed reports a number of cases treated with Sprague's **hot-air therapeutic apparatus**. The patients suffered from a variety of diseases, among which may be mentioned, chlorosis, inflexibility of the vocal cords, anemia, asthma, angina pectoris, visceral gout, acute pleurisy, eczema, and rheumatoid arthritis. All showed very marked improvement and some complete recovery after from 3 to 25 applications; the number varying according to the condition and progress of the patient. Altogether he has given some 1,400 treatments during the last 12 months.

**7.—**Sheffield has examined American literature, and found a number of cases of hysteria in children that have been reported by medical men as witchcraft and by other names by the laity. Epidemics appear to have been particularly frequent in connection with religious services. Hysteria may be either a psychosis or a neurosis. The etiology of the disease in childhood is rather obscure. Neuropathic heredity is apparently not so important as has been believed. Suggestion is, however, a frequent cause, as is also alcoholism in childhood, and any depraved condition of the organs that lead to decreased vitality. The exciting causes in hysteria are, as in the adult, chiefly profound emotional disturbance. The youngest case hitherto reported is that of a child a year and a half old. The commonest ages appear to be those between 8 and 14. Females are more commonly affected than males in the proportion of 2 to 1. The paper is still unfinished.

### Medical Record.

September 17, 1898. [Vol. liv., No. 12.]

1. Bottini's Operation for Enlarged Prostate, with Report of Five Cases. HENRY H. MORTON.
2. The Physiology of the Liver and the Role it Plays in Digestion and Nutrition. GEORGE E. DAVIS.
3. Pott's Fracture. R. W. KNOX.
4. Vaginal Examinations and Vaginal Douches in Normal Labor. GEORGE P. SHEARS.
5. Malaria and Autogenous Febrile Conditions in Kern Valley, Cal. REGINALD A. FERGUSON.
6. Gastrostomy for Stricture of the Esophagus, with Report of Case. EARL M. GILLIAM.
7. Inverted Typhoid Fever. M. GOLTSMAN.
8. Report of a Case of Acute Quinin-Poisoning. BENNETTA D. TITLOW.
9. History of a Case of Huntington's Chorea. HARMON SMITH.
10. A Case of Supernumerary Artery of the Optic Disc Projecting into the Vitreous Humor. J. HERBERT CLAIRBORNE.
11. Hydramnios and Twin Pregnancy. J. T. JOSEPH BIRD.

**1.—Senile hypertrophy of the prostate** is the most perplexing of all genito-urinary conditions requiring surgical interference, since individual preferences or operative habit avail more than any rules. The drawbacks and advantages make hesitation and the danger to life in old men of all cutting operations very considerable. Simple castration has a mortality in selected cases of 7% or 8%, while prostatectomy is very much more fatal. Palliative operations are makeshifts, while the dangers of septic absorption, of anesthesia in old men are great. By Bottini's operation, whereby a channel through the enlarged prostate is burned by the galvano-cautery, these dangers are minimized. The obstructing bar at the neck of the bladder is now simply burned through. That some operations are successful and others not is probably due to the size of the gland. Castration succeeds only when there is adenoma of the prostate. Cases may be divided into two groups: (1) Those with dense, hard prostates, with moderate enlargement occasioned by connective-tissue hyperplasia, in which the obstruction to the urinary outflow is due to a bar at the

neck of the bladder, or to the ring-like enlargement of the prostate, surrounding the urethra like a collar. Bottini's operation will relieve these conditions by dividing the obstruction. (2) The group of cases in which the prostatic enlargement is due to an overgrowth of the glandular elements, renders Bottini's operation ineffective, and castration or prostatectomy may succeed better in these cases. The difficulty of getting sufficient power to heat the cautery-blade is now overcome. One great advantage of Bottini's operation is, that general anesthesia is avoided. A 4% cocaine solution will prevent any very acute pain. Morton gives the details of the operation, and a cut of the incisor is shown. The histories of 5 cases operated upon are set forth, showing most satisfactory results. Patients were able to dispense with the catheter, and 3 to 8 drams of residual urine was usually found.

**2.—**Davis argues that the **functions of the liver** are so important, transforming, as it does, the materials of assimilation absorbed from the intestines; transforming the materials of dissimulation, and aiding in the neutralization and elimination of various poisons, that it is paramount to all the other structures in the alimentary system. It is also a great protector, constituting a barrier against poisons introduced by the food and those produced in the course of digestion, furnishing nutrition to the cells, and eliminating toxins and waste-products of metabolism.

**3.—**The injury known as **Pott's fracture** is a dislocation as well as a fracture. The fibula is fractured and the astragalus dislocated outward. It is the tilting outward of the latter which fractures the former. Knox is of the opinion that it is the displaced fragments that cause faulty union and the constant pain. Opening of the joint is advised in such instances. Of the plaster-of-Paris and the Dupuytren splint, the former is the better and the most comfortable of all dressings. The most important point is the manner and time of its application. In treatment it is seen that (1) plaster-of-Paris is the best dressing for fractures about the ankle; (2) this dressing should be put on immediately or as soon as possible after the receipt of the injury; (3) swelling is not a contraindication to the use of plaster; (4) it takes longer for ligamentous than for bony union, and a patient should not use his foot for locomotion for several months after the injury; (5) no other dressing so nearly prevents motion, and on this account it is especially valuable in compound luxations; (6) small capillary drains may be used, but rubber drainage tubes through the joint are unnecessary and capable of doing much harm.

**4.—**Shears remarks that in **normal cases of labor** we cannot improve upon the methods of nature. It has been clearly shown that the vaginal secretions have bactericidal properties, and that in normal cases antiseptic douches can only aid in causing infection. In normal labor, therefore, no douches of any kind are necessary. The escaping liquor amni, a normal salt solution, cleanses out the vagina and renders it thoroughly aseptic. Vaginal examination in labor is not only often unnecessary, but is in itself a positive evil, and should be employed only to avoid a greater evil. With proper precautions, however, it becomes harmless. The postpartum douche is not a necessity, *per se*, but is given because most labors are not, properly speaking, normal.

**5.—**Ferguson classifies the **febrile conditions** that occur in **Kern Valley, Cal.**, into an autogenous malaise and fever, due to the accumulation in the body of the products of tissue-waste, an auto-intoxication, an enteric fever due to protozoa, malaria, and typhoid fever. The malaise corresponds to the fevers produced by auto-intoxication, and may be caused by the bacillus coli communis. The protozoal fevers correspond, clinically, to the tertian type of malaria.

**6.—**Gilliam reports a case of **gastrostomy** in a widower, of 55, in whom a stricture of the esophagus was unrelieved by bougies. The patient died 6 weeks after operation. Two cuts accompany the article: Fig. 1 showing the cicatrix of the first incision, and also the tube *in situ*; Fig. 2 clearly demonstrating the successful union between the abdominal and visceral parietes. The lumen at the site of contraction was  $\frac{1}{2}$  inch in diameter. The history of gastrostomy is recited, and Gilliam concludes that gastrostomy must be considered a palliative remedy; that the earlier the operations, the greater the chance of success; that no one method will suffice; that the colon is not to be mistaken for the stomach



7.—Goltman reports the case of a neurotic boy, 14 years of age, who was suddenly attacked by severe chill, followed by polyuria. The next day he had another chill, and examination of the blood revealed the presence of intra-corporal organisms. Although cinchonism was produced the fever persisted for about a week, and as the plasmodia were now absent, only three doubtful organisms being found, two drops of blood were examined for the Widal reaction, which occurred promptly. The temperature was characteristic for typhoid fever, and three days later an abundant eruption of rose-spots occurred. The temperature, however, diminished at this time, and remained subnormal for three weeks, when the patient recovered. The case, therefore, represents an **atypical form of typhoid fever** ushered in by a malarial infection. Goltman used and greatly prefers, constant purgation by salts.

8.—The patient was given about  $\frac{1}{2}$  of a grain of **quinin**. The next day the face was badly swollen, and there was an erythematous rash, somewhat resembling measles, on the body. The symptoms persisted for 48 hours, and then were relieved by an acetic acid wash. This patient had had three similar attacks, each following the external use of quinin.

9.—Smith reports a case of **chorea** in a man 29 years of age, married, and the father of two healthy children. His father had developed Huntington's chorea at the age of 28. His sister had developed chorea, apparently of the Huntington type, at the age of 13; she died at the age of 21. Eighteen months before examination he noticed twitching in the hands, and later, in the toes. Now he has twitching of some of the muscles of the face, nodding of the head, Argyll-Robertson pupils, thick and hesitating speech, some dulness of the tactile sense; and slightly ataxic gait. Romberg's symptom is pronounced; memory is apparently impaired; the reflexes, both cutaneous and tendon, are increased; the pulse is rapid, and the other organs are apparently normal.

10.—Claiborne cites the instance in a colored woman of 25 years, of **supernumerary arteries of the optic disc**. In the right eye a supernumerary artery emerged from the upper and inner edge of the disc, ran forward into the vitreous, turned sharply upon itself, and, after pursuing a meandering course, returned almost to the level of the disc, whence it was distributed to the retina in a normal manner. In the left eye the erring artery arose from the inner side of the disc just within its boundary, and, plunging forward into the vitreous, turned upon itself, making three loops, and finally was distributed to the retina from a point very near its origin. The artery in each eye was filled with blood, but in the left eye it was larger and more nearly bore the dignity of a central artery. A bibliography on the subject is printed. The literature of persistent hyaloid artery should be grouped as: Supernumerary arteries of the optic disc.

11.—Bird reports an interesting case of twin pregnancy ending prematurely, and complicated by hydramnios.

### Medical News.

September 17, 1898. [Vol. lxxiii, No. 12.]

1. The Use of Thyroid. WILLIAM E. MOSELEY.
2. Sacroiliac Disease (Tubercular). L. L. MCARTHUR.
3. The Etiology of Yellow Fever. FREDERICK G. NOVY.
4. The Invasion of Porto Rico from a Medical Standpoint. NICHOLAS SENN.

1.—Moseley has administered **thyroid gland** in cases of **uterine hemorrhage** due to fibroids. The first patient, aged 47, had suffered from a number of severe hemorrhages, and after curetting, the pathologist reported the condition to be glandular hypertrophy and congestion. The thyroid was given in increasing doses, and the patient recovered entirely. The second case was one of intramural fibroids. She was given the same treatment, and recovered completely. The third, a woman of 50, had a large, symmetrical tumor, which, as a result of the thyroid treatment, diminished in size with improvement of all the symptoms. The fourth, a woman of 46, had been twice curetted without improvement. The thyroid was not well borne, but, aside from its physiologic effect, relieved the metrorrhagia almost completely. The fifth suffered from pelvic peritonitis and salpingitis. Several operations having failed to give her relief,

and scrapings from the ureter having been reported to be benign, she was given thyroid and rapidly improved. Moseley concludes that thyroid should be commenced in minimum doses, that it checks excessive loss of blood, and its administration is followed by improvement in the general health, probably on account of the arrest of hemorrhage. Whitney, in the same paper, has found that the administration of thyroid causes diminution in the excretion of salts, and nitrogen in the urine, showing that the loss of weight must be due to an increase of the metabolism of the fats in the body. Examination of the blood of 2 cases before and during treatment, showed increase in the red cells, no distinct alterations in the leukocytes, and increase in the small mononuclears, and in one case, a marked increase in the specific gravity. Whitney also summarizes our present knowledge of the action of this drug in various diseases.

2.—After showing that it is the specific organism which determines the infection and trauma the localization, McArthur sets forth the symptoms of **tubercular sacro-iliac disease**, explains posture and methods of opening of the abscess, differentiates hip-joint and Pott's disease from sacro-iliac disease, and summarizes the various methods of treatment. He approaches the articular surface from without, after loosening the gluteal attachments by chiseling away an auricular fragment. The posterior margin of the great sciatic notch is the guide. Histories of six cases are given.

3.—Novy continues his paper upon the **bacillus icteroides**. Like the colon-bacillus it gives rise to an acid reaction, causes gas in glucose media, and, like the typhoid bacillus, does not give the indol reaction, does not coagulate milk, and its growth on potato is invisible. It does not grow in Elsner's medium; it fails to grow in bouillon that is distinctly acid, and has about the appearance in gelatin at the end of 48 hours that is given by the typhoid bacillus. It appears that it is more closely related to the typhoid than the colon-bacillus. It is very apt to give rise to involution-forms if grown in bouillon for any length of time. It resists destruction by gaseous disinfectants very well—quite as well as the typhoid, colon, and Havelburg bacilli. Novy then analyzes the report of Sanarelli concerning its discovery in the human body, and finds that the bacillus icteroides was only present in seven of thirteen cases, and in these, with the exception of two, was very rare. This Sanarelli explained by stating that the bacillus elaborates a very virulent toxin. Novy disputes this, showing that according to Sanarelli it is necessary to inject from 150 to 200 cc. of filtered culture in order to kill a dog. In those cases in which cultures were rendered more virulent by sterilizing with ether, Novy suggests that perhaps the ether contained toxic substances; 5 human beings were subjected to experiment, and the symptoms were vomiting, anuria, delirium, and coma, although all recovered. Novy calls attention to the fact that patients recovering from an acute disease, such as he supposes were the subjects of Sanarelli, are more susceptible to other forms of infection than normal persons, and has found the same condition to be true of guinea-pigs. He, therefore, does not place any reliance upon Sanarelli's experiments. A further objection to the theory of toxin-formation is the fact that Novy was unable to produce an antitoxin by injecting a horse with large quantities of a filtered virulent culture. The suggestion of Sanarelli, that the destruction of tissues caused by the toxin favor secondary infection, does not apparently hold good for the lower animals. Sanarelli's method of rendering the discovery of the microorganism easier by removing portions of tissue aseptically, and placing them in the incubator for 24 hours, is exactly the method that favors the multiplication of the microorganisms of the colon-group. The cyclical character of the disease produced by the injection of pure cultures may be altered by artificially increasing their virulence. The pathologic changes are such as occur in most infectious diseases. The bacillus appears to be very susceptible to agglutinating agents, and agglutinates quite as well with normal serum as with the serum of animals infected by it. This reaction is, therefore, of no diagnostic value. Exposure to cold inhibits the growth, but does not in the least destroy the vitality of the bacillus. This seems clearly to show that it cannot be the cause of yellow fever, as this organism is readily killed by a single front. As a result of his studies, Novy concludes that the bacilli of Havelburg and Sanarelli are distinct; the former belongs to the colon, the latter to the typhoid group,



and neither is the cause of yellow fever. He suggest that the cause, when found, will prove to be a microorganism smaller than any yet hitherto discovered.

4.—Senn describes the **invasion of Porto Rico**. He praises very highly the precautions taken by Major General Miles to preserve the health of the troops. He had been warned of the necessity of this by his brief experience in Cuba; where the absence of cooperation on the part of General Shafter with the medical officers, had left them utterly powerless properly to treat the patients. The Porto Rican expedition, on the other hand, was well equipped in food and stores, and but a small number were wounded in the various skirmishes. It was noticed that all the non-fatal wounds healed with remarkable rapidity. Careful quarantine organized by Colonel Greenleaf enabled the army practically to exclude yellow fever. Typhoid fever, however, was not uncommon, but it appeared that the majority of cases must have been infected before their arrival at Porto Rico; the disease being particularly prevalent among the soldiers brought from Chickamauga. Medical supplies were issued in abundance without formality, and the best of diet, including fresh milk, was furnished to all the patients. (In a private communication from one of the patients who had been in the hospital at Ponce, he assured me that the medical supervision had been markedly inefficient, and the typhoid-fever patients were given ordinary army-diet.)

### Boston Medical and Surgical Journal.

September 15, 1898. [Vol. cxxxiv, No. 11.]

1. Correction, by Operation, of some Nasal Deformities and Disfigurements. GEORGE H. MONKS.
2. On the Value of Laboratory Research to the Clinician. HERBERT C. EMERSON.

1.—Monks calls attention to the operative treatment of some ordinary nasal deformities and disfigurements, such as venous and capillary congestion or "red-nose" hypertrophic acne, bifid nose, deformity due to old injury, saddle-back nose, and depression of lower half of the nose. To properly scarify a nose, it should be first thoroughly cleansed with soap and hot water; then firmly squeezed between the thumb and finger of the left hand, and a few minims of a weak cocaine solution injected. Multiple incisions should be made in different directions all over the affected area with a small sharp knife. These cuts need not be very long, but should all be deep enough to divide the superficial vessels, whose trunks may often be seen through the skin. Methods of operation for the particular cases and conditions are set forth and illustrations show the cosmetic results. A piece of celluloid was inserted through an incision below the tip in one case in which an unsightly depression in a lower part of the bridge of the nose with corresponding elevation of the tip existed, which so raised the bridge that the line of the entire nose was nearly a straight one.

### Journal of the American Medical Association.

September 17, 1898. [Vol. xxi, No. 12.]

1. On the Predominance of German Influence in Modern Medicine and Surgery. H. GIFFORD.
2. Glioma of the Retina. J. L. THOMPSON.
3. A Case of "Mathematically-Perfect Eyes." GEORGE M. GOULD.
4. The Galvanic Current for the Treatment of Pterygium. HORACE M. STARKEY.
5. The Value of Faradism in Choroiditis. ROBERT F. LE MOND.
6. Polycetular Keratitis. DUDLEY S. REYNOLDS.
7. The Use of Formalin in the Treatment of Blepharitis. H. MOULTON.
8. An Unusual Case of Ruptured Tubal Pregnancy; Operation and Recovery. J. E. COWLES.
9. The Influence of Sex on Disease. LOUIS FAUGÈRES BISHOP.
10. False Labor-Pains. T. MITCHELL BURNS.
11. Colpoperineorrhaphy and the Structures Involved. BYRON ROBINSON. (Continued)
12. A Story of Chickamauga. R. STANSBURY SUTTON.

13. The Returning Army. N. SENN.
14. The National Cry. N. SENN.
15. Our Relief Societies. N. SENN.

1.—See this JOURNAL, Vol. II, p. 98.

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7.—Moulton employs **formalin** in all cases of **blepharitis**, in solution of the strength of .2% to 1%, beginning with the weaker one. It must be prepared freshly, or at the time of using to insure uniformity of strength. A small cotton mop is used for daily applications. Correction of refractive errors is of prime importance. The proportion of cases benefited and the measure of relief given, makes it a superior remedy. Three cases of its use are cited.

8.—This case of **tubal pregnancy** is worthy of record on several accounts: First, because of its early rupture, being but about four weeks advanced in pregnancy; second, because of recovery from such a dangerous state of collapse as occurred during the operation; and third, on account of the severe complication—left lobar pneumonia—which set in on the second day after the operation, and would seem to have barred what little chance of recovery was still left to the patient. The woman was 30 years of age, married 7 years and never had a miscarriage. Her last period was on January 20th. On March 1st, she stooped while sweeping and was seized with severe pain. On March 2d celiotomy was performed. On opening the peritoneum, dark blood squirted upward several feet—a quart or more being removed. Cowles states, "When in honest doubt, operate." His choice of routes is the abdominal.

9.—Bishop remarks that the influence of sex on the course of general disease is wholly a matter of soil and environment; that is, the disease is the same, with the same tendencies and possible terminations, but modified by the constitution of the person, and not by sex. The course of general diseases, he believes, is not affected materially by difference of sex, except in a few instances that are easily defined and pointed out.

10.—As soon as false labor-pains are suspected, Burns administers a four-quart enema, followed by a fourth of a grain of morphin hypodermically. The morphin may be repeated by the mouth in an hour or two if the pain lessens but does not disappear. Cathartics are not to be used. In some cases it is impossible to stop the colic until after hot drinks, as ginger and peppermint, or inhalations of chloroform, and even hot fomentations and flaxseed meal-poultices have been used.

11.—Robinson notes that in many parts the fascia of the pelvis consists of many distinctly defined layers which can be cleaved from each other. This endows it with much more utility. One plane may tear without the other. Several cleavage-planes are characteristic of fascia in other localities, and are more capable of resisting trauma than a single plane. The use of the levator ani fascia superior is, (a) to sustain the pelvic viscera (it is analogous to the fascia transversalis abdominalis); (b) to form a pouch on each side for the pelvic viscera, which assists in closing the pelvic outlet above the muscular floor; (c) to fix the pelvic viscera; (d) with its superior pad of fat and snow-white connective tissue to support the pelvic peritoneum; (e) to resist the pressure of the abdominal muscles and the diaphragm, and, (f) to serve the useful purpose of separating the perineal tissue from the peritoneum. Further, it forms the pelvic floor, and by its strength prevents pelvic hernia. Successful colpoperineorrhaphy includes the restoration of damaged fascia, the passage of deep sutures, the restoration of function by means of restored muscular relations, the forcing in the median line of adjacent perineal tissue, and the adoption of the flap-method of operation whereby there is no denudation or loss of tissue, and the flaps (skin and mucosa) avoid infection and insure primary healing. The functions required of the pelvic floor are to resist intraabdominal pressure and to allow rectal and vesical functions. It is composed of muscles, fasciæ, areolar, and elastic tissue. These structures are interwoven into distinct, though complicated relations, and fill the gap of the pelvic outlet. The pelvic floor is composed of two halves, whose structures arise from



the lateral walls and join in the median line. The object of the muscles is to control the lower end of the vagina and rectum. (To be continued.)

12.—See editorial page 578, column 2.

13.—The contrast between the invading and returning army, as to size and appearance, is remarkable, as stated by Senn. Yellow fever, dysentery, malaria, and typhoid fever, and not especially Spanish bullets, were our most formidable enemies. The invading armies suffered the brunt of privation and discomforts. Yet Senn, who met the Spanish surgeon within the lines of the enemy, was shown how the Spanish army, when it reached Cuba, was in good condition and health, yet its ranks were then thinned by yellow fever, malaria, and dysentery. The typhoid-fever cases had their inception on American soil, and the management of such cases in field-hospitals is necessarily attended by many difficulties. Senn speaks in high praise of Col. Forwood, Assistant Surgeon-General, who selected the site of Camp Wikoff, and points out the monopoly of the railroad ending there and the entire absence of water-communication as lessening facilities for passengers and freight traffic. The exclusive right of monopolizing the whole business of transportation was made a condition to secure the ground for camp purposes. "Politics and personal interests have figured conspicuously in the management of the present war," says Senn.

14.—Senn, writing of the hue and cry after the Spanish war, refers to the universal indulgence of Americans to criticism and to the energy and penetration of the American press. The position of the medical department in our scheme of government is pointed out: The executive power of the Surgeon-General is limited; the Secretary of War must sanction everything of importance and he is busy enough in his own department; the medical department is entirely dependent on the quartermaster's department for forwarding and distributing supplies, and to make a department strong and efficient, it must be independent. Yet the importance of the medical department was never more apparent, and in the face of appalling defects, intrinsic and incidental, criticism continues to fall on the Surgeon-General and his officers. Senn concludes this article with the hope that Congress will place the responsibility, and is confident the blame will not rest on the medical department.

15.—The relief societies—the Red Cross, the Women's Patriotic Relief Association, New York, the Illinois Army and Navy League, and the Massachusetts Volunteer Aid Association in particular—and their invaluable services, are written of by Senn. He shows how many relief societies have rivaled each other in furnishing supplies and comforts for the sick and well soldiery beyond the limits of the government-supply.

### American Journal of the Medical Sciences.

August, 1898. [Vol. cxvi, No. 2.]

1. A Consideration of the Urinary Distance as a Diagnostic Factor in Prostatic Hypertrophy. EDWARD L. KEYES.
2. Two Cases of Acute Ascending Paralysis, with Autopsy. JOHN JENKS THOMAS.
3. The Use of Animal Toxins in the Treatment of Inoperable Malignant Tumors. GEORGE RYERSON FOWLER.
4. The Röntgen Rays in Ophthalmic Surgery. WILLIAM M. SWEET.
5. Hemorrhagic Internal Pachymeningitis in Children. C. A. HERTER.

1.—In order to ascertain the importance of the urinary distance as a diagnostic factor in prostatic hypertrophy, Keyes examined 12 prostatics, and 62 other individuals with various diseases of the urethra, and a few with absolutely healthy urethral canals. The conclusions drawn from this series of observations are as follows: that the urinary distance varies in the adult healthy male from something over 6 to something under 10 inches, but it may be honestly averaged at 8 inches; that shorter lengths are found in short individuals with small penises, but that a large organ naturally contains a long urethra, especially in tall individuals; that, in prostatic hypertrophy, the urinary distance averages more than 8 inches, and is not longer in cases of peripheral general hypertrophy than when the enlargement is median, or in

cases of bar; that, in a doubtful case, the consideration of the urinary distance may become an important element in diagnosis.

2.—Thomas reports two cases of acute ascending paralysis, in each of which autopsy was made. The first patient was an unmarried female, 36 years old, who gave a family-history of tuberculosis and of nervous disease. The patient had suffered from several infectious diseases, including diphtheria and scarlet fever; she had also been subjected to severe nervous shock; and she was subject to attacks of indigestion. After death careful microscopic examination of the nervous system revealed the following conditions: (1) Acute inflammatory degeneration of the anterior horns of the gray matter of the spinal cord, with parenchymatous degeneration of the nerve-cells and processes; (2) infiltration of the perivascular lymph-spaces, and dilatation of the vessels of the anterior horns; (3) moderate infiltration about the vessels of the posterior horns and of the white matter of the cord; (4) slight parenchymatous degeneration of the nerve-fibers of the white matter of the cord; (5) slight degeneration of the posterior nerve-roots and marked degeneration of the anterior nerve-roots; (6) parenchymatous degeneration and perivascular infiltration of the peripheral nerves; (7) absence of microorganisms in sections and in cultures. The second patient was an Italian, 35 years old, and a laborer by occupation. The family and the personal history threw no light upon the etiology. Microscopic examination of the central nervous system disclosed the following conditions: (1) parenchymatous degeneration, varying in extent, of the peripheral nerves, present in all the nerves examined; (2) degenerative changes in the large ganglion-cells of the anterior horns of the cord, with destruction and fragmentation of the protoplasmic granules and loss of the nuclei of the cells; (3) the nerve-cells of the other parts of the gray matter of the cord, medulla, brain, and spinal ganglia were unchanged; (4) no change in the white matter of the spinal cord; (5) an absence of microorganisms in the tissues. Thomas reviews the reported cases of acute ascending paralysis, and thinks that it is due to some infection. The absence of microorganisms from the tissues would indicate that the products of microorganismal growth constitute the etiologic factor, rather than the microorganisms themselves. It may be that the poison is absorbed from without, or that it is the result of faulty metabolism. The disease seems to be a degenerative process of the peripheral motor neuron, with or without the presence of an exudative inflammatory process in the anterior horns of the cord. The absence of the reactions of degeneration, clinically, can only be explained by the short duration of the disease. The same is true with regard to the absence of atrophy.

3.—Fowler reviews the history of the use of animal toxins in the treatment of inoperable malignant tumors. Fehleisen provoked erysipelas by inoculation of pure cultures of the streptococcus erysipielatis, and the results obtained were quite comparable to those following accidental erysipelas. This method of direct inoculation found few followers in consequence of the limited number of cures, as well as the danger of causing a mortal disease, already 3 fatal cases having resulted from direct inoculation. Fehleisen employed the toxic products of the germs alone, but finding the effect upon the neoplasm absolutely nil abandoned this line of experiments. Spronks carried on a series of experiments upon animals, and also upon 25 subjects with inoperable malignant tumors. As to the final therapeutic results of this series it may be said that in a majority of cases the growths were in no way modified, that in others they seemed to yield somewhat, while in a small proportion of cases a complete cure took place. Spronks concluded that the toxic products of the streptococcus erysipielatis, absorbed through the subcutaneous connective tissue, led to alterations tending to necrosis, and to the absorption of the neoplasm. Coley next undertook to treat cases of inoperable malignant lesions by injections of the toxins, and not the germs, but he, like Fehleisen and Spronks, obtained unsatisfactory results. Before the use of the mixed toxins of the streptococcus erysipielatis and the prodigiosis came into vogue, Répin made injections from the two cultures, one obtained from a fatal case of erysipelas, and one from a laboratory-specimen, the virulence of which was reinforced by being passed a number of times through rabbits. His clinical observations embraced



4 cases, 3 of which were sarcomatous, and one a mixed tumor; in no case did he succeed in removing the growth altogether. Coley was the first to employ extensively the mixed toxins in the treatment of malignant tumors. Up to the present time he has treated 140 cases, in 17 of which there has been complete disappearance of the growth. Of the cases that have not relapsed one has passed the four-year limit, one the three-year limit, and two the two-year limit; one has passed the year-limit, and two have remained respectively two and five months free from a recurrence. Moullin has employed the Coley fluid in 10 cases, 2 of which terminated fatally, one from prostration subsequent to the injection, the other from pyemia. In but 3 of the remaining cases did he obtain a successful result. Certain dangers undoubtedly attend the injection of these mixed toxins. If, however, one commences with a small dose ( $\frac{1}{4}$  minim) and proceeds cautiously until he obtains the necessary reaction, the danger is reduced to a minimum. It should be borne in mind that the effects of the toxins vary in different individuals; some being more susceptible than others. In all the recorded cases of alarming collapse following severe reaction, too large a dose had been employed. As pointed out by Moullin there is danger too, in employing toxins in cases in which suppurative processes are in progress. It has been generally observed that oftentimes the patient becomes more and more accustomed to the intoxication, so that the effects of the toxins are less pronounced, until finally immunity is established. In cases in which this has resulted the efficacy of the treatment is limited; it is in those patients that continue to react to the injections in whom are to be expected the best results. Studies of the influence of the injection upon the tumor-tissue itself, lead to the belief that their disappearance is due to sloughing *en masse*, or to rapid destructive degenerative process, simulating fatty degeneration. The rationale of the action of the streptococcus erysipielatis and its toxin is still a question of dispute. The theory that the cure results from the high temperature induced by the injection and its influence upon the vitality of the cells has now been discarded. Coley, admitting the parasitic origin of cancer, contends that the influence of the toxins is the result of a directly antagonistic effect upon the microorganisms of the neoplasm. Répín on the other hand attributes the results to an elective intoxication of the cells of the neoplastic tissue. Examples of this are to be found in the affinity of tuberculin for tuberculous tissue. It is also well known that when a person is bitten a second time by a venomous serpent, the scar of the former wound exhibits evidence of irritation, as if the cells that were affected by the venom retained for a long time a special susceptibility in this respect. This theory is one that offers the most rational explanation of the effects of these toxins upon malignant neoplasms.

5.—Herter reports two cases of **hemorrhagic internal pachymeningitis in children**. The first patient was a girl, aged  $5\frac{1}{2}$  months, the second also a girl, aged 22 months. Both patients died. The majority of infants in whom this lesion is found are badly nourished or cachectic. The most frequent symptoms are rigidity, convulsions and coma, if the hemorrhage is large. If, on the other hand, the hemorrhage takes place slowly, convulsions may be absent. Paralysis, contracted pupils, tremor on the side opposite to the lesion, and tetany are sometimes observed, but are not constant. The fontanel is usually bulging at the time of onset of cerebral symptoms. Although the diagnosis is hardly possible with any degree of certainty, hemorrhagic pachymeningitis is a lesion that should be thought of whenever convulsions and unnatural rigidity with deepening coma occur in a rachitic or cachectic child, under one year of age. The new membrane must be regarded as originating from the proliferation of dural endothelial cells, or, more probably, from the subendothelial connective-tissue cells. The new cellular connective tissue is exceedingly likely to be the seat of development of new bloodvessels with thin walls. Even in cases that may be supposed to have originated from hemorrhage, an intimate connection must be recognized between the organization of the clot and the proliferation of dural connective-tissue cells. In some cases, there seems to be little inclination to hemorrhage; in others there are numerous, punctate hemorrhages from the delicate vascular membrane. The membrane varies in thickness, in some cases being so delicate as to be readily overlooked, in other

cases reaching 2 or 3 lines in thickness. The experiments of Kremiansky would seem to point to an intoxication as the cause of the lesion, but the influence of traumatism should not be overlooked.

### American Journal of Obstetrics and Diseases of Women and Children.

August, 1898. [Vol. xxxviii, No. 248.]

1. Malignant Growths of the Chorionic Epithelium, and their Relation to the Normal Histology of the Placenta. H. R. GAYLORD.
2. Surgical Treatment of Patients at the Asylum for Insane, London, Ont. A. T. HOBBS.
3. Diphtheria of the Vulva. J. WHITRIDGE WILLIAMS.
4. A Case of Puerperal Infection in which the Bacillus Typhosis was Found in the Uterus. (With chart.) GEORGE W. DOBBERN.
5. Appendicitis complicating the Pregnant and Puerperal States. S. MARX.
6. Acute Inversion of the Uterus following Parturition, with Report of a Case. WILLIAM S. STONE.
7. Uremia in the Process of Child-bearing. HENRY F. LEWIS.
8. Acute Fibrino Purulent Peritonitis in Infants. GEORGE N. ACKER.
9. Modified Milk. EDWARD HAMILTON.

1.—After describing the anatomy, gross and microscopic, of the placenta, Gaylord considers the pathologic conditions in which the placental elements play a part. The most common pathologic condition found in the placenta is that known as hydatidiform mole. Fundamentally the changes found in this growth consist in a remarkable dilatation of many of the villi, which are filled with a clear fluid, giving them the appearance of grapes. Marchand's investigations show that only part of the villi in hydatidiform mole are subject to this peculiar degeneration. His observations are of especial value as showing the migratory capability of chorionic cells. No one at the present day, with the exception of Gottschalk, holds that the connective-tissue elements, either of the villi or the decidua, play any part in the formation of syncytial growths, or still clings to the idea that they belong to the sarcomata. Aschoff has shown conclusively that the syncytium is derived from the fetal ectoderm by a process of metamorphosis from the layer of Langhans. His investigations of the coverings of the villi lead to the interesting result that a distinct differentiation of the syncytial layer from the underlying cell-row is impossible. He found, as characteristic of the syncytium, the same condition that Marchand has already recorded for malignant growths, namely, an absence of glycogen, which was richly distributed through the proliferating elements of Langhans' layer. He observed especially an entire absence of glycogen when no proliferation was apparent. He also found that the syncytium invariably contained fat in finer and larger drops, and that cells of the inner layer, where they formed buds, also contained large quantities. From this he concluded that the presence of a large amount of fat was not characteristic of the syncytium, but rather that where the chorionic cells had a more marked metabolic function—*i. e.*, came more freely in contact with the maternal circulation—there the deposit of fat was greatest. He calls especial attention to the participation of the syncytium in the invasion of the decidua. In no case was he able to find a growth of syncytium into a gland in which the epithelium was not broken down. Gebhard reports in full three cases of chorion carcinoma, all of which contained both cellular elements and syncytium. His second case furnishes a most interesting confirmation of Marchand's theory of the derivation of the cellular elements of the tumor. In the wall of the uterus, isolated from the main growth, Gebhard found a placental villus containing a connective-tissue axis, from the surface of which the ectodermal cells could be demonstrated invading the tissue and forming a part of the tumor.

2.—Hobbs reports the cases of 110 insane women who within the past  $3\frac{1}{2}$  years have undergone operative treatment, representing 196 distinct operations. These embraced 83 curetments, 38 trachelorrhaphies and amputations of the cervix, 26 operations for suspension of the uterus, 12 ovariectomies, 17 hysterectomies, 2 celiotomies for tuberculous peritonitis, 1 for the removal of a broad-ligament hematoma, and 17 perineorrhaphies. These operations were done pri-



marily and specifically for the removal of physical disease and the promotion of bodily comfort. It is maintained that the results thus far warrant the urging upon asylum authorities of the testing of the effects of the removal of operable gynecologic diseases upon the insane.

3.—Williams does not consider it justifiable at the present time to speak of puerperal diphtheria without demonstration of the presence of diphtheria-bacilli in the membranes. As far as he can learn, only two cases have as yet been described that fulfil these conditions, namely that of Nisot, of Brussels, and that of Bumm, of Basle. In both typical diphtheria-bacilli were found in and cultivated from the membranes, and both cases were treated with antitoxin and recovered. It is more than probable that two cases reported by Brinkmann were true diphtheria, though bacteriologic examinations were not made. Williams reports a true case of **diphtheria of the vulva**, in which the Klebs-Löffler bacillus was positively demonstrated. The mother recovered, although the baby and another child contracted the disease, the former dying in consequence of laryngeal stenosis.

4.—Dobbin reports a case that, although not a true example of **typhoid puerperal-infection**, yet in many points is suggestive of that condition. There have been described as occurring in the puerperal uterus and as being etiologic factors in the production of puerperal infection the following organisms: *Streptococcus pyogenus*, *staphylococcus (aureus and albus)*, *bacillus coli communis*, *gonococcus*, *bacillus of tetanus*, *diphtheria-bacillus*, *diplococcus pneumoniae*, *bacillus proteus*, *bacillus aerogenes capsulatus*, and the anaerobic gas-producing *bacillus of Lindenthal*. As yet Dobbin has been unable to find a case in the literature in which the typhoid-bacillus has been present in the puerperal uterus, aside from the one he now reports.

5.—Marx considers that at best **appendicitis** is rare during **pregnancy**, but he believes that it occurs with greater frequency than has heretofore been taught. During pregnancy the enormous congestion of the entire vulvovagino-uterine tract, which is readily reflected upon the entire intestinal system, causing, as it does, plethora followed by torpor of the gut, with the subsequent marked constipation, plainly acts as an exciting cause of appendicitis. The diagnosis is necessarily most difficult. Five cases are here reported.

6.—Stone reports a case of **acute inversion of the uterus** and suggests the following points as of especial importance in the etiology of this case: (1) The nervous condition of the woman; (2) the complete absence of pain during the greater part of the stage of dilatation; (3) the uterine inertia manifested in the latter part of the second stage; (4) the difficulty in the removal of the cord from the neck of the child; (5) the adherent placenta.

7.—Lewis gives a comprehensive review of the literature of **albuminuria and eclampsia of pregnancy** and reports six cases treated under his care. He states that primiparae are three times as liable to eclampsia as multiparae. Puerperal toxemia occurs more often in very young or in very elderly primiparae, in twin pregnancies, hydramnios, and other conditions in which there is abnormal distension of the uterus and abdomen. In general, it may be stated that of 10,000 pregnant women 500 will have albuminuria; of these 500 albuminurics 60 will have eclampsia; and of these 60 eclamptics 12 will die.

8.—Acker reports two cases of **acute fibrinopurulent peritonitis in infants**. The first occurred in a female child, aged 2 months; the second was also in a female child, aged 3 years. In the first case there was a history of constipation, and in the second an attack of acute indigestion is thought to have been the cause of the trouble.

9.—Hamilton gives the following requirements for a perfect **modified milk**: (1) alkalinity and body-temperature, (2) sufficient quantity, (3) proper proportion of constituents, (4) digestibility, (5) freshness, sterility, and cleanliness, (6) absence of adulteration. If artificial feeding is unsuccessful the cause may be traced to one of the following conditions: (1) the intervals of feeding are irregular and usually too frequent, (2) the amount of milk at each feeding is too great for the gastric capacity, (3) the percentage of the elements is too high, (4) the nipples, bottles, and milk-containers are not kept clean, and (5) the milk is contaminated, adulterated, or stale.

## American Gynecological and Obstetrical Journal.

August, 1898. [Vol. xiii, No. 2.]

1. Two-Years' Work with the Sprague Sterilizer in the Gynecological Department at the St. Elizabeth's Hospital, Boston. F. W. JOHNSON.
2. Is the Use of the Rectal Sound Scientific? THOMAS CHARLES MARTIN.
3. An Ideal Conception of an Ideal Hysterectomy for Uterine Carcinoma. THOMAS H. HAWKINS.
4. Two Cases of Tubal Pregnancy; Operation in the Pre-rupture Stage. NATHAN G. BOZEMAN.
5. On the Relation of the Great Neuroses to Pelvic Disease. F. N. PERCUM.
6. A Method of Vaginal Ablation in Pus Cases. W. R. PRYOR.

2.—Martin concludes that the employment of the **sound** within the movable rectum is not consistent with the mechanical principles upon which the practice of surgical sounding is based; to enter a stricture by such means is possible, but often impracticable; the attempt is fraught with danger. Sounding as a method of diagnosis requires three conditions: (1) That the tube to be sounded shall have a recognized limit of distensibility; (2) that its mobility in the direction of its axis shall be inappreciable; (3) that there be not at irregular intervals normal anatomic obstructions in its channel sufficient to arrest the progress of a sound. These conditions obtain in the urethra, but the rectum, on the contrary, answers negatively to each of these three propositions. Seven or eight inches (17.78 or 20.32 cm.) of the rectum's length are not fixed. The normal range of distensibility of the rectum may be said to be from zero to  $3\frac{1}{2}$  inches (0 to 8.89 cm.), and consequently a definite calibration for sounding is impossible.

3.—According to Hawkins, in order to expect good results from **hysterectomy for uterine carcinoma** the operation must be thorough, and all tissue involved or suspected involved must be eradicated. Most cases of uterine carcinoma do not come to the physician early. The ideal operation includes the following steps: The preparation of the patient is of great importance. She should be in the hospital at least two days before the operation is performed, better a week. The most suitable anesthetic should be selected, and should be entrusted only to an experienced anesthetizer. Thorough asepsis should be provided for. With the patient in the Trendelenburg position, the abdomen is opened, the viscera displaced, and the uterus grasped with a double tenaculum. The ovarian artery is ligated on each side, the upper portion of the uterus freed, the flap and bladder are separated in the usual way, except that the bladder is detached as far down as possible without entering the vagina; the uterine arteries are tied and divided from the uterus. The pelvic peritoneum may then be split and the uterus be hooked up on either side and pulled out of the way, and any enlarged glands or suspicious tissue be removed. The internal iliac arteries may be tied if thought best. The uterus is then gradually separated as far down as may be deemed prudent. If there is any suspicious tissue that is not easily removed it should be thoroughly burned with the cautery. If the uterus is in the way it may be amputated (when the cervix is not greatly involved) low down and the cervical canal cauterized and packed with iodoform-gauze. In some instances the peritoneum is divided around the sides and behind the uterus well down into the culdesac, pulled up, and the uterus amputated well down. Gauze is then packed under the bladder and down the side of the cervix, the peritoneum pulled up from below and the bladder-flap peritoneum stitched to it with a continuous catgut suture as in an ordinary hysterectomy, except that the amputated cervix is left free. This places the cervix and gauze extra-peritoneal. The rest of the operation is then done from below, the abdominal incision being closed. When the cervix or uterus is removed the upper end of the vagina and all suspicious tissue are thoroughly cauterized, and the parts carefully and completely cleansed. By this operation there is practically no danger of infection. The pelvic tamponade not only protects the abdominal and pelvic organs against sepsis, but also lessens the danger of injury. The diseased tissues can be thoroughly eradicated, and the danger of return is greatly lessened.



4.—Berman states that it has already been demonstrated that after the death of the fetus contained in the oviduct in cases of **ectopic gestation** the placenta continues to grow, and he cites two cases in illustration of this fact.

5.—Dercum considers the relationship between neurasthenia, hysteria, and the female generative organs. For neurasthenia he prefers the far more expressive name of **fatigue-neurosis**. The symptoms resolve themselves into sensory, motor, general somatic, and psychic disturbances, all of which are expressive of chronic fatigue. To these primary symptoms of neurasthenia are added other symptoms, which he designates as secondary or adventitious symptoms. It is extremely probable that these common sensations (pressure, constriction, fulness, heaviness, throbbing) are, many of them if not all, the result of various intracranial circulatory disturbances, and are not directly fatigue-sensations. The two cardinal conditions of the fatigue-neurosis are persistent nervous weakness together with increased nervous irritability; that is, increased reaction of the organism to impressions from without. Thus, a woman with a lacerated cervix will not be conscious of her defect as long as her general health remains good. Not infrequently she fails to seek medical advice for the pelvic condition until neurasthenia has become established. Hysteria, Dercum calls the psychoneurosis. It presents a syndrome that is as fixed and as definite as that of any other disease. The physical symptoms present in it are dominated by mental phenomena, themselves the result of a genuine and profound affection of the cerebral centers. Like neurasthenia, the symptoms consist of sensory, motor, general somatic and psychic disorders. The disease may exist independently of any local disease, pelvic or otherwise. There is no relation between pelvic disease and hysteria, even when the affections coexist; and while in hysteria there is increased reaction to external impression, this reaction is purely psychic. The pain-areas of hysteria bear no relation to disease of the deeper structures. The idea of curing neurasthenia or hysteria by operations upon the pelvic organs must be absolutely abandoned. Nervous symptoms symptomatic of and directly due to pelvic disease are admittedly small in number. They consist of pains within the pelvis itself; pains referred to the lower portion of the back, to the sacrum, to the hips or thighs, and very rarely of sacral neuralgia and pain in the sciatic distribution.

6.—Pryor describes a new method of extirpation of the diseased structures, adherent uterus and adnexa, through the vagina, in cases of pyosalpinx. It consists in splitting up the uterus in the median line and removing the two halves separately.

### Bulletin of the Johns Hopkins Hospital.

August, 1898. [Vol. ix, No. 89.]

1. A Tragedy of the Great Plague of Milan in 1630. ROBERT FLETCHER.
2. Sir John Charles Buckhill, M.D., F.R.C.P., F.R.S. A. R. URQUHART.
3. Medical Fees in Ancient Greece and Rome. CHARLES C. BAMFORTH.
4. Endothelia of the Cervix Uteri. ELIZABETH HURDON.
5. On the Specific Gravity of the Urine during Anesthesia and after Salt-Solution Enemata. THOMAS R. BROWN.

1.—Fletcher gives an interesting account of the origin of the **Colonna infame of Milan**, which perpetuates the names of two innocent men who, in 1630, were tortured to death by the credulous and cruel Milanese because they were held guilty of spreading the plague by means of deadly ointments.

3.—The usual fee paid physicians in Greece for incidental visits was small—only about 16 cents. Democedes received the equivalent of \$2,000 per annum for attending the sick of Aegina. The largest fee probably ever paid is one recorded by Pliny, which Cleombrotus received for his services to King Antiochus—it amounted to 100 talents, or about \$156,000 of our money. Of the average incomes of the physicians of Rome, we know but little. It is only the incomes of some of the palace-physicians that have been handed down—thus, Quintus Sterinius received 500,000 sesterces (\$19,500) for taking care of the Emperor Claudius.

4.—Hurdon reports a case of **endothelioma of the cervix uteri**. Most of the endothelial tumors are found in the ovary, and but three in the uterus are thus far reported. According to Ziegler, the term endothelioma is practically limited to the tumors which originate from the endothelial lining of the lymph-spaces or vessels. The growth in Hurdon's case presented many characteristics differing from a carcinoma. It was peculiarly dense, even in the superficial portions, while in carcinoma the surface is easily curetted away. The only excrescence consisted of a large flat polyp-like mass, with a regular outline, and there were none of the friable papillary outgrowths usually seen in carcinoma. The growth was characterized by the formation of tubules and cell-strands which followed the course of the blood-vessels.

5.—Brown carried out a series of 25 examinations to determine the **effect of ether-anesthesia on the specific gravity of urine**. As the bladder was not catheterized immediately before administration of the anesthetic, in five cases such large amounts of urine were found on catheterization as to make it probable that a large proportion of it was present in the bladder before anesthesia, and that it did not differ materially from normal urine. In the remaining 20 cases comparatively small amounts of urine were found, of very pale color, with an average specific gravity of 1.0177. The very small quantity obtained in several cases made it probable that the amount was also decreased.

In 10 other cases a high rectal enema of 500 cu. cm. normal salt-solution was given; the patient was not allowed to take any fluid for four hours, and the urine passed during this time was carefully collected. In some cases the urine was passed twice, in others once during the four hours; in all cases the amount was between 250 and 400 cu. cm., *i. e.*, between  $\frac{1}{2}$  and  $\frac{3}{4}$  of the quantity given by the rectum. The average specific gravity was 1.008, and the color very pale. The diminished specific gravity was due to increased elimination of water, not to decreased solids, and suggests the possibility of using rectal enemata to produce diuresis.

### Scottish Medical and Surgical Journal.

July, 1898. [Vol. iii, No. 1.]

1. The Methods of Examination of the Female Urinary Organs. N. T. BREWIS.
2. Liver Cirrhosis and Its Varieties. ALEXANDER JAMES. (Figure and Plate)
3. A Case of Disease of the Fifth Cranial Nerve. A. H. LISTER.
4. The Value of Saccharine Foods as Articles of Diet. W. G. A. ROBERTSON.
5. Intrauterine Typhoid. WILLIAM FORDYCE.
6. Case of Charcot's Disease. ALEXANDER PATTERSON. (Plate.)
7. Case of Erythema Exudativum Multiforme. D. M. GREIG. (Plate)
8. Arrested Respiration During Chloroform-Administration. LIM BOON KENG.
9. The Pathogeny of Puerperal Eclampsia. R. C. BUIST.

1.—Under two conditions the **female bladder** forms a swelling that may be seen, *viz.*, cystocele and overdistention. In the former a rounded swelling is seen bulging through the vaginal orifice accompanying downward displacement of the pelvic floor. In the latter an ovoid swelling is to be observed distending the hypogastrium. Both of these swellings disappear when the catheter is used. Before exploring the bladder the urine should be examined. Exploration of the interior of the bladder is carried out by means of the sound, the speculum, and the finger. By the use of the sound can be determined irregularities of the bladder-walls, growths, the presence of calculi and foreign bodies, the size or depth of the organ—in the healthy bladder when not abnormally distended the distance from the meatus urinarius to the fundus is about  $4\frac{1}{2}$  inches—the elasticity of the walls, and the position of the bladder. The finger in the bladder determines the seat, extent and consistence of growths, the presence of fistulae, foreign bodies, and calculi. Specular examination reveals the reddened and thickened mucosa of cystitis, and the presence of tumors, calculi, fistulae, and cicatrices. It also reveals the origin of pus. The dangers associated with exploration of the urinary tract are traumatism and asepsis.



2.—James describes the conditions found in **acute yellow atrophy of the liver**, and notes the fact that in this disease, when the course is not too rapid, there will be found some increase of the interstitial tissue. Failure of nutrition and a decrease in the metabolic activity of the cell are the factors that must bring about cirrhosis, and it results in the production of less complex and less developed cells, while the more complex suffer at the expense of these. James reports a case of carcinomatous cirrhosis of the liver, in which there seemed, upon microscopic examination, to be evident stages of the conversion of the new-formed cells into new bile-ducts in some places, while in others the same cells seemed to be directly responsible for the formation of carcinoma-nests. He adduces this as a proof of a theory previously expressed by him that tumors do not arise from latent embryonic tissue, but as the result of a transitional process that is continually going on, and that, in the case of tumor-formation, is stopped before the final cell intended to be produced is reached. This retrogression of the liver-cells is, he believes, the cause of carcinoma. Carcinomatous tissue does not need to be absolutely like embryonic tissue, but it may be a development from embryonic cells at different stages. The beginning of the growth of carcinoma cells is due to the existence of something that leads to the disturbance of the balance of nutrition among them. A toxin must be accepted as the original cause of this imperfect reproduction, and from this there ensues the formation of excessive connective tissue in the liver, and in some cases of the cirrhotic form of carcinoma.

3.—Lister records the case of a woman, 33 years old, who had suffered from neuralgia in the left side of the face and temple, which ceased after the removal of carious teeth. Subsequently she discovered a tumor in the left parotid region. Her face was paralyzed on the left, and there was a loss of sensation in the middle and lower parts of the face. The tumor was removed and proved to be adenoma. There was some recurrence of the neuralgia afterward, with tenderness and numbness on the forehead and below the eye. The external rectus of the left eye was paralyzed and there was diplopia. There was paralysis of the left facial nerve of the infranuclear type, complete in the temporo-facial division. There was no palsy of the stapedius. The auricular muscles did not move, but the occipital belly of the occipito-frontalis contracted. The palatal muscles moved freely, and the uvula did not deviate. The temporal and masseters did not contract, and on projection of the jaw it moved to the left; so that the pterygoids, too, must have been paralyzed. The tongue deviated to the left. The tensor tympani did not seem to be affected. The anesthesia was limited to the middle line of the face, with the exception of the tongue, which was anesthetic over the anterior part of the left side, but not posteriorly. The inside of the gums and cheeks was insensitive and the sense of touch was poor on the front part of the temple, the side of the nose, the outer part of the upper eyelid, the anterior part of the cheek, and the upper lip. The mucous membrane of the nose, and of the hard palate was anesthetic. The sense of heat, of cold, and of pain was much diminished. On the outer surface of the ear was a small area of skin in front of the anterior part of the helix, and a portion of the ear itself, the superior part of the helix, the lobule and the lower part of the posterior portion of the helix that had normal sensation, while the remainder of the outer surface of the ear and the meatus had but poor sensation. There was corneal ulceration. The left side of the face was somewhat reddened. The skin was smooth and glossy, but there was no difference in the perspiration. The tongue was more furred on the left than on the right. Smell was poor on the left at first, but improved. Hearing was good; taste was absent on both the anterior and posterior portions of the tongue, and the left side of the soft palate. The diagnosis was a lesion of the nerve between the brain and the peripheral part of the Gasserian ganglion, possibly due to chronic inflammatory thickening. The disturbance of taste seemed to be due largely to the disease of the fifth nerve, as the facial was involved outside of the skull, and the glossopharyngeal was not interfered with. This case, added to the reports of others, makes it probable that the taste-fibers for the anterior and posterior parts of the tongue and for the soft palate reach the brain by the fifth nerve.

4.—Robertson insists upon the necessity for determining the kind of sugar that is present in **saccharine foods**,

because cane-sugar, for instance, is not absorbed as such, but must undergo inversion and be split up into dextrose and levulose before it is absorbed. After studying the various kinds of preserved fruits, marmalades, and the like, which contain a large amount of invert-sugar, it seems that their digestibility depends upon the amount of this sugar that they contain. Fruits contain much sugar, chiefly as levulose, but their acidity necessitates the addition of more sugar, and this should be done during the cooking, in order that this may convert it into invert-sugar. Honey is chiefly composed of dextrose and levulose, and is an extremely important and readily assimilated article of diet. Confections are digestible according to the extent to which the sugar they contain has been converted into invert-sugar.

5.—Fordyce records a case of **intrauterine typhoid fever**, the mother dying of that disease in the fifth month of pregnancy. The external appearances of the fetus were normal. A small quantity of serous fluid was found in the peritoneal cavity. The intestines seemed quite healthy. The liver and spleen were not enlarged. Tubes of agar-agar were inoculated from the kidney, the spleen, the intestinal contents, and blood from the left ventricle with the strictest bacteriologic precautions. In the tube inoculated from the kidney there developed, in pure culture, a bacillus identical with Eberth's bacillus; in that from the spleen, two round colonies similar to those from the kidney and made up microscopically of organisms identical with the typhoid bacillus; in that from the intestines a pure growth of the same bacillus covering all the surface of the agar-agar. The tube inoculated from the blood remained sterile. From this investigation Fordyce concludes that typhoid fever can be communicated to the *fetus in utero*, which, as a result of this infection, may die and be expelled prematurely; that the fetus may be born alive but weakly, and evidently suffering from the infection; and that the fetus may be born alive and healthy, having passed through the infection in utero either by the rapid induction of cerebral anemia or by suddenly throwing the whole pressure of the circulation on the cerebral vessels, both, perhaps, finding their concordance in stasis of the cerebral circulation. Vaquez and Nobecourt have found that a rise of blood-pressure precedes the attack, and the face is seen to pale at the onset of each seizure.

6.—Patterson reports the case of a man who, after leaping, noticed that his left knee bent to the outer side. There was no pain, but the joint swelled, and constantly bent further outward. Later, he had an attack of depression and shivering, but never pain. He had had syphilis, and the Argyll-Robertson pupil was present. The fundus of the eye was normal, but the knee-jerks were absent. There was no distinct ataxia. There was anesthesia of the left thigh. The left knee was 4 inches greater in circumference than the right and contained fluid, and there were freely movable bodies in the joint. The joint could be moved in any direction. Amputation was undertaken, and on opening the joint the ends of the femur were found eroded, the external condyle being entirely eaten away. There were peculiar linear erosions on the surface of the internal condyle. The condyles of the tibia were affected in like manner. The semilunar cartilages were present, but eroded and, floating in the fluid, were loose pieces of bone. There was a similar but less marked change in the ankles. The stump healed very well.

7.—Greig reports a case of **multiform exudative erythema** that began with heat and itching of both legs and a red patch on the front of the left leg. Similar patches appeared elsewhere on the lower extremities, and together with numerous blisters. These patches of erythema spread over all the extremities, and were covered with papules and bullae. A blackish crust formed upon these, and the exudate had a pungent odor. The preliminary treatment had not much effect, and the eruption spread over the trunk, but there was rapid improvement and quick disappearance of the eruption after a few days' treatment with iron, quinin, and sulphuric acid.

9.—According to Buist, the convulsions of **puerperal eclampsia** are evoked.

#### Deutsche medicinische Wochenschrift.

July 21, 1898. [24. Jahrg., No. 29.]

1. The Inheritance of Organic and Functional Disturbances of Speech. HERMANN GUTZMANN.



2. Tumors of the Membranes of the Spinal Cord. A. FRAENKEL.
3. Beriberi. F. GRIMM.
4. The Cough of the Nervous. BLOCH.
5. The Production of Sex in Honey Bees. KIPPING.

1.—Gutzmann enlarges on the influence of heredity in the development of organic and functional speech-defects. Statistics from his private practice and institutions in Berlin, are investigated. The reports of American institutions, especially of Kentucky, Indiana, and Illinois, have been prepared with due regard to the family-history. (1) In the case of deaf-mutism, heredity is slight; it is naturally most marked in the cases where both parents are deaf and dumb; 4.6% of all children from such unions are deaf-mutes, as against 0.6% where but one parent was deaf and dumb. It is interesting to note that the marriages of deaf-mutes (husband and wife being afflicted) are less fruitful than marriages generally. (2) The transmission of defects of the palate, or of harelip, is proved. The condition was found in 5.2% of his cases inherited; the heredity is often crossed. (3) Lipping (sigmatismus lateralis) depends upon a peculiar formation of the dental arches, which predisposes to, but does not cause, lipping. This malformation the author found in a large number of instances in the relatives of the patients, particularly in the parents. In discussing functional disturbances the author points out that speech depends on peculiarity of form of the organs of articulation, and just as the features of the face may be transmitted from parent to offspring, so may the conformation of the organs concerned in the individuality of speech: (1) In determining the influence of heredity on stuttering, the factor of imitation must not be overlooked. True heredity was demonstrable in 8.3% of all cases. (2) As regards stammering, the hereditary factor was found in 39.5%. (3) Mutism (the persons speaking but little, although hearing is intact), which seems to be transmitted largely through the father, was inherited in 37% of cases. Adenoid vegetations play an important role in its production, but this does not controvert, indeed, it strengthens, the idea of heredity.

2.—The second case concerns a student aged 21 years, who in 1893 fell from a horse-car and sustained a **crush of the right hip**. A year later he had severe pains and a drawing feeling in the injured hip, which soon subsided. Later he began to experience pain in the epigastrium with every active movement, a burning sensation in the sacral region, constipation, and weakness. Contractures of an intense degree developed; the reflexes, except the plantar, were lost, and sensation was absent over the entire surface of the lower extremities, and as far up nearly as the umbilical line. He died of exhaustion and bed-sores. At the autopsy a tumor was found beginning above the lumbar enlargement and extending upward for 12 cm.; it filled the dural sac and covered the cord a good distance around. Microscopically, the tumor proved to be a gliosarcoma, which in one part, in the region of the tenth dorsal segment, was connected with and seemed to grow out from the cord. At this point the histologic character was peculiar—hollow spaces lined by an epithelium closely resembling that of the central canal, were found. This feature brings this tumor in line with the neuro-epithelioma gliomatousum cysticum, described by Rosenthal.

3.—**Beriberi** is not confined to the tropics, but may occur in the temperate and colder climates. Though generally considered a form of peripheral neuritis, the nature of the disease is far from well-understood. It should be remembered that relapses are common and that beriberi does not confer immunity. The disease always begins with increased frequency of pulse, cardiac irritability, a feeling of oppression in the epigastrium, and moderate dyspnea. Paresthesia and muscular soreness soon set in; the reflexes and electric reactions are preserved; a hard edema appears on the tibia, and the face grows puffy; there is also a slight temperature-rise. The further course differs according as the disease consists in only a single attack of repeated infections. The first form—beriberi simplex—has three stages: (1) That of increasing symptoms, lasting about a week; (2) the transitional period, with variable and subfebrile temperature, extending over several weeks; and (3) the stage of convalescence—this may be brief or cover months. The symptoms of the first stage are those already described,

which, however, become more marked. In the second period, paresis of the muscles and reaction of degeneration develop; atrophy also sets in; the knee-jerk diminishes and is finally lost. Ataxia is absent. The third stage usually ends, in the survivors, in cure. In the other form—beriberi accumulatum—there is repeated infection, with intermittent fever and complications; it is often fatal. The pathology is unknown; the neurotic nature is not proved. Treatment is entirely symptomatic; prophylaxis basis itself on the following facts: (1) The immunity of Europeans in Japan as long as they remain on European diet; (2) the disappearance of the disease from the Japanese navy after regulation of the diet on European lines; (3) the unintentional ridding of Japanese penal institutions of the disease by regulation of the diet and, especially, the preparation of the food. The disease appears in some way to be connected with marine animal food; the "rice-theory" must be abandoned. Race and sex play no role, but children are in a marked degree immune.

4.—A married woman had severe cough for several years, eventually **tuberculous infiltration** of both apices, with **cavity-formation** in one. Tubercle-bacilli were present in the sputum. The cough in time became paroxysmal and was associated with intense dyspnea requiring morphin and chloroform. On one occasion breathing ceased entirely and only active artificial respiration restored the patient. Careful examination revealed manifold hysterical stigmata, and under proper treatment the paroxysms of dyspnea ceased, and eventually the patient recovered from her tuberculosis, gaining 28 k. in weight. The author thinks that the cough was principally nervous, at least in the beginning—it came on after a slight cold during pregnancy—and that the neurosis was the etiologic factor in the patient's entire illness. The tubercle-bacilli, he believes, had nothing to do with the pulmonary lesions, and he cites a number of other examples of nervous cough in persons in whom pulmonary signs existed and eventually disappeared under hydrotherapeutic and toxic treatment. [There is certainly a nervous cough, and it may occur in phthisical persons, but there is no good reason for considering focal processes in the lungs as sequences of the nervous cough, pure and simple, and looking upon the tubercle-bacilli as secondary.]

July 28, 1898. [24. Jahrg., No. 30.]

1. Concerning Rhythmic Contraction of the Soft Palate. BERNHARDT.
2. The Ganglion-Cells of the Hearts of Mammals. SCHWARTZ.
3. Bilateral Paralysis in the Distribution of the Brachial Plexus. E. SEHRWALD.
4. A Case of Anesthetic Leprosy, with the Results of the Necropsy. SARGIS.
5. Tumors of the Spinal Cord. A. FRAENKEL.
6. Disease of the Heart in Consequence of Excessive Laughter. LEOPOLD FEILCHENFELD.
7. Athetosis and Tenia Saginata. RUEDEL.

1.—Bernhardt reports a case exhibiting contractions of the whole soft palate, the posterior pharynx, and the base of the tongue, which occurred about 120 times in a minute. This was accompanied by a peculiar noise in the ears, and a slight noise could be heard by bystanders as far as 2 feet from the patient. This resembled the sound made by snapping the finger-nails over each other. The face was entirely quiet if the mouth were closed. When the head was bent backward, there was slight alternating elevation and depression of the larynx. The noise in the ear might be due to contractions of the tensor tympani or of the tensor veli palati, which would bring the lips of the Eustachian orifice together. Contraction of the soft palate has been repeatedly noticed with facial tic, but the reason for the associated occurrence is not obvious, as the facial nerve does not supply the muscles of the palate, which are chiefly supplied by the vagus or by the fifth nerve. Probably, however, the same cause that gives rise to the facial irritation will irritate the other nerve-centers. The disorder usually occurs in nervous individuals. The patient in the case reported, however, showed no signs of nervousness and no hysterical symptoms. The etiology is not known.

2.—Schwartz reports extensive investigations into the location of the **ganglion-cells of the heart**. He believes that the varying results obtained by other observers



is due to the fact that they always sought the cells in connection with nerve-fibers, and perhaps thus mistook other objects for nerve-cells; that the methods employed were not as good as those now in use; that only small portions of the heart were examined; and that there are other cells in the heart that are often taken for ganglion-cells, and they have, perhaps so far, been considered ganglion-cells. Schwarz chose a method of staining that colors only the ganglion-cells and not the nerves, namely, the use of thionin, and he made serial sections in sagittal, frontal and transverse directions. As a result, he concludes that the ganglion-cells are found in only a certain localized portion of the heart, which is on the posterior side of the auricle, more on the left than on the right, and directly about the sinus, extending below to the transverse coronary sulcus. The ganglion-cells lie directly under the epicardium. This work may be of extreme importance in explaining the actual pathogenesis of angina pectoris, as sclerosis of the coronaries is so common in association with this affection, and the ganglion-cells lie in immediate relation to these vessels. There were no ganglion-cells in the myocardium of the ventricle or auricle. Beside the ganglion-cells there were a large number of cells very much like mast-cells, scattered widely along the nerves and vessels, both in the pericardium and the myocardium, and these have probably been frequently mistaken for ganglion-cells. These observations on the localization of ganglion-cells are entirely in accord with those of his upon embryos.

3.—Schrwald reports a case of **brachial paralysis** in a new member of a "Turnverein," who was attempting to "chin himself" on a bar, and being unable to accomplish this, he hung for some time with his arms strongly extended and the full weight of his body hanging below. The resulting paralysis affected the distribution of the brachial plexus on each side, and is explained by the fact that in this position the clavicle is pushed backward and upward, so that it presses on the nerves running along the scalenus medius and the serratus anticus between the head of the clavicle and the first rib.

4.—Samgin reports a case of **anesthetic leprosy**, in which the disease began with chronic rhinitis, soon followed by pain in the limbs and anesthesia; the latter afterward became complete, excepting over a very small area between the shoulder-blades. There was paralysis of the facial nerve on both sides and on both ulnar nerves, the latter being much thickened. Death occurred from amyloid degeneration of the kidneys. Examination of the skin showed atrophy of the glands and hair, and round-cell infiltration with giant-cells in the neighborhood of the vessels and glands. The infiltration was much less about those places that had been affected earlier. Lepra-bacilli were found in but few sections, but there was some detritus of bacilli found in a number. There was interstitial inflammation about the ulnar and peroneal nerves affecting the perineurium, the epineurium, and the endoneurium. The myelin in these nerve-trunks was almost entirely destroyed, and only slight remnants were left. The bacilli could not be found in all sections through the nerves, and when found were either in the lepra-cells or in the interstitial tissue. In the spinal cord, there was a secondary ascending degeneration, without any specific infiltration. Goll's columns were sclerosed, especially in the cervical portion. The cells showed no change. The fibers in the spinal ganglia were partly degenerated, and there was some hyperplasia, with multiplication of the nuclei. The nerve-cells were deeply pigmented. There were no lepra-bacilli in the central nervous organs. The frequent apparent absence of lepra-bacilli from sections of the skin is to be attributed to their rapid destruction, and this is due to the formation of dense interstitial tissue.

5.—The compression of numerous nerve-roots, contrary to the effect of circumscribed tumors, causes a variable picture. As multiple tumors rarely affect the spinal cord itself the diffuse root-symptoms are usually the most outspoken. The posterior portions of the pia are most commonly affected; hence, the most constant symptom is violent pain and this was the first complaint in Fränkel's cases. In a more advanced period, motor symptoms, usually contractions, occur. As syphilis was absent there was no disease of the vertebra, and this spoke strongly in favor of compression of the nerve-roots by the tumor. Benda adds to the report some remarks upon the nature of the tumor, first speaking of the forms of the neuroglia-cells. Those cells that covered the cavity in

the tumor were undoubtedly ependymal. The growth was undoubtedly not a mixed epithelial and connective-tissue formation, and cannot be classed with tumors of the choroid plexus. The development of the ependymal canals was limited to a small central portion of the tumor removed some distance from the direction in which this malignant growth was spreading, and they were absent from the most recent nodules; therefore, the ependymal canals did not develop as a result of the tumor-formation, but were the starting-point and probably the oldest portion of the tumor. This does not of itself indicate an embryonal origin, though there are some things in the study of the growth that do speak for such an origin, while the fact that there is no evident connection with the central canal or the ventricles speaks strongly against this. Benda has found van Gieson's method valuable in staining sections that have been preserved in alcohol, differentiating with the fuchsin-picric-acid mixture. It is not as useful as the Weigert method, but it is important, because it can be used after hardening in alcohol.

6.—Feilchenfeld reports the case of a 13-year-old girl, who with her companions had been laughing excitedly for about an hour. This was followed by pain in the chest, cough, and dyspnea, and afterward by an unquiet sleep. Similar attacks were repeated in much the same order several times a day, and the patient was found with an anxious look, cyanosed, and orthopneic. The pulse was small and frequent. The action of the heart was weak, but no murmur was audible. Camphor and morphin failed to bring relief. At first there was no increase in the area of cardiac percussion-dulness, but as the attacks continued, dulness extended to the right parasternal line with reduplication of the second pulmonary tone and a loud systolic murmur. All of these signs vanished within a week after the onset of the attacks, which had become now much less frequent. The opinion is expressed that a spasmodic contraction of the diaphragm in laughing had caused paresis of the vagus (which passes through this muscle) and thus had brought on the attacks. The nerves, however, are believed to have subsequently entirely recovered, but the heart-muscle had been weakened by the frequent attacks, and this gave rise to the intermittent attacks of cardiac incompetency.

7.—Ruedel reports the case of a 13 year-old child, who had been anemic for some time, had lost strength, and had acquired peculiar athetoid movements and spasms of the arms and feet. These were of short duration. Tonic treatment causing no improvement, a suspicion of tapeworm arose, and the administration of anthelmintics caused the discharge of *tænia saginata*, and the conclusion is reached that the spasmodic movements were reflex in character.

#### Münchener medicinische Wochenschrift.

August 2, 1898. [45. Jahrg., No. 31.]

1. The Treatment of Chronic Rheumatism with Hot Air. AUGUST BIER.
2. The Local Application of High Degrees of Heat by the Electric Current. S. SALAGHI.
3. Nerve-Cells and Gray Matter. FRANZ NISSEL.
4. Injuries to the Ureters During Celiotomies. FRITZ BLUMENFELD.
5. Concerning Tropon as a Food for the Sick. H. SCHMILINSKY and G. KLEINE.
6. Concerning Landry's Paralysis. WILHELM GOEBEL.
7. What is the so-called Typical Inspiratory Stridor of Nursing Infants. GEORG AVELLIS.

1.—Bier has for a number of years employed the **hot-air** treatment in cases of **chronic articular rheumatism**. The good effects that have undoubtedly attended this form of treatment, are, in his opinion, to be attributed to the hyperemia that the hot air induces. He believes, however, that even better results may be obtained by the mechanical production of passive hyperemia. This treatment he has carried out by encircling the limb above the joint with a tightly applied rubber bandage, a cotton bandage having been previously applied from the distal end of the extremity to the distal side of the joint involved. This dressing may be allowed to remain in place 12 hours at a time, either during the day or during the night. The rubber bandage should be applied as tightly as possible, always consulting the comfort of the patient, as the greater the hyperemia induced,



the greater will be the effect of the treatment. The results obtained from applying this treatment in cases of chronic articular rheumatism have been more gratifying than those obtained from the treatment with superheated air.

2.—Salaghi draws attention to the fact that **electricity** always heats the conducting medium, and that the **heat** is proportionate to the **resistance**. If an electric current is passed through a metallic conductor, consisting of an outer thinner portion and an inner thicker portion, the thinner part will be heated, while the thick portion will show practically no increase in temperature, so that one can in this way regulate temperature. The conductor need weigh but little, take up but little room, and the thinner it is the higher will the temperature become. The current is passed through a double flexible conductor, which allows the patient to make movements while the process is going on, and it is, therefore, more comfortable than hot baths. The ordinary electric lighting apparatus can be used, and the current can be passed to any exact location that is wanted, all of which are great improvements upon the hot-air baths.

3.—Nissl discusses his own recent work and that of others on the **changes in the nerve-cells and gray matter following intoxications**, and contends that these cannot be the immediate and first results of the action of the poisons. To add to other reasons, he has finally been able to administer to animals a small but increasing dose of morphin, veratrin, nicotin, and alcohol, and has found that the result upon the cortex is the same after the use of any of these drugs. He believes that this indicates at least that the nerve-cell changes have nothing immediately to do with their function. The first changes are probably chemic or physiologic, or both, and consist in disturbances of metabolism. Nissl believes that it must be recognized that nervous tissue consists of nerve-cells and a specific nervous substance besides, namely, a fibrillar substance between the cells. The latter seems to be the conductor of the nerve-functions, and is the most highly differentiated cell-protoplasm that exists in the body of animals. The gray matter cannot be looked upon, as it was formerly, as simply a peculiar anatomic portion of the nervous organs, but it has a special functional purpose. This can only be proved when it is shown that there exists a substance that is not glia, and that can not be accounted for by the number of nerve-processes and nervous fibers added together. (The paper is to be continued.)

4.—Blumenfeld has made an extensive study of the literature of **ureteral traumatism during abdominal section**. The first cases of this accident recorded are those of Walther, Simon, Nussbaum, and Hegar. Gusserow's case is described in full as being of exceptional interest, a case of malignant ovarian tumor the size of a man's head, situated in the left ovarian region. Tauffer reports five cases. Dorff, of Brussels, records a case, Kelly four cases, Wertheim one case, and Keen, Bardenhauer, Bowée, Müller, Paulik, and J. Veit one each. Still others are reported, namely, those of Emmet, Cushing, Irvine, Leopold, Fritsch, Poggi, Monari, Durante, Novaro, Boavi and Bastianelli. A short review of some of these cases is given. (The article is to be continued.)

5.—In the course of experiments in **metabolism** when feeding patients upon **tropon**, Schmilinsky and Kleine made analyses of the substance itself, and found the amount of nitrogen to be about 89%. Their experiments show that the absorption of tropon, while satisfactory, was scarcely as good as that of meat. There was no special influence upon the body-weight, so that any hope of increasing flesh by means of this food seems somewhat remote. There was no effect upon the system in general, and none upon the digestive tract. Vomiting and diarrhea were absent. The taste of the substance is not distinctly unpleasant, nor altogether pleasant, and its sandy consistence is somewhat disagreeable; it was taken, however, without objection by most of the patients. These experiments, then, seem to indicate that tropon is a valuable nutritive substance when one wishes to avoid injuring the gastro-intestinal tract by ordering a finely divided substance of little volume, to replace loss of body-albumin, or to afford a change of diet in diseases like diabetes.

6.—Goebel reports the case of a man, 30 years old, who had previously acquired syphilis, and was exposed to a wetting while covered with sweat. The next day he had pains in the arms, soon afterward could not mount steps, and four days later he saw double, and could not walk well.

When admitted into the hospital he was almost entirely paralyzed in the legs, and nearly completely paralyzed in the arms. There was convergent strabismus and complete bilateral abducens paralysis. The sphincters were normal, as was also sensation. The reflexes were all lost. Faradic reaction was normal everywhere. There was some difficulty in swallowing. Ocular examination showed, beside what has been mentioned, some paralysis of the superior oblique; beginning paresis of the right internal rectus and inferior rectus; and beginning right-sided ptosis. Paresthesia of the extremities came on; facial paralysis appeared on both sides; there was lagophthalmos, and finally the patient died with cyanosis and failure of respiration. On postmortem examination the spleen was found enlarged and the kidneys very hyperemic. There was no distinct macroscopic change in the nervous system, excepting a reddish-yellow color of the lumbar cord, and hyperemia of the sciatic nerve. Microscopically, many of the muscles showed distinct fatty degeneration. The same was true of the peripheral nerves of both the lower and the upper extremities, and of the oculomotor nerves. The cauda equina showed the same changes, and in its nerves there were a number of areas in which the parenchyma was entirely destroyed, and replaced by glia. In the middle of each of these areas was a bloodvessel. The areas themselves resembled those that have been described as occurring with pernicious anemia. Excepting in the lumbar portion there were no spinal-cord changes. The medulla and the pons were examined, and showed, in general, fatty degeneration of the fibers, absence of nuclei, persistence of the axis-cylinders, and overfilling of the blood-vessels without any special cell-collections about them. A detailed description of portions of these structures is given.

7.—Avellis notes that there have been a number of cases of **infantile inspiratory stridor** practically cured by operation upon the thymus. At one time a theory prevailed that laryngismus stridulus was due to pressure of the thymus. This is no longer accepted, but Avellis insists that this inspiratory dyspnea of infants is due to the pressure of the thymus upon the trachea. This view is supported by the age at which it occurs, and by the fact that it is even frequently congenital; by the occurrence of spontaneous recovery of itself without treatment; by improvement or aggravation upon change of position; by the high position of the larynx; by the fact that the air enters one bronchus more readily than the other; and by the effect of operation. In some cases it may of course be due to enlarged bronchial glands. Avellis has in some cases given thymus gland and spleen, but it is difficult to say exactly how much of the result was due to this treatment, as the cases usually got well of themselves.

### Revue de Médecine.

June 10, 1898. [Vol. xviii, No. 6.]

1. Three New Cases of Primary, Progressive Muscular Dystrophy in Children. (*Illustrated*.) P. HAUSHALTER.
2. A Clinical Study of Intravenous and Subcutaneous Injections of Saline Solutions in the Treatment of Infections and Intoxications. (*Concluded*.) J. BOSC and V. VEDEL.
3. A Study of Inequality of the Pupils in the Sick and the Well Persons. (*Concluded*.) H. FRENKEL.
4. Lancereaux's Method (Subcutaneous Injections of Gelatin) of Treating Aneurysm of the Ascending Aorta and of the Aortic Sinus. BOINET.

1.—Haushalter reports several cases of **primary progressive muscular dystrophy**. The first occurred in a girl of 7 years, without neuropathic heredity, that had a convulsion at the age of 3 months, and did not walk until 2 years old. At the age of 6 she had an attack of measles, after which she commenced to walk with some difficulty. Her condition when examined was as follows: The face was absolutely without expression, all the muscles being motionless, even those closing the eyes, and the head fell forward. The muscles of the thorax were equally involved, particularly those of the scapulæ and the clavicles; the deltoid was unaffected. The other muscles of the arms were present, although reduced in volume. The abdominal parietes were excessively thin. The muscles of the thigh were



only slightly involved; the knee-jerks were abolished. There were fibrillary twitchings in the muscles, but they did not yield the reaction of degeneration. The case belongs to the facio-scapulo-humeral type (Landouzy-Dejerine), and it is remarkable on account of its development after an attack of measles, and because it is the only case in the family. The right side of the body is chiefly affected, excepting the face, where the disturbance is practically symmetrical. The second patient was a child in whose father symptoms of muscular atrophy first appeared at the age of 14. He had been addicted to the use of alcohol from the age of 7 years. Other cases of myopathy had also occurred in his family. The child, a girl 5 years of age, showed atrophy, particularly of the supraspinous and infraspinous muscles, and of the thighs, particularly of the adductors. The reflexes were abolished. The case is remarkable for the symmetry of the lesions, which predominated in the muscles of the shoulder-girdle and the pelvis. It cannot be placed strictly in any one form of this disease, but resembles most closely the pseudo-hypertrophic form, without hypertrophy (Leyden-Möbius). The third patient was free from neuropathic heredity, developed normally, but soon showed loss of power in the legs, followed by similar feebleness of the arms. At the age of 2 years she presented the appearance of a well-developed child, excepting that the limbs were round and showed no indication of muscular tissue, the volume being entirely due to a very considerable development of adipose tissue. The little patient was unable to stand. The limbs were absolutely flaccid and remained in any position in which they were placed. The arms, however, could be slightly moved, and the child could convey a morsel of food to her mouth. The reflexes were abolished, and there were fibrillary twitchings. The intelligence was good. This case represents a form of precocious amyotrophy of rapid course with predominating symptoms in the lower limbs, and belongs, therefore, to the disease called by Hoffman the progressive spinal amyotrophy of early infancy. The affection is characterized by the rapid atrophy of the muscles; the presence of adipose tissue and a secondary lordosis with muscular retraction. Fibrillary twitchings may or may not be present. Pathologically there is simple atrophy of the muscles, and degeneration or disappearance of the cells of the anterior cornua of the spinal cord, and of the anterior roots. The prognosis is unfavorable, death usually occurring not later than the sixth year. Haushalter believes that there are numerous transitional forms of the disease.

2.—Bosc and Vedel continue their paper upon the **intravenous and subcutaneous injections of saline solutions**. They report 5 cases of cholera, in all of which intravenous injections were given, with recovery in 3. The first patient was bled 250 gm. and subsequently received an injection of 2 liters of saline solution. There was immediate improvement and subsequent recovery. The second and third patients also recovered under the same treatment. The fourth was in a state of profound prostration; he improved after the injection, but relapsed and died 11 hours later. The fifth patient died within 8 hours. During the injection increase in the strength of the pulse was noted, with improvement in the expression, and slowing and improvement of the respiration, and diminution of the diarrhea. The stages following the injection are cold, heat, and a return to normal. For a short time all signs of improvement continue and the patient may even smile. The tendon-reflexes disappear and then, after an interval of 10 or 20 minutes the patient begins to vomit and have severe diarrhea. The expression becomes anxious; there is cyanosis, followed by a violent and general chill; at the same time the temperature rises rapidly, reaching even 40° C. This constitutes the stage of heat; the face is cyanosed, the conjunctiva injected, the pulse and respiration more frequent. In about 40 minutes the patient commences to return to the normal condition. The temperature, however, remains high for several hours, then declines and on the following day great improvement may be noticed. The cyanosis disappears, and the pulse and respiration become more vigorous and normal in frequency. This typical reaction does not appear in all cases. Of 22 cases of various diseases reported, recovery took place in 13, and death to 9. No matter what the disease, the general results were always approximately the same. The moderate reactive effects are characterized by initial improvement; rise of temperature; first

slowing and then increase in the rapidity of the pulse; increase in the blood-pressure; acceleration in the respiration, which becomes difficult at the moment of the chill; then the chill, often accompanied by excitement and irregular movements, and associated with nausea, vomiting and diarrhea. This is succeeded by the warm stage, with high temperature, profuse sweating, and general vaso-dilatation. The second stage, or that of descent, is characterized by a fall of temperature, persistence of the sweats, micturition, and gradual return to a normal condition. This in turn followed by the reactionary phase, during which the temperature may remain normal, or be slightly elevated; the pulse is better and much slower, and the patient shows indications of rapid recovery. Incomplete reaction is sometimes observed, followed by collapse, with persistent low temperature, or the temperature may not rise above normal, or it may remain elevated during the stage of descent, or, indeed, no reaction at all may occur. This modification probably depends upon the gravity of the case. Frequently, recovery ensues after a single injection. Sometimes, however, it may be necessary to repeat this, each repetition being followed by a normal or an atypical reaction. The effect varies with the local lesion. In cases of pneumonia, resolution may be hastened. In cases of septicemia the organs may be so stimulated that the suppurating processes remain localized. In cases of dysentery the action is more obscure, but the lesions certainly disappear very rapidly. Subcutaneous injections produce the same reaction as intravenous injections, but the reaction occurs more tardily, or is less intense and less persistent. Upon the local lesions they also act less vigorously, and it is often necessary to repeat them a number of times. Indications for the injection are the existence of an infective or toxic condition. The most urgent symptoms are failure of the circulation, indicated by a weak, rapid pulse, and low blood-pressure. The existence of anuria or oliguria, and the presence of albumin in the urine, is not a contraindication. If the reaction is slow or incomplete, particularly if the temperature remains high, while in other respects the patient is better, or if recovery does not ensue within a reasonable time, or if the local symptoms persist, the injection should be repeated. If only one symptom is urgent, such, for example, as anuria, or cardiac weakness, and the patient's condition is not excessively grave, subcutaneous injection is perhaps desirable, and it may occasionally be used among a series of intravenous injections. Otherwise, the intravenous injections are preferable. The complications are the introduction of air into a vein, thrombosis, phlebitis, or abscess following a subcutaneous injection. The conditions of the various organs usually mentioned as contraindications are not really contraindications at all. Even in a case of cerebral apoplexy with arteriosclerosis, great benefit was observed. The action of the injections appears to be the elimination of toxic substances by stimulating the emunctories. The toxins, however, do not appear to be eliminated by the urine, for hypotoxicity of the urine was observed after the injection, and curiously the urine seemed to possess properties antagonistic to the toxic properties of the blood. It has also been supposed that the injections favor oxidation, thus causing transformation of the toxins, and they probably act by washing the cells, not only those of the parenchymatous organs, but also the red blood-cells, and perhaps directly stimulate the leukocytes.

4.—Boinet reports the case of **aneurysm** occurring in a man, 38 years of age, accustomed to hard work, who had previously been treated for sclerosis of the right lung. When first seen, a swelling was observed in the region included between the second and fifth intercostal spaces on the right side. This pulsated, and over it was heard a systolic murmur. Despite treatment the symptoms grew worse, there was increased dyspnea, and tuberculous expectoration. The patient finally died with all the symptoms of intense cyanosis. At the autopsy the interesting features were: the absence of hypertrophy of the left heart, a condition that Boinet believes to be common with aneurysm without arterial sclerosis. Both lungs were infiltrated with tubercles, and the aneurysmal mass pressed upon and partially occluded the pulmonary artery. It is believed that this obstruction of the pulmonary artery accounts in part for the development of tuberculosis of the lung. From an examination of the sac it was concluded that the gelatin had no influence upon the deposition of clots.







FIG. 3.—Fly amanita, *Amanita muscaria*, top view. Poisonous. Two-fifths natural size.

The eyes were closed at the time, but later were open. One of the prominent early symptoms was sudden jerking back of the head. He was taken to the hospital at 11.30."

Dr. J. B. Littlewood was called in at 10.15 o'clock, and gave two  $\frac{1}{100}$  gr. atropin tablets and 15 gr. of potassium bromid hypodermically. Cold sweats were prominent. I quote the following epitomized statement of Dr. John J. Darby to Mr. Chesnut, Nov. 12, 1897:

"I was called in at 11.30 o'clock. At 9.10 Dr. K. had stated that his eyesight was uncertain and that he had double vision. Instead of one specification on his desk, he saw two. He was not at this time sick at his stomach. At 12.30,  $\frac{1}{2}$  gr. of apomorphin was given without effect. Both strychnin and atropin were administered, of atropin  $\frac{1}{30}$  gr. at 11.55, and afterwards  $\frac{1}{30}$  gr. every two hours. Altogether about  $\frac{1}{10}$  gr. of atropin was received by the patient in 24 hours. Castor oil and sweet oil were given internally at 12.30. Vomiting was not produced until 7.30 o'clock. There was no rise in temperature."

### THREE CASES AT SHIPPENSBURG, PA.

The following notice appeared in the *Pittsburg Dispatch* of August 29, 1898:

"KILLED BY TOADSTOOLS.—Mrs. Jeffers and Child Died from Eating Supposed Mushrooms.—*Chambersburg, Pa.*, August 28.—Mrs. George Jeffers and child, of Philadelphia, died in Shippensburg to-day from the effects of eating toadstools. Rev. Geo. Jeffers, who is a minister of the Lutheran Church, was spending his vacation in Shippensburg with his wife's father, George Davidson. Friday, he and his wife, while on a walk in the country, found what they thought were mushrooms. Instead of mushrooms they were toadstools. Some time after, the three persons became very sick. Mrs. Jeffers and her daughter, 8 years old, died this morning, and Mr. Jeffers is in a very critical condition." It will be noticed by Dr. Berry's letter that the child was 5 years old. The family above mentioned were communicated with, asking particulars of the unfortunate accident, and the enclosed very courteous letter from the physician who attended the cases, Dr. E. S. Berry, was received:

SHIPPENSBURG, Pa., August 31, 1898.

DR. D. W. PRENTISS.

*My Dear Doctor:*—Mr. Davidson asked me to reply to your letter asking information in regard to the cases of mushroom-poisoning recently under my care, and I take great pleasure in doing so. The species that were eaten were the *Amanita muscaria*, or fly-mushroom, the *Amanita phalloides*, or skunk mushroom, and a few that resembled the *Amanita verna*. The majority were pure white, with a rank, pungent, disagreeable odor, with collar and sheath. The father ate about a dozen, the mother about eight, and the child, 5 years old, about four or five. They were eaten for

dinner at noon on the same day they were gathered, and a few more eaten again at supper. They became very sick about 12 o'clock that night, with violent vomiting and purging, affecting all alike. No particular pain was complained of, no headache, but cramps in the calves of the legs. After about 24 hours they became jaundiced and had a peculiar glazed appearance about the eyes. Muscular twitchings took place, noticeable especially in the face, arms, and hands. The next 12 hours found them very greatly depressed, irregular action of the heart, jerky respiration, and dilated pupils. The child had convulsions for about 4 hours up to 2 hours before death. All this time it had clonic spasms of groups of muscles, more especially the flexors. The mother was affected in much the same way, except convulsions. She was very restless and irritable, and was unconscious for about 5 hours before death. The father got better in 12 hours after symptoms appeared, and was able to attend the funeral two days later. He had irregular action of the heart and a temperature of about 100°. In the fatal cases death seemed to be due to paralysis of the centers of respiration. The treatment was atropin and morphin hypodermically, followed by stimulants, whisky, ammonia, and nitroglycerin. I forgot to mention that the urine was saffron-color, becoming purple just before death. The perspiration and breath smelled of the mushrooms, and was very offensive. I have come to the conclusion that if I ever have a case of this kind again I will bleed and purge freely at first and then inject subcutaneously a sterilized normal salt-solution.

The fungi were eaten at noon, after which a slight feeling of nausea and headache was experienced. At supper, at 6 o'clock, more of the mushrooms were partaken of, and again the same feelings as above, but more intense. At bedtime, 10 o'clock, they all complained of not feeling well. At 1 o'clock the same night, I was called upon to send some medicine, for "cholera morbus" they said. At 3.30 I was again called up and told that the patients were getting worse. I then went to see them and found them vomiting and purging fearfully. The vomitus was first of food, then it became choleraic, as also did the stools.

Morphin, gr.  $\frac{1}{2}$ , with atropin sulph., gr.  $\frac{1}{150}$ , was given hypodermically and repeated in two hours, which controlled the vomiting and purging only partially. After 36 hours the skin became jaundiced and the stools were between a pink and purple color. The second day nervous symptoms developed, and at about 11 o'clock of the third day, two of the patients were dead, the child dying about half an hour before the mother. Both were unconscious for 6 hours before death.

Sincerely yours,  
EDWARD S. BERRY, M.D.

The accompanying plates are from drawings made by Dr. Berry of the principal species of mushroom eaten.

It is evident, from Dr. Berry's letter, that the symptoms in these cases were due to the combined poisoning of the two species mentioned, those of poisoning by the death-cup predominating. The choleraic diarrhea and vomiting, the discharge becoming red towards the last, with cramps in the calves of the legs and the purple urine, belong to the effects of *phallin*. Phallin produces hemoglobinuria from decomposition of the red blood-corpuscles, setting free the color-matter. So also the discharges from the bowels are usually colored red. In postmortems the serum of the blood, especially in the large veins, is found red.

THE POISON OF *AMANITA MUSCARIA*.—The chief poisonous principle of the fly-amanita is muscarin, a colorless syrupy alkaloid, without odor or taste, which forms crystalline salts with acids. But another poisonous substance also occurs in the plant, the chemical nature of which is not known. The fatal effect on flies—from which the name "fly-amanita" comes—is due to this





FIG. 4.—*Amanita phalloides*. Color, white. Partly open. (From drawing by Dr. E. S. Berry.)

latter. Muscarin is not poisonous to flies.<sup>3</sup> The other poisonous element in *A. muscaria* appears to be volatile, since it disappears upon drying. This may also account to some extent for the impunity with which the dried fungus is taken by the native Kamchatkans as an intoxicant.

Muscarin was first isolated by Schmiedeberg and Koppe in 1869. It has since been made synthetically by treating cholin with nitric acid.

SYMPTOMS OF POISONING usually appear in from half an hour to an hour after eating the mushrooms, though sometimes a longer period of 12 hours or more elapses before the actual symptoms of poisoning appear.<sup>4</sup> The symptoms usually begin with more or less violent colic, attended with vomiting and subsequent diarrhea, the dejecta containing debris of the mushrooms. There is also contracted pupils and salivation.

To these symptoms cerebral disturbances are added; the patients feel as if drunk and become violently excited. Some suffer from disturbed vision—they see things dimly as though wrapped in a mist. This dimness of vision may amount to blindness. Visions float before the eyes. Attacks of epilepsy and trismus may occur. Then a state of drowsiness gradually sets in, in which the excitability of the reflex nerves is more or less retarded or quite abolished. The pulse becomes slow and threadlike, with constricted arteries. Respiration is generally short and stertorous, the pupils are dilated as death approaches, the extremities and face

are cold, and death may supervene from progressive loss of heart-power.

If the case takes a favorable turn the patient awakes out of the state of sopor, his pulse becoming quicker and stronger, his respiration freer, and, after a time, recovery is complete. The more rapid the awakening, the more rapid the recovery. Or the sopor may deepen into coma, which passes to the fatal issue. The period of duration of the whole course of muscarin-poisoning is very different, dependent especially on the quantity of the poison taken, on absorption, on the early occurrence of vomiting, etc. Death may supervene in from 6 to 12 hours after eating the poisonous fungi, but usually the course is more protracted, the fatal result occurring toward the end of the second or third day.

The quantity of the fly-fungus essential to produce poisoning cannot be precisely stated, but it is certain that even small portions may give rise to violent symptoms.

According to Schmiedeberg and Koppe, 8 to 12 mg. of muscarin (gr.  $\frac{1}{8}$  to gr.  $\frac{1}{4}$ ) will kill a cat in from 15 to 18 minutes, and 3 to 4 mg. (gr.  $\frac{1}{20}$  to gr.  $\frac{1}{15}$ ) will kill a cat in from 2 to 12 hours; 5 mg. (gr.  $\frac{1}{12}$ ) produces in the human subject contraction of the pupil, loss of focalizing power (spasm of accommodation), abundant secretion of saliva, determination of blood to the head, flushed face, perspiration over the whole body, giddiness, anxiety, griping, rumbling in the bowels, and weight in the head (Schmiedeberg). These symptoms are almost identical with the action of pilocarpin.

It is the influence of muscarin upon the brain which induces the natives of Northeastern Asia, the Koraks, Kamchatkans, and others, to use these fungi as an intoxicant. They become at first very cheerful and merry. This condition is followed by drowsiness and sleep, from which they awake in a state of exhaustion.



FIG. 5.—Death-Cup, *Amanita phalloides*. Pure white. (From drawing by Dr. E. S. Berry.)

<sup>3</sup> As a fly-poison this fungus has been in use in Europe for hundreds of years, and its use as an intoxicant in Northeastern Asia is not less ancient.

<sup>4</sup> The difference is in the amount of the poison taken and in the rapidity of absorption. If the mushrooms have been eaten along with a meal of other food, absorption will be slower than if taken on an empty stomach.

During the stage of excitement they are partially delirious and experience visions of a varied character. The passion of these races for this form of intoxication is so great that they resort to disgusting practices to keep up the effect.<sup>5</sup>

Muscarin is excreted from the system unchanged by the kidneys.

It appears from the above that muscarin first produces increased excitability of the brain, and later reduced excitability, merging in cases of poisoning into paralysis of the brain-cells. The action on the heart is similar to that upon the brain-centers; first, increased frequency, followed by slow, feeble pulse. The action upon man and the lower animals is identical. In the latter, poisoning by muscarin is followed by stoppage of the heart, in relaxation or diastole due to paralysis of the inhibitory nerve. Application of muscarin to the heart-muscle produces the same effect. This condition is relieved and the heart again begins to beat upon the administration of atropin. So also a previous use of atropin will prevent this poisonous action of muscarin (Schmiedeberg and Koppe). There is an analogy between the action of muscarin in paralyzing the heart and the similar effect of aconite. The physiologic antidote of aconite is digitalis.

In the effect of the fly fungus in causing cerebral excitement followed by sopor, there is a resemblance to such intoxicants as opium, cannabis indica, and alcohol. The effect on respiration corresponds with that upon the heart. The respiration is at first quickened, then becomes slow and shallow, and finally, as coma supervenes, stertorous.

From a review of the symptoms above enumerated it will be noticed that there is a certain resemblance in the action of muscarin to the action of three different alkaloids, namely, morphin, pilocarpin, and aconitin:—to morphin in causing drowsiness and sleep; in contracting pupils, and in paralyzing respiration; to pilocarpin in producing salivation and sweating, in contracting pupils, and especially in causing convulsive spasm of accommodation, even to the extent of producing loss of vision<sup>6</sup>; to aconitin in heart-paralysis and "death with heart in diastole." It is to be remarked that atropin is the physiologic antagonist of morphin and pilocarpin, and that digitalis is the physiologic opposite of aconite.<sup>7</sup>

TREATMENT OF POISONING BY THE AMANITA MUSCARIA.—The consideration of the symptoms enumerated above and of the known physiologic action of muscarin indi-

cates the measures of treatment which are most efficacious.

1. Clear out the stomach and bowels of any of the fungi that may remain. As emetics, the non-depressing emetics, sulphate of zinc, and sulphate of copper are preferable. They are prompt and thorough in their action. But it may occur that emetics given by the stomach fail to act, on account of a benumbed condition of the nerves.

Then apomorphin, 4 mg. hypodermically, and repeated if necessary, should be tried. If these be not at hand use mustard, a tablespoonful in half a tumblerful of water, repeated if necessary. Sulphate of zinc 1.00 gram (gr. 15) every 15 minutes until vomiting occurs. Sulphate of copper 0.30 gram (gr. 5) every 15 minutes until vomiting, may serve. The importance of not leaving any of the mushrooms in the stomach or intestines appears from the fact that in autopsies in cases of mushroom-poisoning portions of the fungi are found in the alimentary canal.

In consequence of this, there is progressive absorption of the poison going on from the inception until these debris are got rid of. No doubt many of the fatal cases so result from this cause. Muscarin is rapidly eliminated by the kidneys, and if we can rely upon the reports concerning urine-drinking by the Kamchatkan debauchées it must be very completely eliminated.<sup>8</sup>

If these agents fail, wash out the stomach with the stomach-pump. To act on the bowels, castor oil is preferable, to which, in cases of torpidity, croton oil may be added. Purgatives producing watery exudation into the intestines, such as the salines, should not be given, because water dissolves the muscarin and might thus promote its absorption.

2. Atropin is the physiologic antidote to muscarin. It should be given without delay hypodermically, in doses of from  $\frac{1}{2}$  to 1 mg. (gr.  $\frac{1}{120}$  to gr.  $\frac{1}{60}$ ), until it shows its characteristic action on the system, and then the effect kept up as the severity of the case may demand. Dilatation of the pupils seen in some cases is probably due to atropin.

3. Sustain the action of the heart. From heart-failure comes the principal danger. First of all in importance is absolute rest in the recumbent posture; then, as in case of aconite poisoning, give the tincture of digitalis 10 drops, every 2 or 3 hours, according to the effect. If there should be blanched skin, pale face, and cold extremities, give nitroglycerin 1 mg. (gr.  $\frac{1}{60}$ ) hypodermically as frequently as required,

<sup>5</sup> Ziemssen, vol. xvii; Art. Fungi-poisoning. Also Blyth on Poisons—Muscarin-poisoning.

<sup>6</sup> Krenschel: Ueber die Wirkung des Muscarins auf Accommodation und Pupille. *Arch. f. Ophthalm.*, Bd. 20, Abthl. 1, p. 135. Ziemssen, *Cyclop.*, vol. xvii.

<sup>7</sup> Post-mortem appearances are not characteristic, if we except the finding of the remains of the fungi in the alimentary canal. It is reported that cadaveric rigidity appears very early and rapidly passes off. (Bornträger and Kussmaul: *Verhandlungen des naturhistorisch-medizinischen Vereins zu Heidelberg*), I, p. 18, 1857. Fatty degeneration of the organs, especially the liver, is found, and ecchymosis in various organs.

<sup>8</sup> The method of going on an amanita debauch is described as follows: A number of natives get together in a room and proceed to take their dose, which is an average of ten dried mushrooms to a person. They are moistened, placed in the mouth, and swallowed without chewing. The effect comes on rapidly, being characterized by visions, hallucinations, mental exhilaration and excitement, followed by drowsiness and sleep. This continues for 10 or 12 hours. The urine is saved and when the first effect of the fungi passes off it is renewed by drinking the urine. It is said that thus the spree can be kept up for a week on the original dose.—(Ziemssen's *Cyclop.*, vol. xvii; Art. Fungi-poisoning.)



instead of the digitalis. If the heart still continues weak and the vital powers are sinking, galvanism to the cardiac region and inhalations of oxygen may be employed. Efforts to keep the patient alive should be unrelenting, for we know that if the crisis can be tided over, nature will eliminate the poison and recovery be assured. If death does not occur by the end of the third day, recovery is probable. Other unfavorable symptoms are to be appropriately met as they occur. For nourishment, concentrated foods are preferable, such as the meat extracts, egg-albumen, milk, and the like. Nourishment is best given in small quantity at frequent intervals. There is no chemical antidote to muscarin known. Tannic acid, the chemical antidote to alkaloids generally, does not precipitate it. Acidulated water (vinegar and water) used before cooking, to remove the poison from these mushrooms, would be worse than useless as an antidote. It dissolves the poison and would promote its more rapid absorption.

**THERAPEUTIC USES OF MUSCARIN.**—It may be stated at the outset that from present knowledge, muscarin is entitled to no place in the *Materia Medica*. That it is a dangerous poison we know; but so far at least there is no evidence of its beneficial action as a medicine. It has been administered in night-sweats and in polyuria,<sup>9</sup> but its usefulness is doubtful.

**THE "DEATH-CUP," AMANITA PHALLOIDES.**—This account would be incomplete without some mention of this, the most deadly of the mushrooms. Nearly all the cases of fungi-poisoning are caused either by this or the fly-amanita—the larger proportion by the death-cup. The poison of this latter is *phallin*, a toxalbumin, which, like white of egg, is coagulated by boiling water, which decomposes it and renders it inert. As indicating the virulence of the poison, a case is reported of a boy, 12 years old, having been killed by eating one-third of a raw cap.

The action of phallin on the system is very different from that of muscarin. Phallin destroys the red blood-corpuscles, liberating the hemoglobin. Thus the blood-serum is found of a red or cherry color. There is also likely to occur red serous discharges from the bowels, and the urine to be of a red color (hemoglobinuria).

The symptoms of poisoning do not appear until from 9 to 14 hours after the ingestion of this fungus, while in the case of the fly-amanita they usually occur in from 15 minutes to 2 hours. This difference alone is

sufficient to differentiate between the two. There is considerable pain in the bowels, cramps in the legs, choleraic diarrhea, and vomiting. These symptoms persist, generally without loss of consciousness, until death, which ensues in from 2 to 4 days from exhaustion. The treatment of phallin-poisoning is unsatisfactory. It does not kill by heart-paralysis as does the muscarin, but by disorganization of the blood and consequent exhaustion.

The only remedy that offers hope is intravenous injections of the normal saline solution (7 parts of common salt to 1000 of warm water), used freely, and repeated if necessary.

Unless vomiting and purging have already occurred, they should be induced by such remedies as already indicated for poisoning by the fly-amanita; that is, mustard or zinc sulphate as an emetic, and castor oil as a purgative.

No antidote to phallin is known. Other treatment is symptomatic—stimulants, tonics, and food, as indicated. Mr. Chesnut states that the *Amanita verna*, or destroying angel, of Bulliard, is regarded by some experts as identical with the death-cup. It has the same poisonous action.

The importance of poisoning by these fungi has given an impetus to the formation of mycological clubs, and such societies have rapidly multiplied throughout the United States during the past few years.

The value of edible mushrooms as an article of food is undisputed, both as a luxury and from the highly nutritious properties, containing, as they do, nitrogenous matter. As a food they compare favorably with beefsteak, and are so rich in nitrogen that one can easily eat too freely with subsequent discomfort. But it is necessary to distinguish between the edible and the noxious varieties, and in this direction are the mycological societies especially useful.

Since by far the largest number of cases of mushroom-poisoning come from eating one or the other of these two species, the fly-amanita or the death-cup, I think it of interest to append the accompanying descriptions and plates.<sup>10</sup> I wish to express my thanks to Mr. Chesnut for his kind courtesy and assistance in preparing this paper.

W. Spirig (*Correspondenz-Blatt für Schweizer Ärzte*, July 1, 1895) reports a case of **typhoid fever** occurring in a man of 20 **treated by antityphoid serum**. The serum, which was prepared by Häfner, of Berne, had been tested experimentally on animals, and it had been found that the animals recovered if a sufficient quantity of the serum was used after the injection of an otherwise fatal amount into the peritoneal cavity. The injection of 10 cu. cm. of the serum every afternoon, with one exception, for 6 days, proved that the temperature was considerably reduced; that there were no untoward symptoms following its use, and it is believed that diarrhea, prostration, and the general condition were favorably influenced.

<sup>10</sup> Taken from the report of Mr. V. K. Chesnut, of the Botanical Division of the U. S. Department of Agriculture. (Bulletin No. 20. Principal Poisonous Plants of the United States. Government Printing Office, 1898.)

<sup>9</sup> In Merck's Index, 1896, it is listed as follows:

"*Muscaria Nigra*.—Nitric acid salt from *Agaricus muscarius*, 15 gr. vial, \$5.50.  $C_8H_7NO \cdot HNO_3$ . Brown, deliquescent mass, soluble in water and alcohol. Antihydrotic, antispasmodic. Uses: instead of eserine, and as antidote to atropine. Recommended for diabetes insipidus. Dose, 2 to 3 gr. Must not be exposed to air. *Muscaria Scaberrima*.— $C_8H_7NO \cdot H_2SO_4$ . Brown, greasy mass, soluble in water. Dose, 2 to 3 gr. 15 gr. vial, \$5.50." It is difficult to obtain pure and keep unchanged."

In a recent work on *Materia Medica* and Therapeutics (Shoemaker, 3d edition) the dose of muscarin is given as gr.  $\frac{1}{16}$  to gr. 2 (!!) This latter would be a dangerous dose if the muscarin is a reliable preparation. Five mg. (gr.  $\frac{1}{20}$ ), according to Schmiedeberg and Koppe, produced in man very decided toxic symptoms.

THE PHYSIOLOGIC CHEMISTRY OF URIC ACID.<sup>1</sup>

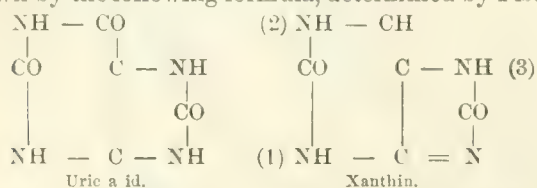
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I SHALL not attempt to discuss with any detail the chemistry of uric acid. This would require more space than I have at my disposal. Moreover, this subject has been elaborately treated in various textbooks and I shall devote my time to the less widely known facts concerning the formation of uric acid in the body and the influence of various physiologic and pathologic conditions on the same. I am sure that a discussion along this line will be of more practical interest to medical men than a statement of the more purely chemic facts concerning uric acid.

The discovery by Horbaczewski that uric acid is formed when spleen-nucleus is broken up in the presence of oxidizing agents, such as fresh blood or dilute solutions of hydrogen dioxid, has given us the true explanation of the origin of uric acid in the mammalian body and has served as the basis of numerous researches, some of which have already proved of value to the science of medicine. Before this discovery, the chemist had taught us to regard uric acid as a result of imperfect oxidation, the completed product of which is urea, but the physiologist has been unable to satisfactorily demonstrate this supposed relationship between urea and uric acid. The experiments of Horbaczewski show that the amount of uric acid and other xanthin-substances formed in the body is a measure of nuclein-metabolism. In other words it indicates the relative number of nucleated cells that are at the time undergoing disintegration-processes. The researches of Hoppe-Seyler, Miescher, Kossel, and others, on the nucleins, opened up the way for the discovery of Horbaczewski and have since confirmed and amplified the value of his research.

Uric acid belongs chemically and physiologically to a group of substances sometimes known as nuclein-bodies because they have their origin in cell-nuclei. In this group, beside uric acid, we find adenin and hypoxanthin or sarkin (known as the sarkin-bodies), guanin, xanthin, heteroxanthin, paraxanthin, theobromin, theophyllin, caffein, and carnin. All of these, with the exception of uric acid, are basic in character and are generally designated as xanthin-bases. Kossel and Krüger have proposed that these bases, together with uric acid, might be designated as alloxuric bodies, because all of them contain both alloxan and urea residues. The constitution of uric acid and xanthin is shown by the following formula, determined by Fischer:



It will be seen that xanthin contains three imido-groups, and by the replacement of a hydrogen-atom of either of these with a methyl-group a monomethyl-xanthin results. Three monomethyl-xanthins are possible, in accordance with the imido-group replaced. Krüger and Solomon have shown that heteroxanthin is a monomethyl-xanthin, with a methyl-group substituted for the hydrogen of the imido-group in position (3). By the substitution of two methyl-groups three compounds are possible. Theobromin is formed in this way by substitutions in the imido-groups (2) and (3), and theophyllin by substitutions in groups (1) and (2). Paraxanthin is probably the third dimethyl-xanthin, but this has not been positively demonstrated. Caffein is trimethyl-xanthin. Theophyllin and caffein are not known to be constituents of the animal body, but the fact that they are constituents of beverages quite universally employed by man renders their close chemic relationship to other members of this group a matter of physiologic interest.

I have stated that the amount of the alloxuric bodies formed within the organism is a measure of the extent to which nuclear disintegration is going on. It will, therefore, be desirable to inquire into the chemic constituents of cell-nuclei, because we must there find the antecedents of the alloxuric bodies. It is probably true that no two kinds of cells have nuclei of exactly the same composition. Differences in function indicate variations in chemic composition and structure, and, so far as cellular chemistry has advanced, this indication has been confirmed. It will be best to review briefly the facts that have been so far ascertained concerning the chemic composition of cell-nuclei.

The lymphocytes of the thymus-gland have large nuclei that constitute the greater part of the cell, and for this reason, as well as from the fact that they can be obtained in abundance and quite free from other tissue, these corpuscles furnish suitable material for the study of the chemic composition of the cell-nucleus. Lillienfeld has made a most valuable contribution to our knowledge of the composition of nuclear substance in his researches on these lymphocytes. He has found that in the dry state these corpuscles yield more than 68% of a body to which he has given the name nucleohiston, and less than 2% of albumin. These figures probably fairly represent the relative amounts of nuclear substance and cytoplasm in these cells. It may be remarked that Lillienfeld has found nucleohiston not only in the lymphocytes of the thymus and lymphatic glands, but also in the cells of the spleen, the testicles, the unripe spermatozoa of the carp and in the epithelial cells of the small intestine. This nucleohiston is probably identical with the "tissue-fibrinogen" with which Wooldridge, some years ago, secured immunity against experimental anthrax, and which he believed was a compound of lecithin and an albumin.

Nucleohiston may be extracted from finely divided

<sup>1</sup> Read before the Association of American Physicians, May, 1898.



thymus-glands with water, and precipitated from its aqueous solution with acetic acid, avoiding an excess in which the recently precipitated body is soluble. The moist substance is soluble in dilute acids and alkalies and in dilute neutral salt-solution. It is worthy of note that nucleohiston gives the Millon and xanthoproteic reactions, and the biuret-coloration faintly on standing. It contains a little more than 3% of phosphorus. Novy has found that subcutaneous injection of 0.3 gram or more in rabbits causes elevation of temperature of from 1° to 1.5° C., preceded by a short period of subnormal temperature. Nucleohiston, as well as its nucleic-acid constituent, precipitates diphtheria-toxin, but, as Novy states, this undoubtedly is a mechanical effect; the toxin being carried down with the precipitated proteids. However, nucleohiston does have some destructive action on diphtheria-toxin after the mixture has stood for some time in vitro, although separate injections do not protect animals. (Novy.)

Nucleohiston is easily broken up into histon and nuclein. This can be accomplished by artificial gastric digestion or by the action of 0.8% hydrochloric acid on an aqueous solution, or by boiling the aqueous solution. The nucleins obtained from nucleohiston by these different methods are very similar, but apparently not identical.

Histon was discovered by Kossel, in 1884, in the nuclei of the red corpuscles of the goose. It has marked basic properties, but in other respects it resembles the peptones. It gives the biuret-reaction. Histon is precipitated from its aqueous solution by saturation with neutral salts; thus a relationship to the globulins is indicated. Its basic character is shown by the fact that it is thrown down from aqueous solution of its hydrochlorid on the addition of ammonia. When injected intravenously histon destroys the coagulability of the blood, but histon-plasma is quite unlike so-called peptone plasma. The views of Lilienfield on the influence of nucleohiston and its components on the process of coagulation will be stated later. Novy has shown that histon is much more poisonous than Lilienfield believed. Two hundred milligrams often killed guinea-pigs weighing 300 grams or less. Repeated injections not only failed to establish tolerance, but apparently increased susceptibility. Necrotic areas often formed about the point of inoculation in animals that recovered. The effect on the temperature is similar to that of nucleohiston. From the results obtained by Woolbridge and some subsequent investigators, it has been suggested that histon might have antitoxic properties. The careful researches of Novy on this point fail to confirm this belief. He finds that histon does not protect against separate subcutaneous injections of the toxins of diphtheria and tetanus, or against inoculations of the bacilli of anthrax and hog-cholera; that, in a mixture of histon and diphtheria-toxin, the latter is destroyed in a few minutes, but that this is due

in part, if not wholly, to the acidity of the histon-solution.

Leukonuclein, the body conjugated with histon in nucleohiston, is easily decomposed into an albuminous substance and nucleic acid. With the former we are not concerned, but nucleic acid is, for the purpose of the present inquiry, the most important constituent of the nucleus. Nucleic acid is characterized (1) by its large phosphorus-content, nearly 10%; (2) the fact that on being broken up it yields xanthin-bases; and (3) its marked germicidal properties. All nucleic acids, so far as studied, those from yeast-cells, spleen, marrow, spermatozoa, nervous tissue, the thymus, etc., are bactericides. This property of the nucleins, discovered by myself in 1893, has been confirmed by Kossel and others. To furnish the germicidal nucleic acid is apparently one of the most important functions of the leukocyte, and in setting free this substance the corpuscle itself most probably is destroyed.

Although it has no direct bearing on the physiology of uric acid, it may be of interest to insert at this place Lilienfield's views concerning the influence that nucleohiston and its components have upon the coagulation of the blood. He says:

"The leukocytes contain in their nuclei a markedly acid substance, nucleohiston, which, when added to spontaneously coagulable fluids, or to cold, filtered horse plasma, or to proplastic and fibrinogen fluids, treated with fibrin-ferment, retard their coagulation greatly. Caustic lime and caustic baryta split up nucleohiston into leukonuclein and histon. Nucleohiston dissolved in lime or baryta-water causes coagulation in proplastic and fibrinogen fluids. From the above the following conclusions may be drawn: (1) Histon is the coagulation-retarding constituent of nucleohiston; (2) leukonuclein is the coagulation-hastening constituent. Naturally after having the histon split off, nucleohiston loses its retarding action on coagulation. Leukonuclein and nucleic acid are not in and of themselves capable of producing fibrin from fibrinogen. They split off from fibrinogen thrombosin, the immediate antecedent of fibrin, and then, on the addition of a soluble lime-salt, thrombosin is converted into fibrin. By employing a solution of nuclein in lime-water both steps in the process are accomplished. The nuclein splits off the thrombosin, which in the lime-solution passes into fibrin. . . . The intensity of this effect is in direct proportion to the amount of nucleic acid in the nucleoprotein molecule, and is greatest when nucleic acid itself is used. . . . Fibrin is a lime-compound of thrombosin."

Lilienfield found that neutral solutions of nucleohiston injected into the jugular vein of living animals caused the formation of thrombi, while the blood allowed to flow from the carotid remained fluid. Injection of neutral solutions of histon-hydrochlorid to the extent of 0.3 gr. to each kilo of body-weight renders the blood subsequently drawn noncoagulable. Injection of neutral leukonuclein-solution causes the formation of thrombi, and the blood subsequently drawn coagulates instantaneously.

It must not be inferred that all nucleic acids cause coagulation of the blood. I have injected large quantities of yeast nucleic acid intravenously in rabbits and as much as one gram of this acid in man without causing any such effect. Moreover, the statements of Lilienfield, as quoted, have been very properly criticised

by Cramer, who believes that Lilienfield's so-called thrombosin is nothing more than fibrinogen.

It is possible that the slowness with which blood sometimes was seen to coagulate in the old days of venesection, giving time for the partial subsidence of the red corpuscles and the formation of the "buffy coat" of leukocytes, was due to the presence of an unusual quantity of histon in solution, and that our professional ancestors were not far out of the way when they attributed this phenomenon to an "inflammatory" condition of the blood.

Nucleinic acid, on being decomposed, yields the nuclein-bases and thymic acid. The kind and amount of nuclein-bases yielded by different nucleinic acids are by no means constant. Yeast nucleinic acid, on being heated with a dilute mineral acid, yields relatively large quantities of adenin, hypoxanthin, guanin, and xanthin. In his earlier work on thymus nucleinic acid, Kossel was able to detect among its decomposition-products only one of the nuclein-bases, adenin, and he proposed that this nucleinic acid should be called adenylic acid. More recently, however, he has found, in addition to adenin, not only guanin, but also a new base, cytosin. It will be best, for the present at least, to designate the different nucleinic acids by the source from which they are obtained, and we shall continue to speak of yeast nucleinic acid, thymus nucleinic acid, etc. Of thymic acid it is necessary to say only that it contains all the phosphorus present in the original nucleohiston-molecule, and that it can be decomposed into a base, thymin, and levulinic and phosphoric acids. The following represents the steps in the breaking up of the molecule of nucleohiston:

Nucleohiston	Histon,	( Albumin, Nucleinic acid,	Nuclein- bases, Thymic acid,	Thymin, Levulinic acid, Phosphoric acid.
	Nuclein,			

I have gone somewhat into detail concerning the composition of the nucleus of the leukocyte, because when we come to study the phenomenon of chromatolysis, in which process uric acid is formed, we must know something of the antecedents and the by-products before we can estimate the cost or appreciate the real value of the special product. Indeed, I must say a few more words concerning the chemic composition of nuclear substance. In many cells the basic histon is not present, and in its place there is formed a basic proteid of much simpler molecular structure. These proteid bases are known under the general name of protamins. Miescher, who may be regarded as the discoverer of nuclein, obtained in 1874 a basic substance from the spermatozoa of salmon, to which he gave the name protamin. This base is combined in these cells with nuclein. In 1894 Kossel took up the study of protamin, and he has since shown that in the spermato-

zoa of many animals there are proteid bases combined with nuclein. In no two animals are the basic substances identical, and Kossel proposes that the name protamin be used generically, and he calls the base obtained from the spermatozoa of the salmon, salmin, and that from the sturgeon, sturin. Kossel is of the opinion that a protamin-group will be found in all proteids, and that it is from this group in the proteid molecule that leucin and basic substances are derived. He is also inclined to the opinion that the histon of nucleohiston consists of a protamin combined with an albumose. In fact he has prepared such a compound, which, he states, gives all the reactions of histon. However, before it can be definitely shown that the protamin-group is contained in histon it must be shown that protamin-derivatives can be obtained from histon. On being heated with sulphuric acid and water a protamin can be split up into histidin and arginin. The last-mentioned base was discovered by Schulze in the conglutin of lupin-sprouts, and later was obtained by Hedin in the decomposition of horny substance with hydrochloric acid and stannous chlorid. Schulze and Sikiernik have shown that arginin on being heated with baryta yields urea. The protamin-molecule contains the basic group, but does not contain the tyrosin or amido-acid group. This encourages us to hope that the structure of the proteid molecule will some time be known.

Recently H. Kossel has demonstrated the very interesting and important fact that the protamin, sturin, has marked bactericidal properties. This shows that the nucleated cell contains in addition to its nucleinic acid a germicidal basic substance, and is additional evidence that certain animal cells are well protected against bacterial invasion.

Mathews, working under Kossel, has recently studied the spermatozoa of the boar, bull, herring, and the sea-urchin, *arbacia*. He finds that the sexual cells of the herring consist principally of nucleinic acid combined with a protamin to which he gives the special name clupein; that the basic substance in the spermatozoa of the sea-urchin is more nearly related to histon than to protamin; and that those of the bull and boar contain neither protamin nor histon.

We are now ready to proceed to the study of the origin of the alloxuric bodies in the body. It will be evident from what has already been said concerning the chemistry of nuclear substances that the alloxuric bodies can originate only when there is nuclear disintegration, and then not until the nucleinic acid is broken up. The dissociation of the basic substance and the nuclein is not enough to lead to the formation of the alloxuric bodies. Indeed, nucleinic acid may be set free and manifest its germicidal action without the production of uric acid and its immediate antecedents. The destruction of the nuclear substance must be quite complete before these bodies are formed. The solution and disintegration of nuclei are designated as the pro-



cess of chromatolysis. Some of the conditions under which the alloxuric substances may be formed in the body may now be stated.

(1) Every nucleus comes from a parent-nucleus. Every cell must at some period of its existence be nucleated. No cell can be built up or organized except through the agency, direct or indirect, of a nucleus. Every cell that is capable of reproduction must contain a nucleus. I do not mean to say that a certain amount of cytoplasm is not also necessary to reproduction. There may be some difference of opinion on this point, or the nuclei of some cells may require cytoplasm, while the nuclei of other cells may not, but there can be no doubt that the existence of a nucleus is essential to the process of reproduction. However, this is not the sole function of the nucleus. As has already been stated, the nucleus is essential to the organization of the cell; cells that are never to reproduce themselves are organized through the agency of nuclei. Biologically, the nucleus is that part of the cell which is essential for growth and reproduction. Quantitatively, it may constitute the greater part of the cell, or it may be relatively a very minute fraction of it. Developmentally, it is that part of the cell that determines both form and function. From the standpoint of heredity the nucleus is that part of the cell through which generic and specific form and function are transmitted. It is that part of the cell that makes life, potentially at least, continuous. Nuclein is the material of which nuclei are composed. Many of the cells formed in the animal body are destined, after having reached a certain period of growth, solely to serve other cells. These may, and some of them certainly do, lose their nuclei after having reached the stage of development necessary for them to reach before they can perform the function for which they are brought into existence. Chromatolysis and cell-disintegration are not in these cells simultaneous processes. The erythrocytes of mammals are cells of this kind. Erythroblasts may be studied in the spleen and bone-marrow of both young and adult animals. (The formation of erythroblasts in the spleen of the adult animal in a normal condition is slight, and some deny that it occurs.) I shall not enter into a description of the well-known changes observed in the formation of these cells. I wish only to call attention to the fact that the nucleus, after having perfected the red blood-corpuscle, so that it may serve as a carrier of oxygen, disappears, and, so far as we know, is not further utilized. The suggestion that the nuclear substance of the erythroblasts, after having performed its function in the organization of the cell, may be utilized in the building up of some proteid of the plasma, does not affect the general statement here made, even if it be true. It matters not for the present purpose whether the chromatolysis observed in these bodies be accomplished by a gradual solution of the nuclein or a more active expulsion of the nucleus, the result is the

same in either case. Nuclein is broken up, alloxuric bodies are formed, and uric acid, the most highly oxidized of these substances, is the chief representative, in the urine, of the nuclear metabolism resulting, as here indicated, in the body. As the formation of red blood-corpuscles is a continuous process, this source of the alloxuric bodies is a never-failing one. The modifications to which it is subject in disease need not be discussed here. During fetal and early extrauterine life, the number of cells undergoing this kind of chromatolysis must be relatively much greater than subsequently. It must not be inferred that chromatolysis, without simultaneous cell-disintegration, is confined to the red corpuscles. I have referred to these as a suitable illustration of a process that goes on to a greater or less extent in other tissues.

(2) The leukocytes are a constant but quantitatively variable source of uric acid and other alloxuric bodies. The biology of the leukocyte is one of the most interesting problems in medicine. Within a few years past it has been demonstrated that an increase in the number of leukocytes in the blood is followed by increased elimination of alloxuric bodies. However, there are exceptions to this rule. It is too early yet to attempt a scientific classification of the different forms of hyperleukocytosis and hypoleukocytosis. However, this need not deter us from gathering together the somewhat meager and incomplete facts on the subject and endeavoring to read the lessons they teach.

There may be hyperleukocytosis without consequent increase in the amount of alloxuric bodies eliminated. The researches of Kühnau have demonstrated this. It has long been known that the intravenous injection of inert substances, such as cinnabar or carbon in finely divided form, will cause a great increase in the number of leukocytes in the blood. After a short time no free particles of the dust can be found in the blood, but the leukocytes are laden with the particles. Hoffmann and Langerhans observed these pigment-bearing corpuscles 20 days, and Ponfick 70 days, after the injection of the dust. They are found most abundantly in the small capillaries, where the leukocytes undoubtedly have the best opportunity to absorb them, on account of the slow movement of the foreign particles. Then the leukocytes bear the foreign particles out of the blood-vessel and, apparently at least, permanently deposit themselves with their burden in some extravascular cell. I say apparently, because we cannot positively assert that the corpuscles remain permanently with the particle. However this may be, the studies of Kühnau have shown that there is no increased elimination of alloxuric bodies following the most marked hyperleukocytosis induced in this manner. These experiments are of further interest inasmuch as they indicate that the life of the leukocyte may be much longer than is usually supposed to be possible.

In the second place, there may be hyperleukocytosis

with increased elimination of the other alloxuric bodies, but with no increase and sometimes with a marked decrease in the amount of uric acid formed and eliminated. This seems to be true in the graver anemias. However, more extended investigation along this line is desirable. Kühnau suggests that this may be ascribed to deficient oxidation due to the great decrease in the red corpuscles, as Hobaczewski has shown that nuclein must be broken up in the presence of an oxidizing agent in order to yield uric acid. It should be stated that it is not supposed that the xanthin-bases are formed and then oxidized into uric acid. When nuclein is oxidized and then broken up it yields uric acid and the xanthin-bases. When broken up without previous oxidation, it yields the xanthin-bases, but no uric acid. Kolisch and Stejskal report a case of grave anemia, terminating in death within a few days, in which the uric acid was much below, and the xanthin-bases greatly above, the normal. The studies of Neusser and of Westphal, in which the former reported an excess and the latter a deficiency of uric acid in pernicious anemia, do not throw any additional light on this subject, inasmuch as they failed to estimate the other alloxuric bodies. The experimental studies in which the red corpuscles have been destroyed by the use of some dissolving agent show somewhat diverse results. However, it is, so far as I know, quite generally true that marked destruction of the red corpuscles is accompanied or followed by hyperleukocytosis, the increase in the leukocytes being absolute as well as relative. I believe this to be true of malaria, although the evidence on this point has been somewhat conflicting. The difference in the observations is apparently due to the time with reference to the paroxysm when the leukocytes have been counted. Kühnau probably states the facts correctly when he says that during the paroxysm blood-pigment is set free. The large polymorphonuclear leukocytes in the spleen and marrow absorb the red-corpuscle detritus, infected red-corpuscles and entire plasmodia. During this stage the leukocytes will be found in diminished number in the blood. After the paroxysm the melaniferous leukocytes appear in the blood. This is the stage of hyperleukocytosis. It is of short duration and is followed by leukolysis and a consequent increase in elimination of both uric acid and the other alloxuric bodies. The same investigator found a similar decrease in the red-corpuscles, with subsequent hyperleukocytosis and augmented elimination of alloxuric bodies after subcutaneous injections of pyrogallol. A priori, it might be inferred that the hemoglobin from the broken-down red corpuscles is the leukotactic substance, but Kühnau found that intraperitoneal injections of hemoglobin have but slight leukotactic or leukogogic effect.

In the majority of instances of hyperleukocytosis there is subsequent leukolysis and a consequent augmentation in the amount of alloxuric bodies, including

uric acid. This is true of digestion-leukocytosis and of that which follows the injection of nuclein. It is also true of the leukocytoses that accompany various inflammatory diseases.

It would be of great interest to know the successive products that result in disintegration of the leukocytes. Much more extended and exact research is necessary before we can speak very definitely on this point. However, the idea that the value of a hyperleukocytosis in combating an infectious disease is to be measured by the number of leukocytes, without reference to the agent used to increase their number, is certainly wrong. That hyperleukocytosis induced by nuclein and allied bodies does augment the germicidal properties of the blood and increase the resistance of the animal body against certain pathogenic microorganisms has been demonstrated by the researches of Wooldridge, myself, Grammatschikoff, Pawlowski, Loewy and Richter, Hahn, Jacob and others. These have uniformly found that a nuclein-hyperleukocytosis does slightly increase the resistance of the body against bacterial infection. All, furthermore, conclude that the extent to which the resistance can be increased by this means is, with present means, limited. That every hyperleukocytosis does not increase the resistance to infection has been shown by direct experiment. It is well known, for instance, that the injection of pilocarpin causes an extraordinary hyperleukocytosis, and yet an amount of a culture of the pneumococcus from which the control might escape and the nuclein-animal would surely not be affected, kills the pilocarpin-animal, notwithstanding the great increase in leukocytes. Whether this is due to the depressing action of pilocarpin on the heart, as supposed by Loewy and Richter, or to some other cause, cannot be at present stated. It is certainly true that in some forms of leukolysis, nucleinic acid is set free, and to this must be ascribed the increased germicidal action of the serum obtained from hyperleukocytotic blood. It has been found to be necessary to modify the phagocytic theory of Metschnikoff. It is now generally agreed that the leukocytes combat the bacteria by virtue of some chemic constituent of the former.

The question now is whether we are to believe with Buchner that his so-called alexins are secretions of the leukocytes, or that the leukocyte disintegrates, and that one or more of the substances resulting from this disintegration act as germicidal agents. Havet seems to have been the first to show that in hypoleukocytosis the germicidal action of the blood is reduced, while on the other hand, in hyperleukocytosis the bactericidal action is augmented. Hahn has confirmed the second half of this statement.

The following reasons may be given for the belief that the increase in the germicidal properties of the blood following hyperleukocytosis is due to leukolysis and is not a result of an increased secretion of a germicidal substance by the leukocytes:



(a) By artificially breaking up the leukocytes outside the body a germicidal substance, nucleinic acid, is obtained; (b) increased elimination of the alloxuric bodies follows hyperleukocytosis in all instances with the exceptions already stated; (c) the microscopic studies of Botkin and Löwit show that hyperleukocytosis is followed by an increased quantity of leukocytic debris in the blood; (d) the experiments of Loewy and Richter show that hyperleukocytosis is followed by the appearance in the blood of albumoses that are not found under normal conditions, or are found only in minute traces. These albumoses are believed to come from the disintegration of the leukocytes. However, I must state that I do not consider the method employed by these investigators wholly free from chances of error.

Experiments made to determine whether or not change in leukocytotic content alters the glycolytic property of the blood have been contradictory, and consequently do not furnish evidence for either side of this question.

Whether the hypoleukocytosis that immediately follows the injection of nuclein, albumose, bacteria, toxins, etc., is due to leukolysis or to leukopenia has not been positively determined.

(3) A third source of uric acid and allied bodies is the food. It has long been known that increased consumption of animal food increases the amount of uric acid formed in the body. This increase is probably due to two causes: (1) Meat contains nucleo-proteids and alloxuric bodies in small amount. (2) Digestion-leukocytosis is greatest after meals rich in animal food and is likewise increased by alcoholic beverages. The fact that nuclein-containing foods increase the amount of alloxuric bodies formed and eliminated has been demonstrated by several investigators, among whom may be mentioned Umber, Mayer, and Hess and Schmoll. It is needless to dilate upon these statements.

(4) The physiologic disintegration of various nucleated cells in the body must contribute slightly to the formation of alloxuric bodies. This is especially true of epithelial and glandular cells. According to the studies of Weintraub, 100 grams of meconium contain from 0.3 to 1.0 gram of uric acid, and the daily stool of an adult from 0.1 to 0.5 gram of alloxuric bases.

(5) Some poisons, such as lead and alcohol, stimulate certain cells to abnormal proliferation. Karyokinesis assumes pathologic significance and many of the rapidly forming cells break down and their nuclei suffer dissociation-changes.

(6) Certain pathologic growths are accompanied by marked cell-proliferation and, as many of these cells, including their nuclei, disintegrate, this may be a source of uric acid and allied bodies in cases of carcinoma, etc. However, the scope of the work assigned me does not require me to go into a discussion of a

pathologic condition, and I gladly leave their consideration to those who can speak more authoritatively.

### SUBCUTANEOUS NAILING, EXPLORATORY INCISION, AND THE EXTENDED ELBOW IN CONDYLOID FRACTURES OF THE HUMERUS.<sup>1</sup>

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(A contribution from the surgical laboratory of the Philadelphia Polyclinic and College for Graduates in Medicine.)

IN accepting the invitation to take part in the discussion on Injuries of the Elbow, it is my desire to present in a succinct manner such personal opinions as will lead to a similar expression of views from other surgeons. That which I shall contribute to the debate, will advocate no very striking novelty in procedure and will record no conspicuous discovery in surgical pathology. It will simply show the conclusions in regard to certain problems in practical surgery at which I have arrived, after thoughtful consideration of personal experience, combined with a limited amount of experimental work and more or less familiarity with surgical literature.

These conclusions are, for the sake of brevity and clearness, formulated as definite propositions:

1. *Ankylosis of the elbow-joint after condyloid fractures is usually due to imperfect reduction of fragments or incomplete restitution of structural relations.*

The interference with mobility results largely from distinct alterations in shape of the articulating surfaces, due to the incorrect coaptation, though overgrowth of bone from stripped-up periosteum, and ossific depositions in the sero-ligamentous capsule aid in its production. Experience seems to show that mobility of the joint is, as a rule, promptly regained when the play of the olecranon and coronoid processes around the trochlear surface is not obstructed by bony displacement or new deposits. In persons of an arthritic diathesis intra-articular and pararticular adhesions may undoubtedly restrict motion, but these are not the usual cause of ankylosis after fractures of the humeral condyles. To hemorrhagic effusions into the joint have been attributed adhesions of newly formed connective tissue and thickenings of the synovial membrane; but these causes of ankylosis are relatively unimportant.

Powers, of Denver, has reported<sup>2</sup> an interesting instance of ankylosis in extension, after fracture at the elbow, in which exploration disclosed a broken-off coronoid process situated *behind* the joint. This was removed, part of the broken condyle chiselled away and the patient finally given almost perfect mobility of the elbow. This case is valuable in showing that displaced bone causes ankylosis, and that incision at the

<sup>1</sup> Read by invitation at the meeting of the British Medical Association in Edinburgh, July 27, 1898.

<sup>2</sup> *Medical Record*, 1896, vol. i, p. 615.



FIG. 1.—Gunstock deformity of the left elbow after fracture of the lower end of the humerus.

time of the reception of the injury would probably have permitted restoration of bony contour and prompt recovery of functional activity.

2. *Conservation of the normal angle between the axes of the humerus and the ulna is desirable.*

Much attention has been given in recent years to the possibility of fractures of the lower end of the humerus causing cubitus varus or "gunstock deformity" of the arm, thereby interfering with the so called "carrying function" of the upper limb. This deformity has been supposed to result from ascent of a detached internal condyle; descent or rotation forward and inward of a detached external condyle; and rotation forward and toward the middle line of the body of the condyloid mass, after transverse or comminuted fracture.

H. L. Smith, of Boston, believes<sup>3</sup> that this deformity is not likely to occur from fracture of a single condyle, but after a break traversing the entire width of the humerus; and he considers that the deformity has been given unnecessary importance in the determination of the best posture in which to treat fractures at the lower end of the arm-bone. Stimson, of New York, on the other hand, has asserted<sup>4</sup> that displacement of a

condyle, not exceeding  $\frac{1}{4}$  inch or  $\frac{1}{8}$  inch in amount, may effect a change in the humero-ulnar angle. The analogous displacements produced intentionally, by Ogston's condyloid and Macewen's supracondyloid osteotomy, for the relief of knock-knee, suffice to explain the mechanical factors in the production of gunstock deformity of the arm and convince me that fractures of one or of both condyles may produce the unsightly deformity. This I have proved by experimental fractures; some detaching the internal condyle, others causing more complicated bony lesions of the lower end of the humerus. I am not so certain of the deformity being readily produced by descent of the external condyle, when it alone is separated from the shaft of the bone.

It must be recognized that the humero-ulnar angle differs greatly in individuals. I have found it less conspicuous in children and women than in men; and believe it to be most marked in those of well-developed muscular power. Smith has found it to vary between  $-5^{\circ}$  and  $+30^{\circ}$ , and he states that even in the same person the two uninjured arms may differ as much as from  $10^{\circ}$  to  $15^{\circ}$ . He also found that the width of the condyloid portion of normal arms differed on the two sides of the same person. The average variation in 50 cases measured was 3.1 mm. He investigated 75 cases of united fracture of the elbow, treated according to traditional methods, to find that the average difference on the two sides was 5.5 mm. The increased width was, if I correctly understand him, on the side injured. He makes the important



FIG. 2.—Gunstock deformity of the left elbow after fracture of the lower end of the humerus.

<sup>3</sup> *Boston Medical and Surgical Journal*, October 18, 1894, p. 339.

<sup>4</sup> *Trans. Am. Surg. Assn.*, IX, 1894, p. 270.



statement that in 20 cases treated by *acute* flexion, the average difference in width after union was 4 mm., and that in these same cases the carrying angle was unchanged in 40%. In the 75 cases treated by various persons in the ordinary ways the carrying angle was unaltered in 10%.

It is probably true that the conversion of the humero-ulnar angle into a straight line, or its change to an angle in the opposite direction, has little effect on the wage-earning capability of the patient; but it certainly produces an unsightly deformity, and impairs the symmetry and integrity of the human mechanism. It does not, of itself, interfere with the mobility of the joint. I recently saw a young lady who, about 15 years ago, when a child, broke the condyloid portion of the left humerus. I took part in the treatment of the injury, which was by means of a rectangular, trough-shaped posterior splint. She has marked gunstock deformity, as a result of the defective treatment, but has perfect mobility of the joint. The hand is, of course, brought nearer the thigh when the limb hangs vertically, but this defect brings no special inconvenience. It might, perhaps, be a disadvantage to a woman in the lower walks of life, who was compelled to carry burdens in the dependent hand. I refer to this patient because it was my dismay at the deformity remaining after the treatment adopted that first forcibly directed my attention to the disadvantage incident to right-angled flexion in the management of these bony lesions; and because she by chance came into my office, after many years' absence, while I was preparing this paper.

It is an acknowledged duty of the surgeon to restore, after injuries, the anatomic symmetry, as well as the functional usefulness. Hence, no extended argument is necessary to prove that it is best to adopt that line of treatment which will attain both ends. Retention of the normal humero-ulnar angle of a broken elbow is, therefore, not only desirable for cosmetic reasons, but is demanded by anatomic and surgical considerations.

3. *Fixation is satisfactorily obtained by nailing the fragments together with long nails driven through the skin.*

The occasional deformity and limitation of motion resulting from fractures of the condyloid portion of the humerus are doubtless due, not only to incomplete reduction of the broken bone, but to imperfect fixation, which has allowed the properly readjusted fragments to slip again into abnormal relations. Stimson is, probably, not alone in his belief<sup>5</sup> that, in "inter-condyloid fracture with marked separation, there is no practicable means surely to maintain reduction." He says, further, that the impossibility of direct control of the fragments, the contraction of muscles, and the pressure of fascia combine to make the result largely a matter of chance. This opinion was confirmed, he states, by seeing and feeling in open fractures the difficulty caused by the shiftings of the fragments.

I have been making some experimental observations during recent months on the use of nails for direct fixation of fractures, having been led to the investigation by my success at the Philadelphia Polyclinic Hospital in nailing together the fragments of a metacarpal bone. I have found that fractures of the condyles of the humerus, made in the cadaver, can be satisfactorily fixed after reduction, by driving wire nails through the skin into the bone and across the lines of separation.

The accompanying skiagraphs show the method better than a verbal description.

I became convinced by this experimental work of the efficiency of fixation by means of slender nails, and of the wisdom of adopting the procedure in the comparatively few severe fractures of the humeral condyles needing direct fixation. I have had, however, no personal clinical experience of such operative treatment in elbow-injuries, and my opinion was based on inductive reasoning alone and the use of similar means in resection and osteotomy.

A few days ago I came upon Stimson's statement that in an open fracture of the condyles he had "felt constrained to pass a long steel pin transversely through both condyles and the long projecting end of the upper fragment, for in no other way could they be kept in apposition."<sup>6</sup> I had undoubtedly seen this statement

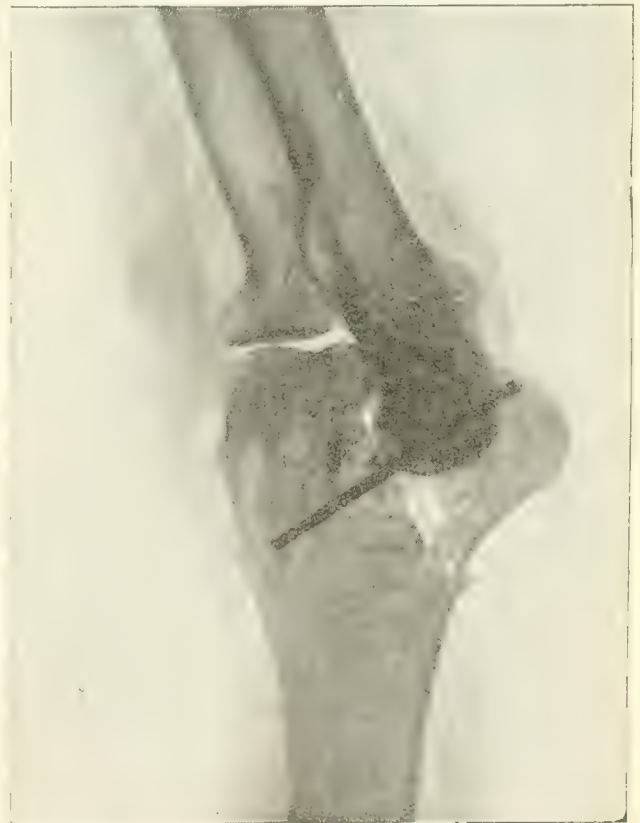


FIG. 3.—Experimental fracture of internal condyle (made with osteotomy). Fragments kept in position with wire nail driven through skin. Skiagraph taken with dorsum on photographic plate.

<sup>5</sup> *Trans. American Surgical Assn.*, IX, 1891, p. 272.

<sup>6</sup> *Trans. American Surgical Assn.*, IX, 1891, p. 272.



FIG. 4.—Experimental V-shaped fracture of condyles made with osteotome. Fragments fixed with wire nail driven through skin. Skiagraph taken with anterior surface on photographic plate.

before, but had forgotten it. Stimson does not give the result, but I can see no reason to doubt that the coaptation continued satisfactory. If the operative field was free, and kept free, of septic contamination, the result ought to have been good.

I have had made special "fracture-nails" of tempered steel, with a drill-shaped point and a long, square head. These are readily pushed through the skin, muscles, and compact exterior of the bone by means of a handle that fits the head. The handle is then detached and the nails are driven into the deeper portions of bone with a hammer. After two, three, or four weeks the nails are pulled out with clawlike forceps. For convenience I have had a hammer-head made upon one side of the forceps.

During the driving of the nail or nails the fragments, already adjusted, are held by the fingers of the operator or assistant; and after fixation is accomplished an aseptic dressing and a light splint of wood, metal, paper, or gypsum may, or may not, be applied.

Ordinary wire nails and a hammer may be used with

satisfaction, but the want of temper and point makes them rather less convenient.

If the nail first inserted does not effectively fix the pieces of broken bone, it should be withdrawn and re-inserted, or one or two additional nails should be used. The placing of the nails will be found much more easy in open than in closed fractures; and will require more skill and patience in comminuted fractures than in those in which there are but two fragments.

There will be but a limited number of fractures in which this operation is demanded, but it will, I believe, be found valuable in a certain proportion of cases. No one should attempt the operation unless he is a believer in asepsis and a conscientious exponent of modern aseptic surgical methods. Careless or incomplete asepsis is not permissible. It is as reprehensible as in abdominal or cerebral surgery.

4. *Previous skiagraphs may be needed to aid in determining the point at which the nails should be introduced and the direction in which they are to be driven.*

If the exact direction of the fracture-lines cannot be determined by palpation and manipulation, the use of the fluoroscope or, better, the study of skiagraphs, will often permit the surgeon to determine how best to nail the fragments together. If sufficiently definite information cannot be obtained by palpation, manipulation, and the use of the Roentgen-rays, exploratory incision is the safest course in severe injuries of obscure character.



FIG. 5.—Experimental T-shaped fracture of condyles made with osteotome. Fragments fixed with three "fracture-nails" driven through skin. Skiagraph taken with anterior surface on photographic plate.



5. *Obscure or severe fractures may demand exploratory incision for replacement of fragments and prevention of ankylosis. Such incisions are not employed as often as they should be.*

Aseptic incision of joints, being in competent hands practically free from risk to life, is demanded in a certain number of elbow-fractures, because the anatomic integrity of the joint and its functional usefulness are jeopardized by the surgeon's ignorance of the lesion and his consequent inability to repair the structural damage. After incision, the fragments can be accurately adjusted; the torn periosteum replaced; muscles, fascia and nerves disentangled from undesirable positions between the bone-fragments, and sutured if lacerated; and fixation of the fragments consummated. It is probable also that cure will be hastened and pain lessened by the removal of bloodclots and the leakage of

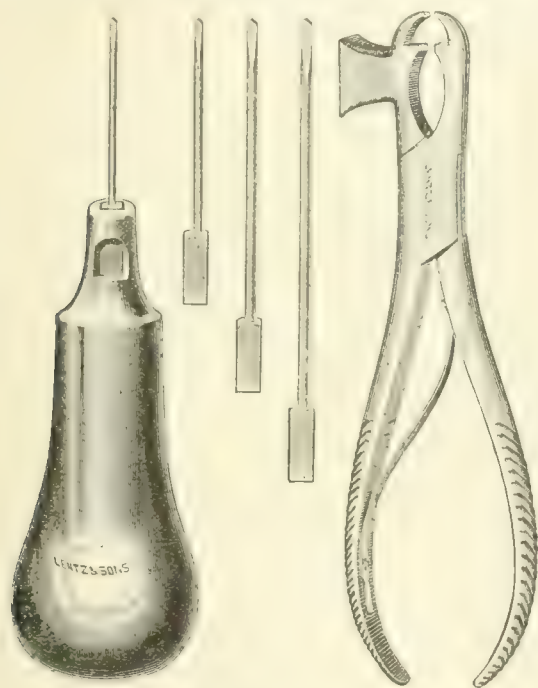


FIG. 6.

"Fracture-nails and Hammer-forceps."

synovial fluid and inflammatory exudate, permitted by the incision; and that fat-embolism and non-union will be less likely to occur.

The well-informed modern surgeon, who must know the safety of aseptic operations, should not hesitate to adopt exploratory incision in appropriate cases. The patient with a bad fracture of the elbow has an intrinsic right to the benefit derivable from incision in competent aseptic hands.

6. *The best route for this exploratory investigation is through the groove between the biceps and the long supinator.*

My investigations in the laboratories of the Philadelphia Polyclinic have led me to adopt, for exploration of the condition of the lower end of the humerus, a curved incision on the outer portion of the anterior

aspect of the elbow-joint, which turns up a flap exposing the biceps and the long supinator. The cut begins at a point about 8 cm. above the tip of the external condyle and ends about 6 cm. below the tip of the condyle. It is about 15 cm. long and convex toward the middle line of the arm, with the center of the curve corresponding with the point midway between the condyles. When this cellulo-cutaneous flap has been raised, the intermuscular groove between the biceps and the long supinator is seen. Blunt dissection down this pathway discloses the front of the humerus and the anterior ligamentous covering of the joint. The musculospiral nerve will perhaps be seen, but it is easily preserved from injury. The entire width of the bone and joint is rendered accessible to touch and inspection.

7. *The extended position of the elbow is less likely than right-angled flexion of the joint to be followed by impairment of the normal humero-ulnar angle, which gives the "carrying function" to the upper extremity; and it is therefore the preferable posture in condyloid fractures of ordinary severity.*

It has been my practice to treat these fractures with the elbow extended and to carefully compare the injured with the sound limb, in order to preserve by my splints the humero-ulnar angle. I reduce the fragments, compare the two arms, and apply a splint of wood or of gauze and gypsum to keep the joint not quite fully extended. Full extension is more likely to prove irksome to the patient, and it is a wise precaution to run no risk of displacing the fragments by hyperextension of the injured joint. A thin, narrow board is usually laid on the front of the normal arm, and the direction of the axes of the humerus and ulna is marked on it. A penknife is then employed to whittle the board into proper shape, and, by reversing it, a proper splint is made for the broken bone. The splint is padded and applied to the front of the arm, little cotton is laid in the flexure of the elbow, and bandages are used to hold the splint in position. A gypsum-splint molded to the arm is more elegant, but is not always so conveniently obtained.

The extended elbow in these fractures has been advocated for various reasons. It has been said that it enables the surgeon to appreciate more readily any change in the deviation of axes than the right-angle position, which crowds up the soft tissues in front of the joint and obscures the position of the fragments. The angular deformity, to be avoided, has been attributed to the displacing influence of the triceps, which is relaxed by employing the extended posture. If the extended elbow is combined with supination of the radius the biceps is also considerably relaxed. The position advocated seems, therefore, to relax the important displacing muscles. Some writers allege that the displacement of the condyles and the destruction of the "carrying function" by right-angle splints is due to the fact that the radius lies at a higher level than the ulna, and that the splint and bandaging tend

to bring them on the same level, thereby raising the internal condyle or depressing the external. I am inclined to believe, from experimental evidence on the cadaver, that this is to a certain extent true, though too much importance may heretofore have been accorded to it by us who advocate the extended elbow.

Strong clinical evidence of the worth of the extended posture is the assertion<sup>7</sup> of Thompson, of Washington, who was able in two open fractures to keep the fragments in position when the arm was extended, but found that they were displaced if he attempted to keep them in position with the elbow at a right angle. Taylor, of San Francisco, reports<sup>8</sup> a similar experience with a closed fracture.

It is unnecessary to intimate to this audience that Liston treated elbow-fractures in the straight position.

Thomas, of Liverpool, Jones, of Liverpool, Dulles,<sup>9</sup> of Philadelphia, H. L. Smith,<sup>10</sup> of Boston, and Bruce,<sup>11</sup> of Dingwall, Scotland, recommend *acute flexion* in the management of these injuries; but I have never tried it, though some of my colleagues at the Philadelphia Polyclinic have had, I understand, satisfaction from its employ.

8. *Good results as to anatomic conformation and as to mobility can usually be obtained by the adoption of the measures suggested.*

This proposition is simply a corollary to the other statements of my paper and needs no elaboration.

9. *Osteotomy, with or without nailing, may be judicious treatment for fractures of the condyles united with deformity or followed by ankylosis.*

In July, 1878, I published in the *Edinburgh Medical Journal* an article advocating refracture for deformed union of fractures. In those days the investigations of Lister had not yet taught us all to make wounds almost with impunity; but since then the surgical world has recognized the value of osteotomy in correcting deformities, whether traumatic, trophic, or inflammatory. There is no valid reason why the same method should not be employed in elbow-fractures demanding relief for disability or deformity.

Burger (*Centralb. f. in. Med.*, August 27, 1898) has devised a number of **bandages for supporting the abdomen**, the principal original feature of which is the use of broad, flexible celluloid plates held in place by elastic bands. The form of the plates is varied; ventilation is provided for by a number of small openings, and under the influence of bodily heat they adapt themselves readily to the parts. Pads of various forms may be attached to the plates to make pressure about any organ or opening where support is desired. The apparatus has proved to be of value in the various forms of hernia, for the support of movable kidney, spleen, etc.

## THE POSITION OF THE ORIFICE OF THE EUSTACHIAN TUBE AND THE POSSIBILITY OF CATHETERIZING IT THROUGH THE MOUTH.<sup>1</sup>

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CATHETERIZATION of the Eustachian tube through either the nose or the mouth has been known to the medical profession for about 200 years. Fixed and definite rules have been given for the insertion of the catheter through the nose, based on the relation of the normal anatomic structures. The anatomic relations vary in all structures, and this variation is more marked in the nasal chambers, even in health, than in any other part of the body. This deviation from the normal may involve the bony structure, or the mucous membrane of the nasal chambers, or both; or it may be limited merely to the mucous membrane surrounding the Eustachian orifice. In either event there is sufficient modification in anatomic structure and relation to interfere with the routine following out of any one method in all cases. The very fact that catheterization is demanded predicates an alteration in the normal topography. These facts led me to adopt a method that I have since learned was used before catheterization through the nose, *i. e.*, catheterization through the mouth; differing from the original method, however, in that the catheter is introduced with the aid of the rhinoscope and doing away with fixed rules, as the parts can be clearly seen and the alterations of structure appreciated and overcome. A brief review of the literature of the subject will serve to show the wide difference of opinion among various writers, and this very fact proves the unreliability of the many methods employed.

In 1724, Guyot, who was postmaster at Versailles, being deaf and having by some means become acquainted with the fact that there was a passage from the throat to the internal ear, introduced a bent tube connected with a syringe *through the mouth* and believed he had reached the Eustachian tube.

Cleland, in 1741, introduced a bent probe through the nose into the Eustachian tube, and with Douglas, in 1755, demonstrated and commended injections into the middle ear by this route. Wathen, however, was the first, in 1755, to formulate any rules regarding the procedure and to report cases cured by it. Portal, in his *Chirurgie Pratique*, contended that the procedure was impossible. Later Itard described a plan of catheterization through the nose. Many medical men at this time decried the operation, among them Bell, who did not approve of it because of its difficulty and the irritation set up by it. Itard confessed a difficulty in the procedure. An English surgeon, Wright, practised it

<sup>7</sup> *Trans. American Surgical Assoc.*, X, 1892, p. 58.

<sup>8</sup> *Trans. American Surgical Assoc.*, X, 1892, p. 65.

<sup>9</sup> *Brit. Med. and Surg. J.*, p., August 30, 1894.

<sup>10</sup> *Brit. Med. and Surg. J.*, October 25, 1894, and July 4, 1895.

<sup>11</sup> *British Med. Journ.*, 1896, II, p. 1201.

<sup>1</sup> Candidate's Thesis presented to the American Laryngological Association at its twentieth annual meeting, held in Brooklyn, N. Y., May 16, 17, 18, 1898.



from 1816 to 1818 with improved instruments, but then abandoned it.

Deleau, in 1825, introduced the use of air as an injection in the middle ear and further developed the rudely shaped instruments that have hitherto been employed.

Kramer, of Berlin, in 1835, was severely taken to task by Wright for using methods *ad captandum vulgus*. Among the instruments condemned by him, together with the Eustachian catheter, were the funnel-shaped forceps, which were considered unnecessary because they occupied the canal, thus shutting off the view of the parts beyond. Artificial light was also condemned because of the deceptive and distorted images produced by it.

The consensus of opinion seemed to favor the route through the nose rather than through the mouth; yet each succeeding year saw an innovation in technic, a modification of an already existing method, or the invention of some new instrument destined to fulfil all requirements better than its predecessors.

No attempt is made to give the great variety of methods of catheterization through the nose in detail. Mention is merely made of a few of those that have proved satisfactory in certain cases.

The French claim that it was Boyer, rather than Wathen, who, in 1818, first gave a detailed description of the route to be followed in reaching the tube through the nose. Gairal in 1836 and Kramer in the same year made further changes, the latter's method being still further altered by Menière, Toynbee, and Tröltzsch in later years. Triquet in 1857 and Bonnafont in 1860 were more radical in their alterations of the plans of their predecessors. A new method was introduced by Giampietro in 1863, and another by Gruber in 1870, which was modified by Tillaux about 1875. In mentioning the names of Kuh, Bing, Löwenberg, Morrison, de Lacharrière, Sexton, Levi and Cozzolino, the list is by no means complete, but sufficient has been adduced to prove the point that no one method has been universally applicable, be the cause what it may.

After Guyot demonstrated catheterization through the fauces, came Pomeroy and Cutter here in America, and Störck and Kessell abroad, favoring the method.

Kessell used an S-shaped catheter, and at the moment of insertion of the tip of the instrument into the Eustachian orifice instructed the patient to take a deep inspiration.

Because of abnormality in position of the Eustachian orifice, and because he found that the direction of the tube and its angle of entrance into the naso-pharynx differed from that which had been previously given, Ephraim Cutter, in 1872, devised an instrument for catheterization through the mouth. (Fig. 1.) The orifice of the tube is located with the rhinoscope, and the instrument is inserted by the image thus obtained. Two catheters are necessary, one for either side. The form



FIG. 1.

Cutter's original instrument  
for catheterization of the  
Eustachian tube.

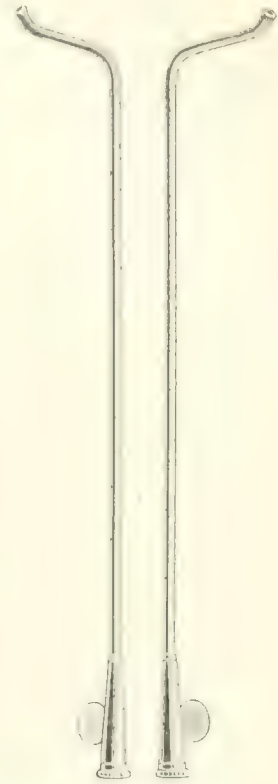


FIG. 2.

Cutter's improved catheters,  
right and left.

of the instrument was later modified by the originator. (Fig. 2.)

O. D. Pomeroy, working independently of Cutter, invented about this same time a faucial Eustachian catheter (Fig. 3), claiming that it could be more easily and rapidly introduced behind the uvula than the ordinary instrument, and with less violence. By rotating the instrument to either side the beak entered the pavilion of the tube without the aid of the mirror, and air or medicinal agents could be forced into the tubes by means of the rubber-bulb attachment.

A method of catheterization through the mouth is also given by Politzer for cases that cannot be reached through the nose. Toynbee also mentions the procedure.

In describing the technic of any method or procedure, however clear to the originator, he may fail to convey to others the very point necessary for complete success, notwithstanding the fact that a multiplicity of directions are given; delicacy of touch and manipulation of instruments cannot be described, but must be acquired by experience. A consideration of these facts explains the success of a method in one operator's hands and its failure in another's.

The catheter I have always used is six inches in length, made of coin-silver and is very flexible, so that the curve can be altered at will to suit individual cases.

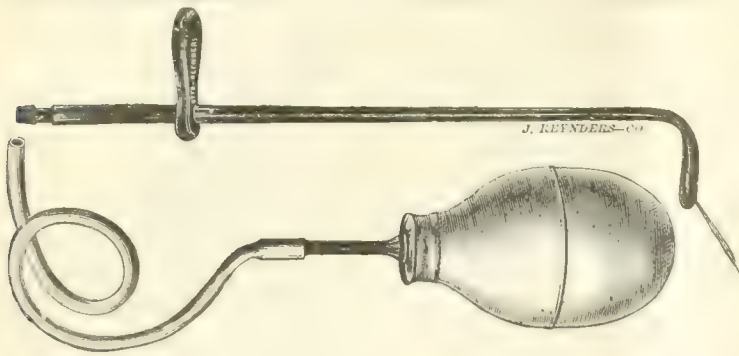


FIG. 3.

This catheter should have a smooth, even surface at its Eustachian extremity, and as it is made of soft metal it should be kept separate from other instruments and should never be thrown against hard surfaces, as it is roughened or nicked, and it would then be likely to tear the mucous membrane of the tube or its pavilion. For attachment to the catheter I have devised a small receptacle (Fig. 4), which consists of a metal cylinder  $1\frac{1}{2}$  inches in length and  $\frac{1}{2}$  inch in diameter, in which may be placed any of the medicinal agents to be injected into the middle ear and which also answers as a handle for the instrument as a whole. The end at which the catheter is attached is closed by means of a screw-cap, which can be removed for the purpose of cleansing the apparatus or introducing the remedial agents. Attached to this end of the cylinder is the tube, about  $\frac{1}{2}$  inch in length, which should loosely fit into the bulbous end of the Eustachian catheter, so that in case too much force be exerted in inflation the catheter will be forced from the tube before any injury could be done to the tympanum. At the other end of the cylinder, on the opposite side, projects the small tube to which the rubber ball for inflation is to be attached. This should be placed  $\frac{1}{4}$  inch from the end

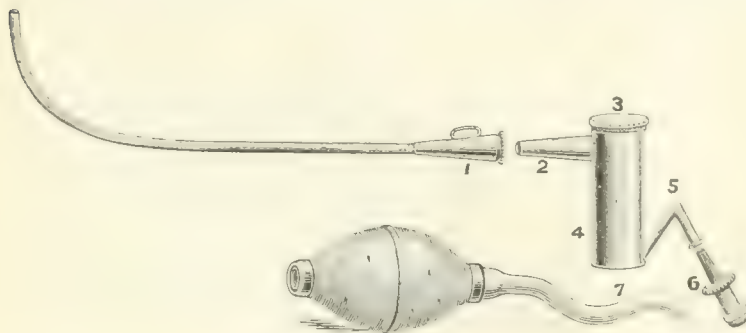


FIG. 4.

1. Catheter of coin-silver. 2. Tip on which catheter fits. 3. Screw cap. 4. Receptacle for holding fluid. 5. Tip bent at an acute angle to prevent fluid from running back in the rubber bulb. 6. Hard-rubber cap fitting into (5), to which the rubber bulb (7) is attached.

of the cylinder, so that the substances used for medication will not run back into the rubber bulb. The ordinary atomizer-bulb can be used for inflation. The secret of the success of this method is the delicacy in handling the catheter, the tongue-depressor, and the mirror. I prefer a small tongue-depressor (Fig. 5) for a number of reasons: (1) it is light and easy of manipulation; (2) it is slightly flexible; (3) it fits or embraces only the median line of the tongue, causing that member to assume a concave instead of the convex surface usually seen

in using the heavier and broader instruments; (4) it is so small that it does not interfere with the handling of the catheter or the mirror.

As the introduction of the Eustachian catheter through the mouth necessitates the use of three instruments, the patient must be used as an assistant, and the



FIG. 5.

tongue-depressor is entrusted to him. This may be offered as an objection to the method, but in my experience it is more of an aid, as in this way the patient's attention is taken away from the real object of the operation, and with a little instruction he can regulate the pressure of the instrument and avoid gagging from this source. The patient is now told to breathe freely through the nostrils, which will lower the soft palate and uvula, thus permitting a rhinoscopic examination, to determine the course of the catheter and the line of the Eustachian tube. The catheter and the mirror are controlled by the operator and are inserted at the same time. Personally I manipulate the catheter with my left hand and use the mirror with my right in catheterizing either tube, because this is more natural to me than to reverse the procedure. The catheter is passed back of the soft palate in the direct line of the uvula, care being taken not to touch the inferior lateral posterior border



of the soft palate. (See Fig. 5.) In other words, the tip of the instrument is kept as free as possible from contact with the tissues. With the rhinoscope the Eustachian orifice is quickly located and the catheter is then inserted with the aid of the image thus obtained. In introducing the catheter into the orifice of the Eustachian tube care must be taken not to move the tip of the instrument to and fro, as the parts are very sensitive, and spasm and gagging, one or possibly both, may easily be set up. Should the parts be very sensitive or should there be a tendency to gag, with elevation of the uvula, the instrument must be instantly withdrawn and the patient allowed to rest for a few minutes, while he is engaged in conversation until the reflex excitability is quieted. Then the manipulation can be repeated. The catheter should always be gently warmed before insertion.

The cylinder attached to the catheter should be held loosely in the left hand, grasping it with the index-finger and the thumb, and manipulating by means of the second finger. (Fig. 6.)

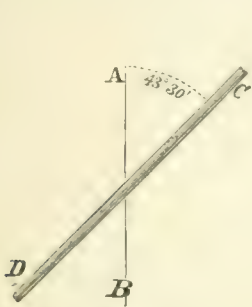


FIG. 6.

Illustrating the angle at which the Eustachian tube enters the nasopharynx. *D C*, Catheter *in situ*. *A B*, Central plane of head antero-posteriorly. Angle formed by intersection of tube with central plane,  $43^{\circ} 30'$ .

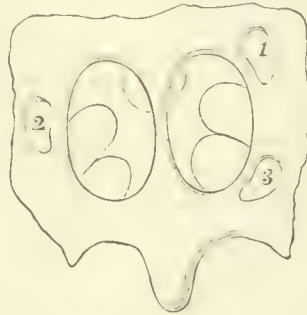


FIG. 7.

Abnormalities in position of the Eustachian tube. (After Cutter.)

This will insure free movement of the instrument in any direction, a delicacy of touch, and a free gliding motion. Under no circumstances should any force be used in the insertion of the instrument. Dangerous emphysema may be produced if the tissues should be lacerated and the air forced into the submucous tissues. This has been fatal. Such an accident happened in my experience but once, and the inflation was followed by immediate emphysema extending down into the neck, with marked external swelling. The patient recovered entirely in four days.

The main objection to catheterization through the mouth is that it is a difficult procedure. Granting this to be true, with practice and an increased knowledge of individual cases, together with the added dexterity thus acquired in handling instruments, this objection will gradually be overcome. On the other hand, as offsetting this, the difficulties of catheterization through the nose may be added. Not taking into consideration the difficulty of the method *per se*, mention may be

made of the abnormalities in position of the Eustachian orifice that may exist in certain cases, as was shown by Cutter and confirmed by Kostonecki; deviation and spurs of the septum, thickening of the middle and inferior turbinates, malformations of the nasal orifices, all tend to render the procedure difficult by this route and impossible by any one *fixed method*. (Fig. 7.)

Another point in favor of catheterization by the mouth is this: the catheter can be rendered thoroughly aseptic and be introduced *directly* into the Eustachian orifice, without coming in contact with any tissue; while catheterization through the nose necessitates the passing of the instrument over tissue that cannot be thoroughly cleansed, with the added danger of carrying infection into the non-infected Eustachian tube. In catheterizing through the nose the fact that the patient admits the inflation is not sufficient evidence that the catheter is really in the Eustachian orifice. While some operators may acquire such delicacy of touch as to state positively that the catheter is inserted in the tube, the mirror can be depended upon with more certainty than touch. In passing the catheter into the Eustachian orifice, a small portion of the mucous membrane may form a sac into which the point of the catheter may slip, thus allowing only a partial inflation, the cause of which the sense of touch alone cannot determine in any other way than by the increased resistance thus offered. In catheterizing through the mouth the cause of this obstruction will be noticed at once with the aid of the mirror. Also, if the catheter, when inserted into the tube, is not at the correct angle, with the aid of the mirror and by the resistance offered the proper angle for complete inflation can be readily acquired. Löwenberg had for each individual a special catheter of the proper angle and length. This fact shows the great variableness in position and angle of the tube. In passing the instrument through the mouth the operator has a good free movement of the catheter and can obtain any angle desired, while through the nose the lateral motion of the instrument as a whole, the very motion desired, is necessarily limited.

#### ARGUMENTS FOR AND AGAINST CATHETERIZATION.

##### THROUGH THE MOUTH.

1. Does not require a special catheter.
2. Absolutely aseptic.
3. One method for all cases.
4. Certainty of insertion of catheter into Eustachian tube assured by actual view of the instrument *in situ*.
5. Invagination of mucous membrane seen and avoided.
6. Air or medicaments thrown in direct line of tube.

##### THROUGH THE NOSE.

1. Abnormalities require different-shaped instruments.
2. Cannot possibly be aseptic.
3. Different methods necessitated by abnormalities.
4. Educated sense of touch the only guide.
5. Invagination cannot be determined.
6. Impetus of air generally at an angle to long axis of tube.

The indications and contraindications are practically the same for catheterization through either the

mouth or the nose, and have been well stated by Oaks. One of the main indications for catheterization through the mouth is the fact that any condition necessitating catheterization would necessarily alter the normal relation of the nasal structures.

Among the therapeutic indications for Eustachian catheterization are: (1) A sense of fulness and pressure, with tinnitus and deafness; (2) acute otitis media, as soon as acute pain has been relieved by usual treatment, especially if unilateral; here the air-douche is indicated; (3) chronic catarrhal inflammation of the middle ear; (4) deafness caused by the foregoing; (5) acute suppurative inflammation of the middle ear; catheterization and careful inflation may induce dispersion and absorption of sero-purulent exudation, without perforation; (6) chronic suppurative otitis; the same indications obtain as in the acute form, the rationale being the same. In addition, catheterization also furnishes the means for irrigating the tympanic cavity by way of the Eustachian tube.

In acute catarrhal inflammation the catheter may be inserted, the bulb being compressed before insertion; then, when the catheter is in position, the bulb can be allowed to expand, clearing the tube by suction.

Among absolute contraindications to Eustachian catheterization are: (1) The presence of ulceration in the nose or naso-pharyngeal cavity, with or without hemorrhage, on account of the danger of septic infection; (2) hyperpyrexia; (3) acute otitis complicated by acute pharyngitis and severe otalgia; (4) emphysema of the pharynx and larynx.

Among relative contraindications are: (1) Early childhood; (2) senility; (3) a neurotic condition; (4) convalescence, attended with great nervous prostration.

### THE PHYSICIAN AS A TEACHER.<sup>1</sup>

By GEORGE S. BROWN, M.D.,

of Birmingham, Ala.

A CERTAIN amount of legal, theologic, and medical knowledge of uncertain value is, perhaps, the natural right—at any rate they possess it—of that large class technically designated by us as other people or the laity, accordingly as we feel superior or merely dignified. In medical matters, the individual of this large class often gets to be exceedingly erudite; and he is always ready with the most emphatic and sometimes startling opinions whenever sickness in his immediate neighborhood arouses his interest. Being thus forced to form opinions, and often to act upon them, it falls within the scope of the duty of his medical adviser to furnish him with reliable data with which he may form conclusions intelligently. I would not be understood to mean that we should try to educate our patients up to making a diag-

nosis of nephritis, for instance, or to deciding whether or not an appendicitis should be operated upon. I would not have them think for a moment that they could safely assume such professional responsibility, but, on the contrary, we should so teach them that they might know enough *not* to do these things, and be able to use some good judgment in selecting a medical man to decide such questions for them; questions medical, medical men only can decide.

We should leave no stone unturned in our efforts to gain knowledge; but having gained it, and being in the way of gaining more of it, we should boldly and pertinaciously insist that the public's safety for certain things lies in us; that we are the only responsible practitioners of medicine. We should insist that garrulous friends who visit the sick-room, and prescribe some patent cure-all over the physician's head, or behind his back, are ignorant and dangerous. Our patients should be made to see that such opinions and advice (like all cheap things) are usually worthless, and, too, that no sense of responsibility goes with them. No matter what the result to the patient may be, no verdict, other than "meant well," can possibly attach to these non-professional advisers. To the beginner, the attempt to educate his patients in this way seems but a thankless task, if not a self-destroying one; and, indeed, it is one he can ill afford. One trouble with him, however, is that his explanations fail to explain. His desire is to please, and when a patient or over-anxious friend asks him to explain what the sickness is, he tries to do so, and after wasting half an hour this friend or patient goes away thoroughly satisfied that he understands the young practitioner perfectly, and the doctor thinks he does, too; but next day this pupil comes back with another question or opinion, which shows at once that he has totally misinterpreted all he heard the day before. This is a parallel case to that of the old lady who declared that her doctor said she had slugs in her liver, and on being told, "Oh! no, he said you had a sluggish liver," she replied, "Yes, them's just the words he used." After a few such experiences, the young practitioner sees how impossible it is in half an hour's time to educate any one up to the point of view to which he, himself, has attained only after years of observation and study. He may recall, indeed, that his own receptive and reasoning powers have improved from year to year; that words that fell from the lips of his wise old professor a few years ago have a totally different meaning now; and he finally sees that by reason of such misinterpretation, his explanations only cheapen his knowledge in the eyes of his patients.

Most of our patients have never been drilled in any scientific study, and natural phenomena, a knowledge of which constitutes the very woof of a scientific education, are often unexplained and unexplainable mysteries to them. All things and phenomena are to them but a mass of unrelated odds and ends and accidents.

<sup>1</sup> Monitor's Address, delivered before the Alabama State Medical Association at a public session held April 20, 1898.



They have had no glimpse of the universe as a mosaic, in which all things have a part, even disease, as John Hunter said long ago. How impossible is it then for us to put them in our places, and make them see with our eyes. If we could they would still understand with their own elbows. We do owe our patients and their anxious friends explanations of their troubles, but in the main they ought to be explanations of how impossible it is for us to explain. If you tell them the truth, they will misinterpret you and quote you to your undoing; if you lie to them you will get in the habit of it and the dullest miracle-lover in the community will find you out in time. What you do tell should be the truth, but that should be as little as possible.

The physician stands upon a higher ground as an educator, however, than his lessons in pathology and physiology. If he is a man with the qualifications of a teacher, his influence is unlimited. Even the educated medical or scientific lecturer, although his words may cover a larger territory, does not get the ear of the daily business-man when it is alert with such vital interest as does the family-doctor. He talks in time of trouble, when the very soul thirsts for knowledge. He talks to the convalescent, who is being born into a new world, and the cheerful, hopeful, simple relating of the beauties and beneficences of nature, as they are revealed to the scientific observer only, falls like balm on the stricken spirit, and bids it take hope again and love the beautiful world, by (as we see it) stimulating those brain-cells that preside over the desire to live. There is no other teacher who knows his pupils so well as the doctor—provided, of course, he has the seeing eye—is qualified. He is the only teacher who knows that the hour of the day, the state of digestion, pulse and temperature, have all imaginable influence in modifying a pupil's receptivity for different kinds of knowledge. He knows better than other teachers that a pupil on an idle day, for instance, with perfect physical and mental strength, may drink in gratefully the scientific data of psychology and moral philosophy; that when he is worn and depressed, and spiritless, a poem of the summer-time, or a story of the birds and flowers, will cheer and stimulate, or, as the teacher sees it, will fill out those collapsed brain-cells. This is a weighty trust we carry. We are compelled to do a great deal of teaching whether we like it or not, and we should mind alertly that we do not teach error. The doctor, I take it, should be on one long aggressive hunt for truth. He should go to the bottom of all things and try to separate truth from error, and then he should boldly assert his strong convictions where the good of mankind is staked. He must withhold the truth, of course, when it would cause unhappiness, and could do no good, but he should never cease to load himself with it.

In studying the history of medicine, we get occasional glimpses of the manners of medical men in their relations with their patients and with each other. We

find that as medical knowledge has accumulated and become more valuable, medical manners have improved and become more honest. When medical knowledge was at its crudest, the prevailing conduct of its devotees was such as exists among us to-day as the rankest quackery. The very meagerness of their knowledge compelled them to pretend to all knowledge. But even as one who attains to positions of dignity needs less and less to assume it, these, our professional forebears culled here and there a truth that they added to the slowly growing mass of knowledge, and thus gradually lessened their own and our necessity for red-fire effects. To-day the personality of the doctor is much, but through all the history of medicine down to very recent times it was everything. In early times (that is in medicine we might say from Galen down to this century), the sameness of the method by which each prominent character came to the front is really tiresome reading. Each succeeding founder of a school customarily tried—and usually succeeded—to prove that all previous knowledge and methods were mistakes, and that he, alone, was the discoverer and dispenser of the true business. The dogmatists and empirics warred with each other; the methodics took a middle ground until the pneumatics arose and smote them, to be in turn destroyed by the eclectics. Pretense was the fashion, as it will always be in the absence of accurate knowledge, and the success following was usually measured by its impudence. Galen even, whose reputation was more far-reaching than that of any other save one, was not by any means free from the common fault. Hippocrates seems to be the only one of that old school who at all resembles the high-minded, scientific medical gentleman, so common in our ranks to-day. He *was* scientific; he loved the truth for truth's sake and believed that all truth was good. It is true he had theories about pathology and physiology that were vague and largely wrong, but that was due to his lack of facts, but when he came to treat disease, he recognized nature as the real curative agent, and in effect bowed to her in all reverence.

The laity are slow to grant that medical knowledge is ours exclusively. When one of them is much sick himself, it is true he ceases to be disputatious on the subject, and wants the best doctor sent for, but when it is only his wife or child or friend, he clings to a pet theory that the doctor does not know it all. This, of course, is true, as well as that we frequently make mistakes, and that our old-lady rival (that terror of the young practitioner) is frequently right when we are wrong. Still, the lesson we should preach is that we are more likely to be right than any one else. One thing that makes the laity give in to us with reluctance is that we tend to be autocratic, and are suspected of believing ourselves omniscient. All doctors who keep much away from their brother-practitioners do become egotistical, and are satisfied with their own petty experiences. They do not read. They put their two or

three ill-observed and non-recorded cases against the thousands of accurately observed and recorded cases in the books. They get so dictatorial, and boss their whole neighborhood in medical matters so long, that after a while they cannot bear the sound of another doctor's voice. Galen got that way; he had a consultation with another doctor one day, and because he could not make the fellow see the thing as he did, he threw him out of an upper window and broke his neck. Haller, the great physiologist, delayed the study of biology more than a hundred years by crushing the zeal out of a young man named Wolff, who had the audacity to insist on some theories that Haller had already said would not work. Being a great man, he could, of course, not take anything back; and being an old man, and a long-established boss, he would not learn anything new. So young Kasper Friedrich Wolff had to go, and knowledge was the sufferer. Of course, after knowing all there is in medicine, it is an easy slide to knowing all there is in theology, law, and the money-question. Then it is that the humble retainers and neighbors of these isolated autocrats begin to suspect their doctor of fallibility in *medicine*, and to weigh their own opinions and remedies against his. Our duty is to teach that, no matter who the doctor, nor what his surrounding darkness is, his *medical* opinions are, in the long run, more trustworthy than those of any non-medical, irresponsible, lay-practitioner—that practitioner who reminds us of the old deacon who Huck Finn said “built a church and preached there every Sunday, and didn't charge nothing for it, and it was worth it.”

Of course, all of us who attend medical societies know their value in keeping down this egotism and dogmatism, which is a fault of so many doctors entrenched in their little communities. We owe it to every hamlet presided over by such a doctor, to use every means we possess to get their medical autocrat interested in this Association.

As medical science progresses and becomes more and more exact, the medical man becomes less pretentious and more efficient and honest. Every year, as the terms of medical education become more severe, and the study itself and its rewards become more satisfying, a better and better grade of men is inducted into the ranks.

A science deals with the phenomena of nature, hence its progress is limitless, and its devotees are furnished that mental food which brings most satisfaction—a daily progress in well-doing, each step of which is liquidated on the spot in happiness. And medicine is all that to-day. “We live in deeds, not years; in thoughts, not breaths; in feelings, not in figures on a dial. We should count time by heart-throbs. He lives most who thinks most, feels the noblest, acts the best.”

It is interesting to note the change that has taken place in the doctor's attitude toward the public since medicine became more scientific. A few hundred years

ago, all successful medical practitioners had manners like those we term quacks to-day. They had as many mystifying appliances and mixtures, and as many fantastic effects in speech and dress as we find used by those who practise among the barbarians of savage and civilized countries to-day. The study of the evolution of medical manners, like the study of the evolution of any other branch of anthropology, finds its most valuable data and connecting links, not in the dust of the dead, but among the living. Even in a city of this size you can find atavistic survivors of every stage of the history of medicine. Not two squares from this house is a practitioner of the old school whose race was run hundreds of years ago; he and his scattered tribe being a here-and-there survival of their moldered generation, left seemingly for no purpose except the convenience of the historian; like the big trees of the Yosemite, our own gum-trees, and the ornithorhynchus, without kith or kin. They are degenerate flotsam, swept from society's active current, to be carried by foul and sluggish eddies to remote ill-drained corners, there to await death in the beams of the purifying sun of time. There is no missing link. Every stage of medical progress is not only duly recorded in the books, but has its corroborating prototype somewhere in the world to-day. Still, as a body, we are on a higher stage by far than ever before.

The medical teacher of a few generations ago was a rather stiff somebody, with a long coat, with terrifying whiskers or severely shaven, somewhat unapproachable, as well as irreproachable. He had much erudition and even more style. His was the day of verbosity and the didactic lecture. He daily grounded his ponderous opinions on the demolished opinions of a thousand predecessors and contemporaries. Of course, when there was nothing but opinions to work on, it was clear that only one set of opinions could be right, and he scorned to soil his hands with an experiment, as he did to wash them for an operation. One not having a proper reverence for oratory, and for his wonderful talent for personal detraction, might, at this day, say that with the jaw-bone of an ass he slew his thousands. The prevailing style of manners was such only sixty years ago, that the great surgeon Liston brought an ape's skull before his class and called the students' attention to its startling resemblance in general topographic arrangement to the head of Mr. Syme, his great rival in surgical teaching. It seems not to have occurred to Liston, by the way, that he was not flattering himself.

Paracelsus, who lived in the early part of the sixteenth century, was perhaps the best example of that time of a successful practitioner; a pioneer in medical progress, and a really scientific medical gentleman, according to the then liberal interpretation. And yet he claimed to have invented the elixir vitæ, which survives to-day under numerous alluring and alliterative titles. He lopped off much that was old and useless, and added



only a little less that was new and useless. He wrote a little book for the guidance of young medical practitioners, one item of which gives an insight into what was regarded as legitimate methods then. It says:

"When a messenger comes for you to visit a new patient, take your time about going, engage the messenger in conversation on the way, and question him in a casual way about the patient. The messenger being unsuspicious, and probably fond of talking, you may be enabled to make a diagnosis of the case before you get to the bedside. Arrived at the house, go in and look at the patient's face steadily for a little while, and then without asking her a single question, you may be able to tell her what the trouble is, and she will marvel at your wisdom, and will herald your fame in every direction."

You will notice that the supposed patient is a lady. Some of you may at this day have seen such exhibitions of diagnostic skill. Paracelsus had plenty of common sense, shrewdness, and altogether an observing and attentive mind, but his strong points were style and nerve. He was fond of stage-effects. When he announced his discovery of the elixir of life, and got enough of his patients to believe in it, he gathered them about him and sat for the historic picture of beginning all medical learning over again. He lighted up the scene and his own halo of glory by majestically setting fire to the books of Hippocrates and Galen and Avicenna, saying that under the present peculiar circumstances they were of no further use. Paracelsus died at the age of 48 in spite of the elixir. Some historians say that Paracelsus was unusually irregular. He could not have been very much of an exaggeration of the prevailing type of fashionable practitioners, however, because they had not improved much more than a hundred years afterward, when Molière took it into his charitable head to hit the medical profession a few licks, which did it more good than anything that had happened to it previously for a century. Molière was down on pretense, because he readily saw that in medicine, as in everything else, it was the most convenient wadding to use in lack of knowledge. Molière wrote as he did, because to any non-medical observer the practice of medicine seemed to be *all* quackery. Certainly that kind got almost all the practice. In *The Imaginary Invalid* Molière describes a ceremony of conferring the medical degree upon a candidate, which seems an absurd and unwarranted exaggeration, and yet Locke, traveling to Montpellier some three years afterward, describes the real thing, which differs from Molière's burlesque hardly at all. Locke describes a procession of doctors dressed in red, with black caps on their heads, followed by ten violin-players; then the speech of the president against the circulation of the blood; the different compliments to the newly-made doctor, and his putting a cap on his head, a ring on his finger, and a golden chain around his loins. In the play, we read, under the third interlude, "A burlesque ceremony of admitting a doctor of medicine in recitative music and dancing:"

"Upholsterers (supers) enter and prepare the hall, after which the whole assembly enter, 6 apothecaries, 22 doctors, 8 bearers of some of the less poetical implements of our art, the one who is to be admitted physician, 8 surgeons dancing and 2 singing. They all take their places according to rank, and chant and recite for an hour or more—"

a lot of stuff which the translator says is such a mixture of Latin, dog Latin, French, and words to be found in no language under the sun as to be untranslatable. The first verse is:

Savantissimi Doctores,  
Medicinae Professores,  
Qui hic assemblati estis,  
Et vos, altri messiores,  
Sententiarum Facultatis  
Fideles executores;  
Chirurgiani et apothecari,  
Atque tota compaña aüssi  
Salus, honor, et argentum.  
Atque bonum appetitum.

All this is really not much of an exaggeration of what can be seen in medical-school commencements in some quarters to-day. Pomp and show will always be used for padding where merit is deficient.

Cato said, writing to his son:

"you may take my word, as the word of a prophet, when I tell you that whenever that nation (the Greeks) shall bestow its literature upon Rome, it will mar everything, and all the sooner if it sends its physicians among us. They have conspired among themselves to murder all barbarians with their medicine—a profession which they exercise for lucre, in order that they may win our confidence and dispatch us all the more easily. I forbid you to have anything to do with physicians."

Cato, who, by the way, lived to be 85, had probably met Arcagathus, who was the first physician to hang out his shingle in Rome. He came from Greece. He was so dreadfully cruel and fatal in his practice that the community (those members of it, at least, who had not yet fallen under his kindly hand) arose and banished him. After being familiar with some of the details of the practice of Arcagathus, one is prepared to hear that it was more than 80 years before another physician ventured to Rome to locate, as we say.

Priests and others, no doubt, studied and practised a little as a polite art, as they do now; and barbers did what surgery was done; much, of course, was left undone, which was just as well. But there is no account of any physician who practised medicine there for a living during that time and did nothing else.

But we have improved; we have always improved. The most rapid strides, of course, have been made in our century, particularly the last quarter of it. Vaccination, ether, asepsis, the trained nurse, and kindred achievements are gifts to be proud of. With one exception, the great gifts coming to the world through the medical profession have been as free as the sunshine and the air. We never patent our discoveries. We think every facility ought to be given that can improve the efficiency of the medical man, for the obvious reason that what affects it vitally affects the community in which he practises.

While we always give freely of our experience to each

other, in order to benefit humanity by improving our own average of efficiency, we do not get the same encouragement and help from other people. When we buy appliances to use in our professional work, we generally want the best, and the manufacturers make us pay for them. Surgical knives and scissors cost just a little more to make than household knives and scissors; yet we often pay four or five times as much for them. Every tariff-bill that has ever been framed has steadily maintained the tax on surgical instruments and microscopes, except to medical schools, some of which are wealthy enough to buy all the doctors in Alabama ten times over. Who can tell what day some Congressman even may lose his life because his family-physician has been forced to forego the necessity of a microscope by a foolish tariff-law, which he, himself, had a hand in framing. Would that not be an instance of fate's grim humor? We must fight our own battles, and in doing so we will be accused of bragging, of throwing bouquets at ourselves; but while it is our duty and privilege and professional pride to give much to the public without any return, I must insist that we doggedly claim from them a meed of credit for sincerity, when we disinterestedly warn them against men and things that can work them only harm.

We should daily and unwearily preach to them many things for their good. Men cannot live by bread alone, and patients cannot live by pills alone. We charge them for the pills, which sometimes do no good. We do not charge for the talk, and it often does good. We should teach, for one thing, that all quacks have first failed as legitimate doctors; they are degenerates; they have not the brain-power to study medicine; and, worse than all, they have a moral squint, which causes them to miss utterly the scientific spirit, the atmosphere of prayer of the Hippocratic oath, the simple justice of our code of ethics. Shall we not, then, war upon such fauna? Shall we hesitate, from fear of the charge that we are jealous, to do all in our power to exterminate them, and to bring to shame the people who, through ignorance, indifference, or greed, aid and abet these sharks, who prey upon the poor and unfortunate? A quack-doctor is quite a joke among the better-informed of the laity, but have you no care or pity for those poor starving thousands who spend their last dollar for vile medicine for one sick child, and hasten its end, when the money is needed to buy bread for his brothers? Is that a joke? What does your prosperous and pious newspaper-proprietor say, when he takes a large part of this money wrung from the poor, and for it prints more lies to delude them? Can he extenuate such complicity? He laughs and says that is legitimate matter, because everybody but fools knows that an editor is not responsible for what appears in his advertising columns; that his responsibility ends when he puts on the ink to make it readable. Yes, their joint victims are fools, and, according to his code, as such

are to be robbed. Why should he not go to the insane-asylum and pick pockets? The victims would never be sharp enough to catch him. He spares them, forsooth, because they are a little weak in the head.

A short time ago, a poor, ignorant countryman came from near Eutaw, Ala., to consult a notorious quack about his little boy, who had a form of spinal paralysis which is very common, and which a doctor of the slenderest experience could recognize at once as an entirely hopeless one. All the other doctors he had consulted had told him, as I did, to save his money, and not throw it away on quacks. The quack told him to go home and mortgage his farm for \$200, and then bring the child back and he would cure him. He had been referred to me by a friend of his, whom he had confidence in. It was incredible to him that a man could be such a rapacious hyena, and he asked me, with tears in his eyes, if I thought the boy could be benefited by giving this fellow the money. "For," said he, "I could never raise that mortgage, as now I am just barely able to feed my children by working this farm; but still, if he can cure him, I am willing to risk starvation for us all." I gave him a very free and warm opinion, and I think he took my advice. He said he could not understand it; because all our Birmingham newspapers spoke in the highest terms of this man's skill. I said yes, but newspapers do not use their consciences during business-hours, and I proved it by showing him how one of them, at least, had criminally lent his space to telling the people that vaccination was useless and dangerous, and that the electropoise would prevent smallpox absolutely. The public is, perhaps, too well educated at present on this particular disease, and this idiotic machine costs so much that poor people cannot buy it, so that, probably, not much harm was done in this instance. But so far as our newspaper-man knew or cared, the population at the smallpox camp might have been doubled by it.

It is our duty to fight these things, and to do all the talking we can to the end of educating the public as to our proper stand with regard to them. This newspaper-disgrace is the worst I know that we have to contend with. One hundred and twenty thousand doctors, and a few other public-spirited citizens all over this land are doing all they can to educate the people in sanitary and moral laws, and all the newspapers, except, perhaps, half a dozen (none of which is published in Birmingham), are doing all they can get pay for, with their daily columns of criminal, filthy and nauseating nonsense, to bring these efforts to naught. They seem to care nothing for human life; but that is not altogether the case; it is simply that they want the money, and they find it easy, after long practice, to push the consequences aside, because they are not pleasant to contemplate; just as all good people made little Joe move on till he died because he was not pleasant to look at. We cannot get the ear of the pub-



lic as easily as the advertising quack can, for obvious reasons, and we are well aware that it is not politic, nor profitable, to be always telling people unpleasant truths. Still each of us ought to make some little personal sacrifice, to help arouse a healthy and intelligent public opinion that will protest against newspapers lending their aid, in consideration of a share in the loot, to these practisers of false pretense: these sharks who obtain money under more shameless false pretense than any poor devil of a common swindler was ever locked up for. What could be more vile than robbing the poor and ignorant and sick, than giving space to these vultures to herald their lies and filth so vile as must cause these genteel owners of the press to wince when they see their families read their own papers? Accusing us of jealousy will not salve their consciences; they know that our pay-patients do not need our protection. It is the class that gives us most of our work and least of our pay; it is the class we work for when editors and other pious folk are busily engaged in trying to forget that such folk exist, and to believe that quack-doctors pay money to newspapers just for fun.

Our desponding, but honest professional brother, who thinks we are all degenerating into quacks, because his two or three neighbors are beating him in the race by underhand methods, must take heart. They cannot beat him if he will but equip himself with what medical science offers to-day; yes, a half, a fourth, a tenth part of the medical knowledge of to-day honestly used will win against all meaner methods. Such knowledge is within the reach of the most remote country-doctor now, if he can only be induced to come to the medical societies and get his interest refreshed. The country-doctor has one decided advantage over his town-brother—he has time for meditation. Consultants and books being scarce, he has necessity for it. His close communion with the phenomena of nature makes him first a naturalist and then a philosopher—a thinker. Until he attains this point, indeed, he has no use for a microscope and other instruments of accuracy. But he must bring his thoughts to market, or he will cease to think it worth while to produce them. Jenner probably would never have made his observation on cowpox if the indomitable spirit of John Hunter had not kept him on a hot skillet of medical zeal, through a perfect stream of letters from that individual requiring all sorts of information, investigations and experiments. Jenner, it seems, was never too busy to respond to these demands of his friend—that master of all workmen in his line, before or since—the man who had taught him how to work. Hunter wanted a bird's nest, some fact about young rabbits, or a live ground-hog; Jenner always had time to find them for him. The country-doctor knows his patients, and that is another advantage he has. He attends the same ones year after year, until he not only knows their constitu-

tions and minds, their virtues and weaknesses, but he gets to love them as near relations. Patients in town are less stable; they come and go, they move about from town to town, or change with the fashionable current; they are persuaded by a friend to try a new doctor who has just come in and is wonder-working at a great rate. I have known one or two instances, too, in which the family-physician was displaced because it was not convenient to settle his bill. But the country-doctor's patients *all* owe him, and he and they get so used to it that neither of them seems to mind it. They do not move away, and as there is no other doctor near, he is forced to attend their sick whether he likes it or not. There is no young doctor about, hungering for a call, to whom he can turn the case over, so that your country-doctor soon gets to be your only real philanthropist. He gets to love these patients and their children who have such confidence in him, and often feels fully compensated in the pleasure the work gives him; his patients get to *see* this, and take attentions from him, involving brain and muscle and horse-killing work, with all that freedom from any sense of obligation with which a babe takes its nourishment.

James Whitcomb Riley's character of Doc Sifers comprehends all this beautifully—a man who is handy about everything, knows the habits and weaknesses of his patients and friends, human and brute, and of the wild things of the woods; a naturalist; a humanitarian; a lover of all things; a close observer; every quality in fact which makes a good doctor and nurse.

Doc hain't, to say, no "rollin' stone," and yit he hain't no hand  
Fer 'cumulatin'. Home's his own, and scrap  
o' farmin'-land—  
Enough to keep him out the way when folks is  
tuk down sick  
The suddenest 'most any day they want him  
'special quick.  
And yit Doc loves his practice; ner don't, wilful,  
want to slight  
No call—no matter who—how fur away—er day  
er night.  
He loves his work—he loves his friends—June,  
Winter, Fall, and Spring;  
His lovin'—facts is—never ends; he loves jes'  
ever'thing. . . .  
'Cept—keepin' books. He never sets down no  
accounts. He hates.  
The worst of all, collectin' debts—the worst, the  
more he waits.

And yet, according to the philosophy of the farsighted and more thrifty members of our profession, he ought to have had a good paying practice; that is because he was so popular with the women; he was as much so with them as he was with the dogs and children, bees and birds.

'Mongst all the women—mild er rough, splendiferous er plain,  
Er them with sense, er not enough to come in  
out the rain,—  
Jes' ever' shape and build and style o' women,  
fat er slim—  
They all like Doc, and got a smile and pleasant  
word fer him.

And then that other country-doctor whose spirit has been embalmed by another poet:

"A' would gie onything tae say Annie hes a chance, but a' daurna, a' doot yer gaein' tae lose her, Tammas." "Can naethin' be dune, doctor? Ye savit Flora Cammil, and young Burnbrae, an' yon shepherd's wife Dunleith wy, an' we were a' sae proud o' ye, an' pleased to think that ye hed keepit deith frae anither hame. Can ye no think o' somethin' tae help Annie, and gie her back tae her man and bairnies?" and Tammas searched the doctor's face in the cold, weird light. "There's nae pooer in heaven or airth like luv," Marget said to me afterwards; "it maks the weak strong and the dumb tae speak. Oor herts were as water afore Tammas's words, an' a' saw the doctor shake in his saddle. A' never kent till that meenut hoo he hed a share in a' body's grief, an' carried the heaviest wecht o' a' the Glen. A' peedied him wi' Tammas lookin' at him sae wistfully, as if he had the keys o' life an' deith in his hands. But he wes honest, and wudna hold oot a false houp tae deceive a sore hert or win escape fer himsel'."

Doc Sifers and Weelum MacLure are in different settings and 4,000 miles apart, but they would very likely know each other intimately at once should they meet in this world or the next.

We doctors like to get paid for the work we do, but only for the actual work. We do not patent and try to control our discoveries. What medical men have done in therapeutic, surgical and sanitary science has been as freely given as the rain and sunshine and the other gifts from heaven to all who wished to know it. Only renegades and pretenders do otherwise. If we make a discovery we hasten to acquaint our brothers with it, because it is the only good way of advertising ourselves. No medical reputation is worth anything unless it is based on the approval of one's fellows. Their good opinion and theirs only is all that an honest doctor needs to strive for. When he proves himself worthy and competent before these only competent judges, he will not have to sit up at night to take care of his reputation. He can then put in all his time, as all of us should, in observation, study, and practice. I venture to say that our profession is the only pursuit known to man in which virtue (good, honest effort) always has its reward. We are being rewarded now in the increasing respect of the laity. All seeking after truth breeds a bent of mind for honest dealing, and confidence and love are its sure rewards; and as knowledge comes and wisdom lingers, we feel sure of the laity's perfect confidence when we are entirely worthy of it.

I cannot let this occasion, of which I have already taken so many advantages, pass without acknowledging for my profession, our great obligation to our ablest lieutenant, our most loyal sympathizer and constant believer in us, our noble guard upon whom we must rely in our warfare against ignorance, indifference, sickness, and death—the trained nurse. Her work requires all that is mentally, morally, and physically best in woman, and her reward is much—a happy, healthy life which custom cannot stale; her own, ours and everybody's approval; and the smiles on faces where have been tears of suffering and unhappiness which

her hand has taken away. Edwin Arnold has written of the first one:

"If on this verse of mine  
Those eyes shall ever shine  
Whereto sore-wounded men have looked for life,  
Think not that, for a rhyme,  
Nor yet to suit the time,  
I name thy name, best victress in the strife;  
But let it serve to say  
That when we kneel to pray  
Prayers rise for thee thine ear can never know,  
And that thy gentle deed  
For Heaven and for our need  
Is in all hearts as deep as love can go.

"'Tis good that thy name springs  
From two of earth's fair things—  
A stately city and a sweet-voiced bird.  
'Tis well that in all homes  
Where thy kind story comes,  
And brave eyes fill, that pleasant sounds be heard.  
Oh, voice! in night of fear,  
Like night's bird's—sweet to hear;  
Oh, strong heart! set like city on a hill:  
Ah, watcher! worn and pale,  
Dear Florence Nightingale,  
We give thee thanks for thy good work and will.  
England is glad of thee;  
Christ, for thy charity,  
Take thee to joy when heart and hand are still."

But even Florence Nightingale, with her prophetic eye and all her genius for reform and organization, did not dream of half the useful knowledge possessed to-day by the successors of Sarah Gamp and Betsy Prigg.

In conclusion, we beg you of the laity to help us as these nurses are helping us, or at least to acquaint yourselves with what we and they are doing. If we are to stay through the epidemic while you run away, you must not turn deaf ears and button up your pockets when we tell you that with your money all epidemics can be prevented. You must listen to us and work with us. It is as much your duty as ours; else as we suffer a pang when we have overlooked one of our poor patients, so may you one day have ringing in your ears that heart-breaking cry of the creator of little Joe: "Dead, your majesty; dead, my lords and gentlemen; dead, your right reverends and your wrong reverends; dead, men and women born with heavenly compassion in your hearts—and dying thus around you every day."

H. V. C. Hinder (*Australasian Med. Gaz.*, June 20, 1898) reports **4 successful cases of prostatectomy**. The bladder was opened by suprapubic incision, a wedge shaped piece was cut out of the prostatic urethra and a glass tube was passed into the bladder through a median perineal incision in all the cases. The patients made good recoveries and have remained in satisfactory condition, one of them for over two years, since the operation. Some patients get along very well if taught to catheterize themselves, but cystitis follows in many cases. Hinder believes that early diagnosis and free removal of all obstruction, followed by thorough drainage of the bladder, would do much to lessen the mortality of operative treatment in these cases. This is most safely and surely effected by suprapubic removal and a perineal drain.

R. Gordon Craig also reports a successful prostatectomy by the method above described, in a separate article in the *Gazette* of the same date.



# The Philadelphia Medical Journal

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**Commissions to the General Physician by the Specialist for Reference-cases** are urged by a writer in the *Colorado Medical Journal*, and the suggestion is complacently coquetted with by a New York contemporary. The proposal is of course highly inethical, and subversive of all true professional dignity. A man of character would neither take nor give such commissions, and carried on by characterless men the practice would quickly result in the biggest quack giving the biggest commissions. The plan should be entitled, A method of introducing and hastening professional degradation.

**Suggestions to Writers, No. 10: Use the fewest words possible to express the fact.**—The mistake of not doing so has been called perissology. The following example of needless amplification occurs in a special article by a distinguished neurologist in a leading metropolitan medical journal: "The anterior column of gray matter extends throughout the spinal cord, and the upper enlarged intracranial end of the spinal cord, which is known as the oblong cord or medulla (medulla oblongata)." The information contained in these 32 words might have been given in 15.

**Concerning Snuffing-tubes and the Origin of the Word Tobacco.**—In Bulletin 4 of the Free Museum of Science and Art of the Department of Archeology and Paleontology<sup>1</sup> of the University of Pennsylvania, there is an interesting article on the Snuffing-tube, by Dr. Max Uhle, from which it appears that the word tobacco is derived from the word *taboca*, of Tupi origin, signifying tubes. A number of South American Indian snuffing-tubes are pictured, and the custom of snuff-taking is traced to ancient Peru. Snuffing, therefore, preceded the smoking of tobacco, and the snuffing-tube may have been the forerunner of the pipe. Besides tobacco another powder called niopo or curupa was later used as a snuff by the South American Indians. The relation of all this to medicine appears in the fact that originally the use of snuff and tobacco was as a medicine among the ancient Peruvians. The medicine-man of the Purus tribes also produced ecstasy by

snuffing tobacco, so that it had a religious, as well as a purely physiologic use. The barbaric medicine-man is thus once more the initiator of a world-wide custom.

**The Wheat-supply of the World**, was one of the subjects chosen by Sir William Crookes in his Presidential address before the British Association. The statistics of the bread-eaters of the world, the wheat-production, and the capabilities of wheat-growing countries were considered. The prophecy based on past experience is that, in 1931, 330,000,000 bushels of wheat will be required that cannot be obtained. The bread-famine thus predicted will be compensated for, Sir William hopes, by the chemist, by raising leguminous plants, by saving nitrogen at present wasted, by drawing on the atmospheric supply of nitrogen, etc. Not many years ago a coal-famine was predicted by an English statistician, but like the approach to absolute zero, it seems more difficult to reach and farther removed as we near the theoretic limit. Wheat is not absolutely necessary for the support of life. We at present waste our wealth outrageously, and we grow only a portion of the food possible on the best cultivated lands.

**The Etiologic Relation of the Bacillus Icteroides to Yellow Fever.**—The discussion on this subject continues with unabated vigor. There seems to have been a disposition of late on the part of some of the northern bacteriologists to discredit Sanarelli's work and conclusions, but the arguments used to sustain their views are not invariably convincing. Thus, a recent writer upon the subject has urged that Koch's first law is not fulfilled, because Sanarelli did not find the microorganism in all of the cases he examined, notwithstanding the fact that he manifestly did not and perhaps does not even now know the best method of searching for it. This does not necessarily discredit it as a cause, for in so common a disease as typhoid fever it is frequently difficult to isolate the bacillus of Eberth. This same author, moreover, has exposed cultures of the bacillus icteroides to low temperatures, even below zero, and found its growth was inhibited, but its vitality not destroyed. He argues that this bacillus manifestly cannot be the cause of yellow fever, because, as is well known, epidemics of yellow fever cease after a frost, and he believes the cessation must

<sup>1</sup> It is a noteworthy illustration of the illogicality and whimsicality of English spelling that the *Bulletin*, in its title spells *Archæology* as here written but no longer feels constrained to spell *perissology* with the logical and etymological *æ*. But we are almost afraid to point out that *ἀρκας*, and *παλας*, would demand the *æ* in both words, or rather *ai* if one were rabidly right.

be due to the destruction of the bacillus. The annals of the U. S. Navy contain many instances of ships infected with yellow fever, that have been sent to northern latitudes and presumably exposed to a temperature that in our author's opinion should be sufficient to destroy the germs. Nevertheless, the disease reappeared so soon as the ships returned to the tropics. In an instance related to us by a naval surgeon, a ship infected in the Pacific ports of Central America was taken to Alaska, the crew sent ashore, the ship thoroughly wet within and without, and allowed to remain frozen all winter. Yellow fever reappeared as soon as that ship went south, and eventually it was necessary to burn it. Evidently in this case some of the bacilli escaped destruction by cold.

**Statistics of Suicide.**—Dr. John Sibbald, Commissioner in Lunacy for Scotland, made it appear by an ingenious use of statistics in his recent paper before the British Medical Association, that suicide has not increased in England and Scotland during the last thirty years at anything like the rate that is generally believed. The figures for all reported suicides for the years 1865–69 are for England 67 per one million of population, and for Scotland 40 per one million, whereas for 1890–94 the figures are 86 and 54 respectively. This looks, on the face of it, like an ominous increase.

Dr. Sibbald, however, called attention to several sources of error, chief among them being the concealment of suicide due to the aversion of friends to having the facts made known. He said, with truth, that this feeling is not nearly so intense now as formerly, and that consequently fewer deaths by suicide are reported nowadays as due to natural causes. This, he thought, is the principal reason why the rate per million has seemed to increase. He proceeded to demonstrate this theory by a study of statistics. He first took the cases of suicide by hanging. Of all modes of self-destruction this is the one that can least be concealed or assigned to accident or homicide. It speaks for itself; it is a form of suicide that will out. Now in both England and Scotland during these thirty years this method has been the most frequently adopted of all—34 and 29% respectively of all cases. But according to Dr. Sibbald's tables the number of cases of suicide by hanging has not increased during these years, but has kept at a remarkably even rate—about 25 per million of population in England, and 17 per million in Scotland. Hence it follows, if this method is taken as a true index, that suicide has not increased.

Dr. Sibbald next showed in separate tables that the apparent increase has been in cases, first, of suicide by weapons (firearms and cutting instruments) and, second, by poison and drowning. The last two methods, by poison and drowning, show the greatest increase. But during this period accidental deaths from these four last named classes of causes have not increased,

but have quite remarkably decreased. Hence the inference seems at least plausible that the increase in suicide is to be found among those only who resort to weapons, poison, or drowning; and that this increase is more apparent than real, and is due simply to greater accuracy at the present time in ascertaining and registering the cause of death. It would otherwise seem most remarkable that suicide by hanging (the most popular and most unmistakable method) shows no increase, while suicide by other methods (which can all be more easily concealed or mistaken than hanging) shows the whole increase, and this, moreover, in conjunction with the fact that accidental deaths due to these causes have decreased.

As a statistical study Dr. Sibbald's paper is most interesting and almost convincing. We cannot say as much, however, for Dr. Haig's paper on suicide as a result of uric acid poisoning. The author seems to have allowed his judgment to be somewhat misled by his enthusiasm for a hobby. That uric acid should be such a potent cause of suicide as Dr. Haig believes, is quite incredible. His paper is in marked contrast with Dr. Sibbald's in its absence of facts and figures.

**The Insanities of Inebriety.**—Dr. J. F. Sutherland, in a paper read before the British Medical Association, takes a decided stand on the question of restraining inebriates. He is not deterred in the slightest degree by that old fiction of the law known as "the liberty of the subject." When a "subject"—or a citizen, as we prefer to call him in the United States—degrades himself constantly with drink, wrecks his family, imperils human lives, and becomes both a burden and a disgrace to the community, he should, in Dr. Sutherland's opinion, be forcibly restrained. The author, who is deputy commissioner in lunacy for Scotland, makes a strong plea for legislation on the subject.

After a statistical study, in which inebriety is shown to be much more common in large cities than in rural districts, and, rather to our surprise, least common of all in the Highlands, Dr. Sutherland proceeds to show the folly of permitting the inebriate to continue in his depraved course until such time as he commits some crime for which alone he can be legally tried. Under existing laws in most countries the habitual drunkard is breaking no law by his drunkenness. The State protects him, ostensibly; but what the State does really is to lie in wait for him; to give him every opportunity for preparing himself for crime, and then, when he lapses, to try him, to condemn him, and, most probably, to hang him. The State is thus as derelict as, if not more so than, the drunkard. Anyhow it becomes a sort of accomplice. By refusing to be guided by the dictates of both humanity and science, and cleaving instead to an old legal formula about the liberty of the citizen—which the State ignores in other cases whenever it sees fit—by doing all this, the State becomes



homicidal, and can properly be said to be itself drunk with the ignorance of ages.

Analogies for legislation looking to the restraint of the inebriate are easily found in our lunacy laws. It is not difficult to apprehend and commit a lunatic, and abuses under the law are of the rarest occurrence. It should not be more difficult, therefore, nor more unjust, to apprehend inebriates, and, by a due legal process, have them declared what they are, and deprived for awhile of their liberty. The two kinds of cases are strictly analogous, especially to the medical mind, which knows perfectly that inebriety means disease, degeneracy, and insanity.

Dr. Sutherland defines not less than seven forms of insanity caused by drink: (1) Intoxication, (2) delirium tremens, (3) mania-a-potu, (4) dipsomania, (5) monomania of suspicion, (6) chronic alcoholism or dementia, (7) general paralysis. While this list is wide open to criticism on both pathologic and nosologic grounds, there can be no doubt that acute and chronic alcoholic intoxication is a potent cause of mental perversion. The author goes much farther than most alienists in claiming that even simple acute intoxication is essentially a transient insanity, and as such—if we understand him correctly—should act as a bar to the infliction of the full penalty of the law. The old legal maxim that the intoxication is the result of a voluntary act, and hence should not mitigate but rather aggravate the offence, is believed by Dr. Sutherland to be totally at variance with the teachings of experience and science. There are satisfactory evidences that the more intelligent judges are coming to see this subject in its true light. They cannot fail to note the inconsistency of the law which regards acute drunkenness as disqualifying a man for making a legal contract, such as a marriage, a deed, or a will, and yet does not disqualify him for his full share of responsibility in criminal acts. But this is strictly in accordance with the spirit of English law, which has always been more jealous of property than of life.

Legislation on this subject, when it comes, will be framed in each country and State to suit local prejudices and needs, but Dr. Sutherland's paper will, in the meantime, serve a good purpose by giving voice to the general medical conscience and intelligence on the subject of inebriety.

**Theories of Hypnotism.**—Dr. J. Milne Bramwell, at the recent meeting of the British Medical Association, ventured upon a discussion of the various theories that have been advanced to explain the essential nature of hypnotism. This is the only aspect of hypnotism that still has perennial interest. So many merely clinical facts have been accumulated and exploited that little in that line remains now to be done. The clinical field is probably well-nigh exhausted, and the mere clinical aspect of hypnotism no longer presents enough novelty to attract original minds. Not so, however, with the

theory of hypnosis. This appeals strongly to scientists from both the physiological and psychological side; in other words, hypnology is passing into its critical stage, and hence gives promise of soon taking the place among the sciences where it properly belongs. Dr. Bramwell gave an admirable criticism of this subject, and one that is all the more valuable because he himself did not indulge in undue speculation.

It was shown that Braid himself had advanced to a sound position as to the theory of hypnosis, and that many of the later observers would have remained on safer ground if they had held closer to the shrewd Scotchman. Dr. Bramwell held that hypnosis cannot be described as merely a mental state of mono-idealism, or of concentration of the attention on a single point; nor can it be explained by "suggestion" (as is so commonly attempted), for this is merely its starting-point; nor yet by its analogy to normal sleep. Finally, hypnosis is not explainable as a state merely of suspended volition. With reference to this last point (on which centers the theory of the Nancy school), Bramwell contends that the will is not suspended in hypnosis, and that suggestions can be and constantly are resisted in even the lethargic stages. The theories about *rapport* and suggestion, held by the Nancy school, and about magnets, held by some of the Salpêtrière followers, are mere reversions to earlier and cruder mesmeric ideas. There is no actual need for an operator, as hypnosis can be self-induced.

So far as we understand this criticism, Bramwell thinks that the commoner theories about hypnotism are unsatisfactory. In this we agree with him, but we should like to have had from him a rather more constructive criticism than he attempted. It is easier to pull down, of course, than it is to build up. We do not quite agree with him in his rejection of the theory that hypnosis is in reality a mere sleep-phenomenon. It has seemed to us that there is more than an analogy between the two states; that there is an identity at many points, and that hypnosis can best be explained in terms that also explain sleep. This seems all the more plausible when the phenomena of dreams, nightmare, somnambulism, etc., are considered. To be sure, mere analogies do not explain the essential nature of things, and normal sleep itself is still a difficult state to explain either physiologically or psychologically. This very fact, however, puts us on safer ground with hypnotism, because we can thus say that hypnosis is *sui generis*, and is neither more nor less difficult to explain than common sleep. We at least get rid in this way of the need of resorting to all the fanciful and inadequate explanations so much in vogue.

Benedict, of Vienna, in this same discussion, was apparently of an opinion similar to the one here expressed, for he said that he regarded hypnosis as a physiological state similar to the winter sleep of the dormouse.

Of purely fanciful and speculative explanations of hypnotism that of Mr. Frederick Myers is at present one of the best known. Mr. Myers was present at Edinburgh and gave a long and labored explanation of his theory of the "subliminal self." We will merely say that to us this theory is inadequate, unfounded and, in a measure, unintelligible. It does not clarify the question because it is even more difficult to apprehend than the subject which it seeks to explain. It will probably not be generally accepted in the present state of medical opinion, but the fact that Mr. Myers was so well received at Edinburgh is at least a good indication that the medical profession keeps an open ear for those even who take a very advanced position on such obscure questions as telepathy and clairvoyance.

Hypnosis, we believe, is a physiological condition allied in many ways with physiological sleep, and is the soil, as it were, for the most varied and bizarre display of the mental faculties. These faculties, such as memory, will, emotion, etc., are not always affected in one and the same way in all subjects; hence one of the obstacles to arriving at a true theory has been a tendency to claim a uniformity of mental activities as a characteristic of hypnosis, whereas the variations in activity are very great. Bramwell himself has fallen into this error by reason of a certain dogmatic way in which he claims that the will is *never* abolished, and that the suggestion of crime is *never* accepted, in hypnosis. We believe that clinical observation disproves such statements, but we think that subjects vary widely in these respects within the limits of true hypnosis.

**Professor Behring to His Critics.**—We read in the *Deutsche medicinische Wochenschrift* of September 15th the answer of Professor E. Behring to his critics relative to the patent which the Washington authorities have recently granted him for his diphtheria-antitoxin. He appears to have been impelled to his statement by a polite request on the part of the editor of the *Deutsche medicinische Wochenschrift*, and by some caustic remarks which were published in the *Berliner Tageblatt* of September 5th, under the heading: *Science and Business*. The writer in the latter journal, a well-known daily paper of Berlin, considers the question of this patent from the moral standpoint, and compares the high morality of Helmholtz with his ophthalmoscope, Pasteur with his methods of immunization, Liebig with his chloral, and Lister with his antiseptic treatment of wounds—none of whom sought a patent for his discovery—with the base immorality of Behring seeking a patent for his diphtheria-antitoxin. In answer thereto, Behring states that as far as he is aware, our patent-laws are of recent date, and that neither Helmholtz nor Liebig, even had they so desired, could have made use of them. But that, nevertheless, it is well known that Liebig, as also

other renowned chemists, even in years gone by, were not averse to turning their discoveries to their financial profit, and that since the existence of the patent-laws, chemists of great renown in reality have not hesitated to have recourse to the—for scientific men, according to the *Berliner Tageblatt*—"immoral" expedient of patent-claims. He feels unable to say what would have been the actions of Pasteur and Lister could they, without difficulty, have patented their discoveries. He is not disposed to consider the interests of foreigners, particularly of those foreigners who might themselves make use of the patent-laws. The Germans should rather decline to sustain the inconsiderate piracy of certain American firms, in that they should not take seriously, nor join with them in, their hypocritical clamors of "stop thief, stop thief." In answer to the statement that one is unaccustomed to view the physician as a merchant with medical wares for sale, he queries: *Who says that he is still a physician?* On the contrary he says that he renounced the medical profession a long time ago, and since then has been obliged to resort to business-methods to acquire the necessary means to enable him to prosecute his experimental-therapeutic investigations. In 1892, in his paper entitled: *Die praktischen Ziele der Blutserumtherapie*, he asserted that he was no longer concerned in the application of the results of his scientific investigations in practical medicine. While at this time the significance of his discovery was appreciated even in foreign countries, no helping hand was held out to him. On the other hand, the French people collected 1,000,000 francs for the Pasteur Institute to further the practical application of serum-therapy, and the French Republic gave a yearly grant of 200,000 francs to the same institution. But what was done in Germany? Behring writes that he stood not only in danger of moral destruction, but was also threatened with want of the necessities of existence. He would have been obliged to make use not only of his few possessions, but also of his entire credit, to continue his experimental investigations. The Höchster Farbwerke finally coming to his assistance, he was relieved of financial distress. He begs to assure the writer in the *Berliner Tageblatt* that it is to-day in Germany a very hazardous affair for a discoverer or an inventor, trusting to the gratitude of the nation, to lose sight of the business advantages of the discovery or invention. "A tender soul might perhaps find a certain justification for the moral wrath of the authority in the *Berliner Tageblatt*, in case the poor Americans should be injuriously affected if my patent should in reality be allowed. How much foundation in fact, however, there is for such fear may be judged from the fact that the Höchster Farbwerke and I have mutually resolved to furnish for the same price more reliable preparations than those heretofore put upon the market by American firms."

The *Münchener medicinische Wochenschrift* of Sept.



13th, contains a note to the effect that whereas a statement concerning the patenting of diphtheria-antitoxin by Professor Behring is still missed in the medical-press, where one would naturally expect to find it, the matter has already been taken up by the lay-press. Reference is then made to the article in the *Berliner Tageblatt*, and in the quoted excerpt we note the assertion that the writer believes this the first time in the history of medicine that such an occurrence has taken place. We judge that the *Münchener medicinische Wochenschrift* hardly approves of Professor Behring's course, as it directs attention to the fact that it cannot be justified because of the patenting of other medicaments, such as antipyrin, neither the discoverer nor the patentee of which was a physician.

The *Klinisch-therapeutische Wochenschrift* of September 11th comments upon a protest (in a Marburg paper) of Professor Behring against the criticisms of American and English professional journals, and seeks to justify his course. This journal believes that Professor Behring's action, instead of being in direct contravention to the tenets of our code of ethics, is in conformity therewith. Our contention that the experiences and inventions of one should be for the benefit of all, finds in Professor Behring's patent its widest application; "now the American people, instead of the expensive and frequently worthless preparations at present on the market, will be provided with a cheaper article prepared under the direct supervision of the discoverer."

The spirit of Behring's article is certainly far from admirable. His insinuations and sneers at Americans are undignified and untrue, and may help us to estimate his personal character more accurately. We have a profound sympathy for the suffering of many German scientists and their ill-requital financially either by the Government or the community. But the fundamental and damnable fact remains that not to Behring alone is due the discovery of which he is attempting to reap the entire reward. The division of the French prize between Roux and Behring shows that. This renunciation of his profession and its ideals is also highly suspicious, and his defense makes it clear that the renunciation was for purely commercial reasons. The whole affair is soaked in the pickle of commercialism. A man who has a "few possessions" and "credit" is not suffering for bread. Koch was not suffering, and he also is in the employ of and in profit-partnership with the same firm that owns Behring's cast-off professional soul. There is, fortunately, little danger that the serum of American manufacturers will be run out of the market by that of the *Höchster Farbwerke*, either because this last is better, or because Behring's sordid patent will be sustained by our courts.

It is a matter of profound regret that German science so readily becomes subservient both to political and financial control. We trust that in this our English people will pursue the higher ideal.

## Reviews.

**Laboratory Directions for Beginners in Bacteriology.**—By VERANUS A. MOORE, B.S., M.D., Professor of Comparative Pathology and Bacteriology and of Meat-Inspection, N. Y. State Veterinary College, Cornell University, Ithaca, N. Y. Published by the Author. Press of Andrus & Church, Ithaca, N. Y., 1898. pp. 84.

This pamphlet—a printed revision of mimeographed notes on bacteriology furnished the author's students—aims "to impart a technical and working knowledge of certain of the more essential methods and to develop a definite knowledge of a few important species of bacteria." It will be found very useful by the beginner, and is particularly to be commended because of the attention devoted to many minor details of laboratory routine, so annoying to the student, and which, because of their relative unimportance, are frequently unmentioned in the ordinary treatises on the subject.

**The Woman's Medical College of Pennsylvania.**

An Historical Outline. By CLARA MARSHALL, M.D., Dean of the College. P. Blakiston's Son & Co.

The history of medical colleges is generally dry reading to all but the alumni of the particular institution under consideration, but a dramatic interest attaches to that of the Woman's Medical College of Pennsylvania, which will hold the attention of any one in whose hands Dr. Marshall's sketch may fall. Fifty years from now this record of the injustices, insults, and ostracisms to which the broad-minded men and earnest women were subjected by whose efforts this institution was founded and given the honored place which it now holds will make reading as curious as that which tells of the persecution of the early Quakers by their liberty-loving oppressors. The book is singularly free from bitterness, perhaps because Saul is so evidently on the road to Damascus, as shown by the long appended list of institutions to which the graduates have received appointments or in which they or the students have the opportunity for clinical study. Fifty-three pages of the volume are occupied by the titles of medical papers written by the Alumnas. The volume is printed on heavy paper and attractively bound, with a cut of Dr. Ann Preston, the first dean, as a frontispiece.

**System of Diseases of the Eye,** by American, British, Dutch, French, German, and Spanish Authors. Edited by WILLIAM F. NORRIS, A.M., M.D., and CHARLES A. OLIVER, A.M., M.D. Vol. III. Local Diseases, Glaucoma, Wounds and Injuries, Operations. Pp. 962. Philadelphia: J. B. Lippincott Company, 1898.

The contributors to this volume are: Drs. Charles Stedman Bull, George C. Harlan, Samuel Theobald, Swan M. Burnett, W. A. Brailey, Sydney Stephenson, A. Hill Griffith, Isidor Schnabel, Joseph Schöbl, Johann Deyl, Priestly Smith, Emil Gruening, Robert L. Randolph, Herman Knapp. The translators are: Drs. Charles H. Reed, Adolph Alt, Robert Sattler. The volume contains 50 full-page plates and 186 text-illustrations. These, with the 962 pages of contents, make a most handsome and attractive octavo volume. Diseases of the orbit are discussed by Bull, of New York, whose papers on orbital tumors have given him considerable reputation in this subject. The chapter on diseases of the eyelids, by Harlan, of Philadelphia, is concise and somewhat brief. We should have been glad to have had a more extensive discussion of the common ezeematous form of marginal blepharitis. No mention is made of the value of mercuric chlorid in the treatment of this disorder. The chapter on operations upon the lids is most satisfactory and is well illustrated. Diseases of the lacrimal apparatus are well treated by Theobald, of Baltimore. He makes an able defense of his use of large probes. He has found the average diameter of seventy adult canals to be 4.11 mm., while the diameter of his largest probe (No. 16) is only 4 mm. He states that in 66% of his cases of lacrimal stricture, including children, he has used with ease the No. 16 probe. He says: "My experience in the use of large lacrimal probes now extends over a period of eighteen years, and each succeeding year my belief in the value and efficacy of this



method of dealing with lacrimal obstruction has become more strongly established." Diseases of the conjunctiva have been assigned to Burnett, of Washington, who gives an extensive description of the geographic distribution of, and of the influence of climate upon, trachoma. Copious statistics show a frequency of from virtually nil in Sweden, Norway, and Denmark to from 58 to 67% of all eye-cases in Rosmini's clinic in Milan, Italy. The percentage is even higher in some parts of Russia. Burnett dwells upon the comparative immunity of negroes to this affection. The space allotted to the medicinal treatment of trachoma (one page) is entirely too small in a work of this size and scope. Many valuable remedies, such as boroglycerid and the tannin-preparations, are not even mentioned. Burnett prefers copper sulphate as a routine local application, dwelling chiefly on the ease with which its effect may be regulated. The chapter on diseases of the iris and ciliary body, by Brailey, of London, is scholarly, scientific, complete, and extremely practical. As would be expected from so distinguished an histologist, the microscopic pathology of the choroid is ably presented by Hill Griffith. The relationship of posterior staphyloma to myopia is discussed by Schnabel, of Vienna, whose chapter is replete with the results of his personal investigations. He believes that only those myopic eyes with posterior staphyloma are in danger of macular retinoiditis. Myopic eyes, primarily emmetropic or hyperopic, he considers free from the evils of macular disease. The chapter on diseases of the retina, by Schöbl, of Prague, is a masterly essay and includes 165 pages, with many fine illustrations. It is the feature of the book. The author leaves little to be desired in any part of his discussion, and has added much new material from his extensive clinical experience. Diseases of the optic nerve, by Deyl, also of Prague, are well considered in the characteristic style of the German and Austrian masters. In the discussion of central scotoma due to toxic agents, no mention is made of the possible macular origin of the trouble, and there is no reference to the reports of Schoen, Bayer, Treitel, Nuel, Usher, Dean, de Schweinitz, and Griffith. As the toxic amblyopias will be discussed separately in another volume, it is likely that this omission will be remedied. The article on glaucoma, by Priestly Smith, of Birmingham, England, is highly satisfactory, as is that on wounds and injuries, by Emil Gruening, of New York. Randolph, of Baltimore, whose experimental work on sympathetic ophthalmia is so well known, contributes a fair article on this subject, and handles very discreetly the perplexing problem of when to enucleate. The chapter on operations, by Knapp, of New York, is the best of the American contributions to the volume; but he is so identified with the German science that we cannot fairly claim him; so, altogether, the foreign contributions quite outclass the American in this volume. Knapp has built his chapter largely upon personal experience. He concludes the discussion of cataract in the following italicized language: "*Simple extraction is not only the best, but also the safest operation for senile and many other cataracts.*" Concerning "partial tenotomies" he sagely remarks: "I did them myself at the beginning of my practice, and when, in conversation, I told von Graefe of it, he answered, 'You will not do that long.'" He is also dubious about tenotomy and advancement for insufficiency of the interni. It is encouraging to find so many prominent oculists realizing the difference between anomalies of innervation and anatomic discrepancies. A few years ago the scoffing from authoritative sources was overwhelming—now, the doom of the tenotomist is not far distant. Knapp presents a very satisfactory paper on foreign bodies in the eyeball, and speaks encouragingly of the large electromagnet of Haab.

**The Methodist-Episcopal Hospital Reports, Vol. 1, 1887-1897.** Edited by LEWIS STEPHEN PILCHER, M.D., and GLENTWORTH REEVE BUTLER, M.D. New York. Published by the Hospital, 1898.

This interesting, beautifully printed and well-bound report of 563 pages contains a resume of the history of the founding of the Hospital and of the work accomplished by the institution in the first decade of its existence. From the section describing the duties of the medical board we excerpt the following significant sentence: "A fact worthy of notice, explaining many of the peculiar features of this work, and

accounting for much of the prestige of the Hospital, is the large and important place given on the Board of Managers and on the Executive Committee to medical men."

The second part of the volume contains the surgical reports, and comprises over 300 pages, while the medical portion, the third part, fares decidedly worse and covers only about 160 pages. To the surgical section Dr. Pilcher contributes a valuable article on diseases of the female generative organs. Dr. George Ryerson Fowler's article on injuries of the cranium and the spine is an important contribution to this subject, and deals comprehensively with diagnosis, course, and treatment. The chapter on appendicitis, from the same pen, is naturally authoritative. The most trustworthy symptom of appendicitis, in the author's opinion, is tenderness in the right iliac region, with its maximum point in the center of the latter. The section on differential diagnosis is most exhaustive. As for the treatment, operation should be performed in all cases that are still of a progressive character at the end of twenty-four hours. This attitude is a commendable concession to the conservatism of the internist.

An interesting paper on tetanus, containing a careful analysis of the literature and of the results of the antitoxin-treatment, is contributed by Dr. Charles Henry Goodrich. In the medical section Dr. Alexander Ross Matheson reports a case of Gilles de la Tourette's disease. Dr. Butler, discussing the meaning of the crepitant râle, holds that it may be produced by pleurisy as well as by stickiness of the air-vesicles; he also describes an endothelioma of the pleura and a case of actinomycosis of the lung that recovered under the use of oil of eucalyptus.

Besides the articles to which allusion has been made, the volume contains a number of others of marked value, among them one on empyema in children, one on rheumatism, etc., all of them combining to make the book a welcome addition to medical literature, and to engender the hope that the hospital authorities may find it possible to issue their report a little oftener than once in a decennium.

**Transactions of the State Medical Society of Wisconsin, 1898.** Vol. XXXII. Madison, Wis.: Tracy, Gibbs & Co., 1898.

A practical innovation in these Transactions is the insertion before the table of contents of the notice of the next meeting of the society, to be held on the first Wednesday of May, 1899, at eleven o'clock, at Oshkosh, Wis. Suggestions for this meeting are a valuable part of the volume and will be much appreciated by those interested. An important addition to this volume which will increase its worth considerably is the printing of the constitution and by-laws of the State Medical Society, together with a list of the members. On matters pertaining to medicine, 66 papers in all are printed, of which 5 pertain to materia medica and therapeutics, 12 to surgery, 10 to practice of medicine, 9 to neurology, 7 to gynecology, 6 to obstetrics, 2 to pediatrics, 8 to ophthalmology and otology, 14 to laryngology, 2 to hygiene and State medicine, and 1 to medical jurisprudence. The address of the President shows research and comprehension. The general topics of papers are very practical and appeal to the sympathy and interest of an active and actual practitioner, general or special.

**Transactions of the Ohio State Medical Society, 1898.** Edited by DR. B. MAXWELL FOSHAY, Cleveland, O. J. B. Savage Press, Cleveland, O.

This volume of 558 pages, of which 446 are devoted to society matters, has the general appearance of that of former volumes. The volume is larger than its predecessors, owing to the insertion of the full membership lists of societies auxiliary to the State Society. Of the 4 addresses that on medical education from a layman's standpoint is apt and significant. Eleven articles on surgery, 6 on medicine, 5 on neurology, 4 on gynecology and obstetrics, 3 on ophthalmology, 3 on otology, laryngology and rhinology, 2 on rectal and genito-urinary surgery, 1 on forensic medicine, and 2 on physiologic chemistry are given. Several interesting illustrations are presented, mostly of surgical results. The psychic treatment of disease is worthy of especial mention, being comprehensive and serviceable. The discussions on the various papers do not seem extensive, but that is not indicative of the value of the various papers presented.



## Correspondence.

### QUICK RECOVERY FROM DISLOCATION OF THE HIP.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

IN the issue of your JOURNAL of August 20th, last, Dr. Harry M. Sherman, of San Francisco, Cal., orthopedic surgeon to the Children's Hospital, has written upon "Traumatic Dislocations of the Hip, Old and Recent." Judging from his writing, the accident is rather a rare one; and, because of this, the simplicity of the manner in which the dislocation was produced, and also for the fact that complete recovery followed the simple reduction of the same, I report the following case which occurred in my private practice: The patient, Baby Z., male, aged between 2 and 3 years, on September 8, 1890, while passing from one room to another (both rooms being on the same level) slipped and fell, and because of the complaint of pain and the inability to rise, I was summoned to see him. Examination revealed a typical dorsal dislocation of the hip, which, under an anesthetic (chloroform), was readily and easily reduced. The mother lacking the appreciation and judgment essential to carry out instructions, turned the child loose, and the next day I found him on foot, with no injury or mishap of any kind as a result, but rather an uninterrupted and rapid and perfect recovery followed.

Very truly yours,

E. B. SHARP,

*Instructor in the Diseases of the Stomach and Intestines, Philadelphia Polyclinic and College for Graduates in Medicine.*  
424 Broadway, Camden, N. J.

### A SIX-MONTHS' FETUS THAT LIVED THREE DAYS.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

As a matter of some interest and rarity I report the following: On May 12, 1898, I was called to see Mrs. H., who was very evidently in labor. She had menstruated last from November 6 to 9, 1897, and 28 days previously she had also menstruated regularly. The husband was absent for one month previous to the menstrual epoch of November, but returned home while she was unwell. Sexual intercourse took place on about November 11, 1897, and the husband was again absent for over 30 days, immediately following the 12th. Very plain quickening was felt on March 12, 1898. The patient is a very intelligent multipara, and is confident that the quickening took place about that date, as she felt it plainly for the first time on that day. The baby was born after 14 hours of labor, at 4.10 P.M. on May 12, 1898. It was cyanosed, did not breathe immediately after birth; and a few hours afterward, when I returned to see my patient, I was surprised to see the baby in her arms, alive, breathing, and taking some milk and whisky and water. There was still marked cyanosis, and the little one would whine as soon as it was removed from the warmth of the mother's breast, or from a hot bottle which the mother was finally persuaded to apply to it. When warm it slept, but it would wake and whine as soon as it would get cold. It seemed to have no power to keep itself warm, and on account of the effect on the mother, I was sorry it lived as long as it did. The baby did not die until 5.30 A.M. on May 15th, living somewhat less than 72 hours. I regret now that I took for granted that it was dead at birth, as I might otherwise have extemporized an incubator. I have never heard of a 6-months'

fetus living so long. It could not have been older than 6 months, and I believe that was the exact age, and that conception took place on, or close about, November 12, 1897.

The diameters of the head were 3 and  $3\frac{1}{2}$  inches respectively; the length of the child was  $11\frac{1}{2}$  inches. There were little or no eyebrows, and it was difficult to perceive the nails. The bowels and the kidneys acted properly, and the child nursed from a bottle with a good deal of strength.

Respectfully,

JOHN W. CORBETT, M.D.

Camden, S. C.

### A CURIOUS EPIDEMIC.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

IN the manuscript copy of an address made to the Vermont State Medical Society thirty years ago by its President, the late Dr. John L. Chandler, I find a curious and interesting history of an epidemic of puerperal septicemia. The outbreak occurred during the years 1819 or 1820 in the western portions of Rutland and Bennington Counties, Vermont, and in the adjoining towns of the State of New York, extending over a territory from 30 to 40 miles square. Fifty cases were reported during the four months of its continuance, and it presented these extraordinary features.

Only primiparas were attacked. Not a single case occurred among multiparas, although physicians still in attendance upon cases of puerperal septicemia were present at the confinement of multiparas.

Not a primipara escaped the disease whose confinement took place during that period, and within the limits of the district involved. Yet, during the latter weeks at least of the epidemic, physicians in attendance upon these cases refused to accept other confinements, and in some cases physicians resident outside the infected district were called.

The mortality was extraordinary. Out of fifty cases but two recovered; making a death-rate of 96%.

The treatment in the cases with a successful issue was heroic. Excessive blood-letting had already fallen into disrepute; and in none of the earlier cases was venesection employed. In some of the later cases, however, recourse was had to it as a *dernier ressort*. In Dr. Chandler's case, ending with recovery, he abstracted in four days six pounds and four ounces of blood. This in addition to saline and mercurial cathartics, and extensive blisters. In the one other successful case Dr. Woodward reported that he "bled the patient until the blood would no longer stain a white pocket-handkerchief."

Two questions naturally suggest themselves in connection with this history. Was it simply a *coincidence* that primiparas only were attacked and multiparas escaped? And was recovery in the two cases cited the result of, or in spite of, the treatment employed? I should be grateful if those with special knowledge of, or wide experience with, puerperal septicemia would answer these questions.

ALLEN BURDICK, M.D. (Harv., '82).

### SECTARIANISM IN THE ARMY.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

A FEW months ago, when the volunteers were being mustered into the service of the United States for hostile operations against Spain, a great hue-and-cry went up from homeopathic partisans against what was claimed to be official discrimination against their "school" in the selection of regimental surgeons. Homeopathic journals took the

matter up, and the agitation soon reached the newspapers, from which it received considerable attention. The President and the Secretary of War were appealed to by petition and in person to remove the "ban upon homeopathy" and to give professed practitioners of that "school" equal advantages with those claimed to be held by members of the regular profession. In the usual course of events, some practitioners of the homeopathic profession were appointed to the position of regimental surgeons. Inquiry amongst those best informed seems to put the fact beyond much question that the "homeopathic" treatment dispensed by "homeopathic" surgeons did not differ in any essential from that employed by the regular surgeons. It is just to say that the "homeopathic" practitioners appointed were men of creditable standing, whose practical scientific attainments were clearly recognized and generously acknowledged by their regular associates.

But the inexplicable thing is why men who treat wounds according to modern methods, who possess a high degree of knowledge in the essential branches of medical science, and who prescribe medicines precisely as they are prescribed by regular physicians should glory in a sectarian designation and demand certain privileges solely by reason of factious opposition to "the old school." I have no quarrel with any honest believer in homeopathy, and I am glad to accord to homeopathic physicians the respect due to all sincere professional gentlemen of that faith; but is it not asking a little too much of the regular profession to stand aside, with due reverence, for a clamor that is backed by nothing more substantial than mere sectarian selfishness? If a qualified surgeon desire army service, his practice differing in no degree from that of other surgeons, why should he not enter the service upon his merits rather than claim "recognition" as the representative of a therapeutic faction? Does homeopathy stand to-day for nothing more than a hollow opposition to regular medicine? From the lessons of the late war no other conclusion appears possible to an unprejudiced mind.

PHYSICIAN.

## RECOVERY FROM A LARGE DOSE OF CHLORAL AND BROMID.

*To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—*

THE following case seems worthy of record on account of the large amounts of chloral and bromid that were taken without a fatal result. I am indebted for the notes to Dr. W. A. Long, under whose care the patient was.

On July 28th, Dr. Long was called by one of our lawyers to see a strong, robust young man of about 27 years of age, well and favorably known, who had, while attending to some legal business, exhibited symptoms of mental aberration. The patient was suspicious of both friends and strangers. He believed that a certain newspaper had abused him, and that he ought to seek revenge. He fancied that persons had accused him of masturbation, and imagined that his penis was "too long." He declared, however, that he had not masturbated since early youth, and the penis was found to be of usual size. He complained of insomnia. Dr. Long prescribed a four-ounce mixture containing to each fluidram chloralhydrate  $7\frac{1}{2}$  grains, potassium bromid  $7\frac{1}{2}$  grains, extract of hyoscyamus  $\frac{1}{2}$  grain, extract of cannabis indica  $\frac{1}{2}$  grain. The patient obtained possession of the bottle and swallowed the entire contents, thus receiving into his stomach 240 grains of chloral, 240 grains of potassium bromid, and 4 grains each of extract of hyoscyamus and cannabis in-

dica. This was taken at about 4 P.M. The man was discovered in deep sleep about two hours later, when I was called in consultation. Strychnin,  $\frac{1}{2}$  grain, was at once administered hypodermically. The pulse at this time was 68 per minute, full and strong; temperature and respiration normal. Within an hour the pulse increased to 120 per minute. Two hours later it was 72 per minute, soon falling to 60, and not being very strong. The pupils were slightly contracted; temperature and respiration were still about normal. At this point we gave  $\frac{1}{60}$  grain strychnin, over the heart. The pulse soon increased in frequency and strength. The man continued to breathe regularly, but after a while the respirations became slower and the pulse somewhat reduced in strength. A rectal injection of brandy was given, and the patient almost immediately had tetanic convulsions, lasting a few minutes, then subsiding, to recur with less severity in about half an hour. Breathing and pulse soon became regular, and the man slept until 5 o'clock the next morning, when he awoke and announced himself "quite refreshed," though speech was still confused and rambling. An hour later he ate a hearty breakfast.

After being kept under careful observation for two days, a diagnosis of mild melancholia was made and the patient was sent to a private retreat. For several hours following the awakening the man suffered from spasm of the sphincter vesicæ, due, probably, to the action of the strychnin, and urination was difficult; but before leaving for the retreat urine was voided freely and regularly.

Dr. Long informs me that he had just heard that the patient's mental state had improved under treatment, and it is hoped that cure will result.

The United States Dispensatory reports the case of a lady who recovered after taking 480 grains of chloral; but in Dr. Long's case synergistic drugs were combined.

Yours truly,

SOLON B. STONE, M.D.

Lewistown, Mont.

## THE RELATION OF VACCINATION TO TUBERCULOSIS.<sup>1</sup>

*To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—*

WITH over 6,000 deaths accredited to tuberculosis in the large cities of this country within the narrow limit of one year's time, it is a grave question whether we are doing everything within our power to limit the spread of that dread disease. Tuberculosis has been on the increase during the last 20 years, and is still on the increase. Indeed, when we consider the steadily growing number of persons who are afflicted in one or the other of its protean or multiplex forms, we are likely to be appalled by the immensity of the vast army of tuberculous patients. Hence the inquiry has been started as to what we are doing to mitigate the evil. Are we studying the cause and striving to remove it? Are we making rational attempts to limit its increase, or to limit the number of victims? It is true, we have learned that it is a bacterial disease, and that it is contagious or infectious in nature. We know that heredity plays an important role in determining the victims whom it may seize, and the fact has been recognized for centuries that an attack of some other disease, notably exanthema, pneumonia, pleurisy, asthma, chronic catarrh, typhoid fever, and chronic skin and suppurative diseases, has been the predisposing

<sup>1</sup> It should be needless to repeat that THE PHILADELPHIA MEDICAL JOURNAL is not to be held responsible for views expressed by correspondents.—ED. PHILA. MED. JOUR.



cause of tubercular infection. All epidemic diseases, especially influenza, all severe injuries, in fact every factor which is a drain upon the vital forces, or which lowers the tone of the system, may be an exciting cause of tubercular infection in cases in which the predisposing cause—heredity, mal-formed or undeveloped thorax or lung, or a previous attack of some pulmonary disease—exists.

Every tiller of the soil knows that a rotation of crops is desirable; that the growth in a given soil of some certain grain, grass, tuber, root, or fruit, will insure a better succeeding crop of some other grain, grass, tuber, or fruit; that each variety, or every variety of grain and grass not only takes from the soil upon which it grows something it requires for growth and nourishment, but that it also adds something to the soil, and that something added to the soil may be and often is the necessary nutriment for some other variety of crop. In the human body we find the same laws governing the growth of bacteria and lower organisms which gain lodgment there.

Certain disease-germs gain entrance to the human economy, grow, mature, multiply, and die; they leave the body in a condition such that contact with some other variety of disease-germ insures infection and an abundant crop. As previously stated, the belief has prevailed for generations that exanthema, variola, and rubeola, were accountable for many cases of tuberculosis. The disease variola, and its modified form varioloid, are considered crops which leave the ground of the human economy in a proper condition for tubercular infection and the growth of an abundant crop. Admitting that theory to be true, it naturally follows that the immunizing agent or disease vaccinia should act in a similar manner; that a person after vaccination should be peculiarly susceptible to tubercular infection.

There should be little doubt about this fact at the present time, as the source of supply for vaccine virus is the cow, heifer, or calf; not the foster-parent, but the real parent, of the disease tuberculosis. The bovine genus is the original source of tuberculosis, and it is almost universally prevalent among cattle. Were the tuberculin-test used upon all cattle we should be astonished at the number which would respond to the test. Notwithstanding this fact, and further, that compulsory vaccination is the order of the day in all, or almost all, of the States, there is, nevertheless, no State inspection of vaccine virus, or of the heifers which furnish it. There are vaccine farms without number, so notoriously filthy that no surprise should exist at the growth of an anti-vaccination society. We bake our instruments when preparing to puncture a vesicle; we wash our hands in mercury chlorid solutions until they assume unto themselves the smoothness of the nutmeg-grater, and yet we allow others to use upon ourselves, and we use upon others, vaccine virus which has not been inspected or disinfected, and which may contain, and often does contain, the tubercle bacillus, the staphylococcus, streptococcus, anthrax spores, Klebs-Loeffler bacilli, the streptococcus erysipelatis, etc. The vaccine virus may be inert so far as vaccinia is concerned, but the arm or other locality may be harrowed up to secure a local-culture bed of blood-serum for an aggregation of disease-germs. The owners of these vaccine farms may be ignorant men, with but one idea in their heads, namely, that of a quick and sure way of "making money," as they put it, or of obtaining money, as we see it. They know nothing about mixed infection, and care less. They know that cleanliness costs money, so, being thrifty, they avoid that drain upon their purses. Knowing nothing about virus or bacterial attenuation which

follows, continually planting a bacterial crop upon the soil of any genus of the animal kingdom, they openly boast that their virus comes down through one unbroken series of heifer-inoculation since 1740. They do not know that the bacterial crop, like any other crop, deteriorates when planted upon the same soil continually, or, as the farmers say when they plant a certain grain or grass upon the same soil continually, it "runs out" or exhausts the element of the soil which is necessary for its reproduction, and the soil or animal becomes immune to that genus.

The Federal Government should not enact compulsory vaccination laws, nor should the individual States do so until they provide for the most rigid inspection of the source from which vaccine virus is obtained. They should see to it that virus is not obtained until the vesicle reaches a certain stage of development, nor should virus be removed later than a certain period. The most scrupulous cleanliness should be required, and the virus should be active, not attenuated by or through numberless inoculation transmissions upon the heifer. We should strive to learn what effect, if any, vaccination has upon the human subject outside of tubercle bacillus infection. The disrepute into which vaccination has fallen in certain quarters is partially due to the fact that many believe, and with a certain amount of evidence to bear out that belief, that it predisposes them to the disease tuberculosis; that the virus is often impure and more often inert as regards vaccinia, the cause for that inert condition being transmission attenuation caused by inoculation of the same genus, and finally on account of that attenuation, the immunity which it affords against smallpox varies greatly, being practically nil in many cases.

The great necessity in connection with vaccination is, therefore, that the most rigid State inspection be exacted so long as compulsory vaccination is considered a public-health measure. Knowing the great prevalence of tuberculosis among cattle we should demand a most rigid test with tuberculin to be made in every instance; or, better still, let us change our source of supply of vaccine virus to some other genus of the animal kingdom which is less susceptible to tubercular infection.

Diluting the virus with water or glycerin should be strictly prohibited, the addition of a preservative agent alone being allowed as a diluent. The site of vaccination should be inspected for weeks after the operation, when bovine virus is used, and upon the appearance of any dark-colored tubercular growth, or when extensive destruction of tissue occurs, or in case of prolonged suppuration, vigorous antitubercular treatment should be instituted and continued until perfect health is restored. The members of the medical profession should institute this crusade in favor of pure vaccine virus, and they should not wait for some philanthropic outsider to start the ball a rolling. Respectfully,

Cedarburg, Wis. WM. P. MCGOVERN.

#### Artificial Serum in the Treatment of Epilepsy.—

At the meeting of the Académie de Médecine de Paris, September 6th, Motet directed attention to the medical treatment of epilepsy, particularly the results of the researches of de Fleury. The latter states that injections of artificial serum enhance considerably the efficacy of the bromides, two or three injections of artificial serum causing a dose of two or three grains of the bromides to be equally as efficacious as very large doses ordinarily administered. Not only do the seizures become less frequent, but the mental condition of the patients becomes much improved. The serum is supposed to exert its beneficent action by lowering blood-pressure and acting as a tonic to the heart.

## American News and Notes.

**The Dunning Hospital for Consumptives**, at Dunning, Ill., will be formally opened, with appropriate ceremonies, October 8th.

**Dr. A. C. Corr**, of Carlingsville, Ill., has been elected president of the Illinois State Board of Health, vice A. Adelsberger, resigned.

**A severe epidemic of typhoid fever** is reported to be prevailing in Dawson City, in the **Klondike region**, there being from 18 to 20 deaths daily.

**Dr. John Ingals**, of Chicago, has been appointed Director of the Au Sing Hospital in Peking, China, under the control of the American Presbyterian Church.

**Regimental hospitals**, which were abolished at the commencement of the war in favor of division hospitals, are to be restored by order of Secretary of War Alger.

**Chicago Polyclinic.**—The following associate professors have been appointed: Dr. A. M. Hall, otology; Dr. G. W. Mahoney, ophthalmology; Dr. R. B. Preble, medicine.

**The consolidation of medical colleges** seems to be on the increase. The *Columbus Medical Journal* states that there is now being considered a proposition looking to the joining of forces of the Ohio Medical University and the Starling Medical College, as the Medical Department of the Ohio State University.

**Chicago Hospital for Consumption.**—Mr. Otto Young, whose son recently died of tuberculosis, is building in Chicago a hospital for tuberculous patients at an estimated cost of \$65,000. It will accommodate 75 patients and will be provided with every device for the treatment of the disease by modern methods.

**By the will of Carolina T. Downs**, of Canton, Mass., which was recently admitted to probate, the following charitable bequests are made: \$10,000 to the Massachusetts Infant Asylum; \$20,000 to the New England Hospital for Women and Children; \$20,000 to the Children's Hospital, Boston, and \$5,000 to the Perkins Institution for the Blind.

**Dr. John A. Benson**, of Chicago, writes us, just as the forms are being closed, as follows: "On page 582 of the issue of your esteemed JOURNAL of date September 24, 1898, appears the item that Dr. L. Harrison Mettler has been appointed professor of the physiology of the nervous system in the College of Physicians and Surgeons of Chicago (Medical Department of the University of Illinois). Will you permit me to inform you that this statement is not correct. You have been misinformed. I am the incumbent of that chair in the institution mentioned. About twelve years ago I was honored by election to the chair of physiology in the College of Physicians and Surgeons of this city, and two years ago I was selected to fill the chair of the physiology of the nervous system, which chair I now hold. Just before the opening of the present term, feeling that I needed rest, I applied for a leave of absence for this year, and Dr. Quine, the distinguished dean of our faculty, arranged for Dr. Mettler to fill my hours for this session only. The title and prerogatives of the full professorship of the physiology of the nervous system in the College of Physicians and Surgeons of Chicago—the School of Medicine of the University of Illinois—are vested in me, and I have the honor of being the sole incumbent thereof."

**Dr. Phineas S. Conner**, of Cincinnati, Ohio, has accepted the appointment as the medical member of the committee appointed by President McKinley to investigate the conduct of the Commissary, Quartermaster, and Medical Bureaus of the War Department during the recent war with Spain. The appointment had been offered to Dr. W. W. Keen, of Philadelphia.

**Obituary.**—**DR. JAMES H. OSGOOD**, Jamaica Plain, Mass., September 10th, aged 65 years.—**DR. PHILIP ARTHUR MALLESON**, New York City, September 19th, aged 39 years.—**DR. CHARLES D. SHIRMER**, New York City, September 15th.—**DR. HARRY CHASE**, of Viroqua, Wis., at Feron, Utah, September 15th, aged 28 years.—**DR. WILLIAM PETTEN GRIFITHS**, Tonawanda, N. Y., September 21st, aged 44 years.—**DR. L. C. HOOTE**, Washington, D. C., September 22d, aged 80 years.—**DR. CHARLES CARTER**, Blowing Rock, Watauga County, N. C., September 9th.—**DR. A. A. SYLVESTER**, Columbia, Ga., September 11th, aged 64 years.—**DR. ABBIE G. HALL**, Champaign, Ill., September 11th.—**DR. STEPHEN D. AYERS**, Marion, Ill., September 15th, aged 77 years.—**DR. JOHN F. ISOM**, Cleveland, O., September 25th, aged 67 years.

**Health Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending September 24, 1898.

### SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
ALABAMA:			
Dwight . . . . .	Aug. 1 Sept. 12 . . .	12	1
KANSAS:			
Pawnee . . . . .	Sept. 15 . . . . .	1	
VIRGINIA:			
Norfolk . . . . .	Sept. 20 . . . . .	2	

### YELLOW FEVER—UNITED STATES.

LOUISIANA:			
Franklin . . . . .	From date of outbreak to Sept. 24 . . .	70	2
Harvey's Canal . . . . .		1	
Jefferson County . . . . .		5	
Houma . . . . .		1	
New Orleans . . . . .		2	
MISSISSIPPI:			
Jackson . . . . .		2	1
Orwood . . . . .		41	
Oxford . . . . .		9	1
Taylor . . . . .		23	2
Waterford . . . . .		1	

### SMALLPOX—FOREIGN.

CHINA:			
Hongkong . . . . .	July 31-Aug. 6 . . .	1	
ENGLAND:			
London . . . . .	Aug. 27-Sept. 3 . . .	2	
INDIA:			
Madras . . . . .	Aug. 6-12 . . . . .	1	
RUSSIA:			
St. Petersburg . . . . .	Aug. 13-20 . . . . .	1	
" . . . . .	Aug. 20-27 . . . . .	1	
URUGUAY:			
Montevideo . . . . .	July 31-Aug. 6 . . .	1	

### YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro . . . . .	July 31-Aug. 6 . . .	11	7
COSTA RICA:			
Limon . . . . .	Sept. 4-10 . . . . .	2	
" . . . . .	Sept. 16-24 . . . . .	2	
MEXICO:			
Vera Cruz . . . . .	Sept. 1-8 . . . . .	1	
" . . . . .	Sept. 8-16 . . . . .	6	

### CHOLERA.

INDIA:			
Calcutta . . . . .	Aug. 6-12 . . . . .		71
JAPAN:			
Osaka and Hiogo . . . . .	July 31-Aug. 6 . . .	1	1
" . . . . .	July 16-31 . . . . .	4	2

### PLAGUE.

INDIA:			
Bombay . . . . .	Aug. 2-16 . . . . .		101
Calcutta . . . . .	July 23-30 . . . . .		4



**Carbonic Acid Gas in the Production of Local Anesthesia.**—Dr. James B. Bullitt, in the *North Carolina Medical Journal*, proposes the employment of liquefied carbonic acid gas in the production of local anesthesia. His apparatus consists of a drum capable of being recharged, to the outlet of which a hypodermic needle is attached by means of a pipe. The gas when liberated produces an anesthetic spot at the point of contact. He believes that small portable drums could be readily constructed, and that the gas, for the purpose indicated, has the advantage of comparative cheapness.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

The following Acting Asst. Surgeons, U. S. A., will proceed to Ponce, Porto Rico, for duty: J. F. HADLEY, H. B. MOHR, CHARLES D. CAMP, H. P. JONES.  
Capt. EUGENE B. FRICK, assistant surgeon, U. S. A., will report to the C. O., Fort Wadsworth, N. Y., for duty.  
Major NELSON H. HENRY, chief surgeon, U. S. Vol., is honorably discharged.  
Major HENRY S. T. HARRIS, brigade surgeon, U. S. Vol., is detailed as a member of the examining board appointed to meet at Camp Wikoff, Montauk Point, N. Y., vice Major MARSHALL W. WOOD, surgeon U. S. A., who is relieved.  
Acting Asst. Surgeon E. F. MCCLENDON, U. S. A., will proceed to Washington D. C., and report to the Surgeon-General of the Army.  
Major LOUIS W. CRAMPTON, surgeon U. S. A., upon the expiration of his present sick leave, will resume his station at Fort McHenry, Md., to relieve Major CHARLES K. WINNE, surgeon, U. S. A., who will proceed to Fort Crook, Neb., for duty.  
Acting Asst. Surgeon LOUIS L. GILMAN, U. S. A., will proceed to Ponce, Porto Rico, for duty.  
Acting Asst. Surgeon G. H. FONDE, U. S. A., will proceed to Mobile, Ala.  
Acting Asst. Surgeon JAMES REAGLES, U. S. A., will proceed to Plattsburg Barracks, N. Y., for duty.  
Sick leave for one month is granted acting asst. surgeon VOLNEY McR. SCHOWALTER, U. S. A.  
Acting Asst. Surgeon HENRY BAK, U. S. A., will proceed to Hiltonhead, S. C., for duty.  
Acting Asst. Surgeon W. L. COLEMAN, U. S. A., will proceed to Ardmore, Indian Territory, for duty with the battery encamped at that point.  
Hospital Steward EDWARD F. COSTINE will proceed to Plattsburg Barracks, and report for duty.  
Acting Asst. Surgeon GEORGE DOCK, U. S. A., will proceed to Knoxville, Tenn., for duty.  
Acting Asst. Surgeon GEORGE B. LAWRASON, U. S. A., will proceed to New Orleans, La.  
Acting Asst. Surgeon FRANCIS LIEBER, U. S. A., will proceed to St. Francis Barracks, Fla., for duty.  
Leave for one month, to take effect this date, is granted Acting Asst. Surgeon ARTHUR JORDAN, U. S. A.  
Acting Asst. Surgeon LEWELLYN E. WILLIAMSON, U. S. A., will proceed to Jefferson Barracks, Mo., for duty.  
Acting Asst. Surgeon CHARLES BREWER, U. S. A., will proceed to New York City, N. Y.  
The order of July 11, relating to acting assistant surgeon CHARLES G. EICHER, U. S. A., is amended to direct him to proceed from Pittsburgh, Pa., to Camp Russell A. Alger, Falls Church, Va.  
The order of August 2, relating to acting assistant surgeon FRANCIS R. PERCIVAL, U. S. A., is amended to direct him to proceed from Newark, N. J., to Camp Alger, Falls Church, Va.  
First Lieutenant WESTON P. CHAMBERLAIN, assistant surgeon, U. S. A., will take charge of the medical supplies now on board the transport "Panama," at Newport News, Va., and proceed therewith to Ponce, Porto Rico, and return to Fort Monroe, Va., with as many convalescent soldiers as can be comfortably cared for on that steamer.  
Hospital Steward WILLIAM E. WALDROP (appointed September 14, 1893), is assigned to Camp Wikoff, Montauk Point, N. Y.  
Acting Asst. Surgeon HENRI A. SANTOIRE will proceed to Fort Adams for duty.  
Acting Asst. Surgeon AUGUSTUS HUSSEY will report to the C. O., Fort Columbus, for duty.  
Acting Asst. Surgeon WILLIAM P. HARBIN, U. S. A., will proceed to Sullivan's Island, S. C., for duty.  
Acting Hospital Steward LYLE R. STEWART will proceed to Hiltonhead, S. C., for duty.  
Acting Hospital Steward SAMUEL A. SLOUGH will proceed to Fort Sam Houston, Tex., for duty.  
Hospital Steward GEORGE S. CARTY, U. S. A., will proceed to Fort Brown, Tex., for duty.  
Acting Asst. Surgeon WALTER K. JOHNSON, U. S. A., will proceed to Fort Brown, Tex., for duty.  
Sick leave for one month is granted Acting Asst. A. H. SIMONTON, U. S. A. Sept. 19.  
Acting Asst. Surgeon WILLIAM G. YOUNG, U. S. A., will proceed to Ponce, Porto Rico, for duty.

The following named Acting Asst. Surgeons, U. S. A., will proceed to Porto Rico, for duty: E. F. MCCLENDON, CHARLES E. McDONALD, W. M. CARSON, WILLIAM C. LE COMTE, JOHN J. GILHULEY, JAMES S. PENNA, L. C. SHATTUCK, W. O. COTTRELL.

The order of Sept. 15, relating to Lieut.-Col. Forrest H. Hathaway, Special Inspector, Q. M.'s Dept., is amended so as to direct him to proceed to Jacksonville, Fla., and return to his proper station.

The following named officers of the Medical Department, U. S. A., will proceed to Ponce, Porto Rico, for duty: Acting Asst. Surgeon CHARLES A. HAMILTON, Acting Asst. Surgeon CHARLES J. KENWORTHY, Acting Asst. Surgeon S. H. WADHAMS.

Major SAMUEL W. KELLEY, Brigade Surgeon, U. S. Vol., will proceed to Anniston, Ala., for duty.

Major CHARLES B. NANCREDE, Chief Surgeon, U. S. Vol., is honorably discharged.

Acting Asst. Surgeon HENRY S. GREENLEAF, U. S. A., will proceed to Camp Wikoff, N. Y., for duty.

Acting Asst. Surgeon H. J. THOMAS, U. S. A., will proceed to Tampa, Fla.

Acting Asst. Surgeon EDWARD C. POEY, U. S. A., will proceed to Jacksonville, Fla., for duty.

Major EDWARD T. COMEGYS, Surgeon, Acting Medical Purveyor, Chickamauga Park, will take station at Atlanta, Ga., and establish a medical supply depot at that place.

Hospital Steward JOSEPH H. MANNING will be sent to Fort Monroe, Va.

The following named officers of the Medical Department, U. S. A., will proceed to Ponce, Porto Rico, for duty: Acting Asst. Surgeon F. M. BARNEY, Acting Asst. Surgeon ROBERT BOYD, Acting Asst. Surgeon S. W. PERRY, Acting Asst. Surgeon WILLIAM G. YOUNG, Acting Asst. Surgeon E. L. GRIFFIN.

Sick leave for one month is granted Acting Asst. Surgeon HAMILTON P. JONES, U. S. A. Sept. 19.

Sick leave for one month, from August 30, 1898, is granted Acting Asst. Surgeon JAMES McV. MACKALL, U. S. A. Sept. 19.

Sick leave for two months is granted Captain MADISON M. BREWER, Asst. U. S. A. Sept. 19.

The sick leave granted Captain GEORGE J. NEWGARDEN, Asst. Surgeon, is extended one month. Sept. 19.

Acting Asst. Surgeon G. R. PLUMMER, U. S. A., will proceed to Fort Clinch, Fla., for duty to relieve Acting Asst. Surgeon FRANCIS LIEBER, U. S. A., who will proceed to Fort McIntosh, Tex., for duty.

Acting Asst. Surgeon LAWRENCE A. FELDER, U. S. A., will proceed to Birmingham, Ala., for duty.

The order transferring Hospital Steward GEORGE S. CARTY, U. S. A., from Miltonhead, S. C., to Fort Brown, Tex., for duty, is revoked.

The order transferring Acting Hospital Steward SAMUEL A. SLOUGH from Key West, Fla., to Fort Sam Houston, Tex., is revoked.

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### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon P. LEACH, from the "Yosemite," to home and await orders.  
Passed Asst. Surgeon M. S. SIMPSON, from "Badger" to home.  
Passed Asst. Surgeon S. O. HEISKELL, from the "Dixie" to home.  
Passed Asst. Surgeon A. M. D. MCCORMICK, from the "Yankee" to home and await orders.  
Asst. Surgeon F. M. FURLONG, from the "Siren," when put out of commission, and to the "Iowa."  
Asst. Surgeon S. H. MCKIM, from the "Dixie" to home.  
Asst. Surgeon P. S. REIG, from the "Alexander" to home.  
Asst. Surgeon H. D. AVERILL, from the "Miantonomah" to the "Scindia."  
Passed Asst. Surgeon G. M. PICKRELL, to the "Buffalo."  
Surgeon D. O. LEWIS to the "Yankee."  
Passed Asst. Surgeon G. M. PICKRELL, from the "Yankee," and report, when discharged, at hospital, New York.  
Asst. Surgeon J. B. DENNIS, from the "Frolic" to the "Oregon."  
Asst. Surgeon E. J. GROW, from Naval Hospital, Chelsea, to the "Wabash."  
Surgeon D. O. LEWIS, from the "Yankee" to home and await orders.  
Passed Asst. Surgeon E. M. SHIPP, from the "Bancroft," when put out of commission, and to the "Lancaster."  
Asst. Surgeon G. M. COATES, from the "New Orleans" to home.  
Passed Asst. Surgeon G. W. ALLEN, from the "Prairie" to home.  
Passed Asst. Surgeon J. F. URIE, from the "Topeka" to Marine Rendezvous, Boston.  
Asst. Surgeon J. C. ROSENBLUTH, from the "Massachusetts" to the "Vermont."  
Asst. Surgeon E. THOMPSON, from the "Vermont" to the "Massachusetts."  
Asst. Surgeon M. K. JOHNSON, from the "Vicksburg" to the Naval Hospital, New York.  
Asst. Surgeon W. B. GROVE, to the "Vicksburg."  
Asst. Surgeon E. O. HUNTINGTON, from Naval Hospital, Norfolk, to the "Newark," taking passage in the "Solace."  
Surgeon H. SMITH, retired to temporary duty with the "Michigan."  
Asst. Surgeon D. B. KERR, from the "Stranger" to the "Pensacola."  
The following are honorably discharged: Asst. Surgeon J. R. M. DILLON, Asst. Surgeon J. M. WARD, Passed Asst. Surgeon C. F. PECKHAM, and Asst. Surgeon O. T. SMITH.

## Foreign News and Notes.

The third outbreak of plague is now evident in Bombay and in other portions of India. The type of this outbreak appears to be very virulent.

An International Congress of Physicians of Insurance Companies is projected. From present indications it will be held in Brussels during 1899.

Dr. Alfons Edler von Rosthorn, formerly extraordinary professor at the University of Prague, has been appointed ordinary professor of obstetrics and gynecology at the University of Gratz, Austria.

The students at the University of Vienna during the past semester numbered 4,425, exclusive of 1,285 who had matriculated for special courses. The number of medical students was 1,192, exclusive of 636 who had matriculated for special courses.

Dr. A. G. Barrs, formerly professor of materia medica and therapeutics, has been appointed professor of medicine, and Dr. C. M. Chadwick has been appointed professor of materia medica and therapeutics, at the Yorkshire Medical College, Leeds, England.

The Sanitary Association of Scotland met in twenty-fourth annual session at Rothesay, September 8th. The presidential address was delivered by Dr. Archibald K. Chalmers, one of the medical officers of Glasgow, the subject of the address being, The Vital Statistics of School-ages.

Sugarin, or methylbenzolsulphinid, is a new sweetening agent which, it is proposed, will replace saccharin, being equivalent to it in sweetening power. In the process of its preparation toluolcycansulphamid is saponified with potash and subsequently treated with sulphuric acid.

Infectious Diseases in the French Army.—Dr. Marnaux, of the French Army, has recently issued a report in which it is stated that measles and scarlet fever are the prevailing infectious diseases among the French troops. Owing to the thoroughness which with vaccination is practised, small-pox has almost entirely disappeared. The prevalence of measles and scarlet fever is thought due to the youth of many of the recruits, to the renewed vitality of germs deposited in a previous barracks-epidemic, and to the morbid agent being conveyed to the troops by some one previously in contact with a person suffering with one or the other of these affections.

"Frecks."—The *Lancet* states there are now on exhibition in London, Clara, Tom, and Anna Snell, three children, of a family of fourteen. They were born at the Bunyip, Gippsland, Victoria, their father and mother being natives of Devonshire, and showing nothing of the extraordinary peculiarities of their children. The rest of the members of the family are of normal size. At the age of 12 years Clara, the eldest, weighed 242 lbs., with a waist of 66 in., calves 23 in., and arms 19 in. Tom at the age of 8 years weighed nearly 126 lbs., and Anna turned the scale at 116 lbs. Clara is now 24 years old, weighs nearly 504 lbs., and measures 78 in. round the waist, 26 in. round the leg, and 22 in. round the arm. Tom, aged 20 years, weighs 266 lbs., and measures 48 in. round the chest, the rest of the body being very well developed, and Anna, the youngest, turns the scale at 336 lbs., and is large in proportion, their united weight totaling nearly half a ton.

### The International Medical Congress in 1900.—

The arrangements for the International Medical Congress, which is to meet in Paris, August 2 to 9, 1900, are being actively prosecuted. The Organizing Committee of the Section of Psychiatric Medicine, Professor Ballet, chairman, has already announced the following subjects for discussion: (1) Psychoses of puberty; (2) the morbid anatomy of idiocy; (3) rest in bed in the treatment of acute forms of madness; and (4) sexual perversions from the medico-legal standpoint. It is proposed that the discussions be opened by 3 members—2 foreign and one French.

### The British Malaria Commission.—

The *British Medical Journal* announces that the Scientific Commission, appointed jointly by the Colonial Office and the Royal Society to investigate the mode of dissemination of malaria with a view to devising means for preventing the terrible mortality which now takes place among Europeans resident in tropical and subtropical climates, has now been nominated. It will consist of Dr. C. W. Daniels, of the Colonial Medical Service, British Guiana, who is well known for the many valuable contributions which he has made to tropical medicine; Dr. J. W. W. Stephens, formerly Lawrence Student in Pathology and Bacteriology at St. Bartholomew's Hospital, and the author of the essay on the Bacteriology of Asiatic Cholera in Allbutt's *System of Medicine*; and Dr. R. S. Christophers, of University College, Liverpool. Dr. Daniels will proceed at first to Calcutta, where he will acquaint himself practically with the remarkable work which Surgeon-Major Ross, of the Indian Medical Service, is carrying on into the relation of mosquitos to the dissemination of malaria. Drs. Stephens and Christophers will at first proceed to Rome, where they will spend some time in studying malaria. Subsequently the Commissioners will meet together at Blantyre, British Central Africa.

### Lunacy in the Colony of Victoria.—

According to the *Lancet*, the annual report of the inspector of lunatic asylums shows that the total number of registered lunatics in the colony of Victoria on December 31, 1897, was 4,346 (2,296 males and 2,050 females), of whom 4,341 were on the books of the seven public asylums, the largest of which is that at Kew, containing 1,021 inmates. The persons admitted during the year 1897 numbered 771, the highest admission-rate recorded since the opening of the asylums, and an increase of 88 as compared with the previous year. The proportion of the insane to the sane population was 1 to every 271. The recoveries were 217 against 210 discharged during the preceding year. The percentage of recoveries on admission was 27.96, and of relieved 11.08. The number of patients who died during the year was 324, the percentage of deaths on the daily average numbers resident being 7.93. On January 1, 1897, there were 198 patients on probation with their friends, and during the year, 324 in addition were allowed out of the asylums. The system of allowing patients out on trial has been growing more and more into favor in the Victorian asylums, where it is used to a greater extent than in any other part of the world. It is considered that to allow the patient to mix in the world for a reasonable time away from the asylum restraint is a good test of mental recovery. The weekly cost of maintenance was 8s. 6d. per patient.

### The Microorganism of Rabies.—

The search for the microorganism of rabies has been a tedious one, but arduous labors seem now to have been rewarded. Following Pasteur, the pioneers in this field were Foll, Rivolta, Ferran,



and Spinelli, who claimed to have discovered a bacillus in the secretions and preparations of the organs of those who had died from hydrophobia. Sanfelice apparently demonstrated the specific nature of this organism by employing a special stain and detecting it in large numbers in the spinal cord of a boy who had died from hydrophobia. More recently Memmo (*Centralblatt für Bacteriologie*, Abth. i, Bd. xxi, 17, 18) has confirmed the observations of Sanfelice. He has detected the organism, which he describes as a blastomycete, in several cases of rabies; he has been enabled to cultivate it in artificial media; and finally, by inoculating these cultures, he has succeeded in producing the disease with its distinctive characteristics in dogs, rodents, and birds. He found the microbe in the cerebro-spinal fluid and the substance of the brain and spinal cord, in the saliva and parotid gland, and in the aqueous humor of four dogs dying from the natural disease, and of rabbits, guinea-pigs, and pigeons in which it had been produced by inoculation. It grew best in glucose-bouillon, slightly acidulated with tartaric acid. After inoculation, guinea-pigs and rabbits developed paralysis of the hind limbs in from 11 to 20 days, and died of the paralytic form of the disease. Inoculated dogs died after 30 to 60 days with typical symptoms of natural rabies.

**Medicated Serums.**—At the meeting of the Tuberculosis Congress, held in Paris during July of this year, Professor Fernand Berlioz detailed a new method of serum-therapy, whereby certain drugs may be incorporated with normal serums and introduced into the system by the rectum. He first spoke of the value of the employment of the normal serum of the bullock in the treatment of tuberculosis—its use being attended by increase in body-weight and improvement of the general tone of the system. He then referred to the treatment by medicated serums, normal serum being utilized as an excipient, and the various medicinal agents being incorporated at pleasure. His experience, however, had been largely with two: seroguaiacol—serum containing 1% of phosphite of guaiacol, and organoserum—serum with which is incorporated glycerin-extracts of the organs of the bullock or sheep, such as testicles, liver, spleen, brain, lung, etc. The former is indicated in tuberculosis, the latter in conditions of great debility, and prostration; but both may be combined, thus forming guaiacolated organoserum, and employed with increased effect in tuberculosis. These medicated serums exert a great influence upon nutrition, as evidenced especially by variations in the urine and the body-weight. The excretion of urea and uric acid is increased; the body-weight increases rapidly. In addition, cough and expectoration are favorably influenced. The serums are administered by the rectum, ordinarily in amounts of one ounce at a time. No irritation of the rectum follows, although the treatment be continued for months.

**Recovery after Wound of the Heart.**—At a recent meeting of the Società Lancisiana held in Rome Dr. G. Parlavacchio described a case of punctured wound of the heart on which he had operated successfully. On the night of July 7th a man, 20 years of age, was stabbed with a knife in the fifth intercostal space on the left side in the parasternal line. He afterward walked a distance of more than 200 meters (218 yards) to the Hospital of San Giacomo. Five hours later he was found to be suffering from pneumothorax on the left side with extensive effusion of blood into the pleura; the area of cardiac dulness was increased; at the apex the heart-sounds were confused, and at the base they seemed to be

distant; the pulse was irregular, intermittent, and small. Dr. Parlavacchio suspected a wound of the heart, or at least a wound of the pericardium, but was not able to operate until eight hours after the injury. Chloroform having been given, a free incision was made in the fifth intercostal space and much blood escaped on opening the pleura. After resection of the fifth rib a wound admitting two fingers was discovered in the pericardium and was enlarged so as to expose the heart, in which there was near the apex a V-shaped wound,  $3\frac{1}{2}$  cm. long, penetrating obliquely into the left ventricle and intermittently discharging blood. The wound was closed with four deeply applied separate silk sutures, after which there was no further hemorrhage. The pericardium and the intercostal wound were then sutured, the whole operation lasting 40 minutes. The V-shape of the wound in the heart was probably due to its movement during the infliction of the wound. The patient's survival for the 8 hours preceding the operation may be explained by occlusion of the wound by clot which was displaced during the struggling occasioned by the chloroform. The subsequent history of the case was quite uneventful, and on August 14th the patient insisted on leaving the hospital. This is believed to be the third case in which a wound of the heart was successfully operated upon.—[*Lancet*.]

## Philadelphia News and Notes.

**Obituary.**—DR. GIOVANNI TROJANO, a graduate of the Royal University of Naples, Italy, class '81, September 25th, aged 39 years.

**A Red Cross Society hospital-train** brought to the city from Camp Meade, September 26th, 48 sick soldiers, who were consigned to the Woman's Medical Hospital and the Woman's Homeopathic Hospital.

**A Red Cross Society relief-train** brought 72 sick patients from Camp Meade to the city September 24th. The train was in charge of physicians and nurses of St. Agnes' Hospital, where all the patients were taken.

**Suits for Alleged Adulterations of Foods.**—The Department of Agriculture of Pennsylvania has brought civil and criminal suits against seven different grocers of the city for alleged violations of the Acts of Assembly of May 21, 1885, relating to the manufacture and sale of oleomargarin or similar compounds in imitation of butter, and the Act of Assembly of June 26, 1895, known as the Act to provide against the adulteration of articles of food, better known as the Pure Food Law.

**University of Pennsylvania.**—At a meeting of the Faculty of the Medical Department of the University of Pennsylvania, on September 26th, it was decided to recommend to the Trustees that, for the present, Dr. James Tyson, professor of clinical medicine, be given full and general direction of the department of medicine, and that 4 assistants, Dr. John H. Musser, assistant professor of clinical medicine, Dr. Alfred Stengel, Dr. M. Howard Fussell, and Dr. Frederick A. Packard, instructors in clinical medicine, be appointed to deliver, under Dr. Tyson's supervision, didactic lectures on medicine.

On account of the illness of Dr. John Ashhurst, John Rhea Barton professor of surgery, it was also recommended that Dr. J. William White, professor of clinical surgery, be, for the present, given full and general direction of the de-

partment of surgery. Recommendation of assistants in the department of surgery was reserved.

#### Vital Statistics of Philadelphia for the week ending September 24, 1898:

Total mortality..... 376  
Children under 5 years of age..... 120

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	.....	40
Marasmus.....	.....	31
Heart-disease.....	.....	29
Nephritis.....	.....	19
Diphtheria.....	99	18
Typhoid fever.....	367	15
Gastro-enteritis.....	.....	14
Apoplexy.....	.....	14
Inflammation of the brain.....	.....	14
Carcinoma.....	.....	13
Casualties.....	.....	13
Intestinal obstruction.....	.....	11
Pneumonia.....	.....	11
Cholera infantum.....	.....	10
Scarlet fever.....	17	1

**Pathological Society of Philadelphia.**—At the meeting, September 22d, Dr. J. H. JORSON presented a specimen of **chylous cyst of the abdomen**. The patient had been a woman, aged 50 years. For two years prior to operation she had noticed a growth in the right hypochondrium; latterly she had lost some strength and flesh. At operation a cyst containing from 150 to 200 cu. cm. of chylous fluid was found. It apparently sprung from the retroperitoneal space between the kidneys, and presented above the duodenum, with which it was firmly united. The patient died at the commencement of the third 24 hours after the operation, of rapid heart-failure. At the necropsy no connection of the cyst with any lymphatic structure either above or below it could be traced. The president, DR. W. E. HUGHES, suggested that the cyst was probably an amplification of some lymph-channel.

DR. T. R. CURRIE presented a specimen of **carcinoma of the esophagus** from a man aged 48 years. Until 6 weeks prior to his death, the symptoms had been entirely gastric, and hydrochloric acid had been absent from the vomited matter. At the necropsy there was found an annular carcinoma involving the lower 2½ inches of the esophagus, and almost completely occluding its lumen. Microscopic examination revealed it to be a squamous epithelioma. DR. CATELL referred to a carcinoma of the esophagus, which developed 9 months after a stricture due to the ingestion of lye, and spoke of the origin of this carcinoma from trauma. DR. BOARDMAN REED asked if the vomited matter had been examined for peptones and combined hydrochloric acid, and if it were certain that the fluid examined had really come from the stomach. DR. RIESMAN, who had made the examination of the vomited matter, thought it possible that the latter had not come from the stomach, though he recalled cases in the literature in which absence of hydrochloric acid had been noted in carcinoma of the esophagus. DR. W. M. L. COPLIN spoke of the enlargement of the retroperitoneal glands noted at the necropsy, and said that if it could have been demonstrated that these glands were carcinomatous, interesting questions relative to the lymphatic connections between regions above and below the diaphragm would be opened up. He referred also to the metastasis to the liver in such cases, and mentioned the suggestion that it was due to the swallowing of particles of the growth containing the supposed parasite, and that the infection then was gastrointestinal.

DR. H. L. WILLIAMS reported a case of **primary adeno-**

**carcinoma of the fundus of the uterus**. The growth was a well-developed polypoid mass, the size of a walnut, circumscribed to the upper part of the fundus. Microscopically, it was a typical adenocarcinoma, invading the uterine wall for about ¼ inch. A year and a half after hysterectomy the patient was still in the enjoyment of perfect health.

DR. HENRY CATELL presented a specimen of **gangrenous appendicitis** from a boy aged 12 years. The patient had had previous attacks, but the last and fatal one had been provoked by a trauma. DR. J. H. JORSON referred to two other cases of appendicitis following injury. The president, DR. HUGHES, said that most of the cases of appendicitis following injury were instances of recurrent appendicitis, and doubted that traumas were of much influence in the causation of the affection.

DR. DAVID RIESMAN showed some specimens of **Charcot-Leyden crystals** from a case of asthma. In the fresh state the sputum had contained but few crystals, but after standing 24–36 hours they were abundant. The specimen also contained many cells which stained diffusely with eosin, and others showing eosinophilic granulations. Microscopically there was apparently an almost pure culture of diplococci. DR. JOSEPH SAILER spoke of having also found, in the sputum from a case of asthma, many cells which stained diffusely with eosin.

#### Expectancy of Life among Persons Infected with Syphilis.

—J. Nevins Hyde (*Medical Examiner*, April, 1898), in closing a paper on the expectancy of life in syphilitics, draws the following conclusions: (1) Inherited syphilis is one of the most fatal of disorders, and under the most favorable circumstances, irrespective of abortion and miscarriage, nearly 90% of children born living subsequently die. (2) Acquired infantile syphilis is rare, is an exceedingly manageable disease, and is one in which probably a large proportion of all infants survive. (3) Between 80% and 90% of all adults affected with acquired syphilis escape its gummatous complications. (4) The percentage of patients affected with gummatous syphilis who perish is not known, but it is doubtful if it exceeds 2% of the from 10% to 15% of those who suffer from gummatous complications. (5) The expectancy of life is probably not affected by coincidence of syphilis with other diseases, and the prospect that the patient with acquired syphilis will ever suffer from either struma, tuberculosis, or carcinoma, is exceedingly small. (6) The natural evolution of syphilis in untreated cases in the adult is not in the direction of a lethal issue, but rather in the line of physical degeneration and grave complications due to involvement of the nervous system and of the bones without affecting organs essential to the continuance of life. (7) It is unfair to charge an extra risk for the insurance of syphilitic applicants otherwise in sound health, as any assumed unfavorable longevity-prospects due to the fact of infection are more than counterbalanced by the extreme improbability of death from either tuberculosis or carcinoma. (8) If what precedes has a fair foundation in fact, it follows that the syphilitic applicant for life-insurance should be examined with a view, not so much to his syphilitic history as to his condition with relation to all the other items making up a satisfactory risk. In other words, if he has a good family-history, a sound constitution, excellent habits, and has reached, but not surpassed, a satisfactory age, his expectancy of life is probably that of other individuals in similar conditions without added risk in consequence of his specific disorder.



## Society Proceedings.

### AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Eleventh Annual Meeting, held at Pittsburg, Pa., September 20, 21, and 22, 1898.

FIRST DAY—September 20th.

The Association was called to order by the President, DR. CHARLES A. L. REED, of Cincinnati.

DR. JOHN MILTON DUFF, of Pittsburg, welcomed the Association on behalf of the local medical profession. Lieutenant-Governor Walter Lyon followed with a brief, but eloquent address of welcome on behalf of the citizens of Pittsburg and of the State. President Reed, on behalf of the Association, responded in a concise, but graceful speech.

**Some of the Complications following Vaginal Hystero-salpingo-Oophorectomy in Pelvic Suppuration: with Remarks on the Objections to this Operation.**—DR. FREDERICK BLUME, of Allegheny, Pa., said that a perusal of the literature of the past few years proves that vaginal hysterectomy has made its way here and abroad. Its condemnation on theoretic grounds has decidedly diminished. Its advantages are too plain to permit of its being longer ignored. Men who, in the beginning, strongly objected or opposed this mutilating operation, as some were fond of styling it, have changed their opinions. Guided by the experience of others they have adopted this method and confirmed the assertions of its advocates that it is a conservative operation in the broadest sense of the word—a procedure that, though sacrificing the uterus, conserves the life of the patient, even under circumstances amid which the suprapubic route would mean certain death. The propriety of removing the uterus for suppurative disease of the appendages has been questioned ever since Pean introduced vaginal hysterectomy. Briefly stated, the chief objections are (1) that the uterus is not a useless organ after the ablation of the appendages, and should not be sacrificed unless seriously diseased; (2) that vaginal hysterectomy is an incomplete procedure, followed by serious complications, and that it is not curative. The disposition to preserve the uterus during the childbearing age in women with healthy tubes and ovaries, or when there is unilateral suppurative pelvic disease, can well be understood, but why this organ should not be removed as the initial step of a life-saving operation, when the ablation of both appendages becomes a necessity, is beyond comprehension. The assertion that the uterus without the appendages is still an important organ, that its functions have not ceased with the artificial induction of the menopause, must be rejected as untenable in the light of present knowledge. The arguments that after the extirpation of the uterus the nervous phenomena are more pronounced than when the appendages are left alone, has strongly influenced many surgeons against vaginal hysterectomy. Careful investigations, however, have shown that these arguments cannot be verified. Mainzer, in a report of 200 vaginal hysterectomies for chronic inflammation of the adnexa, performed in Landau's clinic, has arrived at the conclusion that there is less disturbance of the nervous system after the radical operation than after salpingo-oophorectomy alone. He further states that the age of the patient bears no relation to the presence or absence of these nervous symptoms. Dr. Blume is not in accord with the view that the removal of the uterus increases the nervous disturbances incidental to the menopause, and he is inclined to believe that this view is based upon the complaints of neurotic women. With but one exception, all of his patients state that they have as much sexual appetite now as at any time before operation. In two it seemed actually increased. The mortality of vaginal hysterectomy is considerably less than that of the abdominal operation. There is, however, a diversity of opinion as to the ultimate results of the vaginal procedure. Dr. Blume does not resort to the vaginal method in cases in which there is a possibility of saving one tube and ovary—i. e., in cases of unilateral suppuration, even when due to gonorrhea. He is not yet convinced that both appendages must be sacrificed, far less

the uterus, when gonorrheal infection is limited to one tube and ovary. His personal experience with vaginal hysterectomy for pelvic suppuration is limited to 42 cases operated on from the year 1895 to September, 1898. This series, though small in number, is quite interesting on account of the extent and the gravity of the pathologic changes. Of the 42 patients, 18 belonged to that desperate class which, if treated by the abdominal route, are either left unfinished or, according to the statements of prominent operators, have a death-rate of from 25 to 30% in the hands of the most skilful surgeons. The pelvic organs were agglutinated into one mass and could not be distinguished by vaginal or rectal examination. In some instances these masses reached half way to the umbilicus; while in others the peritoneal cavity was less involved and they extended downward into the vagina, pushing the uterus against the symphysis pubis and compressing the rectum to such an extent that an ordinary rectal tube could not be passed without difficulty. The lesions of the remaining 24 patients were not quite so extensive, yet in every instance both appendages were so far involved that a conservative operation was out of the question. Complications occurred in three cases. DR. JOSEPH PRICE, of Philadelphia, said that, following a variety of operative procedures, the sexual appetite of women is in many instances improved rather than impaired. It is rare for a woman to complain of impaired sexual appetite after supravaginal hysterectomy. Age, however, should be considered in discussing the nervous phenomena incident to a normal or a precipitate menopause. Dr. Price advocates the abdominal route, believing that the vaginal method is an incomplete one, and favoring obstruction of the bowel. As a result of ten vaginal hysterectomies performed by Coe in his early work, there were two deaths from intestinal obstruction.

DR. EDWIN RICKETTS, of Cincinnati, cited an instructive case in which it became necessary to resort to the combined method. He spoke in favor of the vaginal route in some cases, but not in all instances, for pus in the pelvis. DR. RUFUS B. HALL, of Cincinnati, was willing to admit that there are cases that can be dealt with by vaginal section and drainage, but the field for this operation is limited. In cases in which there are dense adhesions to viscera, good, complete work cannot be effected through the vagina. Experience has taught that if a patient is under thirty-five and the uterus is removed by an abdominal operation and the cervix is left, she suffers less from reflex disturbances than she does when the uterus was left. DR. CHARLES GREENE CUMSTON, of Boston, said that suppurative conditions within the pelvis demand different treatment, according to their situation, the number of foci, their size and nature, and in making the diagnosis and considering the choice of operation, all of these things should be considered, whether the case be suitable for the vaginal or the abdominal route. In most cases of pus in the pelvis, posterior colpotomy is a trifling operation, yet a conservative one. It can be performed in cases of chronic purulent disease of the female pelvic organs and in those of acute suppuration when it would be dangerous to perform either abdominal or vaginal hysterectomy. DR. JAMES F. W. ROSS, of Toronto, said that his experience agrees with that of Price, that vaginal hysterectomy for carcinoma, no matter how early it is done, is not satisfactory. High amputation of the cervix after the method of Byrne had been satisfactory in his hands. DR. L. H. DUNNING, of Indianapolis, stated that the character of the suppurative products encountered by the surgeon calls for different lines of procedure. In the cases related by Dr. Blume, in which the pus accumulations were exceedingly large, extending as high as the umbilicus, fixed, and extending down into the vagina, it had been Dr. Dunning's practice for the last ten years to perform vaginal section, and he saw no reason to change it. When vaginal hysterectomy was performed it was exceedingly difficult, if not impossible, to remove the pus-sac. He has operated by vaginal incision in fifty cases of the kind described. Of this number, four patients returned for subsequent operation. All but one of them, had made primary recoveries. DR. B. SHERWOOD DUNN, of Boston, believed that the perfection of technic of hysterectomy by the vaginal route exceeds in difficulty that by the abdomen to a great degree. The complications following the vaginal route exceed those of the abdominal method. The danger to the ureters, and to the bowel, and post-operative hemorrhage are very much



greater by the vaginal than by the abdominal route. Dr. Dunn restricts vaginal hysterectomy to a few selected cases in which he is fearful of death by the suprapubic route. The vaginal operation is difficult, and in many instances it has to be followed by a second operative procedure through the abdominal wall. DR. W. E. B. DAVIS, of Birmingham, Ala., held that vaginal incision and drainage have a large field. There is a great deal of difference between operating upon old gonorrheal cases and upon fresh ones. Unquestionably all of the cases following the puerperal state, in which the surgeon can place his finger upon the side or behind the uterus, can be dealt with better by the vaginal route. The surgeon makes a mistake when he opens the abdomen to deal with this class of cases, when vaginal incision and drainage is such a simple procedure. While a few cases will return for secondary operations, the surgeon should be willing to give young women several operations, if necessary, to save important organs. DR. C. A. L. REED, of Cincinnati, formerly resorted to the vaginal route, and, after trying it carefully and conscientiously in many cases, he has practically abandoned it and has returned to the abdominal incision. He has found, however, a class of cases in which hysterectomy has proved a most important concomitant in the course of treatment, but even in these he does not remove the uterus per vaginam.

**Operative Technic for Intraligamentous Ovarian Cystoma.**—DR. D. TOD GILLIAM, of Columbus, O., said that prior to the enucleation-method of Miner the surgical treatment of cases of intraligamentous cystoma was crude and incomplete. Miner's method marked a new epoch and will ever remain the foundation-principle of the surgical treatment of the growths under consideration. It is, however, attended with so much difficulty and danger as to greatly abridge its usefulness. The chief danger is from hemorrhage, which is oftentimes fearful and not infrequently fatal. Other, and by no means unimportant, dangers arise from injuries to important pelvic structures during a hurried and blind dissection. There is a crying need for something better. The essential factors of the ideal operation are: (1) Tapping, to reduce the volume of the cyst and to open the way for hemostasis and enucleation; (2) ligating the supply-vessels, to control hemorrhage; (3) enucleation along the line of cleavage to insure easy, rapid and safe dissection. This technic was foreshadowed in a case operated upon by Dr. Gilliam in 1894. Here he gained his first knowledge of the line of cleavage for intraligamentous cyst, and he reported the fact to the Columbus Academy of Medicine. In 1896 Kelly announced the line of cleavage for intraligamentous uterine fibroids. Hall (in 1897) was the first to combine all the essential factors of the ideal operation. Hall's method, however, included hysterectomy. Dr. Gilliam's method without hysterectomy is as follows: The cyst is first tapped and its contents drained off; then the ovarian artery is ligated near the pelvic wall and a clamp is placed between the cyst-wall and the uterus. A point is selected as low down on the anterior wall as practicable, and with a pair of forceps the capsule is lifted up and a small opening is made. A finger is insinuated and swept around, separating the cyst from its matrix at the base. Now the finger is turned upward and operated in the direction of least resistance, slitting the capsule little by little. This will indicate the line of cleavage, and will generally run upward and outward diagonally across the face of the tumor. Now the hand is introduced and the capsule is stripped off from below upward, following the line of cleavage. The opening is enlarged by making an incision parallel to the capsular margin; the cyst is seized and rolled out of its bed, being stripped from the posterior capsular wall. Trimming and suture are finally done as in other cases.

**General Considerations on Septic Infection of Ovarian Cysts.**—DR. CHARLES GREENE CUMSTON, of Boston, stated that inoculation-experiments have shown that if the liquid contents of an ovarian cyst are not contaminated by bacteria they will remain aseptic and undergo no change. If, however, on the contrary, microbes attack a cyst and enter it, its contents will serve as excellent culture-media and symptoms of infection will soon appear. The human organism will, however, assume the offensive and will react against the bacteria that have infected the cyst; leukocytes come from the walls of the vessels and attack the invading microbes, and thus the liquid contents are become trans-

formed into pus. There were two kinds of septic infection of ovarian cysts, namely, pathogenic infection and saprophytic infection. Pathogenic and saprophytic organisms often enter ovarian cysts through a puncture, incision and drainage. As puncture is discarded in a great number of instances by the majority of operators, the patient contains the agent of the septic process under consideration. The germs do not come from without, but from the interior of the organism, and the process may be called a true auto-infection, which takes place in one of three ways: (1) By means of the blood, the infection being either direct, and produced by phlebitis, which extends up to the cyst; or it may be indirect, the infective elements being carried through the general circulation into the tumor by means of its pedicle. (2) Infection may take place by the lymphatics, the lymphatic channels acting as the contaminating canals and allow a direct introduction of the germs into the interior of the cyst up its hilum. (3) Infection may take place through adhesions, which are abundant in new-formed vessels, which are intimately connected with those in the walls of the cysts, and thus allow easy transportation of the bacteria. After considering at length the symptoms of ovarian cysts and dwelling upon the diagnosis and differential diagnosis, Dr. Cumston dealt with their operative treatment. Operation for the removal of ovarian cysts the seat of septic infection may be divided into four stages, (1) Incision of the abdomen; (2) the breaking up of the adhesions and ligature of bloodvessels that they may contain, and removal of the pus by trocar and not with the knife, because if the cyst is incised pus will immediately flow out and the wound will very likely become infected by the septic material. (3) The next step in the operation is the extraction of the cyst through the wound, and in doing this the surgeon should be careful to avoid infecting the abdominal incision at the time he is drawing the pocket through; but this complication may be easily avoided if aseptic gauze sponges are tightly packed around and inside the line of incision. Then comes the ligature of the pedicle, and its section, after which the stump is dropped into the abdomen. (4) The final step of the operation consists in the cleansing of the peritoneum, which should be done with great care, especially when the operative field has run any chance of infection. If this has occurred, free irrigation of the peritoneum is proper, but it should be done with care and the liquid employed should be a warm, normal salt-solution. Care should be taken to limit the irrigation to the subumbilical portion of the peritoneal cavity and a back flow of the liquid toward the diaphragm should be prevented by having the operating table perfectly flat and the thorax slightly raised.

**A Second Contribution to the Surgical Treatment of Intussusception in Infants, with Cases.**—DR. HENRY HOWITT, of Guelph, Ontario, restricted the term infant to those under one year of age. After briefly describing the different varieties of intussusception that occur at any period of life and also referring to particulars in regard to statistics, modes of growth, length of bowel involved, and the severity of attack in the varieties, he stated that in the infant one has only the acute forms to deal with, possibly only the ileo-colic, which all authorities agree to be the most acute and rapid variety of invagination. It is the ileo-cecal form plus the valve distended and its lumen occluded by the swollen and edematous invaginated portion of ileum that, owing to the tight constriction at the neck by the valve, in a manner resembles a well-hammered boiler-rivet that no evenly distributed pressure from within can force out. Dr. Howitt believes that many instances of the trouble occur in infants, leading invariably to death, without the true nature of the malady being recognized by the attendant; and that when the facts having reference to this variety of intussusception become generally known, fewer deaths will be recorded from certain bowel-affections and more lives will be saved by surgical means. He has seen 7 cases, 6 of them almost within the past 5 years, or since his attention was drawn to the subject. Six were in male children; all came from a district the population of which is under 12,000. He has operated successfully on 4, all of whom were under 6 months of age. A fellow-practitioner lost one owing to an accident during the operation. In one case the friends refused operation and death resulted, and one patient died shortly after the onset before anything could be done. The symptoms of ileo-colic intussusception



were fully dwelt upon. In regard to its diagnosis, the importance of the history of the onset was emphasized. In fact, the nature of the onset may suffice to make a diagnosis. The detection of a tumor in the course of the colon leaves no room for doubt. The condition in this form of intussusception is such as to preclude the hope of recovery by any method short of operation. No time should be lost in trying either bowel-inflation or injection of fluids. They can do no good. Dr. Howitt's method of operating is as follows: He maintains the temperature of the child by suitable applications to the extremities and the body during the operation. Rigid aseptic preparations and precautions should be carried out. A median, three-inch incision, avoiding the high-placed bladder, is made; the small intestines are everted as rapidly as possible, and protected with gauze, which is irrigated with water of suitable temperature. The eversion allows the obstructed portion of intestine to be brought into view. When, as is generally the case, the invagination has reached the transverse colon, the surgeon cannot bring it out of the wound till the part of the large bowel implicated is disinvaginated. This is accomplished by making pressure on the apex of the intussusceptum, while the intussusciens is pulled in the opposite direction: The colon is grasped close to the apex with the hand and the bowel is followed up step by step till the colon and cecum are free. The mass is now lifted out of the incision. Then comes the most difficult point—the reduction of the invaginated portion of ileum. The part is grasped in the hand and firmly pressed for a few minutes; then pressure is made with the thumbs on the apex, while the fingers surround and support the outer orifice of the ileo-cecal valve. The method resembles that used for paraphimosis, except that the large bowel covers the part from view. Before returning the intestines to the abdominal cavity the contents that have accumulated in the ileum above are forced through the affected part into the colon. This proves that the difficulty has been effectually overcome and ensures an early movement of the bowel. Drainage is not necessary. The omentum is spread over the intestines, to prevent adhesion of the bowel to the line of incision. The dressing is covered with oiled silk, the edges of which are sealed with collodion, to prevent urine reaching the cut. DR. C. A. L. REED said that his experience is restricted to a single case of intussusception in infants. The child was operated upon in extremis and died within the first five hours following the operation. With early interference the outcome might have been different. DR. JOSEPH PRICE said that the cases reported demonstrated what can be accomplished by good judgment, great diagnostic skill, and early surgical interference. DR. W. E. B. DAVIS thought it unusual for one man to have as many cases of invagination in infants. He has encountered only one case, and this occurred ten days previously, the child, a male, being eight months old. DR. HALL recalled half-a-dozen cases of intestinal obstruction in infants that had died in sixteen years of general practice. He believes the invagination is overlooked in the majority of instances. DR. JOHN M. DUFF believed intussusception in infants to occur more frequently than is generally supposed. He has held postmortem examinations in several cases in which the diagnosis was doubtful, but intestinal obstruction was found. He has seen two cases within the past year; in one, operation was refused and the child died. At the autopsy intussusception was found. The other case was operated on after peritonitis had set in, and also terminated fatally. DR. CUMSTON said that he had seen four cases of invagination in children.

**Nursing in Abdominal Surgery.**—DR. JOSEPH PRICE, of Philadelphia, said that the time had passed away when any question is raised by intelligent and experienced members of the profession as to the value of the trained nurse. Nurse training-schools have become important institutions not only to young women who, with a creditable ambition, entered them to fit themselves for the profession of nursing, but also to the physician, who, whether in general or in special practice, knows the value of the trained nurse, understands the close and vital relation she holds to his patients; how much her care and quick intelligence of needs does to relieve his anxiety and promote the welfare of his patients. The training in these schools should be specially and simply directed to fit pupils for the duties of nursing. These duties, in all their details, and all the steps in the training essential to discharge them faithfully and intelligently, should be defi-

nately, orderly and clearly outlined by teachers of thorough experience. Those desiring to become nurses should commence their work early, while young, studious and ambitious; while their habits are not so fixed as to make changes difficult, if not impossible. Too much has always been expected of nurses in private. Nursing through 24 consecutive hours is too much to require of human endurance and must result in neglect of the patient. Systematically trained special nurses are usually bright, cheerful, interested and spirited; are alive to the importance of their work; care for and infuse into their patients some of their own animation. The untrained nurse, on the other hand, is meddlesome and dangerous. Young, healthy, unmarried women are to be preferred.

#### SECOND DAY—September 21st.

DR. W. J. ASDALE, of Pittsburg, reported an interesting case of **extrauterine pregnancy, with mature fetus**, and exhibited the specimen. The skeletal remains were borne seventeen years beyond the completion of the term of gestation, and the condition was eventually complicated by an ovarian cyst. No operation was performed. The patient died. At the autopsy a monocyst of the right ovary of large size was emptied and withdrawn. One of the long bones of a fetal skeleton was found free in the pelvis; from high in the left hypochondrium, underlying the left lower ribs and just beneath the diaphragm, the skeletal remains of a fetal body were found, disarticulated and closely packed together. The bones were invested by the intestines, a portion of which was cut away in the removal. The fetal soft parts had, at the time of autopsy, almost entirely disappeared. Records of successful operations undertaken for the removal of long-retained fetal remains are so rare as yet to be exceptional, and how much more doubtful surely would be the result of operative interference in such a complicated case as this.

**Remarks on Primitive Amenorrhea, with Report of a Case and Presentation of Accompanying Pathologic Specimen.**—DR. WALTER B. CHASE, of Brooklyn, said that the essential fact in the sexual life of woman is the predominating control of ovarian influence, and the central fact in the pathology of woman's sexual life is due in large degree to changes or perversion of function or structure of the ovary. While ovarian function is not the single influence that sways woman's existence, its absence will dethrone her womanhood. The commonly accepted theory concerning the functional activity of woman's sexual life is that menstruation marks the commencement of ovulation, and that in its ordinary manifestations the two are, in point of time, coincident. The experience of all observers doubtless furnishes exceptions to the common law, but these exceptions serve rather to confirm than abrogate it. Among these variations or absence of physiologic processes, amenorrhea in some of its forms is of common frequency. An intelligent and comprehensive distinction in amenorrhea embraces a difference between cases that were congenital and those that are acquired. In the former, emansio mensium or primitive amenorrhea, the causes are congenital and chiefly physical, while in the latter, suppressio mensium or acquired amenorrhea, the causes are functional or largely so. In the first class menstruation has never been present; in the second class the function once present is arrested. Primitive amenorrhea may result from congenital deficiency or imperfect development, as follows: Absence or imperfect development of ovaries and uterus; degeneration of the ovaries, cystic or otherwise; the formation and development of benign or malignant tumors of the ovaries sufficient to preclude or abolish their function. Dr. Chase reported the case of a woman of refinement and fine physical development, 24 years old, who had been married about two years, and was sterile, and had never menstruated. She gave an intelligent history of having had, from her eighteenth year, all of the symptoms that usually accompany menstruation from the age of puberty, except the appearance of the menstrual flow. The symptoms of discomfort developed with perfect regularity every 28 days, with a history of increasing pain and nervous excitability until within 18 months, when the pain had become unbearable and the nervous perturbation such that she and her friends feared insanity. The one subjective symptom that gave rise to fears of mental disturbance was severe headache and pressure felt at the ver-



tex, which was present for several days at each menstrual molimen. During a year or more she had become conscious of a gradual enlargement of the abdomen, and could herself easily define an abdominal tumor. The patient was desirous of an operation, which was performed. A tumor was removed and proved to be a dermoid without a pedicle, closely adherent to the uterus and the right broad ligament. A second tumor was found and proved to be a suppurating multilocular cyst of the left ovary. The report of the pathologist was that the dermoid had usurped the place and destroyed the function of the right ovary. In one of the cyst-walls of the multilocular ovarian cyst was found a shrunken ovary the size of a large lima bean, and within this ovarian stroma was found a corpus luteum spurium. To the presence of this ovarian stroma was due the womanly development, with ovulation, and the futile effort of menstruation and its consequent suffering. The case demonstrates the possibility of ovulation without menstruation. It does not remove the doubt whether the absence of the oviducts was primary or secondary to the grave disease of the ovaries, with the possibility that they were congenitally absent. It presents the rare and exceptional condition of a perfectly developed woman who had an ovary and a uterus, who ovulated, was sterile, and never menstruated, and yet was ruined in health by nature's effort to establish an impossible normal function.

**President's Address.**—DR. CHARLES A. L. REED, of Cincinnati, spoke upon the **evolution of specialism**. He dated modern specialism in medicine from the period when the French schools, in the early decades of this century, took up seriously the question of pathologic anatomy. This was the physical basis upon which the work of division began. The obstetric art was as old as the function of reproduction, although the latter ages had witnessed its present refinements. It has been said that obstetrics married surgery, and that the fruit of the union is bright-eyed gynecology. The accouchement probably occurred at the time Recamier invented the speculum in 1801. While surgery had its first rational development in the United States in 1809 under the masterly hand of the immortal McDowell, everything from that day to this is essentially contemporaneous history, in which appear conspicuously many of the proudest American names. Specialism became a verity in response to natural laws, which even to-day determine its destiny. There is not a day but that the general medical profession is enriched in resource and potentiality by the accretions derived from specialism. Each specialty, however assiduously cultivated, remains an integral part of the great general profession, the masters of which must ever stand as ideals. All specialists to-day are primarily the products of general medical culture.

THIRD DAY—September 22d.

**The Treatment of Granular Erosions of the Cervix.**—DR. D. TOD GILLIAM, of Columbus, O., reported three cases that he had treated successfully by ligation of the cervical vessels.

**The Relation of Nervous Affections to Diseases of the Female Pelvic Organs.**—DR. B. SHERWOOD DUNN, of Boston, limited his remarks to the great neuroses of neurasthenia, hysteria, and insanity. He is totally opposed to any operative procedure, except when pathologic conditions are demonstrable. He has no confidence in operations upon healthy organs for the cure of any neurotic condition, and believes that these are now generally condemned by the profession. He, however, looks upon the position taken by some neurologists, that there is no relation of cause and effect between the various neuroses, psychoses and disease of the female pelvic organs as being as extreme and as condemnatory as the advocacy of the removal of normal organs from the female pelvis for the cure of nervous diseases, by some ill-advised persons calling themselves gynecologists. In operating upon diseased conditions in the pelvis, the gynecologist does not expect to remove the symptoms of the neuroses, but only those symptoms properly belonging to the pelvic disease itself. Strange and disappointing as it might seem to some of the critics, when those pathologic pelvic conditions are removed or corrected, the nervous system, relieved from the source of unceasing irritation, gradually returns to its normal poise, and the patient is cured of her neuroses as well as her pelvic disease.

**The Graver Forms of Nervous Disturbances Due to Organic Changes in the Genital Organs.**—DR. WM. H. HUMISTON, of Cleveland, O., said that in the last five years of his work he has never operated upon a case in which the correlation between the diseased pelvic organs and the nervous symptoms was not clearly defined before an opinion from a neurologist relieved him of a doubt of a nervous or cerebral lesion, with one exception. He reported six cases in which great relief, in some cure, followed operative interference. The first case was one of insanity; the second, one of melancholia; the third, one of neurasthenia; the fourth, one of insanity; the fifth, one of hystero-epilepsy, and the sixth, one of hysteria. The cases were reported with the hope that some effort would be made to secure for women confined in county and State institutions for the insane such surgical measures as would, in a large proportion of cases, be a curative means for their mental ailment, and as must, in a vastly greater proportion at least, improve their condition, both mentally and physically.

**Albuminuria Complicating Gynecological Operations.**—DR. RUFUS B. HALL, of Cincinnati, referred first to the conditions predisposing to this complication, and urged careful examination of the urine preceding operation, so as to determine, if possible, the presence of nephritis or other causes leading to suppression of urine. The most common cause is preexisting nephritis, but, unfortunately, in granulated nephritis, a most careful examination of the urine may fail to show the presence of disease. A patient suffering from this disease may, after the operation, have suppression, followed by coma and death. Suppression may also follow operation in a patient with a fatty heart or with atheromatous arteries. It is of the greatest importance to have the patient thoroughly prepared for operation. If there is the least indication of preexisting nephritis, chloroform is advised for the anesthetic, regardless of the age of the patient. In his early operative work Dr. Hall used ether almost exclusively. He cited 110 sections in which ether was given. In 33 cases there was a trace of albumin in the urine in the first 24 hours. In 10 cases there was partial or complete suppression, and two patients died in coma. During the time Dr. Hall used the ether, he operated on seven patients known to have nephritis. They were given chloroform, and are included in 500 sections in which that drug was the anesthetic. Eighty-five of this number showed a trace of albumin in the urine in the first 24 hours after the operation. In 10 cases there was suppression, and four patients died of uremic coma. All patients who were known to have kidney-disease were given chloroform. There were 35, and the deaths in the chloroform-list were from this number. To avoid the dangers from the use of chloroform, it was urged that its administration be intrusted only to one expert in its use. The paper closed with a resumé of the preliminary treatment accorded every patient about to be subjected to a section, of the manner in which operations are conducted, and of the measures employed if albuminuria occurs after the operation.

DR. X. O. WERDER, of Pittsburg, reported the results of clinical observations in over one hundred abdominal sections for ovarian tumors.

DR. FREDERICK BLUME, of Allegheny, Pa., reported a case of **double uterus and vagina with pregnancy in one horn**, in which he excised the vaginal septum.

The following officers were elected for the ensuing year: President, Dr. Edward J. Ill, Newark, N. J.; first vice-president, Dr. Edwin Ricketts, Cincinnati, O.; second vice-president, Dr. A. B. Miller, Syracuse, N. Y.; secretary, Dr. Wm. Warren Potter, Buffalo, N. Y., reelected; treasurer, Dr. X. O. Werder, Pittsburg, reelected. Executive council, Drs. A. Vander Veer, L. S. McMurtry, W. E. B. Davis, John M. Duff, L. H. Dunning, and Walter B. Chase. Indianapolis, Indiana, was selected as the place for holding the next meeting, the time of which was left to the executive council.

**Hygiene in the Schools of France.**—At the Congress of the French Association for the Advancement of Science, recently held in Nantes, a resolution was adopted, recommending that the teaching of hygiene in the schools and colleges of France be entrusted to medical men, and that adequate compensation be voted those who give the instruction.



## The Latest Literature.

### British Medical Journal.

September 10, 1898. [No. 1967.]

1. A Discussion on the Phenomena of Hypnotism, and the Theories as to its Nature. J. MILNE BRAMWELL, MR. F. W. H. MYERS, DAVID YELLOWLEES, M. BENEDIKT, JOHN F. WOODS, CHAS. A. MERCIER, and JOHN HADDON.
2. A Discussion on Suicide: its Psychiatrial and Social Aspects. JOHN SIBBALD, ALEXANDER HAIG, ENRICO MORSELLI, G. F. BLANDFORD, M. BENEDIKT, DAVID YELLOWLEES, ALEXANDER R. URQUHART, JOHN MACPHERSON, CHAS. A. MERCIER, DAVID NICOLSON, HERBERT F. HAYES NEWINGTON, and JOHN F. SUTHERLAND.
3. Clinical Studies with Spleen and Thyroid Extracts. CHARLES A. BOIS and NEIL T. KERR.
4. A Case of Hematoporphyrinuria. R. D. HOTCHKIS.
5. The Neglect of Early Training of the Mentally Defective. WALTER BERNARD.
6. Analysis of the Ocular Phenomena in 40 Cases of General Paralysis of the Insane. W. R. DAWSON and D. F. RAMBAULT.
7. A Graphic Method of Case Records in Asylums. GEO. R. WILSON.
8. On Pauper-Lunatics in Private Dwellings. EDGAR HOGBEN and A. MARIE.
9. The Insanities of Inebriety from the Legislative and Medico-Legal Standpoint. J. F. SUTHERLAND.
10. A Discussion on the Significance of Anatomical Variations. D. J. CUNNINGHAM, F. G. SHEPHERD, A. M. PATERSON, R. J. ANDERSON, and J. YULE MACKAY.
11. Lantern-Demonstration on Cranial Topography. JOHN-SON SYMINGTON.
12. Observations on the Shape of the Solid Abdominal Organs. DAVID HEPBURN.
13. A New Dissection Showing the Internal Gross Anatomy of the Hippocampus Major. J. G. MCCARTHY.
14. On the Arrangement of the Muscular Fibers (1) of the Stomach, (2) of the Upper End of the Oesophagus. A. BIRMINGHAM.
15. Some Abnormalities of the Ocular Muscles. D. P. FITZGERALD. (*Illustrated.*)
16. Preliminary Note on the Development of the Sympathetic System in Elasmobranchs. A. M. PATERSON.
17. The Anatomical Basis of Reduction by Manipulation of Dislocation at the Shoulder Joint. DAVID WATERSTON.
18. A Discussion on the Nature and Treatment of Lupus Erythematosus. C. P. M. BOECK, P. G. UNNA, ALFRED EDDOWES, MORGAN DOCKRELL, H. RADCLIFFE CROCKER, JAMES C. JOHNSTON, DR. MAAR, and W. ALLAN JAMIESON.
19. A Discussion on the Question, What are we to understand by Eczema? MALCOLM MORRIS, WALLACE BEATTY, and FRANK H. BARENDT.
20. The Treatment of Sarcoma by Coley's Fluid. MORGAN DOCKRELL.
21. Notes on a Case of Suicidal Cut-Throat. HUGH GALT.
22. A Study of 200 Consecutive Operations for the Radical Cure of Hernia. ARTHUR E. BARKER. (*Illustrated.*)
23. A Case of Noma of the Ear. G. MUNRO SMITH. (*Illustrated.*)
24. Hereditary Digital Abnormality. D. YOUNG.
25. Medicated Wines. F. C. COLEY.

1.—See editorial, p. 635.

2.—" " p. 634.

3.—The number of patients treated was 22; physical improvement took place in 17, mental recovery in 8. The treatment was begun with 3 capsules of desiccated spleen, representing 100 gr. each of fresh spleen; this was increased later to 6 a week. Capsules of liquid extract, each containing 20 gr. of fresh spleen, were subsequently tried, and with more distinct benefit. The splenic extract was found to increase urinary secretion and intestinal peristalsis. It also assisted in rendering thyroid extract more efficacious. It is best given at least half an hour before meals.

4.—Hotchkis reports a case of **fatal hematoporphyrinuria** following the administration of sulfonal. The

symptoms were at first gastric, later nervous, ending in twitching of the muscles and paresis. The urine was albuminous; its color at first was a deep claret, but later it cleared; spectroscopically, it contained hematoporphyrin or a substance allied to it. At the autopsy the liver was fatty, the kidneys sclerotic. It is recommended that sulfonal should never be given for any length of time, if indeed at all, unless there is certainty that the kidneys are healthy.

5.—Bernard considers the **early training of the mentally defective** of the utmost importance. The evidences of departure from the normal may be detected in infants at the beginning of life by a careful study of the unconscious and instinctive muscular actions, and the mode in which the various child-emotions are expressed; also by the process of growth—muscular, physical, and mental, and by carefully studying the powers of speech at the age of speech-development. Bernard advises methods of corrective suggestion and appeals to imitativeness in order to gradually guide the pathologic toward the physiologic. This should be accomplished through the adoption of a well-ordered and comprehensive domestic treatment, begun with the earliest recognition of any pathologic condition. Early mental sanitation diminishes the frequency of occurrence of insanity. The creation of a "time-table" for infants is advised, including rules for guidance before dentition, during and immediately after dentition, and rules to apply up to the third and fourth years of life, at which stage the books for the mentally defective now in use can be applied.

6.—Dawson and Rambaut have studied the **ocular phenomena** in 40 cases of **general paralysis** and in 16 cases of other forms of **insanity**. In the former group of cases, syphilis was an antecedent factor in 17, or 4.25%, but in no case could it be excluded. Palsies of the external ocular muscles were present in 5 cases. Of pupillary anomalies inequality was the most frequent, being present in 36 of 39 cases. The value of this symptom, however, is slight. In 23 cases the size of the pupil was noted; in 8 there was mydriasis, in 6 myosis of both eyes. Irregularity noted in 94.8%. In 95% the sympathetic eye-reflex was defective, but this is not uncommon with other forms of insanity. The crusensal light-reflex was impaired in 67.5% of cases. Ophthalmoscopically, 3 of 30 cases examined showed advanced atrophy, one case optic neuritis, three early neuritic changes.

8.—Hogben describes the method of distributing the **insane poor in private dwellings** in Scotland. This is more readily done because in many districts in that country the dwelling-room is in excess of the population. Cottagers and small farmers are given the preference as hosts, and considerable supervision is exercised over the care and surroundings of the patients. Less attention is given to the exact character of the mental disturbance than to the general habits of the patients. Nearly all show pronounced improvement both mentally and physically; more or less attachment is often formed between them and their guardians; and the system has the further advantage of aiding certain poor people to support themselves. Marie describes the system as used in France. About 600 patients form a colony in a town of 6,000 inhabitants. (Dun.) For this colony there is a central hospital, with 30 beds and a medical staff and attendants. Two or three patients are given to each of the boarding families, many of them being imbeciles and melancholics past the prime of life. It is observed that many of these patients lose all their suicidal tendencies when they are once more thrown into familiar social intercourse under favorable conditions with reasonable human beings.

9.—See editorial, p. 634.

10.—**Anatomic variations** are, according to Cunningham, retrospective and prospective. The former may be separated into (1) simple ontogenetic arrests, and (2) atavism or prognism. Prospective variations are best encompassed by the term epigonism. They vaguely indicate the direction of phylogenetic evolution. With regard to ontogenetic arrests, the evolutionary history of the individual indicates the difference between little morphologic interest and deeplying significance. As to atavism, it has been too much the custom to place all anomalies of the muscular system in the atavistic group. Stability of structure is characteristic of organs having a long ancestral history, and *vice versa*. Prospective variations may lead to little or no result, while some



tend to adapt the individual more perfectly to its environment. Ancestry-records are consulted in relation to retrospective variations, but in prospective variations each case is on its own intrinsic merits. It is probable that a progressive tendency exists in man toward shortening the vertebral column. The lumbo-sacral region in man is very subject to variation. The skeleton is, in the process of abbreviation, a step in advance of the nervous system.

**11.**—Symington demonstrates a method of illustrating the **relations of the scalp and skull to the external surface and to the internal parts of the brain.** The entire head is repeatedly injected through the carotid and vertebral arteries with a solution of formalin until the head is thoroughly hardened. Before freezing, the latter was injected with a solution of gum, to prevent the cracking and tearing of the brain that often attend the freezing process. The entire head, being fixed in position in a box filled with a solution of gum, is then frozen and sections are cut in various planes.

**15.**—**Ocular muscular abnormalities** were observed by Fitzgerald in a muscular man, 26 years old, and are shown by diagrams. A muscular band from  $1\frac{1}{2}$  to 2 mm. thick was found to arise from the tendon of origin of the external rectus, a slip passing forward and ending in the orbital fat. The fleshy fibers made a compact band passing inward, forward and under the optic nerve. In a second diagram a muscular band is shown arising from the under surface of the tendon of origin of the levator palpebræ superioris.

**16.**—Paterson has demonstrated the **formation of sympathetic ganglia** as derivatives of the dorsal ganglionic elements, by a process of cellular growth; the union of adjacent ganglia to form a communicating cord, and the junction of a visceral branch of the ventral root, which alternates with the dorsal root, with the cellular ganglionic mass at an early stage in its development.

**17.**—Kocher's method of **reducing dislocation of the shoulder-joint** is explained on an anatomic basis, by Waterston, who is satisfied that Kocher's classic explanation represents the mechanism, because (1) the joint-capsule is very lax and extreme movements are limited by muscles as well as by ligamentous bands; and (2) the muscles are to be looked to as the agents affected when the head is removed from the socket. The reduction depends not on the coracohumeral band, but on the following: (1) The rotation-movement occurring about the posterior part of the head, so that the head moves outwards as a whole. (2) The tension of muscles assisting this movement, drawing the head still further into position. (3) The fixation of the neck, especially by the latissimus dorsi and the pectoralis major muscles, whose origins are separated from their insertions. (4) This fixed point, acting as a fulcrum, on which movements of the head can be brought about by movements of the elbow, and opposite in direction.

**18.**—Boeck believes that **lupus erythematosus** is of tuberculous origin, a view held by most French dermatologists, although microscopic, bacteriologic, and experimental researches have failed to yield positive results. Of 42 cases observed by him 28 exhibited symptoms of past or present tuberculosis. Another argument in favor of the tuberculous origin is that there are certain cutaneous affections undoubtedly tuberculous that are to be found intermingled in such a manner with lupus erythematosus that a relationship between them cannot be denied. These affections are allied on the one side to lupus erythematosus and on the other to lichen scrofulosorum. There is, in fact, an uninterrupted series of transition-forms linking these two diseases together. Boeck directs attention also to what he terms "exanthems of tuberculosis," the first of which is an eczematous variant of lichen scrofulosorum, which he calls *eczema scrofulosorum*. The other is one of the most common cutaneous affections of children, and consists of whitish macules and scaly spots to be seen on the face of young people and children, the so called *pityriasis simplex* or *alba*. If these affections are recognized early, much good may be done by advising special care in the case of these young individuals, and the tuberculosis may be prevented from taking a more dangerous form. While tuberculosis may be considered the essential element of lupus erythematosus, there are good reasons for looking to the toxins of the bacillus as the real cause. This would account for the clinical symptoms, which are especially characterized by the vasomotor

paralysis of the vessels of the affected parts. Boeck has never observed a transition from lupus erythematosus to lupus vulgaris. Unna, in dealing with the same subject, but from a therapeutic standpoint, states that he is not convinced that the disease is tuberculous in nature. In the treatment he relies chiefly on external remedies, which he divides into six classes: (1) The drying; (2) the compressive; (3) those that tend to reduce hyperemia; (4) the necrosizing; (5) the inflammatory; (6) the specific. These cannot here be described in detail, but a general plan of cautious treatment, as proposed by Unna, begins with bandages of lead-water at night or application of a powder-bag; and during the day with a dusting of pulvis cuticolor or zinc-sulphur paste, with ichthyol or resorcin to be rubbed in; or a gelanthum with ichthyol or soft soap, or with both, may be prescribed for the night. If red patches are present and show signs of fixed edema, collodion with soap or ichthyol may be applied, while in cases of darker redness the microcautery may be used. An external dressing may be used at night consisting of lead-water, ichthyol, or weak caustic-potash (1 to 10,000) solution. The indolent patches require more vigorous treatment, as pyraloxin-paste and the soap-treatment. These patches are best covered immediately after such treatment with a wet bandage and with zinc-oxid plaster mull or mercury-plaster mull. Hyperkeratotic patches require treatment with salicylic soap. The patches on the scalp should be treated with soft soap and covered with pyraloxin-ointment. In case of anemia, with flushings of the face, or when digestion is disturbed, ichthyol should be given internally throughout the whole course of treatment.

**19.**—Morris defines **eczema** as a catarrhal inflammation of the skin originating without visible external irritation and characterized in some stages of its evolution by serous exudation. He admits a dual cause, namely a parasitic agent and a nervous factor. True hereditary transmission of eczema is not admitted and Morris is emphatic in combating the popular belief that it is harmful to cure eczema. Eczema does not affect the general health. It is not due to gout, diabetes, nephritis, or chronic dyspepsia; all of which are only aggravating circumstances.

**20.**—Dockrell reports a case of **mycosis fungoides**, or "withering sarcoma," treated with **Coley's fluid**. A decided influence was exerted on the tumors, but the disease had lasted so long that it could not be arrested.

**21.**—Galt reports a case of **cut-throat**, the wound being  $\frac{1}{2}$  inch above the upper border of the thyroid cartilage,  $4\frac{1}{2}$  inches long, 2 inches on the right side,  $2\frac{1}{2}$  inches on the other. The knife penetrated deeply, severing every intervening structure down to the posterior wall of the pharynx. The internal jugulars and carotids escaped. Death resulted from hemorrhage in 3 hours.

**22.**—Barker records a series of 200 operations for the **radical cure of hernia**, with only 3 deaths, one of them from ether-poisoning. In 26 cases there was slight discharge from the wound, in the other 174 union taking place by first intention under one dressing. Wetting of the dressings with urine was the cause of the discharge in most cases. Sutures came away in 21 of the 200 cases. Risks to the structures of the spermatic cord and testes were observed in only 2 cases. The ages of the patients ranged from 3 months to over 70 years: 35 were under 20; 132 between 20 and 60. Six were subjected to a second operation on account of recurrence of the hernia. The operations for inguinal hernias were various, 57 being performed by Bassini's method, 79 by Barker's, and 2 by Macewen's method. In cases of femoral, umbilical and ventral hernia, various methods were employed. Silver wire appeared to give a decided mechanical support not furnished by silk. Hard-twist Chinese silk boiled in 1 to 20 absolute phenol was used in almost every other case. About 1,000 of these silk sutures must have been used in the 200 operations. Bassini's operation is regarded as the best yet devised, as regards the question of immunity from recurrence.

**23.**—Smith reports a case of **noma of the ear** in a child 2 years old, resulting in death. The black slough was absent in this unusual situation, but thrombosis was extensive. Bacteriologic examination disclosed the presence of staphylococci, together with a short bacillus, non-motile, rounded at the ends, and staining easily with anilin dyes. The center of the bacillus often remained unstained. The organisms were often in pairs or chains. On gelatin stroke-



cultures the growth was very slow, and did not liquefy; colonies were grayish-white, granular and glistening. Gelatin stab-cultures yielded white colonies.

**24.**—Young reports a case of **abnormity of the thumb**, in which the hereditary tendency was present through four generations, the peculiarities having been transmitted invariably from the paternal side.

**25.**—Coley utters a timely and sensible warning against the prescribing of coca-wines and of combinations of extract of meat, malt, and port-wine. The former by deadening the sense of fatigue, abolish nature's safeguard, and may readily lead to habituation to cocaine or alcohol. The second are physiologically faulty—extract of meat is not a food, but a harmless stimulant, and on account of its meaty flavor often causes the patient to eat something else with it; mixed with lentil flour, or similar substance, it serves a good purpose. It is likewise a substitute for tea or coffee. Extract of malt is useful by itself; port-wine gains nothing by being mixed with the other substances. Its composition is at best rather unreliable, and the makers of the extract-of-meat-and-malt mixture very likely do not use the highest quality of wine.

### Lancet.

September 10, 1898. [No. 3915.]

1. The Wheat-supply of the World, the Latest Achievements of Science and the Position of Psychical Research. WILLIAM CROOKES.
2. Essay on the Marriage of the Unfit. HARRY CAMPBELL.
3. Causes of Urinary Fever at the Beginning of Catheter-Life. C. MANSELL MOULTON.
4. A Series of Cases of Obstructive Disease of the Large Intestine Treated by Lateral Anastomosis—in one Case after Colectomy. G. H. HUME.
5. Landry's Paralysis. ARTHUR S. TAYLOR.
6. An Embryological Curiosity. J. ROSS MACMAHON.
7. Traumatic Separation of the Lower Epiphysis of the Humerus with Displacement Forwards. W. MCADAMS ECCLES.
8. Chlorodyne-Poisoning. JAMES GILROY.
9. Rupture of the Left Coronary Artery; Hemopericardium; Failure of Pulse in the Right Carotid and Radial Arteries. LAWRENCE HUMPHRY.

1.—See editorial, p. 633.

**2.**—The fitness of two individuals to marry embraces two considerations—their fitness as regards each other, and their fitness as regards the production and rearing of offspring. It is with the latter that Campbell concerns himself in this essay. Approaching the subject from a biologic point of view, strongly tinged with Weissmannism, he states first of all that the principle of the survival of the fittest plays a predominant part in animal evolution; while the environment tends to mold the organism adaptively, it is doubtful whether the direct action of environment plays a decided part, because environmental moldings do not appear to be inherited. It is necessary to look for the factors of evolution in natural selection. This divides itself into (a) sexual selection, which is really at the bottom of the marriage question; and (b) natural selection, or survival of the fittest. Natural selection secures adaptation to the environment, and maintains that adaptation by eradicating the less fit. When acting in the latter capacity it is designated as panmixia. The tendency of species to increase in geometric ratio, the changeableness of environment from generation to generation, and the occurrence of variations that fall short of the standard of excellence—these are the factors that start the operation of natural selection. The first has little direct effect upon selection, as, at the present day, food is placed within the reach of practically all, and those unable to procure food do not die, as they would in more primitive conditions; but elimination from other causes is still busy among us. Every death not due to accident or old age is really the elimination of the unfit, and, occurring before the end of reproductive life, falls under the category of natural selection. Elimination due to changed environment is also constantly going on. If the host of pathogenic microorganisms about us would remain unchanged, man might become adapted to his environment and be able to resist them, but they are constantly changing, and complete adaptation is impossible. As to elimination by panmixia, the

wonder is that this variation is no more stringent than it is. In more primitive communities, uninfluenced by the saving factor of civilization, many below the standard of excellence would perish through panmixia. As it now is, they are preserved and can procreate. Civilization provides for the unfit and prolongs their lives. Civilization also abolishes polygamy, which, biologically, is most desirable, although as a sociologist, Campbell is strongly against it. To heredity he attributes the most potent influence, and insists that it cannot be eliminated even from disease. He proves his point most cleverly. The part played by the individual in disease is most important. It is his structure that determines whether he shall or shall not react abnormally amid a given environment; and the structure is essentially determined by heredity. Turning now to the question of who are **unfit to marry** and to procreate, the general answer is those who have defects that under natural conditions would lead to annihilation. Persons with pulmonary tuberculosis, organic heart-disease, epilepsy, insanity, diabetes, and chronic nephritis should not marry. Those with rheumatic fever, especially if they have had more than one attack, and most cases of acute nephritis, not due to scarlet fever, should also be debarred from wedlock; furthermore, those who have suffered from nonaccidental diseases, in which life was saved by surgical operation, as, for example, persons with strangulated hernia or ovarian cyst. Nature has in the past removed millions of women suffering from ovarian cyst with cruel kindness, in order to keep up a certain kind of ovarian fitness in the race. These are practically all saved now in civilized communities, with the result that ovarian cyst is necessarily increasing. Everything should be done to rescue such persons from death, but on a clear understanding that no children shall be borne afterward. Again, general defect of hearing ought to be a positive bar against marriage. Congenital errors of refraction ought to be, but it would take a good deal of boldness to dissuade persons in that condition from marriage. The neurotic individual should remain single. In some families apoplexy and premature senility occur frequently, and the children in such families ought to be cautioned against marriage. Campbell recognizes the difficulties involved in a practical application of his views, but he thinks that an appeal to man's sense of duty to posterity, and making him realize what he owes to those for whose existence he is responsible, will do much toward reconciling the race to the strain imposed upon it by the restrictions of marriage. As it now is, an individual is already much more limited in his freedom of action than he generally supposes, and Campbell is inclined to believe a state of society possible in which individuals will refrain from marrying from fear of producing unfit offspring, as they now abstain from marrying their grandfather or grandmother.

**3.**—Urinary fever at the beginning of catheter-life has usually been regarded as the result of sudden evacuation of a bladder that has been accustomed to a greater or lesser quantity of residuary urine. This is purely a hypothetical explanation, however, and is not founded upon scientific facts. This being the case, an explanation must be looked for elsewhere. The introduction into the bladder at every catheterization of microorganisms, which abound about the orifice of the urethra, and the lowered tone of the bladder-wall itself, should be held responsible for the symptoms that come on at the beginning of catheterism. Residual urine favors the occurrence of cystitis by providing a supply of nutrient material in which the germs can grow, and by weakening the resistance of the tissues that form the wall of the bladder, so that the bacteria can penetrate more easily. Believing the introduction of bacteria by means of the catheter to be the primary cause of urinary fever, the only means of combating it is by aiming at aseptic catheterism. Theoretically, this is possible, but unfortunately in actual practice the patient can rarely be depended upon to carry out the elaborate technic necessary to attain the required end.

**4.**—Hume reports 5 cases of **obstructive disease of the large intestine treated by lateral anastomosis**. In but one case was apposition of the parts secured by a mechanical device, Senn's plates being used in this instance. It is believed that, when time will allow, mechanical devices should be discarded, as by simple suturing a larger opening of communication can be secured. The method employed is rather unique; the two portions of bowel to be united are joined by a series of Lembert sutures for a length



of rather more than 3 inches; an incision is then made into each segment of bowel, just falling short of the ends of the row of Lambert sutures, and these two openings in the bowel are united by an overcast suture. The operation is completed by continuing the Lambert sutures entirely around the opening.

5.—Taylor reports the case of a man, aged 42, and apparently healthy, who awoke one morning, to find his right arm tingling and numb, and the left arm affected similarly, but to a less degree. Vision grew dim; the knee-jerks disappeared; the mind was clear; tactile sensation was perfect. On the second day, the symptoms were much intensified, with a slight febrile rise; breathing was shallow, bulbar symptoms were marked; complete motor paralysis, with paralysis of the soft palate was present; the sphincters were affected; the urine was free from albumin and sugar. There were no bedsores. The man died on the afternoon of the third day. The extremely rapid course of the disease and the absence of any symptoms of gross change in the gray matter pointed to some virulent poison affecting the gray matter, and the analogy with curari-poison lends color to this view.

6.—MacMahon describes a fetus, with an entire absence of the abdominal wall, bladder, and anus, a semi-cloacal condition and bilateral genitalia, with other points of embryologic interest.

8.—Gilroy reports the case of a man, aged 70, who had taken an unknown quantity of cough-medicine containing **chorodyne**, and developed symptoms of opium-poisoning. Recovery ensued after the stomach had been washed out repeatedly.

#### New York Medical Journal.

September 24, 1898. [Vol. lxviii, No. 13.]

1. A Contribution to the Study of Hysteria in Childhood as it Occurs in the United States of America. HERMAN B. SHEFFIELD. (Concluded)
2. Nervous Dyspepsia, with Report of Cases. FRANK H. MURDOCH.
3. Cases of Shot and Bullet Wounds of the Eye. CHAS. STEDMAN BULL.
4. The Semeiotic Value of the Different Symptoms in Cancer of the Stomach. ALFRED GORDON.
5. An Additional Case of Epilepsy with Persistent Thymus, Lymphatic Hyperplasia, and Vascular Hypoplasia. A. P. OHLMACHER.
6. A Case showing the Serious Effect of a Light Abdominal Blow, and Illustrating the Danger of Delay in Such Cases when Surgery is Indicated. CHARLES O'DONOVAN.
7. Abdominal Cases and Comments. S. B. OVERLOCK.

1.—Sheffield gives in tabulated form all of the cases of **hysteria in childhood** (under 15 years of age) to be found in American medical literature. He comments upon the various points of interest contained in the reports of these cases, and summarizes the contents of his paper as follows: (1) Hysteria is a neuro-psychosis, manifesting itself in an array of functional disturbances of one or all of the higher centers, with secondary changes in the lower ones, underlain by a morbid condition of the nerve-substance. (2) The etiology of hysteria in childhood is very obscure. Anything that lowers the vitality serves as a predisposing cause. The role played by heredity is overestimated. Much more weight must be laid upon the acquired causes, among which imitation, faulty methods of education and discipline, alcoholism in the young, and trauma are deserving of special mention. (3) Hysteria attacks boys as well as girls, the ratio being as one to two. It is comparatively rare in children under eight years of age. (4) The symptomatology of hysteria is characteristic for its changeability and multiplicity. In the United States it is observed, as a rule, in the following order of frequency: (a) Spasmodic affections (convulsions, spasm of the laryngeal muscles, croup, contractures, catalepsy); (b) sensory symptoms (painful sensations, anesthesia, blindness, contracture of the visual fields, hemianopsia, deafness); (c) motor disturbances (paralysis of the extremities, paralysis of the laryngeal muscles, aphonia); (d) visceral and vasomotor disturbances (affections of the alimentary canal, dyspnea, tachypnea, hyperpyrexia). (5) The

treatment consists in the removal of the causes, attention to general hygiene, isolation and rest, suggestion, and hypnotism. The duration of this disease depends greatly upon the skill in treatment; the prognosis is, at all events, favorable. The diagnosis of hysteria in childhood must be based mainly upon the exclusion of organic disease; also upon the rapid changeability of the symptoms.

2.—Murdoch applies the term **nervous dyspepsia** only to that class of cases in which it is most unlikely that any anatomic changes could have taken place in the mucous membrane of the stomach, for the reason that great and sudden changes appear in the amount of hydrochloric acid secreted, the glands sometimes pouring it out in large quantities, and again its secretion being for the time suspended, to be followed by another period of increased secretion. He reports five cases illustrating this definition. He considers the nervous mechanism of the stomach at fault in these cases. The treatment consists in the restoration of the lost balance of the secretory nerves. General hygienic measures, such as proper bathing and exercise and a well-regulated diet, which must be followed according to the changing conditions of the gastric secretions, together with the application of electricity and the administration of strychnin, constitute the essential therapeutic measures. The general nervous derangement seen in many of these cases is considered secondary to the deranged nervous mechanism of the stomach.

4.—The semeiotic value of heredity, pre-existing dyspeptic troubles, age, gastric pains, vomiting, perigastric tumor or induration, Gordon thinks considerable, but not sufficient for a definite diagnosis in the early history of **carcinoma of the stomach**. The best proof of the existence of an epithelioma is the presence of a hard and irregular tumor, accompanied by edema of the extremities, ascites, or phlegmasia alba dolens. Adenopathies located in the left subclavicular, the right subclavicular, the axillary or inguinal region, the glands being hard, freely movable, and painless, are of some value in the later periods of the disease. The absence of hydrochloric acid is only of secondary value on account of its absence with other conditions. The same statement applies to a less extent to the presence of lactic acid. Both of these symptoms, while not infallible, should always suggest the presence of carcinoma of the stomach. The diminution of urea, phosphates and chlorids in the urine is of less value. The blood-changes, such as the diminished number and altered shape of the corpuscles, alteration in the plasma, hemoglobin, and chlorids are of minor importance.

5.—Ohlmacher's studies on epilepsy indicate that a certain proportion of epileptics present the morbid anatomy of the so-called "lymphatic constitution." In other words, that, in cases of pure epilepsy, originating early in life, grand mal in type, often accompanied by periodic mania, and generally negative so far as extensive, gross brain-changes are concerned, the persistent, hyperplastic thymus-gland, the general lymphatic hyperplasia and vascular hypoplasia, are to be especially looked for. In addition to the persistently enlarged and active thymus-gland, there remains in epilepsy a remarkable hyperplasia of the intestinal and splenic lymphadenoid structures, a general lymphatic hyperplasia, a narrowing of the arteries, with osseous evidences of old rickets, and excessive adiposis. These features are, as a whole, not necessarily present in any given case. Ohlmacher reports the case of an adult female, with grand mal from childhood, periodic mania, good general health, and sudden death (unobserved, during the night). At autopsy the finger-nails were found of a deep-purple color, the lips moderately purple, the mucosa of the eyes and nose cyanotic. Frothy blood-stained fluid oozed from the nose and mouth. The tongue was held by its tip between the teeth, but was not bitten. The tonsils were enlarged. The follicles of the tongue were much developed. The cervical and axillary glands were palpable. For a moderately thin person the muscles were enveloped in an unusually thick layer of subcutaneous fat. There was a considerable amount of reddish fat in the anterior mediastinum, the omentum, mesentery, and retro-peritoneal space, considering the small size of the body. The thymus-gland was large and reddish. It was covered with fat and a continuous layer of fibrous tissue. In structure it consisted of masses of small, round cells surrounded by fat. Stained sections showed the tissue to be composed of thickly set, large thymic follicles containing an abundance of lymphoid cells. The large follicles exhibited a distinct cortical and



medullary subdivision. The corpuscles of Hassall were present in various stages of formation in the lymphatic follicles. The intervening connective tissue contained fat in abundance in the bloodvessels. The thyroid body was somewhat enlarged. The tongue presented well-marked prominence of its follicles. The larynx, trachea, and bronchi were somewhat narrower than usual. In the last two, the follicles were plainly marked with the mucosa and frothy blood-stained fluid escaped when the lungs were pressed. The bronchial glands were enlarged, soft and reddish-gray in color. The heart was somewhat flabby. The valvular orifices were strikingly narrow; the walls and cavities of usual size. The entire aorta and its main branches were narrowed and thin-walled. The elasticity of the walls was normal, and there was no lesion of any of the coats. The liver showed a slight increased prominence of the lobules, which were surrounded by light-yellowish borders. The spleen was large, flabby, deep-red in color, and its capsule wrinkled easily when handled. Its pulp was reddish in color and quite soft. The splenic follicles stood out as prominent, light-colored areas in the dark pulp. The kidneys and adrenals were embedded in large quantities of fat. The solitary and agminated follicles of the ileum projected prominently above the mucous surface, especially the solitary glands toward the end of the ileum. Many of the follicles exhibited circular depressions at their summits. Peyer's patches were elevated above the surface and there was no undue redness and no trace of ulceration or degeneration in the mucosa covering them. The solitary glands of the colon were larger than normal throughout. The mesentery contained an excess of fat, embedding the lymph-glands, which were large, pale and soft. The retroperitoneal glands were enlarged and softened; also the inguinal and cervical glands. The brain, spinal cord, and pituitary body were normal. Bacteriologic investigation yielded negative information.

6.—The following case, showing the serious effect of a slight abdominal blow, is reported as illustrating the danger of delay when surgery is indicated. The patient was injured while riding a bicycle by colliding with a cart, the shaft striking him full on the abdomen in the hypogastric region. The accident was considered trivial at the time, and the patient, though slightly shocked, presented no symptoms, indicative of any serious intra-abdominal lesion. On the following day, however, his condition became serious, and, there being every evidence of some intestinal injury, celiotomy was performed 33 hours after the injury was sustained. Injuries were found in two places, one being a contusion of one of the coils of small intestine, the other a rent in the small intestine large enough to admit the tip of the little finger. The patient gradually grew weaker after the operation, and died just 48 hours after the reception of the injury. The case illustrates clearly the importance of an early diagnosis, for had the operation been performed 12 hours sooner a different result might have been expected. A diagnosis of rupture of some viscus may be said to be sufficiently certain to justify immediate exploratory incision, when a train of symptoms such as the following is presented: excessive amount of shock; extreme depression and weak pulse; nausea, growing considerably worse and leading to vomiting; deep-seated pain in the intestines that is never absent, but shows violent paroxysms of increased intensity; abdominal distention rapidly becoming tympanitic, and a temperature but little above normal, or even at first below it.

### Medical Record.

September 24, 1898. [Vol. liv, No. 13.]

1. State and Municipal Care of Consumptives. S. A. KNOPF.
2. Atypical Malaria as Seen Coming from our Military Hospitals. D. W. WYNKOOP.
3. Latent Cancer of the Stomach. JULIUS FRIEDENWALD and A. S. HOFALING.
4. Pathological Report of a Case of Cerebrospinal Meningitis. CHARLES R. GRANDY.
5. Treatment of Some of the Diseases of Children Two Hundred Years Ago. ROBERT REYBURN.
6. A New Method of Applying a Plaster-of-Paris Splint to an Ankylosed Knee-Joint or to a Fractured Limb. H. M. HALL.

7. Bromide of Potassium for the Morphine Habit. C. H. HUMPHREYS.
8. A Splint for Fracture of the Femur in the Infant. PATRICK J. TIMMINS.
9. Green-Stick Fracture of Both Bones of the Forearm in a Child Eighteen Months Old. GEORGE H. WILLIAMS.
10. Report of a Large Ovarian Cyst Successfully Removed. J. SHELTON HORSELEY.
11. A Supernumerary Nipple. WILLIAM L. KANTOR.

1.—In a most suggestive address, Knopf insists on the general establishment of **municipal or State institutions for tuberculous patients**, to be located near the homes of the patients—that is, near the large cities. Just as there are commissions for the examination of the insane, so should there be such, composed of physicians and laymen, to deal with tuberculous patients seeking admission to the public hospitals. The duties of such commissions would be as follows: (1) To determine the applicant's condition by medical examination; (2) to visit his home if he has been found tuberculous, and to institute disinfecting and other hygienic measures; (3) to examine the other persons of the family and find out if any of them have also contracted the disease, and to institute proper treatment; (4) to report to the sanitary authorities concerning the condition of the patient's dwelling; (5) to determine the financial condition of the family, whether the patient is or is not able to pay, and whether, on his being taken to the institution, the family will become destitute. Any individual should have the right to present himself for examination, and every physician should be at liberty to recommend any person for examination to the board of his precinct or district. The institutions needed to carry out this comprehensive plan of treatment would be (1) a centrally located reception-hospital and dispensary. The dispensary should treat the ambulant cases of tuberculosis when admission into the sanatorium is impracticable. It should also serve as a place to seek counsel for patients discharged from the sanatorium, and thus should aid in his continued improvement and guard against relapses. (2) There should be one or several city-sanatoria located in the outskirts and if possible in a somewhat elevated region, where the atmosphere is known to be pure. Here all patients should pass through a preparatory sojourn, before being sent to the mountain-sanatorium, and the more advanced cases should all be retained there. (3) There should be one or several mountain-sanatoria at not more than three or four hours by rail from the city, and at an altitude, if possible, of between 1000 and 2000 feet, on porous ground, with southern exposure, and preferably in the vicinity of a pine-forest. To the mountain-sanatorium there should be added a department for children suffering from pulmonary tuberculosis. (4) There should be several seaside-sanatoria for the treatment of children affected with tuberculous diseases of the joints and other tuberculous (scrofulous) manifestations. (5) There should be a maternity-sanatorium. It has been shown that the presence of properly conducted sanatoria for tuberculous patients does not in the least endanger the community. Indeed, at Goerbersdorf and at Falkenstein there has been a reduction in tuberculosis among the villagers. This cannot be said of open health-resorts, where the regulations for the disposal of the sputum are less stringent. The sanatoria should be open not only to the poor, but also to those in moderate circumstances, who can bear part of the expense. Knopf is favorably impressed with the German plan of State invalidity-insurance. The moment an individual in Germany enters upon a career, *e. g.*, as an ordinary laborer, or as a servant, he is obliged to be insured against sickness, accidents, and old age. If he develops tuberculosis, he is immediately sent to one of the many sanatoria of the country. Thirty-seven of these government insurance companies in 1897 assisted 4,480 tuberculous patients, of whom 4,432 were sent to subsidized sanatoria. Nearly all of these State insurance-companies contribute to the funds of such establishments. To carry on the State or municipal institutions a large staff of physicians would be needed. These should be paid for their services. To proceed with this work as soon as possible it is suggested that favorably located general hospitals be transformed into hospitals for tuberculous patients.

2.—Wynkoop believes that the **malaria of the soldiers** may be readily confounded with typhoid fever. This atypi-



cal malaria, also known as Southern fever, is infectious, of sudden onset, with paroxysms of fever without regular type, generally without chills, with gastric and intestinal disturbances, with chronic cachexia, cutaneous disturbances, coma, and death in the third or fourth attack. The crescentic form of the plasmodium is always found in the blood, and it may be found also in the blood of those apparently cured. As to etiology, the mosquito-theory may be questioned, as most of the soldiers insisted that they encountered very few mosquitos while on the island of Cuba. The duration of the incubation-period is very uncertain. The symptoms usually set in with weakness and dizziness, and pains in the back and legs; headache develops, and by evening the temperature is 105° or even 106°. After an hour or two, the fever slightly declines with a drenching sweat, leaving the patient in a state of profound prostration. The next day the temperature reaches about 101° and remains at this level, declining in the morning, for possibly a week or ten days, if no quinin is given. The second high rise should be looked for at about this time. It will pursue a course like that of the first, with the difference that it is higher and is attended with greater prostration. The interval is usually from five to ten days. There may be a third high rise, and usually a fourth, the intervals becoming shorter. Death generally follows the fourth rise. The spleen is always enlarged, and the abdomen is tender. Gastritis and enteritis may develop, and the stools may be almost characteristic of typhoid fever. Erythematous rashes of short duration are often found on the trunk and one hip. Mental symptoms are marked: first, the patient is apathetic and sleeps a good deal; then he becomes delirious and comatose. Many patients apparently cured, after being about for a week or two, are brought to the hospitals in a comatose condition, the coma having come on within less than an hour, and in this condition they may expire. Many sudden deaths of soldiers on furlough in cities can be put down to this score. Although it may be possible to mistake this form of malaria in certain stages for typhoid fever, examination will always enable one to arrive at a correct diagnosis.

3.—There are cases of **carcinoma of the stomach** in which not only are the cardinal symptoms entirely absent, but all other symptoms, if present at all, are so insignificant that they do not lead one to suspect the disease. Such cases are known as latent carcinomas of the stomach, of which there are two varieties: (1) Those in which gastric symptoms are absent or so insignificant that they are masked by other general symptoms; (2) those in which there are no symptoms whatever, general or local. Friedenwald and Hotaling cite the cases recorded in literature and report one observed by themselves. This latter case concerns a colored man, aged 70, who appeared to be in good general health, and at no time complained of feeling ill. Death occurred suddenly, 3½ months after the man came under observation. At the autopsy a carcinomatous growth 16x11 cm. in size, occupying both anterior and posterior surfaces of the stomach was found. There was no evidence of metastasis.

4.—Grandy reports two cases of **cerebrospinal meningitis** in the meningeal pus of which he found the diplococcus of Weichselbaum.

5.—Reyburn gives extracts from the works of some of the writers of the seventeenth century in order to illustrate the heroic methods resorted to in the treatment of infants at that period.

6.—The reduction of a deformity may be maintained during the application of a plaster-cast, by means of weights suspended from the ends of a many-tailed bandage passed over the limb. In this manner sufficient traction is exerted until the plaster is set. This method may be employed in the case of either ankyloid joints or fractures with angular deformity.

8.—The **splint** recommended by Timmins for **fracture of the femur in infants**, consists essentially of a fairly stiff sheet of tin, fashioned to fit the trunk and lower extremities. The strips of splint that are to secure the limbs are to be flexed with the thighs, and then bent back at the knees, leaving the femoral portion long enough to serve for a fulcrum. The splint is retained in place by means of broad strips of adhesive plaster and a roller-bandage. In a case treated with this splint, the part was left undisturbed for 3

weeks and the result was excellent. The ease with which the child can be handled is one of the advantageous features.

10.—Horseley removed an **ovarian** cyst weighing 73 pounds from a woman, aged 34 years, who had been married 17 years, but had never given birth to a child. Though unilocular at the time of operation the cyst bore traces of having been previously multilocular.

11.—Kantor records a case in a primipara of **super-numerary nipple** which had been supposed to be a wart until the occurrence of milk-formation.

### Medical News.

September 24, 1898. [Vol. lxxiii, No. 13]

1. Another View of Conservative Surgery of the Tubes and Ovaries. HENRY C. COE.
2. The Correction of Spinal Deformity by Stages under an Anesthetic. V. P. GIBNEY.
3. Facts Regarding the Death-rate of Diphtheria when Based on the Mortality-statistics of a City. ALBERT WOLDERT.
4. Septic Bronchopneumonia. ALBERT ABRAMS.
5. Carcinomatous Thrombosis of the Brachial Artery. F. R. FRAJER.
6. Cyst of the Thyro-hyoid Bursa. CHARLES L. SCUDDER.

1.—Coe remarks that **conservative operations on the adnexa** are to be commended in properly selected cases. The surgeon should on the one hand avoid tampering with ovaries that are the seat of slight cystic degeneration or cirrhosis, and, on the other, trying to preserve supposed normal tissue in organs the seat of such extensive disease that it is doubtful whether the best interests of the patient (both immediate and remote) would not be subserved by complete removal. In many cases it is advisable to simply separate adhesions. As there is no way of preventing their reformation, it is better to suture prolapsed tubes and ovaries at their normal level in the pelvis. In a certain proportion of cases resected ovaries undergo complete atrophy; in others the stromal remains may form the starting-point of cysts requiring a second operation for their removal. A tube that has been rendered patent or has been resected, may again become occluded, or may form a hydrosalpinx or tubo-ovarian cyst. The symptomatic results are often entirely satisfactory as regards the relief from pain and dysmenorrhea, the preservation of the function of ovulation, and the occurrence of conception. On the other hand, constant pain and dysmenorrhea may persist, menstruation may be absent, scanty, or excessive, and pregnancy is so far the exception that it is to be regarded as an unusually fortunate sequence. In any case, it is not possible to affirm how far conception, following resection of the adnexa, is directly due to this procedure, or how far to the accompanying treatment—curetment, separation of adhesions, restoration of the general health, improved sexual relations, etc. The main object is the avoidance of the premature climacteric. As regards technique, experience has shown that more successful conservative work can be done by the abdominal route for reasons that are obvious, *i. e.*, thorough separation of adhesions, suture of raw surfaces, checking of hemorrhage, avoidance of drainage, etc. Catgut is preferable as a suture-material.

2.—Gibney reports progress in a few cases of **spinal deformity corrected by stages under anesthesia**. English appliances of steel and iron are generally controlled by skillful men. On the Continent, where much cotton is used, deformity is bound to recur. In America plaster-of-Paris is ideal, but imperfect, as it causes excoriations, ulcers, etc., and fixation must be occasionally discontinued, when the deformity recurs. With piano-felting bound on by cheese cloth, Gibney incidentally remarks, excoriations rarely occur. Five cases of Pott's disease are cited in which, under an anesthetic, forcible, in several cases manual, reduction of the deformity was practised. In three cases of lateral curvature the results were not so brilliant. Plaster-of-Paris was used to hold the spine after operation. The aim is to break up osseous adhesions and render the column flexible.

3.—Woldert has studied the **diphtheria statistics** of Philadelphia for the past 6 years, and he calls attention to the doubtfulness of the efficiency of any form of treatment as shown by statistics on account of the great variability in the severity of epidemics. He shows that the general death-



rate of Philadelphia is gradually being reduced, having decreased steadily from 2.48% in 1892 to 1.966% in 1897. The statistics show that since the introduction of bacteriologic diagnosis, the percentage of accurate clinical diagnoses—assuming the other to be invariably accurate—is very high, indeed, and it is to be presumed that they were equally correct before the bacteriologic laboratory was instituted. The conclusion is reached that it is yet too early to form an absolute opinion regarding the beneficial effects of antitoxin; that it is used too infrequently, and that it is usually administered too late in the disease.

4.—As a result of observations in 61 cases of **broncho-pneumonia**, Abrams believes there are two unusual forms of the disease, which he designates as non-febrile broncho-pneumonia and septic bronchopneumonia. His cases are classified as follows: Tuberculous, 25 cases; simple, 10; non-febrile chronic, 15; septic, 11. Of the 15 chronic cases 4 followed a somewhat subacute course. The sputum usually contained staphylococci and streptococci, and the physical signs indicated inflammation of the small tubes. In the 11 septic cases, the symptoms were those of sepsis, with profound purulent expectoration, night-sweats, chills, etc. The commonest microorganisms found were staphylococci, streptococci, colon-bacilli, and pneumococci. The prognosis is favorable, the most important treatment being compressed air, which effects lavage of the bronchial tubes, and the administration of potassium iodid. The one clinical distinction between septic and tuberculous bronchopneumonia is the absence, in the former, of tubercle-bacilli.

5.—Frazier reports the case of a woman, 94 years of age, suffering from an epithelioma of the lip, with extensive involvement of the neck. Shortly before death the patient was seized suddenly with acute pain in the right arm, and the hand and forearm became pale, cold, and anesthetic, with a tendency to dry gangrene in the ends of the fingers. Death took place after 8 days, without symptoms of sepsis.

6.—Scudder records a case of **thyro-hyoid cyst** above the level of the top of the thyroid cartilage, firm, elastic, round, and hickory-nut-sized, attached to the skin at one spot and to the deeper parts. Three operations were performed, the final one under ether.

### Boston Medical and Surgical Journal.

September 22, 1898. [Vol. cxxxix, No. 12.]

1. Auenbrugger and Lænnec, the Discoverers of Percussion and Auscultation. EDWARD O. OTIS.
2. Albuminuria. Considerations Suggested by 1,248 Examinations in Non-renal Cases. ARTHUR K. STONE.
3. The Question of Responsibility in Cases of Sexual Perversion. FRANK W. ANTHONY.
4. The Principle and Limitations of the Home-Modification of Milk. JOHN LOVEIT MORSE.
5. A Case of Hemorrhagic Pericarditis Due to the Pneumococcus; Aspiration; Recovery. GEORGE G. SEARS.
6. Report of 5 Cases of Wounds by the Mauser Bullet, with Remarks. J. H. STEVENS.

2.—The cases studied by Stone were in working-girls and women and the wives of industrious laborers and clerks seen at the Women's Out-patient Clinic of the Massachusetts General Hospital. Cases of undoubted nephritis, of heart-disease with signs of dilatation and venous stasis, cases of tuberculosis, or other diseases in which there were well-determined degenerative conditions, were excluded. The cases, as a whole, showed some special symptom suggesting the desirability of urinary examinations, but there were some cases in which no such symptom existed. For a period of time all cases applying were examined, and enough cases were catheterized to exclude the possibility of albuminuria dependent upon leukorrhea. All cases of cystitis and of menstruation were excluded. The tests applied were nitric acid and heat. Of the 1,248 cases, 298, or 23.08%, showed albumin. The highest percentage was in early life, when the so-called transitory albuminurias are most common. For the next three decades the percentage was 22 plus; after the age of 50, 26 plus, owing to beginning senile changes. It is considered of importance that but 23% of the cases examined showed the presence of albumin. A large number of cases were distinctly transitory. Cases presenting persistent slight albuminuria were considered

less amenable to treatment than the transitory cases. This albuminuria, while it may not indicate renal disease, should be considered as a "danger flag," indicating conditions of maloxidation, and the necessity for careful examination into the condition of the circulation and possible causes of malassimilation of food, and should lead to an attempt to establish the cause of the conditions under consideration, always remembering that albuminuria is never physiologic. Complete examination of the urine is considered as of much less significance in cases with small amounts of albumin in the urine than the careful observation for several days of the amount of urine voided in 24 hours, its specific gravity and acidity, and, if possible, the total amount of urea excreted.

3.—The question of responsibility in cases of **sexual perversion** seems to have received little consideration either in medical or in legal circles. This is due, in part, to the instinctive aversion to things impossible to the normally constructed mind, and, perhaps, more to the rarity with which these cases come under the observation of any one man, unless an expert in that particular line. To condemn to punishment an irresponsible person is unjust; to allow to go unpunished a responsible rascal is poor public policy. The sexual instinct in a given being is inherited from two diametrically opposed appetites, the male and the female—one active and aggressive, the other normally passive and receptive in tendency. In the early life of the embryo the embryonic possibility is equal; as time goes on, an unknown factor determines the sex; but even then and for a long time afterward what may be termed *latent* sexuality is all that is normally possessed. In normal development there comes at the time of puberty an impulse to genital stimulation. The question of responsibility depends largely on the origin of the trouble; if peripheral, it is rare that the patient is irresponsible; if central, responsibility may be more doubtful, or it may be decisively negatived, though here again the rule cannot be a fast one.

5.—Sears reports the case of an Italian laborer, 23 years old, who was first seen in an attack of acute rheumatism. The whole left side of the abdomen was covered with erythematous patches and similar blotches were present on the back. There was a soft systolic murmur at the apex of the heart, transmitted to the axilla; an accentuated pulmonary sound, and fine moist rales at the base of each lung. The temperature was 100° F.; the pulse 90, regular, and of good volume. After 5 weeks under the use of salicylates the patient seemed convalescent. Two days later, however, the rheumatic pains and erythema recurred. The patient developed a pneumonia of the left side and a pleurisy with a small effusion on the right side. Rough pericardial murmurs developed, and later, signs of effusion appeared. The pericardium was aspirated in the fourth interspace, about an inch from the right border of the sternum and 10 ounces of fluid were withdrawn containing much blood, numerous polynuclear and mononuclear cells and an occasional endothelial cell. A culture made from the effusion showed a growth of pure pneumococci. The patient gradually improved from this time on, and after 6 or 7 weeks the left chest was clear, the right showing a little dulness with diminished respiration, and the presence of a friction-sound below the angle of the scapula. The area of cardiac dulness remained somewhat increased. There was a short diastolic and also a systolic murmur heard at the apex. The latter was transmitted to the back and was heard to the right of the median line. Sears has collected from the literature 11 cases of recovery from hemorrhagic pericarditis, making a considerable proportion of the cases of paracentesis pericardii reported. No bacteriologic examinations were made in those cases.

6.—Having had some little experience with **injuries from the Mauser bullet**, Stevens, an ex-surgeon of the Cuban Army, is led to believe that the efficiency of this modern weapon cannot be compared with that of the Springfield or Winchester rifle. While the cartridge from the Mauser rifle has a greater velocity and may on this account be supposed to be capable of wounding an increased number of men, it has been shown that, as a matter of fact, few combatants receive wounds at great distances; so that this supposed advantage of range is rather theoretic than real. Furthermore, the injury produced by the rifle is in most cases so slight that the wounded man is not always forced to leave the line of battle, or, if he is, he is usually able to



reach the primary dressing-station without assistance. As the object of war is to disable, without necessarily killing or fatally wounding, the individual, it cannot be said that this small-caliber bullet meets the requirements. In the majority of cases, unless the wound be received in a portion of the body considered vital, the chances of recovery are good, and but little surgical care is required; in fact, once the surgeon has learned to *keep his hands off*, the better are the chances of recovery.

### Journal of the American Medical Association.

September 24, 1898. [Vol. xxxi, No. 13].

1. The Chemical Relations of Remedies in Scientific Therapeutics. JOHN V. SHOEMAKER.
2. Modern Treatment of Tuberculosis. CHARLES DENISON.
3. Antitubercle Serum (Paquin) in Tuberculosis. WILLIAM HUTSON PRIOLEAU.
4. The Study of Materia Medica and Therapeutics. HENRY M. BRACKEN.
5. Some Preparations of the National Formulary. C. LEWIS DIEHL.
6. The Pons Asinorum of Therapeutics. ROBERT G. ECCLES.
7. Potassium Iodid in Cerebro-Spinal Meningitis. H. A. MOODY.
8. Influence of Age in Causing Opacity of the Crystalline Lens, and the Proper Use of the Word "Cataract." EDWARD JACKSON.
9. A Form of Corneal Turbidity Easily Overlooked. H. GRADLE.
10. Bacteria one of the Chief Etiologic Factors in Diseases of the Eye. ELLET ORRIN Sisson.
11. Conclusions from Clinical and Bacteriologic Experiments with Holocain. ROBERT L. RANDOLPH.
12. Five Cases of Congenital, Bilateral, Symmetrical Displacement of the Lens of the Eye in Three Successive Generations of One Family. EDWARD FROST PARKER.
13. Cases of Hereditary Ectopia Lentis. WILLIAM H. WILDER.
14. An Additional Case of Double Congenital Microphthalmos. CASSIUS D. WESCOTT.
15. Experiments in the Use of Aluminium for Artificial Vitreous. D. C. BRYANT.
16. Gonorrheal Conjunctivitis and Iritis. FRANK S. MILBURY.
17. Colpoperineorrhaphy and the Structures Involved. BYRON ROBINSON. (Continued.)
18. A Ligation of the External Iliac Artery. G. G. DARLING.

1.—Shoemaker believes that we are on the brink of a new era in therapeutics, and that we should look to **organic chemistry** to furnish us with animal extracts and serums, as it has given us the active principles of vegetable drugs. He advocates the adoption of such preparations into the U. S. Pharmacopeia as official remedies, with full directions regarding their preparation.

2.—In concluding a paper on the **modern treatment of tuberculosis**, Denison expresses the belief that a seasonable change of residence to a well-selected, high-altitude climate, with its dryness, sunshine, possibilities of outdoor life, and its stimulating qualities, affords the best possible resistance to the advance of pulmonary tuberculosis. Local treatment and proper methods of inhalation are of value, and exercise is most essential. It is a mistake to overwhelm the body with frequent injections of undetermined animal serum, thereby producing either a severe reaction or a possible cumulative toxemia. The adaptation of all methods of treatment to the needs of a given case is the preferable plan of treatment.

3.—Prioleau reports a number of cases, in which Paquin's **antitubercle serum** was successfully used in the treatment of tuberculosis, and he states that another year's experience with the serum has more than ever convinced him of the value of the serum.

4.—Bracken contends that the student should not commence the **study of materia medica** until he has had a year's study of chemistry and physiology, and then the study is best begun in the lecture-room. By this means the relative importance of the various drugs is pointed out and the student is saved the confusion arising from the study of numerous preparations without a guide. In laboratory-in-

struction, pharmaceutical work should be taken up first, and the course should be short and practical. Then comes the study of drugs in the physiologic laboratory, which is perhaps best made an elective course. The study of therapeutic agents in groups is taken up in the third year of the course, and the application of this work should be connected with the clinical work of the fourth year.

7.—Moody reports the use of **potassium iodid** in the treatment of 10 cases, during an epidemic of **cerebro-spinal meningitis**, with but a single death. The disease seemed to yield visibly as the patients came under the influence of the drug, and the preservation of life is attributed to the iodid, because all other remedies previously used had failed to produce benefit.

8.—See this JOURNAL, Vol. II, p. 98.

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12. " " " " " p. 99.

13.—Wilder reports 3 cases of **congenital dislocation of both crystalline lenses** occurring in a woman and her two children.

14.—See this JOURNAL, Vol. II, p. 99.

15. " " " " " "

17.—Robinson continues his paper on **colpoperineorrhaphy**, discussing general views concerning the anatomy of the perineum and vagina, and concerning the deficiency of the sphincter apparatus. An historic sketch is given of the different methods of operation from the time of Ambrose Paré to the present.

18.—Darling reports the case of a lad, 17 years old, who, whilst firing an apparatus improvised from two anvils and a wagon-nut, was struck a severe blow above Poupart's ligament by a fragment of the nut. It was found that two thicknesses of cloth had also been embedded in the tissues. The wound was treated antiseptically and the patient was kept in bed until the seventh day, when, on rising to void urine, abundant arterial hemorrhage took place. This ceased when recumbency was resumed and the thigh was flexed, but it was repeated several times under similar conditions. On examination it was found that the leg was cooler and that there was no femoral pulsation on the injured side. After enlarging the wound the fragment was found behind Poupart's ligament and behind the artery. A gush of blood followed its removal, but hemorrhage was checked by a finger in the wound. **Ligation of the external iliac artery** was then performed, but as the distal end of the artery had been blocked by a clot for a week, it was not disturbed. The patient made a good recovery, presenting at no time serious infection or apparent injury of the iliac vein.

### Journal of Nervous and Mental Disease.

August, 1898. [Vol. 25, No. 8.]

1. Congenital Facial Paralysis. H. M. THOMAS.
2. A Case of Multiple Syphilitic Neuritis. FRANK R. FRY.
3. Long Remissions in Epilepsy and Their Bearing on Prognosis. WHARTON SINKLER.
4. Report of a Case of Purulent Internal Pachymeningitis, Complicating Middle-Ear Disease. WILLIAM M. LESE-NSKY.

1.—Thomas reports two cases of **congenital facial paralysis** in brothers. The family-history showed the prevalence of abnormalities; a cousin of the mother having been born with but one arm, and another child in the same family having exhibited a congenital deformity of the foot. There was a distinct history of maternal impression, the minister in a church, before the birth of the first boy, having been unable to move any of the muscles of his face, and the mother feeling great anxiety regarding the probability of a similar deformity in her child. Three other children, however, about whom she was equally anxious, were normal. The first patient when born had drooping of the nether lip, and inability to close the eyes; but otherwise he was normal. When seen, at the age of 21, his face was expressionless; he was unable to raise or contract the eyebrows; the eyes could not be closed, and there was no power to elevate or to pucker the lips. The muscles of mastication



were normal, and sensation was unimpaired. The second patient exhibited similar defects shortly after birth. There was marked protrusion of the lower jaw, and the same muscles were paralyzed as in the other case. Both patients had congenital malformation of the lobes of the ears. An operation was performed in the second case, in the course of which it was found that few or no muscular fibers were present in the lower lip. No reports of similar cases could be found. Congenital facial paralysis, usually unilateral, but in some instances bilateral, is sometimes due to cerebral defect or to injury of the facial nerve during birth. Thomas reports a case in which it was permanent. Congenital absence of muscles of the body, particularly the pectorals, has been frequently reported, and Thomas is inclined to believe that his case was of the same nature, although the fact that the muscles affected were those occurring in the distribution of a particular cranial nerve would seem to indicate some neuropathic influence. In the discussion Spiller and Sachs suggested the similarity of the disease to muscular dystrophy of the Landouzy-Dejerine type. Thomas stated that he did not believe that maternal impression had anything to do with the condition, but that the presence of other malformations led him to believe that the condition was congenital.

2.—Fry reports the case of a man, 32 years of age, who had been infected with syphilis, and a year and a half later complained of severe headache, with tenderness over the temporal regions and the shins. He was relieved by anti-syphilitic treatment, which he soon discontinued, and he later developed sore throat. About six months after this he had an attack of hemiplegia, from which he gradually recovered. After a further period he complained of numbness and weakness in his feet and legs, which soon rendered him unable to walk, and were followed by similar symptoms in the arms. Reactions of degeneration soon appeared in the calf-muscles. In the course of two months, however, the man began to improve rapidly, exhibiting, when able to walk, a distinct stepping gait. Throughout he received only mercury and sodium iodid. Fry believes the case to be one of **syphilitic neuritis**. It could not have been due to the mercury, as that was used more freely after the symptoms appeared than before. There had never been any symptoms of rheumatism. In the discussion, Dana, Starr, and others, expressed doubt as to the syphilitic nature of the case; Sachs, however, believed that neuritis due to syphilis might occur.

3.—Sinkler has collected 24 cases of **idiopathic epilepsy** in which there were remissions varying from 2 to 29 years. The most remarkable case was that of a man who as a child had convulsions from teething, which persisted until he was 8, after which he had no further attack until 35. Another patient, a woman, developed epilepsy shortly after marriage, the attacks continuing until 48 years of age, then ceasing until 57, when they returned without assignable cause. A third patient had frequent seizure until 17 years of age, when a prescription containing belladonna was given and apparently caused an acute maniacal state. From that time until his thirty-eighth year he was free from attacks. Another patient commenced to have epilepsy at 10 years of age, the attacks recurring infrequently until the age of 27. Then they ceased, and did not return for 21 years. Sinkler reports also three cases in which the attacks had not returned after periods varying from 2½ to 5 years. He concludes that no case of epilepsy can be considered cured, but that remissions of such long duration may occur that the patient is practically well during their continuance. In the discussion, Patrick reported a case in which attacks of petimal ceased at the age of 45 and returned at the age of 70. He reported also the case of a young woman whose epilepsy was improved after marriage. Wister suggested that infantile convulsions are not always synonymous with epilepsy. Collins reported a case of Jacksonian epilepsy that had remained cured for 3 years after operation. He reported also a number of cases with remissions of varying length. Hammond suggested that although the epilepsy might be cured, it could leave a tendency to redevelopment of the disease, and that, perhaps, it would be better to call these cases with long remissions, cases of renewal of the disease. Sinkler, in closing, approved of Hammond's remarks, but did not adopt them unqualifiedly.

4.—Leszynsky reports the case of a man, 23 years of age, with bilateral chronic suppurative otitis. The right auditory

canal had been thoroughly cured; the operation being followed by an evening-temperature of 104.2°. Symptoms of septicemia, without signs of local inflammation, continued for 12 days, when the patient became aphasic and the pupils were found unequal. There was no headache. The knee-jerks were exaggerated and ankle-clonus was present. An exploratory operation was made in the left temporo-sphenoidal region, but nothing abnormal was found. Death occurred within a few hours. At the autopsy, the dura covering the left side of the brain was covered with thick fetid pus, and there was a slight degree of leptomeningitis involving the third left frontal gyrus and extending upward. A diagnosis of abscess had been made in view of the absence of headache, delirium, convulsive seizures, etc. In the discussion Angel reported a case that had somewhat similar symptoms in which recovery occurred without surgical interference.

### Edinburgh Medical Journal.

August, 1898. [N. S. Vol. iv, No. 2.]

1. The Application of Rest in the Treatment of Disease of the Skin. W. ALLAN JAMIESON.
2. The Clinical Aspects of Arterial Pressure—Some Physiological Data Bearing on the Clinical Observation of the Blood-Pressure. GEORGE OLIVER.
3. Acute Pneumonia of Childhood. JAMES CARMICHAEL.
4. Personal Experiences in the Treatment of Enlarged Prostate. ALEXIS THOMSON.
5. A Study of Four Cases of Full-Time Extra-Uterine Pregnancy. JAMES OLIVER.
6. Note on the Conduction of the Second Sounds of the Heart. WILLIAM EWART.
7. On Dissecting Aneurysm of the Aorta. T. N. KELYNACK.

1.—See this JOURNAL for August 6, p. 268.

2.—Oliver continues his remarks on the **clinical aspects of arterial pressure**. He has found, on experimental investigation (1) that the arterial-pressure, when not influenced by gravity, is uniform in all the arteries available for observation; (2) that the arterioles decisively reduce the blood-pressure; (3) that the blood-pressure is probably not reduced by the passage of the blood through the capillaries; (4) that the blood-pressure is probably slightly reduced in the venules; (5) that the normal peripheral resistance is mainly arteriolar. The arteriolar pressure influences the arterial and the venous pressure. Gravity, posture, muscular exercise, mental exercise, emotional excitement, fatigue, excitation of respiration, effort, rest, digestion, beverages, temperature, and baths have an influence on the blood-pressure.

3.—In discussing the **acute pneumonia of childhood**, Carmichael says that bacteriology demonstrates that the pneumonia of infancy can in no sense be considered a specific disease, in the sense that it is due to any special organism, as similar, if not identical, pathologic changes are produced in the lung-tissues by various organisms. The reason why the same infection that produces a catarrhal pneumonia in infants should produce a fibrinous pneumonia in adults or in children over 5 years of age is explained by the fact that the alveoli of the lung are not fully developed until about the fifth year of extra-uterine life. Of 142 cases of acute pneumonia in hospital-practice in which recovery took place, 107 showed the clinical features of a catarrhal and 35 those of a fibrinous nature. In 83 of the catarrhal cases the disease ended by lysis, in 24 by crisis. In 34 of the fibrinous cases, the disease ended by crisis, in one by lysis. Catarrhal pneumonia is essentially the pneumonia of infancy. There are three varieties of the disease; (1) in which the disease runs an acute course, ending by crisis or rapid lysis, and is attended with physical signs of ordinary bronchitis; (2) in which the disease has a lobular distribution with obscure physical signs; (3) in which the disease, having a lobular distribution, presents more distinct physical signs. In the treatment the use of digitalis as a routine treatment is condemned, antipyretics in large doses are thought harmful, and remedies such as ipecacuanha, tartar emetic, and squill are considered contraindicated.

4.—Thomson records his personal experience with the **operative treatment of enlarged prostate**. The



patients upon whom he operated, 6 in number, belonged to that class in which operative intervention is necessary to prevent the inevitable sequelæ of a constantly enlarging prostate and of an ever-increasing difficulty in catheterization, namely, surgical kidney and septicemia. Suprapubic prostatectomy was performed in one case, bilateral orchidectomy in 4, unilateral vasectomy in one. In the last case suprapubic drainage had been previously established, as the introduction of a catheter had become impossible. The results of the 4 orchidectomies, though not remarkable, were uniformly good. In 3 cases the catheter was still required as an adjuvant, although no longer an absolute necessity. The contractile power of the bladder improved, the residual urine diminished, or disappeared altogether, and the condition of the urine itself so improved that it could no longer be considered a menace to the patient's life. The general health of the patients became such that they were able to renew their occupations. In no case were there any signs of mental impairment that could be attributed to the operation itself. Of the 3 operative procedures in vogue in the treatment of enlarged prostate, orchidectomy is the operation of choice, that is in cases in which a sexual operation is indicated, as its results are more rapid and certain than those following vasectomy. The operation has certain contraindications, however, namely, in cases of grave septicemic infection demanding free vesical drainage, as well as in cases in which there is an intravesical projection of the prostate suitable for suprapubic prostatectomy.

5.—Oliver records four cases of **extrauterine pregnancy at term**. The first was one of gestation in the right broad ligament in which at the eighth month there occurred a copious flow of amniotic fluid through the vagina. The fetus must have died at this time or soon afterward. The second case was one of gestation in the right ovary. The mesovarium was ligated and severed, and the tumor, containing fetus and placenta, was removed intact. The third case was one of gestation in the right broad ligament. At the time of operation 6 pints of pus were found in the fetal sac. The fetus was plump and well-preserved, although it had been dead nearly seven months. The fourth case was one of gestation in the left broad ligament. The escape of the fetus into the broad ligament by rupture of the oviduct was so gradually effected that no symptom indicative of the occurrence of this event was noted.

6.—Ewart calls attention to the fact that the **pulmonary second sound** is heard over a very limited area, of which the second left interspace is the center. In every direction outside of this the aortic sound is that which is heard. It follows, therefore, that the second sound heard over the right ventricle is not the pulmonary but the aortic diastolic sound.

7.—Kelynack reports the case of a married woman, aged 50 years, who had suffered from rheumatism for many years. Just before death she became dyspneic and dropsical, the pulse feeble and irregular, and a systolic murmur was audible at the apex of the heart. At autopsy the heart was found to be both dilated and hypertrophied and the mitral and aortic valves were moderately diseased. The aorta was distinctly atheromatous. Four inches beyond the left subclavian artery the intima of the aorta was ruptured and the slit led into a fusiform sac that extended upward for 1½ inches and downward to the bifurcation of the abdominal aorta into the two common iliacs. The sac communicated at several points with the lumen of the aorta by small apertures. This is the only case of dissecting aneurysm seen in 1,700 autopsies at the Manchester Royal Infirmary.

#### Wiener klinische Wochenschrift.

July 21, 1898. [11. Jahrg., No. 29.]

1. Ehrlich's Diazo-Reaction in Urine. ANTON KROKIEWICZ.
2. Cure of a Psychosis with Myoma of the Uterus after Vaginal Total Extirpation of the Internal Genitalia. A. ELZHOLZ.
3. Some Suggestions with Regard to my own and Camille Hirsch's Article Concerning Glaucoma in Lensless Eyes. ST. BERNHEIMER.

1.—Krokiewicz has made no less than 16,167 separate tests for the **diazo-reaction**, in a total of 1,105 cases. The reaction never appeared in physiologic urine. The conclu-

sions reached and which certainly deserve respect may be summarized as follows: (1) The diazo-reaction has no special significance, diagnostically or prognostically, in croupous and catarrhal pneumonia, in bronchitis, pleurisy, pulmonary gangrene, emphysema, in diseases of the circulatory organs and digestive tract, the nervous system, the blood, in nutritional disorders, in the course of acute intoxication with alcohol, alkaloids, gases and metalloids, in the course of osteomalacia, malaria, rheumatism, erysipelas, gonorrheal inflammation of the muscles, contusions, purulent infections, pyemia, septicemia, and mumps. (2) The diazo-reaction is never obtained in diseases of the kidneys insofar as these are not due to intoxication with chromatophorous substances. (3) The reaction is not obtained in cases of carcinoma of the stomach, the esophagus, the rectum, the pancreas, the liver, and the uterus. (4) It is obtained in cases of carcinoma of the ovaries with metastasis to the omentums and peritoneum. (5) The occurrence of the reaction in the course of pulmonary tuberculosis is indicative of an unfavorable prognosis. If the physical changes in the lung are insignificant and the diazo-reaction appears in the urine, the malady may be expected to pursue a rapid course and to end fatally. The presence of the reaction is independent of the number of bacilli in the sputum. If the tuberculous process is localized chiefly in the mucous membranes, the lymph-glands, the locomotive or urogenital apparatus, the diazo-reaction will be either entirely absent or will occur only occasionally. It is always present in miliary tuberculosis, only diminishing in intensity just before death. (6) In typhoid fever, even in mild, abortive forms, the diazo-reaction appears always in the first or second week. Later it may be less marked or absent. It may be looked upon as a symptom of the disease, and as long as it is present the morbid process is not completed. The appearance of the reaction in the urine during convalescence nearly always indicates a relapse. (7) In doubtful cases, when the diagnosis lies between carcinoma of the stomach and tuberculosis of the digestive tract, the constant absence of the reaction is in favor of carcinoma of the stomach. It thus appears that the diazo-reaction is of great importance, from a prognostic point of view, at least in typhoid fever and in pulmonary tuberculosis.

2.—Elzholtz reports an interesting case of **psychosis complicating a uterine myoma**, absolutely disappearing after removal of the tumor and total extirpation of the internal genitalia through the vagina.

July 28, 1898. [11. Jahrg., No. 30.]

1. Ferrán's Discoveries with Regard to the Tubercle-Bacillus. LEO ZUPNIK.
2. Concerning the Effects of Infantile Paralysis on the Higher Nerve-centers. M. PROBST.

1.—Zupnik criticises the recent paper by Ferrán on the **bacillus of tuberculosis**, claiming that his bacteriologic technic was bad, and that the fact that he believes that he has developed the pseudo-bacillus from the real bacillus is explained by his having heated the cultures up to 55° C. Zupnik has himself been engaged for some time in investigation of the question of symbiosis of the tubercle-bacillus. He has taken sputa from 7 cases, 5 of which contained microorganisms other than the tubercle-bacillus, which caused pseudotuberculosis in the animals experimented upon. Pseudotuberculosis can only be said to exist when it can be proved that the bacillus of Koch has no part in the disease. The effect of decomposition upon the tubercle-bacillus was due in these cases not to the microorganisms of putrefaction, but to their toxic products, as he has proved by taking a filtrate of decomposed material, adding this to cultures of tubercle-bacilli, and finding that the tubercle-bacilli were killed after five or six days. Therefore, in any animals injected with a mixture of such toxins and tubercle-bacilli after it had stood for more than a week, resulting lesions resembling tuberculosis must be due to pseudo-bacilli and not to typical bacilli. He has experimented upon more than 50 guinea-pigs with such a mixture, and found that none of them acquired a real tuberculosis, but they did show a pseudotuberculosis. He concludes that Ferrán has been working, not with a modified Koch's bacillus, but with a pseudo-bacillus. He has also injected guinea-pigs with the secretion of cheesy glands to determine whether these discharging glands had virulent bacilli in their secretion. In



the animals experimented upon there were tubercle-like formations in the organs, and pseudo-bacilli were found, but there were no Koch's bacilli in them.

2.—Probst records the case of a man of 68 years, who in his childhood had had an attack of **paralysis** involving both the legs, the left arm, and, to a slighter extent, the right arm, which came on with pains and swelling of the arm, but without any eye-symptoms, **vomiting, or disturbance of the bladder**. When seen, the man had paralysis and atrophy, most marked in the left arm and right leg, with contractures of these extremities. The head was small and the right pupil was slightly larger than the left, but there were no disturbances in the supply of the other cranial nerves. There was marked atrophy all over the body, though he had some use of his right arm and left leg, and was able to get about with great difficulty. He died of heart disease. Postmortem: The marginal and angular gyri were not well marked on the left. The central gyri were small, especially on the right, and the cortex averaged but 1.4 mm. in thickness. The cerebellum was extremely small, as were the basal ganglia, and the sections of the spinal cord showed that the anterior horns were much lessened in size in the cervical portion. The anterior pyramidal tracts were thin. Lower down, the central canal became a mere fissure. Microscopically, there were scarcely any ganglion-cells left in the anterior horns, and these were small and slightly shrunken. In parts the central canal was closed, the anterior roots were atrophied to a marked degree, the posterior to a slighter degree. The lateral pyramidal tracts were small and clearly outlined. In the lower dorsal cord, there was some atrophy. The pyramidal tracts could be traced through the medulla and basal ganglia, and into the internal capsule, because of their remarkable smallness and their thin fibers. Goll's columns were very small, while Burdach's were about the normal size. These are the lesions of an old anterior poliomyelitis. The cortex was very thin. The glia cells were increased, the fibers thickened, and over the portions of the brain which were atrophied, all the elements of the cortex were present in smaller number and were of smaller size. The nerves and muscles of the atrophied extremities showed marked atrophy, as did the diaphragm on the left side. The cerebellum showed normal conditions. Three other cases of atrophy of the brain after a poliomyelitis of childhood have been described, so that it seems quite certain that the central neuron reacts by atrophy to a destruction of the peripheral neuron. This is certainly not so marked after traumatic destruction of peripheral neurons as it is when this destruction occurs in the more reactive period of childhood.

August 4, 1898. [11. Jahrg., No. 31.]

1. The Biology of Boas' Lactic-acid Bacillus, with a Contribution to the Agglutination of Bacteria. CARL STERNBERG.
2. A Contribution to the Recognition of Tetanus in Man. SIEGFRIED TAUBER.

1.—Sternberg, in a case of fatal **incarcerated hernia**, found long **bacilli** in the vomit and stomach-contents, which, in their morphological and cultural characteristics, entirely resembled the Oppler-Boas bacilli. On glucose-agar slants and plates at body temperature, colonies appeared after 24 hours, which, microscopically, were scarcely visible white points with a tinge of blue; with slight magnification, they were round, with clear and somewhat darker granular center. With a greater magnification, the edge seemed somewhat irregular and wavy-looking, somewhat like pieces of cotton, with small lines running out from the center to the edge. The bacilli stained well with aniline dyes, and appeared at times to have spores. The author gives results with various other culture-methods. When compared with a lactic-acid-producing bacillus from a case of carcinoma, they seemed to correspond entirely. Two forms of the bacillus could be grown, the one long and thin, the other short and thick. The latter form appeared only when the bacillus was grown on the solid media, and it seems probable that this variation in form explains the finding of the bacillus in various diseases other than cancer, the one form or the other appearing in the stomach-contents, according to the condition of the contents. Investigations of its pathogenicity were carried out by injecting guinea-pigs, but it was

found almost harmless, excepting that one pig died after it had been injected repeatedly throughout a month's time. In this case there was peritonitis. One pig showed a ravenous appetite, and drank an excessive amount, and seemed weak. The phenylhydrazin test was, however, negative. The blood-serum of the animals that had been treated showed an agglutinative action upon the bacillus. The author concludes that the discovery of this bacillus is not enough upon which to base a diagnosis of carcinoma of the stomach, and he also draws attention to the fact that agglutination occurs with bacteria which are not pathogenic for human beings, and which cause only slight reactions in animals.

2.—Tauber reports in extenso a case that seems to have been infected by a small **wound in the foot** from rubbing of the shoe. Death occurred after 6 days, and the injection of guinea-pigs with material from the scab on the foot showed that this was the source of the infection. Antitoxin had no effect, and it was remarkable that the blood-pressure was high during the whole course, especially at the end. The temperature rose even after the muscular spasms were becoming less, so that the temperature cannot be attributed purely to muscular spasm. The cause of the increase in blood-pressure was probably an irritation of the splanchnic and not muscular spasm. Mice were injected with substance taken from the scab on the foot, and this killed them. Injections of extract of the spinal cord caused severe convulsions, which were recovered from. The same was true of the extract from the brain. These convulsions, strange to say, appeared almost at once after the injection. The extract of the liver caused much milder symptoms, though they were present. Therefore, it must be recognized that the tetanus-toxin combines with the substances of organs other than those of the central nervous system. The histologic examination showed the cells moderately or not at all swollen, the nuclei pale and not well bordered, usually lying in the center of the cell. The Nissl granules were usually found scattered homogeneously throughout the cell, the processes often somewhat swollen. Some cells were pale and homogeneous, and oftentimes vacuoles were found. Any influence of the antitoxin upon the cells was not seen. The marked swelling of the nucleolus was the most notable thing, as has been already noticed by other men. One thing he mentions in a note is that in many cases he saw the nucleolus lying outside of the nucleus in the body of the cell toward the periphery, and sometimes it had wandered entirely out of the cell. He knows of but one similar observation on nerve-cells.

August 11, 1898. [11. Jahrg., No. 32.]

1. The Abortive Treatment of Buboos. KARL GRUNDFEST.
2. Repeated Arson Under the Influence of Alcohol. HEINRICH SCHLÖSS.

1.—The various **abortive methods of treating bubo** by means of injections of iodoform emulsion, iodoform ether, silver nitrate, etc., are briefly discussed. The relatively successful results following all these methods suggested the idea to Waelsch that the good results might be dependent upon the injection of a fluid rather than upon the medicament which the fluid contained. This led to the trial of injections of sterile normal salt solutions in a series of 27 cases with cures in 74 % of the cases within 15 days. The favorable experience in Waelsch's cases led Grundfest to try the method in a series of 20 unselected cases, which he carefully tabulates. The number of cures without later incision were 8 (40 %). This result leads to the conclusion that the abortive treatment is not to be recommended for general application, particularly as the final healing was considerably delayed by resort to the injections in cases requiring incision later.

2.—**Pyromania** and other allied forms of morbid impulse may arise on the basis of various kinds of psychoses—in paranoia, melancholia, in idiocy, in some cases of nostalgia, in delirious conditions, and postepileptic states. The case of the author is interesting, in that the patient, although defective in education and intelligence, was not weak-minded, nor in any way psychically abnormal when sober, but committed arson many times when under the influence of alcohol. The alcohol probably abrogated the inhibitory action of the ideas, that, in the sober state, would have prevented



the man from committing arson, just as it often paralyzes normal sexual impulses, and impels to the indulgence in perverted acts.

### Berliner klinische Wochenschrift.

August 8, 1898. [35. Jahrg., No. 32.]

1. A Case of Multiple Tuberculous Stenosis of the Intestine. K. G. LENNANDER.
2. Concerning the Methods of Determination, Causes and Treatment of Progressive Pernicious Anemia. E. GRAWITZ.
3. Trichomonas Hominis in the Gastric Contents in Carcinoma of the Cardia. GEORGE STRUBE.
4. Concerning Tetany with Dilatation of the Stomach. R. SIEVERS.
5. The Application of Tropon for the Nourishment of Sick Persons. D. FINKLER.

1.—Lennander records the history of a case of **tuberculous stenosis of the intestines**. A woman of 37, who had a tendency to glandular swellings and constipation, but with no chest-trouble, was taken (without any known cause) with severe pain and tenderness in the right side of the abdomen, and with vomiting without diarrhea. She was relieved by rest in bed, but had frequent recurrences of similar attacks. About 5 months from the first attack she was admitted to the hospital and the appendix was extirpated. The patient for a time seemed relieved by the operation, but afterward was troubled with symptoms similar to those existing before the operation; she became run down in health and emaciated, and was readmitted to the hospital about 6 months after the first operation. On opening the abdomen bloody fluid was seen and a much-distended, injected, thick-walled loop of intestine found. About  $\frac{1}{2}$  meter above the ileo-cecal valve was a much-narrowed portion of intestine, and below this were 3 other stenoses. The remaining portions of the intestinal tract appeared to be in normal condition, but the mesentery corresponding to the stenoses contained a mass of enlarged caseous glands. The diseased portion was extirpated, the proximal and distal ends united by means of a Murphy's button, the abdominal cavity was flushed with normal salt-solution, and the wound was closed without drainage. The portion of intestine removed measured 41 cm. in length, the mucosa was hyperemic, and in the neighborhood of the strictures were found small, superficial erosions with irregular edges. The serosa was reddened and thickened. The undivided stricture was 2 cm. in diameter, the intestinal coats were thickened, and in a fold in the mucosa was found an ulcer with ragged edges, a callous base of fibrinous tissue and of grayish-white color. Several other ulcers were found of similar character, and a Meckel's diverticulum was located in the extirpated portion. Microscopic examination proved the ulcers to be tuberculous. The patient suffered severe pain after the operation and vomited frequently; there was moderate fever for the first 10 days, and nutrient enemata were administered. The patient recovered and resumed her usual duties, but the Murphy's button was not passed, and she suffered more or less frequently from colicky pains and looseness of the bowels. About 2 years after the last operation her condition became so much worse that she was admitted to the hospital and the abdomen was again opened, with a suspicion that the symptoms were caused by gall-stones. The bile-tracts were found normal, however. The omentum was adherent to the transverse colon and the colon was bound by broad adhesions. The adhesions were divided with the thermocautery. Just above the seat of anastomosis was a diverticulum in which the Murphy's button was found. This diverticulum was extirpated, end to side anastomosis by Senn's methods was practised, and the abdomen was flushed with salt-solution and closed. The wound united by first intention, and a good recovery with normal stools and complete relief of the intestinal symptoms followed. During the entire time that the patient was under observation no signs of tuberculosis of any other organs was to be discovered.

2.—Although **anemic conditions** are very frequent, we still experience great difficulty in satisfactorily explaining even the symptomatic forms, and yet more difficulty in cases

of essential anemias like chlorosis and pernicious anemia. The lesions found at autopsy in the latter disease are purely secondary in nature, and the blood-changes, which are well known, are not typical, but are also found in other grave anemias, so that, according to the author, it is impossible to make a positive diagnosis of pernicious anemia through a microscopic study of the blood alone. The chemic changes of the blood are of great importance. We find that in pernicious anemia the water of the blood is enormously increased, the serum being as high as 90% of the total blood-volume. As the serum itself shows, however, a nearly normal composition, it must be concluded that the red corpuscles are chiefly affected and are greatly reduced in volume. If we compare the composition of the blood in this disease with that determined in extremely anemic tuberculous persons we find a marked difference. In the latter the changes in the form and number of red corpuscles are only trivial, but the plasma is very poor in albumin. This simple oligemia results from causes that do not exert a specific influence on the blood-forming organs. In certain other anemias, however, red corpuscles are directly damaged either in the circulation or in the blood-forming organs, and all such diseases produce a blood-picture indistinguishable from that of pernicious anemia. Among such anemias are those from repeated hemorrhages, those occurring after grave infectious diseases, especially sepsis, from chronic suppuration, malaria, osteomyelitis; likewise the anemias from carcinoma, chronic liver-trouble, contracted kidney, sarcoma of bones, and finally those from doehmias and bothriocephalus invasion. In some of these forms there is, in addition to the changes in the red cells, a diminution of the albumins of the plasma, while in progressive pernicious anemia, as already stated, the changes are essentially limited to the red cells, and are not part of a general increased katabolism. Although this distinction is an important one, the author believes that the difference between the pernicious anemia and other grave anemias lies in the clinical course, that of the former being characterized by the fact that even after the removal of the apparent cause, the hemapoiesis persists in a faulty direction, manifested by insufficient new formation and perhaps increased destruction of corpuscles. There is in this disease then a morbid cell activity that tends to persist with great pertinacity in the wrong direction. As to the etiology, the symptom-complex of pernicious anemia is not due to a single cause. The following group of etiologic factors has been established: (1) Gastrointestinal disease of long standing, poor food, impaired digestion, chronic constipation, especially in women frequently pregnant, irregular defecation in women and girls, especially those of hysterical temperament. In such cases it is due to intoxication from the gastro-intestinal tract, which is sometimes accompanied by atrophy of the glands of the stomach and intestines. Rarely the chronic catarrh and atrophy of the gastric and intestinal mucous membrane is the primary condition. (2) Pregnancy. Here, too, probably, there is auto-intoxication from the intestinal tract on account of pressure exerted by the gravid uterus on the bowel. (3) Chronic hemorrhages, especially of small size. (4) Constitutional syphilis, particularly when associated with sclerosis of the marrow of the long bones. In this form the prognosis is bad. (5) Bad hygienic conditions of various kinds, especially in the female sex; hard work, with insufficient food, bad air, emotional excitement. In higher social strata the disease may be found in women who are subjected to intense mental strain as the result of a desire to equal men in physical efforts. Frequent pregnancy and prolonged lactation are also factors. (6) Chronic poisoning, as, e. g., by carbon monoxid. (7) Bothriocephalus and ancylostomum—those cases belong here that are not cured after the expulsion of the worms. The fact that so few persons suffer from pernicious anemia, despite the wide distribution of the casual factors, is explained on differences of individual resistance.

3.—Strube reports a case of carcinomatous stricture of the esophagus, with involvement of the cardia, in which he found in the evacuated stomach-contents vast numbers of **Trichomonas hominis**. The parasites were from 8 to 14 m. in length, oval in shape, with a long tail. They were actively motile by virtue of possessing three or four long flagella. After the fluid, which was very offensive, even in the fresh state, had stood for 24 hours, resting bodies of a round contour appeared, and became motile on the



warm stage. The *Trichomonas* have been found quite frequently in the intestine and in the contents of gangrenous cavities of the lungs. In the author's case their primary habitat was in the stomach, their development being favored by the ulcerating carcinoma. He did not find them in the feces. They disappeared from the stomach-contents after two-weeks' lavage with creosote-solution.

4.—It is the general belief that **tetany in dilatation of the stomach** is due to autointoxication from the gastrointestinal tract, but the toxins have not been isolated. In the majority of instances reported the dilatation of the stomach was due to stenosis from a healed pyloric or duodenal ulcer; in some cases ulcers or scars existed without stenosis, and in still others the dilatation was caused by external compression of the duodenum or to carcinomatous stenosis. The frequency of ulcers, or scars from ulcers, has led to the view that hyperacidity is a necessary etiologic factor in the production of tetany in gastrectasia, but the author, on the strength of cases like those of the last group, in which ulcers did not exist and chlorhydria was absent, controverts this theory. The reason that tetany occurs by preference in gastrectasia from healed ulcers is because in that condition the stenosis and consequent dilatation assumes the greatest proportions, and absorption of toxic material is most likely to occur. He agrees with Ewald in the belief that tetany can be produced by various diseases of the stomach and intestines.

5.—Finkler has performed a number of **experiments with tropon**, which is insoluble in water, and found that more is usually dissolved by the gastric juices and absorbed into the organs, and in less time, than of albumens soluble in water. He believes it to be especially useful in cases, first, where food cannot be swallowed in small particles, and in stricture of the esophagus; second, in sub- or anacidity of the stomach; and third, where irritation of the stomach or intestines is to be avoided, as in ulcers, erosions, typhoid fever, etc. The best results were obtained when it was given without other food; but even when administered with food, the results were better than when albumoses and peptones were used.

#### Münchener medicinische Wochenschrift.

August 9, 1898. [45. Jahrg., No. 32.]

1. Concerning Central Softening of the Spinal Cord with Syphilitic Meningitis. HANS WULLENWEBER.
2. The Application of Tropacocain for Infiltration Anesthesia. J. CUSTER.
3. A Case of Interstitial and Parenchymatous Myositis. BERTELSMANN.
4. Considering Hemorrhage in the Upper Air-Passages in Cirrhosis of the Liver. DREYFUSS.
5. Nerve Cells and Gray Matter. FRANZ NISSEL.
6. Injuries of the Ureters During Laparotomy. FRITZ BLUMENFELD.
7. Concerning Landry's Paralysis. WILHELM GOEBEL.

1.—Wullenweber reports a case of **luetetic spinal meningitis** with necrosis of the central portion of the spinal cord, leading to cavity-formation, and resembling, macroscopically, in some respects, a case of syringomyelia. The patient, a woman of 28, was brought to the hospital suffering from severe pain in the lumbar region, gastric disturbance, and headache. This was ascribed to a floating kidney which was stitched to the abdominal wall without relief of the symptoms. A specific history was obtained. As a result of prolonged rest, her condition improved, and she left the hospital, but returned in the course of a few months suffering more severely than before with the lumbar pain. It was noted that the strength of the legs was considerably decreased, and the patellar reflexes were absent; sensation in all forms was intact. Later, vision became disturbed; the pupils were unequal, but still reacted to light, and there was severe headache. Mercurial inunctions brought pronounced improvement. About a year later, the patient developed cramps in the right leg and girdle-pains and extensive bedsores appeared. In a short time the legs became completely paralyzed, the sphincters relaxed, and the spinal column exquisitely painful upon movement. Death occurred about 18 months after the first symptoms. At no time was there disturbance of the intellect. At the autopsy there was found hydrocephalus,

adhesions of the spinal meninges, softening of the spinal cord in the lumbar region, with a distinct cleft filled with serous fluid. Microscopically, it was observed that the arachnoid was thickened and filled with numerous small round cells. Numerous fibrous bands extended from the pia into the substance of the cord. The blood-vessels were thickened, and occasionally occluded by thrombi. The gray substance had disappeared almost completely, and was in parts replaced by the cleft. There was, of course, secondary degeneration in the posterior columns. The case, therefore, was a typical example of syphilitic cerebro-spinal meningitis. The cavity-formation, however, rendered it possible that this was associated with a syringomyelia. The author, however, believes that it is a simple necrosis of the gray matter, due to vascular disease, and is confirmed in this belief by the absence of characteristic disassociated sensory phenomena, which should otherwise have been present. He is able to collect 4 cases somewhat similar to his own, that have been reported during the last 20 years by Simon, Eisenlohr, Rosenblath, and Schwarz.

2.—From series of experiments on the skin of his own arm to determine the value of **tropacocain as a local anesthetic**, Custer finds that solutions of 0.1% produce perfect anesthesia, but that weaker solutions are not effective. Infiltration of different areas simultaneously with cocain and tropacocain shows the latter to be equally effective as an anesthetic. A series of experiments undertaken on rabbits to determine the comparative toxic effects, showed that tropacocain is almost three times less poisonous than cocain. It was also determined that the toxic effects of the drugs were not in exact proportion to the amount by weight of the drug injected. Thus, an equal amount by weight of cocain was five times less poisonous when injected as a 0.2% solution than when injected as a 5% solution. The toxic effects observed were clonic convulsions and mydriasis. Since his experimental studies Custer has used tropacocain in a large number of minor surgical operations and the results have been perfectly satisfactory.

3.—Bertelsmann reports an interesting case occurring in a youth 18 years of age, who, 7 years previously, had suffered with **hard nodules in the muscles of the calves**, these disappeared after rubbing. Five years later he again developed these nodules, subsequently followed by the appearance of one and, later, others in the forearms. These were painful and unquestionably imbedded in the substance of the muscle. As there was a slight injury to one of the fingers, it was supposed that they might possibly be infectious in nature, and an incision was made, and a segment of one of the nodules removed. Microscopic examination showed that it was composed of round cells, fibrin, and more or less altered muscular fibers. Other methods of treatment having failed, the patient was treated with sodium salicylate, which caused an almost immediate disappearance of the tumors everywhere in the body, and this result was again obtained during a subsequent attack. The author diagnoses his case as one of interstitial myositis, and believes that nodules would be more frequently found in muscular rheumatism if palpation were used more carefully.

4.—Dreyfuss reports 2 cases of **hemorrhage from the upper air-passages** occurring in the course of **cirrhosis of the liver**. The first case, a cabinetmaker, 47 years of age, had suffered from frequent bleeding from the nose, and hoarseness for about 6 months, and there was chronic suppurative rhinitis, injection and hemorrhagic points upon the vocal cords, and also a small tumor in the inter-arytenoid fold. There was moderate ascites, slight discolorations of the skin, and edema of the legs. The patient had been an alcoholic for some years. Removal of the tumor and subsequent treatment with styptics, and local treatment to the nose, ultimately caused very great improvement. The second patient, a fireman, 47 years of age, suffered from dysphagia, hoarseness, cough, and expectoration. There were the characteristic hemorrhagic points in the nose, and granular pharyngitis. Later, symptoms of cirrhosis of the liver appeared, and as his condition grew worse, he was transferred to the medical department. Both patients, therefore, had cirrhosis of the liver, but also local conditions in the upper air-passages that would of themselves have a tendency to produce hemorrhage. It does not appear that simple passive congestion could account for the bleeding in these cases, and it seems more reasonable to assume that the gen-



eral condition affected either the walls of the vessels or gave rise to a hemorrhagic diathesis.

5.—Nissl continues his article upon the recent advances in the knowledge of the relation of the **nerve-cells to the gray matter** in which they are imbedded. He does not believe that the tissue between the nerve and glia cells in the second and third layer of the cortex, according to Meynert's classification, is neuroglia. Neither can it consist of the ramifications of the protoplasmic processes of the nerve-cells, and he is, therefore, compelled to assume that it is composed of a peculiar nervous tissue, as this substance differs from the intercellular substance in the fourth and fifth layers. As the neuro-fibrils simply pass through the protoplasmic processes and decrease in number, and as the processes diminish in diameter, it seems reasonable to conclude that the extraordinary branching, exhibited by various Golgi preparations, does not truly represent the structure of the nerve-cell. The intercellular substance varies in appearance according to the technic employed, being sometimes granular or fibrous, and at others somewhat net-like in arrangement. Nissl believes that the apparent branching of the protoplasmic processes in the Golgi preparation is really due, in part, to the entrance into the protoplasmic processes, of axis cylinders that originate in the gray matter. Nissl has been unable to convince himself that this delicate fibro-granular mass is composed of a network, for in none of his preparations was there indubitable junction of the fibers. He reproduces the photographs of three sections—one, the motor cortex of the human brain, one the motor cortex of a dog's brain, and one the cortex of a mole's brain. These show a certain degree of similarity in the arrangement of the various cells; nevertheless, the difference in the number of cells is extraordinary, the greatest number in a given space being found in the mole's brain, and the fewest in the human brain; that is, the higher the type of the animal, the fewer the number of cells in a given area of the cortex. It follows that the gray matter does not of itself permit any conclusion concerning its functional dignity. The present opinion seems to be that the nervous material is of essentially the same structure in all parts, the functional elements being the ganglion cells, and that the various features in the structure of these cells are of no importance. Nissl, however, takes occasion to combat this view, and believes that not only do cells of different structure exercise different actions, but that a different structure is found in functionally different parts of the cortex. Although the specific nervous substance bears the most intimate relation to the cells, being even found within their substance, Nissl holds that the different groups of cells are still independent. The article is unfinished.

6.—Blumenfeld remarks that **ureteral injuries** may occur during the extirpation of ovarian tumors, myomata, and tumors of the pelvic cellular tissue, in opening parametrial abscesses and in treating inflammatory conditions of the adnexa. The site of the tumor is in most cases intraligamentous. The tumors of the pelvic cellular tissue, and also parametrial abscess, are primarily extraperitoneal. The anatomic relationship between the ureters and the uterine adnexa renders injury to the former in inflammatory disease of the latter very probable.

7.—Goebel continues his discussion of the case of **Landry's paralysis**, of which the symptoms and anatomic findings were reported in the last number. These he holds were classic in character, and do not permit of any doubt regarding the diagnosis. The anatomic changes are similar in all such typical cases, that is negative. In his own case, however, by delicate histologic methods, he has been able to find changes in the roots of the cauda equina, and also in the white substance of the medulla, and although the cord was normal throughout, he does not believe that the fact that the cord and medulla were hardened in different solutions, the former in formalin, and the latter in Müller's fluid, could have had any influence upon this result. The degeneration in the medulla seemed to affect particularly the motor fibers, and was probably the result of the influence of some poison. Why certain parts should be affected more than others is difficult to explain; certainly the hypothesis of Edinger is inadequate. Changes were also found in teased preparations of many of the paralyzed muscles. In regard to the treatment, Goebel suggests the use of ergotin, because the vessels in the central nervous system were found, after death, greatly distended.

August 16, 1898. [45. Jahrg., No. 33.]

1. Multiple Cyst-Formation in the Ureters and Bladder. MARCKWALD.
2. Concerning Pretended Hand-Rays. L. GRAETZ.
3. The Occurrence of Gastric Glands in the Stomach. H. HILDEBRAND.
4. Concerning the Peptic Power of the Contents of the Human Stomach. THEODOR HUSCHE.
5. Tissue-Diseases. MAX STERN.
6. Nerve-Cells and Gray Matter. FRANZ NISSL.

1.—Marckwald has examined the **ureters** in about 700 autopsies, and found the following alterations: In 4 cases well developed ureteritis cystica; in 1 case with marked development of the cell-nests of von Brunn, a slight cystic formation; in 57 cases moderate or slight cystic formation; in 2 cases, the ureters participated in an ascending cystitis with pyelonephritis. He also examined 15 normal ureters in order to render himself more familiar with the histology of these organs. The ureters are lined with 5 or 6 rows of approximately cylindrical cells, with deeply staining nuclei and slightly granular protoplasm. There was no trace of syncytium, neither were any glands or follicles detected. Beneath the epithelium there was an areolar connective tissue rich in elastic elements. Occasionally some of the epithelial cells showed distinct evidences of degeneration, and here and there were the so-called epithelial nests of von Brunn. These consist of branched or solid groups of flat epithelial cells and occur in all normal ureters. They arise from the deeper layers of the epithelium, and project into areolar connective tissue without exhibiting any trace of inflammatory action. The cells of which they are composed exhibit a particular predilection to degenerative changes, and frequently the deeper branches show a tendency to cystic formation, as a result of the epithelial degeneration. Occasionally, these cysts are surrounded by a delicate wall of connective tissue. The 4 cases of cystic ureteritis were as follows: The first patient was a man who died of carcinoma of the esophagus; he had had no urinary symptoms during life; the left ureter was dilated and tortuous in its upper part and a sound was obstructed in passing down it; the interior was filled with numerous white nodular or villous masses that formed a sort of valve in the lumen. Microscopically, all stages of transition between the epithelial nests and cysts could be found. The second case occurred in a girl of 20 who had always suffered from incontinence of urine associated with cystitis. She died of uremia, and at the autopsy the bladder was found contracted, and the walls filled with cicatricial tissue. The ureter was thickened and was filled with cysts. The pelvis of the kidneys were also dilated. The third case had had no urinary symptoms; the left ureter was filled with cysts, some of them containing a fine granular detritus. In the fourth case the lower portions of both ureters were dilated. A case of multiple cystic formation in the bladder of a man was also observed. The author concludes that the cysts that occur in the ureters develop from the epithelial nests of von Brunn, and that they may be present at birth, but usually develop later in life, they are not due to inflammation or infection, and are of pathologic significance only when excessive.

2.—Graetz has investigated the effects produced upon the photographic plate by placing the hand upon it in a developing solution in the dark. These effects have been ascribed by Luys to a peculiar form of rays emanating from the fingers. Graetz has been able to show that they are due simply to the heat of the fingers which enables the developer to work more energetically in their neighborhood, and has been able to produce exactly the same effects by leaden vessels filled with hot water. The same explanation suffices, for similar effects are produced by laying the fingers upon the glass instead of upon the film side. More difficult to understand are the peculiar rings occasionally found about the ends of the fingers. This only occurs in the case of certain individuals, and even with these does not occur invariably. The author was able to demonstrate, however, that they are due to a peculiar chemic reaction taking place between the developer and some substance in the skin, probably the sweat, which produces an effect upon a film for a certain distance beyond the finger. This effect is apparently due to an alteration in color, the film becoming green. The article is accompanied by excellent illustrations.



3.—Hildebrand reports the case of a man who committed **suicide by hanging**. He had always complained of having something in his throat. Upon the posterior side of the esophagus at about the level of the cricoid cartilage were two small round areas of intense red color, with a soft velvet-like surface. Microscopically it was found that they were composed of a superficial layer of cylindric epithelium, beneath which was a plexus of glands, which were lined either with cylindric or cubic epithelium, and resembled in all respects the glands found in the fundus of the stomach. These peculiar formations have previously been reported by Eberth and Schaffer and are of particular interest in relation to the etiology of the esophageal carcinoma.

4.—Husche has endeavored to find some satisfactory method for the quantitative estimation of the **peptic power of the gastric juice**. The method of Grünzer is not altogether satisfactory even if the carmin is replaced by acid fuchsin. The method of Hammerschlag is exceedingly unsatisfactory. However, the two together give a more or less accurate result. Husche found that the peptic force of the normal stomach-contents varied more or less closely with the acidity.

5.—Stern reports 5 cases of a peculiar **skin-disease** that occurred in **tailors and seamstresses**. This consisted of the formation of small vesicles, first upon the skin of the back of the hand, and then in various parts of the body. These were accompanied by intense itching, and when opened contained a clear serum. None of the ordinary therapeutic measures were effective, and there were none of the characteristic appearances of scabies. Improvement usually took place very rapidly when the occupation was abandoned, and the author is inclined to regard this as a form of occupational vesicular exanthema.

6.—Nissl continues his article upon the relation of the nerve-cell to the gray matter. In no case of severe psychical disturbance has he failed to find alterations in the ganglion cells. A peculiarity of the nerve-cell is that it is incapable of reproduction, and Nissl is unable to confirm Apathy's distinction between the nerve-cell and the ganglion-cells and the presence of intercellular bridges. Whether nervous material continues to be formed up to the 40th year of life, as Kaes maintains, Nissl is uncertain, basing his skepticism upon the manifest difficulty of reaching accurate results. He calls attention to the frequency with which neuropathologists confuse the Nissl substance, which properly occurs only in the motor nerve cells, and the tigroid substance which is found in the cells of the spinal ganglia. In regard to the pigment, he thinks that the pale yellow pigment probably bears some relation to the tinctable constituents of the protoplasm, and confesses his total ignorance of the nature of the dark, sharply circumscribed granular pigment. The nucleus of the nerve-cell is still a very obscure structure. It is usually well developed, particularly so in the cells of the human cortex. The insufficiency of chromatin may be shown to be apparent only by careful technic. The nucleolus is a body of complicated structure differing in different cells. The importance of the nucleus is emphasized by the fact that as soon as it degenerates, the nerve-cell degenerates also. The extraordinary and manifold capabilities of the nerve-cells are probably the result of great specialization. Therefore, the highest function of the vertebrate body cannot be directly associated with the cells, but must proceed from a living substance that morphologically is totally different from the cell. As the nerve cells do not multiply, it must be the glia cells that maintain the integrity of the central nervous system. The function of the nerve-cell then is apparently to absorb and utilize nutriment brought to it by the juices of the body, but the specialization of the various forms of nerve-cells is associated with specialization of the function; therefore, although Nissl's hypothesis of a specific nerve-cell that is a certain form of nerve-cell exercising a particular function, is no longer tenable, the idea of a special function associated with a particular cell remains.

#### Deutsche medicinische Wochenschrift.

August 4, 1898. [24. Jahrg., No. 31.]

1. Short Critical Observations Concerning the Nerves of the Heart. E. v. LEYDEN.

2. Gouty Neuritis. WILHELM EBSTEIN.

3. Inoculation against Cholera and Typhoid. R. PFEIFFER and MARX.

4. Concerning the Significance of Sugar in the Urine in the Diagnosis of Gall-Stones. ALFRED EXNER.

5. The Diagnosis of Traumatic Affections of the Inner Ear. RICHARD MÜLLER.

6. The Significance of the Röntgen Rays in Spina Bifida. CARL BECK.

1.—Leyden was led by Schwartz's communication to review the previous work on the **nerves, and nerve-control of the heart**. The most recent view is that the heart's action is automatic, and not controlled by the higher nerve-centers, but purely muscular. In support of this is the fact that embryonic hearts show rhythmic movements before nerves can be seen in them, and that periodic contraction of muscles may be seen when their nerves have been disconnected from them. Further, the heart-muscle is peculiar in structure, and really consists of one greatly divided muscle-fiber. The heart has been so cut that nerve-fibers must have been divided, and if the muscle still held together, contractions were still seen. Investigations as to the existence of nerves have, however, shown their presence. There certainly exist sensory nerves in the heart, as is proved by the violent pain that may occur in connection with cardiac affections, and in order to prove the myogenic theory of cardiac contraction, it still remains to prove that there are no motor-nerves, but that all those that have been discovered are purely sensory.

2.—Ebstein reports the case of a gouty patient, 48 years old, who had pains in the right arm and shoulder, and atrophy of the muscles of this extremity, with paresthesia. He had gouty tophi, and was subjected to repeated attacks of outspoken gout, which improved under treatment. There was undoubtedly a brachial neuritis that seemed to be due purely to the gout. It is, however, necessary to exclude absolutely, in a case like this, the possibility of an alcoholic neuritis, which was improbable in this case; and to finally prove the existence of a gouty neuritis, it would seem necessary to find uric acid in the nervous system.

3.—Pfeiffer and Marx have investigated the effect of carbolic acid in the preservation of the virus of typhoid fever and of cholera, to preserve them, 0.5% carbolic acid being added after sterilizing at 70° C. First, the preparations of typhoid-virus were left from 1 to 3 days, and subsequently for longer times, finally for as long as a month and a half, when it was found that even then the preparation would immunize a guinea-pig quite as well as other preparations without carbolic acid. The same was true of the virus of cholera. An attempt was made to immunize 3 men with this preserved virus, using 5 cu. cm. of the preparation that corresponded to about 0.2 of the dose used by Pfeiffer and Kolle. The result of these injections was a temperature of 100.4°, with some general depression and headache. One man was well by the next day, while the fever persisted in the other two, and they showed some redness at the site of injection, and a slight painful swelling. Fever and swelling disappeared within one more day. The blood of the three men was taken for a control-serum-test before the injection, and also 10 or 12 days after the vaccination, and it was found that the results practically corresponded with those of Pfeiffer and Kolle, so that the preservation of the virus, which in this case had been for 2½ months and accomplished with 0.5% carbolic acid, had in no way harmed its immunizing properties. The blood of none of the three men treated showed marked agglutinative action after the vaccination.

4.—From examination of the **urine** of forty patients with **gall-stones**, Exner has been able to demonstrate, in every case but one, the presence of about 0.4% of sugar. The knowledge of this clinical fact is of importance in the question of the diagnosis of gall-stones. It could not be proved that the amount of sugar in the urine depended upon the lodgment of the calculi in the cystic or in the common bile-duct; nor is any explanation at hand for this clinical fact. The presence of gall-stones in each case was confirmed at the operation for their removal, after which the glycosuria gradually disappeared.

5.—During the past year Müller has studied a number of **affections of the internal ear due to traumatism**, aiming to discover certain phenomena that may aid in estab-



lishing a positive diagnosis. The cases under consideration all presented symptoms that pointed to an injury of some portion of the nervous tract in the auditory apparatus, and no case is referred to in which there was a manifest injury of the external or middle ear. In most cases the injury had preceded the observation by some little time and the condition found might be looked upon as chronic. There were four prominent symptoms that made up the clinical picture, viz., deafness, vertigo, headache, and tinnitus aurium. The results of the examinations of the ear were not altogether negative; in half of the cases either a chronic hyperemia of the drum-membrane was present, or a condition of the membrane that bespoke the previous existence of such a pathological lesion. The hyperemia in these cases is to be distinguished from that of inflammatory origin; it is usually of a more moderate grade, only certain areas of the drum-membrane are involved; the color is darker, not the bright red of inflammation, and it grows darker as time goes on. In each case no history of a previously existing inflammatory process could be elicited. The pathological processes that account for this condition of the external ear and for the disturbance of the nervous elements of the auditory apparatus, are first of all an increase in volume of the bloodvessels, which leads to hyperemia both in the labyrinth and in the central nerve-supply of the ear. This theory of the dilatation of the bloodvessels and the consequent hyperemia will account for most of the subjective and objective symptoms that present themselves in association with such injuries.

### Centralblatt für Gynäkologie.

August 6, 1898. [22. Jahrg., No. 31.]

1. The Epithelium of the Chorion. F. MARCHAND.
2. Concerning the Transverse Incision of the Fundus with Resection of the Tubes. JOSEF HALBAN.
3. A Contribution to the Question of "Tussis Uterina" and Similar Reflex Phenomena. OSKAR SCHAEFFER.

1.—Marchand reviews the literature on **chorioepithelioma** which has appeared since the publication of his paper "Ueber das maligne Chorionepitheliom, nebst Mittheilung von zwei neuen Fällen" in *Zeits. f. Geb. u. Gynäk.*, Bd. xxxix. He especially considers Veit's paper in which the fetal element of the tumor is discussed. Veit mentions as mesodermal parts Langhans' layer and the syncytium. All of the fetal elements are said further to be accidental, and the tumor a sarcoma of the uterus which already existed before the pregnancy and which was the cause of the disease of the ovum. From Veit's paper it is found that we have in the tumor, not two or three, but four different tissues, of which the fourth is the chief, while the others, more or less superfluous, are in a certain measure merely carried with it. Veit emphasizes the importance of the so-called decidual or syncytial cells. It is not easy to follow the demonstration by which Veit seeks to support his view. One of the points which he insists upon in particular is that the hydatidiform cyst, which is so often the forerunner of the malignant growth, is itself the result of a preexisting disease of the uterus—in these cases a sarcoma—and is capable of multiplying itself. Marchand does not agree with these teachings of Veit, who claims still further that the hydatid cyst is not myomatous at all in nature, but a luxuriating growth with watery infiltration. Marchand concludes that the tumor springs from the epithelium of the chorion, and is therefore not sarcomatous in nature, but a true epithelioma. He adheres to the belief in the ectodermal nature of the cellular layer, that it is an epithelial layer.

2.—Halban refers to the danger of a supravaginal **amputation or a total extirpation of the uterus** for the purpose of **preventing conception**, and also to the objectionable premature climacteric that follows castration for the same purpose, and then reviews the history of tubal resection with transverse incision of the uterine fundus, beginning with Kehr's publication in Bd. xxi, No. 31. Kehr's method consisted in simply dividing and ligating the tubes, as is practised by some operators during the performance of Cesarean section. This was followed by vaginofixation. Fritsch made the resection of the tube between his ligatures. Still in some of these cases the possibility of conception still remains, as was noted by Gottschalk, Kies, and Gordon.

The uterine tubal stump remains patulous, and to prevent this possibility of conception Kossmann cauterized the mucosa with a thermocautery. Von Braun, after resection of the tube, turned the serous membrane in over the edge and firmly sutured it, but this also does not insure absolute sterility, as the case of Rühl shows. Rühl then inserted the stump into the vagina. Beutner suggested that the abdomen be opened by a transverse incision just above the symphysis, the Fallopian tubes be divided as far as possible from the uterus, and the four ends closed with separate sutures, including the muscle and peritoneum. The divided ends are reunited there by circular serous sutures (as in circular enterorrhaphy) so that a double septum is formed, while the tube retains its normal position. Neumann has suggested an operation which seems effectual. It consists in excising a wedge of the uterus together with the Fallopian tube and suturing together the wound in the uterine muscle. This method was used by Schanta in a patient with salpingitis isthmica nodosa. Halban reports a case of Cesarean section in which he made a transverse incision into the fundus after Fritsch's method, and then excised the tubes, a method which he thinks is commendable.

3.—Schaeffer, after discussing the question of **tussis uterina** and similar reflex phenomena, concludes as follows: 1. In those so predisposed (individuals with general neuropathic disorders and diseases of the genitalia, especially at the time of menstruation or during pregnancy) there occasionally appears, through isolated contact of the vaginal vaults or less frequently of the vaginal mucosa as far down as the middle third of the vagina, a nervous reflex cough, the so-called tussis uterina. 2. In those equally predisposed can pathologic affections of the broad ligament, and especially of the posterior region in Douglas's culdesac, produce the same reflex cough or other reflex phenomena (e. g. instances of retroflexion-acne, hyperemesis, tussis uterina). Especially liable to do this are the abnormal fermentative disorders and the autointoxications. 3. Affections which show an equal predisposition to invade the vulvar tissues and the lower third of the vagina, create at first only direct local reflexes, and no remote reflexes, especially no tussis uterina. 4. The tussis uterina will also be produced only by irritations which affect the sensitive nerve-endings of the inferior hypogastric plexus with the uterovaginal plexus and their sacral anastomoses (in the vaginal vaults and uterine cervix); on the other hand the spermatic plexus and the middle and inferior hemorrhoidal nerves with those in the broad ligament and the ganglia lodged there when excited by disease of the parts (fundus uteri, ovaries and the adjacent intraligamentous and superior rectal regions) will also produce the reflex when there already exists a respiratory neurosis or through a lowering of the resisting power in that motor sphere. 5. Irritations which affect the pudendal nerve remain localized in their reflex actions. 6. Cases of tuberculous habit or of prominent gastric symptoms under similar circumstances generated a nervous cough which has been designated as a stomach cough.

August 13, 1898. [22. Jahrg., No. 32.]

1. The Relation between the Thyroid Gland and the Female Generative Organs. HERMANN W. FREUND.
2. Concerning Outpocketings, Tendency to Backward Displacements, and Flexions of the Gravid Uterus, with Particular Reference to the So-called Retroflexio Uteri Gravid Partialis. A. DÜHRSSEN.
3. A Case of Axial Twisting Caused by a Tumor. HEINRICH KREUTZMANN.

1.—Freund refers to an interesting case reported by de Voogt in *Cent. f. Gyn.*, No. 27, of **true goiter associated with a rare form of teratoma of the ovary**. After removal of the tumors the goiter remained unaltered. De Voogt cited this case in an attack upon Freund's theory that, firstly, the secretions of the thyroid gland exercise a specific function upon the female genital organs, and secondly, that a tumor of the ovary can produce a goiter. As can be seen, the two parts of this theory are the converse of each other. If the secretion of the thyroid gland exercises an influence upon the female genital organs, it stands to reason that affections of these organs should influence the gland. Freund reiterates his reasons for advancing the theory already mentioned, which is based entirely on physio-



logic grounds, notably the well-known swelling of the thyroid gland during menstruation and the changes it undergoes at the time of the climacteric. He also calls attention to the frequent enlargement of the organ in cases of uterine myofibroma, ovarian tumors, hydrops tubæ and other affections of the genitalia. In de Voogt's case the tumor was a congenital teratoma and therefore not so likely to engender changes in the thyroid gland.

2.—In an address before the Obstetrical Society of Leipzig, Dührssen considered the subject of the proper treatment of **retroflexion of the gravid uterus** with incarceration and retroversion, and of sacculaton of the uterus. He offers the following scheme as to the etiology of sacculaton: I. In contracted pelvis sacculaton of the posterior wall of the uterine body can occur: A. In retroflexion of the uterus (*Retroflexio uteri gravidi partialis vera*). B. In antelexion of the uterus. (a) In uteris bicornis. (b) From tumors. (c) Through anterior situation of the placenta or through overdevelopment of the posterior and lower uterine segment. (d) Through perimetritic adhesions of the posterior wall. (e) Through defective development of the anterior with complementary development of the posterior uterine wall after vaginofixation and ventrofixation without attachment of the peritoneum only. (All of this section B are examples of *retroflexio uteri gravidi partialis spuria*.) II. In contracted pelvis sacculaton of the anterior uterine wall of the pregnant antelexed uterus can occur: (a) Through anterior situation of the placenta. (b) Through vaginofixation and ventrofixation. III. In contracted pelvis sacculaton of the side of the pregnant antelexed uterus can occur: (a) Through perimetritic adhesions. (b) Through torsion of the uterus. (c) Through vaginofixation and ventrofixation. The cause of death in retroflexion of the gravid uterus with incarceration is, according to Dührssen, in 99% of the cases retention of urine with resultant uremia. The treatment of the condition consists first in emptying the bladder by means of the catheter, if this be possible. It may be possible to secure spontaneous discharge of the urine by pushing the cervix away from the neck of the bladder. If this and catheterization fail puncture of the bladder-wall becomes necessary. After emptying the bladder efforts must be directed toward replacing the displaced organ. If this is successful a suitable pessary must be introduced to hold the uterus in position. If reposition is not possible various operative procedures have been suggested, including vaginal incision, abdominal section, and symphysiotomy. Total extirpation of the uterus will be required in some cases after posterior colpotomy.

3.—Kreutzmann reports an interesting case of **torsion of the uterus** produced by the growth of a tumor—a multilocular ovarian cyst complicating a multiple fibroid of the uterus. The woman was 36 years of age, married since her twentieth year, and sterile. Menstruation was regular, but at times painful. A year before the operation the patient noticed an increase in the size of her abdomen, and her physician diagnosed an ovarian cyst. Operation showed a large ovarian cyst without adhesions, which had commenced to grow on the left side and had extended toward the right side, dragging with it the uterus which had become twisted upon its cervix. The uterus was also found to be the seat of multiple fibroid nodules. The patient made a good recovery.

#### Centralblatt für innere Medicin.

August 6, 1898. [19. Jahrg., No. 31.]

#### 1. The Use of Saccharin in Nourishing Infants. ARTHUR KELLER.

1.—Previous views have inclined to a belief that **saccharin** has little or no nutritive value, but is useful for sweetening infants' food, though there has been some doubt as to its effect upon fermentation in the bowel. Keller has made observations upon metabolism when this substance was used to sweeten infants' food, and reaches the conclusion that, when the only purpose necessary is to sweeten the food, saccharin is the best of all sugary substances. The nitrogen-absorption in his experiments was always good when saccharin was being used. The amount of ammonia-excretion was not increased, but was rather somewhat decreased, so that there seemed to be less fermentation in the bowel. There did not

seem to be any prevention of absorption of nitrogenous substances. These observations are important, as it is often difficult to use sugars in nourishing sick infants without increasing the acid intoxication that frequently already exists.

#### Archiv für Verdauungs-Krankheiten.

July 6, 1898. [Band 4, Heft 2.]

1. Enteroptosis and Intraabdominal Pressure. C. A. MELTZING.
2. Concerning Dilatation of the Esophagus in its Lower Position. JOSEF NETTER.
3. Observations Concerning the Composition of the Feces Escaping from a Fistula located at the Lower End of the Ileum. ADOLF SCHMIDT.
4. Concerning the Absorption of Iron in the Stomach and Duodenum. PAUL HÁRI.

1.—Meltzing does not agree with those who believe that there exists an actual tension-pressure from the abdominal walls. From his own investigations upon cadavers, in which the muscles were not yet rigid, and upon himself, he has determined that the hydrostatic pressure is equal in centimeters to the distance of the measured points from the highest portion of the abdominal cavity, and therefore that the pressure from the weight of the abdominal contents bears no distinct relation to the tension-pressure inward of the abdominal walls. Under ordinary circumstances, when there is no muscular contraction, the abdominal walls simply offset the pressure of the abdominal contents. There is a negative pressure when the subject is placed in the knee-elbow or in the inverted position. Meltzing divides enteroptosis into certain fairly definite varieties. The first, which he would call "**pure enteroptosis**," is due to overstretching of the abdominal walls, which brings into play the ligaments of the abdominal organs. The ligaments become greatly stretched and the organs fall, and there is developed a negative pressure in the upper part of the abdomen, which is equalized by the sinking of the diaphragm and over-filling of the bloodvessels and lymphatics in this region. In this way there result the disturbances of the heart and the circulation, and of the sympathetic nervous system in particular that are so frequently noticed. The other form of enteroptosis is "**distortion-enteroptosis**," or that form due to the displacement of the organs by pressure, as from a corset; but tight lacing does not always cause enteroptosis, the result depending upon the condition of the abdominal walls. If these are weak, the organs sink downward, and stretch the muscles, inducing finally much the same results as in the first form; but in case the abdominal walls are strong, the diaphragm must yield, and there is then a displacement of the abdominal contents upward, so that the thorax suffers at the expense of the abdominal walls, and there results no real enteroptosis. With distortion-enteroptosis, there is, too, little change in the abdominal pressure, contrary to the results of pure enteroptosis. Meltzing has not been able to determine the existence of a negative pressure in the distortion-form of the affection, as any changes in the intraabdominal pressure are in this case constantly equalized by the changes in the pressure of the abdominal walls, and there is never, in this form, any actual change in the size of the abdominal cavity; while in the other form there is at first a change in the size of the cavity that must be equalized. The two different results of pressure from the corset are evident clinically. Some patients, who have long laced themselves tightly, have absolutely no disturbance; while others acquire marked enteroptosis; on the other hand, some acquire it when there has been no tight lacing. Those who acquire it do so because of a combination of pure enteroptosis with the results of lacing, while those unaffected have had abdominal walls that are sufficiently strong to allow of no disturbance in the abdominal equilibrium. Distortion-enteroptosis causes at first changes in the form of the organs and in their position, there being usually under these circumstances isolated ptoses; and there does not usually result any general disturbance of the organism until there is added to the displacement marked weakness of the abdominal walls.

2.—Netter reports the case of a man who had always been



weakly, and some 12 years before he came under observation had overexerted himself greatly and constantly and taking an excessive amount of ice-cold liquids, had, as a result, pains in the stomach after swallowing, which lasted for some time, until the liquid seemed to enter the stomach or was vomited. Solid food was often vomited hours after it had been taken and showed no sign of digestion. There were variations in the patient's state, largely depending upon the care he took of himself; the conditions improved somewhat under treatment, especially with the introduction of large sounds into the stomach, but the difficulty never disappeared entirely. Upon examination with the sound this seemed to enter the stomach at once, though the patient said that it felt as if it were above the stomach. Water introduced through the tube could be removed at once, but it appeared cloudy, and was slightly acid; it contained a large number of squamous epithelia. The tube could be introduced beyond the sac that thus apparently existed into the stomach, whose contents after a test meal were hyperacid. The capacity of the sac varied at different times. After a study of the cases reported in literature, Netter points out that in the cases examined after death there was found a chronic catarrh of the mucous membrane and usually hypertrophy of the muscular layer. The latter phenomenon is best explained by spasm of the cardia. This is probably the etiology in cases in which there is hypertrophy of the muscular layer; while in the cases without hypertrophy, the condition is due to primary atony of the esophagus. In Netter's case, atony was the probable cause, as there was never any material obstruction to the passage of the sound, and in fact it was found in emptying the sac that the sound was with difficulty prevented from entering the stomach. The symptom-complex of **dilatation of the esophagus** in its lower end is quite characteristic. There is persistent difficulty in swallowing; pain back of the sternum; frequent regurgitation of food in an unchanged condition; dulness on percussion near the spine after taking of a large amount of food; the swallowing-sounds in the stomach are absent, while they are present over the esophagus. Considerable quantities of food may be introduced, and subsequently be siphoned out again. The results of introduction of the sound are uncertain; sometimes the instrument enters without difficulty, and sometimes it does not enter so readily. A diverticulum in this portion of the esophagus cannot cause much difficulty in diagnosis, because it is so very rare. It may be excluded by Rumpel's method of introducing two tubes, one with numerous perforations, into the stomach, and a smaller into the sac. If a diverticulum is present, fluids introduced through the tube in the sac will not reach the stomach, and therefore, cannot be siphoned out through the other tube; while if dilatation exists, the fluids will partly flow into the stomach through the perforations in the one tube and may be siphoned out through this tube. Carcinoma is much more rapid in its course, and occurs in older persons, and fluids will flow into the stomach alongside a tube after they are introduced into the esophagus through a second tube, while they will not in case there is only a dilatation. The prognosis of dilatation at this point is better when it is due to atony than when due to hypertrophy, as with the first condition it is easier to introduce proper amounts of food into the stomach by means of a tube.

3.—Schmidt reports a case operated on for **intestinal obstruction** at the ileo-cecal valve. Nutrition was well maintained afterward, in spite of the fecal fistula at the lower end of the ileum. Examination of the stools showed that there remained a considerable quantity of muscle-fibers from a mixed diet; sometimes portions of connective tissue; minute portions of albuminous substance in solution; fat; and unchanged cellulose with included starch-granules, or free granules of starch. Albumoses were found, but no sugar, and no leucin or tyrosin. Pepsin was present, as was a diastatic ferment, but no fat-splitting ferments. There was unchanged bile, but no biliary acids, and no mucus. There was no evidence of albuminous decomposition, but aromatic acids formed by fermentation of the carbohydrates were present. The fact that no sugar was found does not prove that sugar is all absorbed above the ileo cecal valve, but when taken in connection with the work of others, it simply means that absorption from the small intestine varies at different times. The presence of ferments in the large intestine, and the large amount of undigested albumin and starch, show that the

large intestine not only absorbs nutriment but also digests food, though it scarcely does more than continue the digestion that has been going on above. This case and others show that decomposition of albuminous matter begins below the ileo-cecal valve, and is always present there, and it would be far better, if possible, to determine in pathologic cases that there is putrefaction in the small intestine, rather than to use the quantity of ethereal sulphates in the urine as a criterion of the amount of intestinal putrefaction. To explain the sudden beginning of putrefaction only when the ileo-cecal valve is passed, some have advanced the theory that the carbohydrate fermentation higher up prevents albuminous putrefaction, but both of these processes can take place together, and hence this is not a complete explanation. The rapidity of the passage of the contents through the small intestine is a matter of importance in the explanation, but stagnation alone will not cause putrefaction, and putrefaction may take place when there is movement. There are undoubtedly numerous factors that are of importance in the explanation. Stagnation is probably the most important and, after this, the absorption of carbohydrates and the consequent thickening of the intestinal contents. The change in the reaction from acid to alkaline or neutral, and the consequent opportunity for the growth of new forms of bacteria, is undoubtedly of some importance.

4.—In earlier experiments Hári fed dogs about 0.2 gram of reduced iron, then killed the animals after 2 or 3 hours, and removed the stomach and duodenum, but was unable to obtain an iron-reaction in the portions of the stomach examined, though the reaction was obtained from the duodenum. He subsequently cut out from the stomach small yellow spots that could be seen at once, and put them in Hall's solution, and as this was unsuccessful, put the whole stomach and duodenum in Hall's solution. By this method he was able to find small islands of dark color in the gastric mucous membrane, which showed the reaction for iron within the cells. On microscopic examination of the duodenum the villi were found of dark-green color, but in the epithelium alone. There was never any reaction for iron within the tissues beneath the epithelium. The epithelia were surrounded by a network of dark color constituted of minute granules of iron. In the stomach, in those small areas that yielded a reaction, there was a constant color-reaction in the cylindric epithelium, but never any reaction in the epithelium covering the mouths of the glands. Control-specimens were stained in the same way when no iron had been given, and yielded no reaction, and in order to prove that the iron did not reach the cells after death, Hári took a stomach and placed it in a solution of iron after its removal from the body. There was obtained from this a marked reaction for iron on the surface of the epithelium, but none within the cells themselves, so that in the experiments on living animals the iron must have been absorbed during life.

**The Ayer Laboratory** of the Pennsylvania Hospital, costing \$30,000, the gift of Mrs. Josephine M. Ayer, and endowed by her son, Frederick F. Ayer, with \$25,000, is now in process of erection in the hospital grounds in Philadelphia.

**Resection of the Ribs for Recurrent Carcinoma of the Breast.**—W. Moore (*Intercolonial Med. Jour. of Australasia*, July 20, 1898) reports the case of a woman, 55 years old, who was suffering from recurrent carcinoma of the left breast. She had been operated on three times, but the axillary glands had not been removed. A small recurrent lump had been noticed for six or eight months, situated at the left of the sternum, which had grown to almost the size of the fist and was firmly adherent to the ribs and skin. Curved incisions were made embracing large areas of skin and extending to the axilla. All the tissues covering the ribs were removed and the third and fourth ribs were divided well external to the growth and at their attachment to the sternum. On removing the growth with the portions of ribs, a large rent was made in the pleura, through which the pericardium, with the heart beating inside it, was plainly visible. Two large flaps of skin and subcutaneous tissue were obtained from above and two below, by means of which the space was closed. The patient was discharged from the hospital on the twelfth day, and was free from recurrence six months after operation.



## Original Articles.

### SYMPTOMS AND DIAGNOSIS OF CARIES OF THE SPINE.<sup>1</sup>

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THE able pathologist who is to treat of the pathology of Pott's disease may hold different views from those to which I have subscribed in the preparation of this paper. I desire to state in the beginning that I regard what is commonly known as caries of the spine, or Pott's disease, as a tuberculous inflammation of the various structures that compose the spinal column, and I shall endeavor to differentiate it from numerous affections of these structures that in all probability are nontuberculous.

Until recently an account of caries of the spine could be found only in works devoted to surgical subjects. So far as my information goes, Gowers is one of the first writers on the diseases of the nervous system to devote lengthy consideration to this subject. The symptoms of the diseases of the spine should be as well understood by the physician as by the surgeon, because a failure to search for them and to appreciate their importance at an early stage of the disease, may result in irreparable damage before the surgeon is consulted. Admitting that the pathologic anatomy, symptoms, and treatment of the bone-diseases are purely surgical subjects, it yet seems to me that the great importance of the nervous lesions that so commonly result from caries of the spine demands for the latter a place in every work in which the diseases of the spinal cord and nerves are considered. The vast majority of persons suffering from the early stage of spinal caries consult either the neurologist or the general practitioner of medicine before the surgeon's advice and help are sought.

In the study of the symptoms and diagnosis of any disease the etiology cannot be ignored. This is especially true with reference to diagnosis and differential diagnosis.

**CAUSES.**—Caries of the spine, in proportion to the number of inhabitants, is more frequent in Colorado than in the eastern and southern portions of this country. There are two reasons for this. One is that a larger proportion of our population follow dangerous occupations, especially mining, in which the laborer is more frequently subjected to injuries of the spine than are those who live in agricultural and manufacturing districts. The second is that a large number of those who reside in Colorado are suffering from chronic tuberculosis. Tuberculosis and traumatism are the

two principal causes that result in caries of the bones of the spinal column. In regard to sex, the cases that I have observed in adults in Colorado show that males suffer about four times more frequently than females. This great discrepancy seems to be due to the character of the injuries to which our male population is exposed. In most countries males suffer more frequently than females, but the difference between the two sexes is not nearly so great as we find it in mining countries. Before the fifteenth year my cases show a slight preponderance of the disease in the female. Caries of the spine is most common in childhood after the third year, and next in young adults; but in Colorado we find an exception to this rule, as adults from the twentieth to the forty-fifth year are by far the most frequent sufferers. It does seem to me that children in Colorado are afflicted less frequently with the disease than children in eastern portions of this country; this, too, in the face of the fact that a larger proportion of the children in Colorado have tuberculous parents. Old age is not exempt from the disease. Gowers has observed it at 50, and says it has been known as late as the seventieth year. I have met with it in a woman in her sixty-fifth year and in a man aged 67. The disease has occurred as early as the fifteenth month. Gowers thinks that it is the most common form of the manifestations of scrofula during the second half of life.

Caries may follow injuries to the back in which the bones have not been directly injured, but inflammation may extend to the periosteum and bone-substance from torn and inflamed ligaments. Caries of the spine following traumatism that has not fractured the bones appear several months after the receipt of the injury, and in some instances after all symptoms of the injury have passed away. It is probable, also, that fracture of the bones in which there is no displacement may terminate in caries several months after the accident. Syphilis plays an uncertain role in the causation of caries of the spine. Adjacent inflammation, abscess, and blood-poisoning may give rise to disease of the vertebræ. The disease under consideration is most commonly encountered in the sickly, the half-starved and improperly fed, but under such circumstances, even if the subject is tuberculous, it is doubtful whether there will be a local manifestation of the dyscrasia in the bones of the spine in the absence of some exciting cause, such as injury or exposure to cold.

**LOCATION.**—The dorsal, cervical, and lumbar regions of the spine, in the order named, are most frequently the seats of caries. In those cases following traumatism, especially in miners, the extreme lower dorsal or the dorso-lumbar region is very commonly the seat of the injury, and, in consequence, the site for the local manifestation of tuberculosis.

THE SYMPTOMS of caries of the spine may be divided into general and local. The former are most commonly seen in children, and consist in an appearance

<sup>1</sup> Read before the Denver and Arapahoe County Medical Society, April 26, 1898, as part of a symposium on Pott's disease.

of declining health. The child is pale, anemic, feeble; its appetite poor, and its bowels irregular. Flesh is lost, strength lessened, and the gait resembles very much that of a feeble old man. The step is short, slow, the foot is carefully placed on the ground, the ball of the foot bearing most of the weight of the body; the legs are slightly bent at the knees, the body is thrown forward at the hips, and while the spine is slightly bent forward at the cervico-dorsal junction, the back of the head is thrown backward, and, in consequence, the chin projects well forward. The gait might be classed among the local symptoms of the disease. I have chosen to speak of it under the general symptoms, as it is only typically seen in children, and usually in those who present well-marked constitutional symptoms of impaired health. I am aware that some orthopedic surgeons contend that the peculiarity of gait is among the earliest and most important symptoms of the disease. If this is the rule in caries of the spine in children, there are numerous exceptions, and it does not hold good in the adult. For the sake of convenience of study, the local symptoms may be divided into those of bone, of nerve-root, and of cord.

**BONE SYMPTOMS.**—Judging from my own experience, the earliest and most important symptoms of caries of the spine in the adult, and in many children, are localized pain, tenderness, and muscular rigidity. Some orthopedic surgeons assert that pain and tenderness are frequently absent, and of inferior importance when present. This may be true of the disease in early childhood, before the sufferer has learned to give definite expression to his symptoms; but in the adult, local pain and tenderness, as well as muscular rigidity, are among the earliest, indeed, if they are not the earliest, and most important symptoms.

The pain in the spine is felt at the affected part, does not have a vertical extent of more than from 1 to 3 inches, although it may radiate along the course of the nerves that are affected in their passage through the diseased bone. I have never seen a case in which active caries affected two regions of the spine at the same time, and in consequence I have never encountered a case in which there were two seats of pain in the spine from caries at the same time. In fact, when the pain has a long vertical extent, or when two regions of the spine are the seat of pain, the indications are against, rather than in favor of, caries, or of any other organic disease of the bones. The pain may be increased by jarring or rotating the spinal column, by quickly bending the spine backward or forward, or from side to side, and especially by firm pressure over the diseased bone. In a child the pain may be increased by laying the patient face downward across the examiner's thighs and crowding the bones of the spinal column on themselves, with one hand at the buttocks forcing the body upward, and with the other at the shoulders, pressing

from above downward. Gowers considers local tenderness of very great diagnostic importance. It is among the earliest objective symptoms, and is probably the most constant. It is elicited by direct pressure over the spinous processes of the affected vertebræ, and also by rotating the spines from side to side. When the disease is situated in the most movable portion of the spine, as in the cervical region, movements of the spinal column, both voluntary and forced, are most painful; movements of the head, especially forward, as in trying to touch the upper end of the sternum with the chin, are greatly restricted and very painful. The patient instinctively fixes the head in an abnormal position. Sometimes it may incline to one side so persistently as to simulate torticollis, but the sternocleidomastoid muscle is tense on the side toward which the head is inclined,—just the opposite of what we find in the latter disease.<sup>2</sup> With the pain and tenderness, there is rigidity of the muscles that fix the affected portion of the spine, especially during the examination. Thickening of the spines of the affected vertebræ, apparent or real, with induration of the soft tissues adjacent to the spines, is sometimes found, especially in the cervical region. I have seen a few cases with apparently considerable thickening of the spines in the dorso-lumbar region following injuries to this portion of the spinal column. Caries of the spine should be detected before deformity is apparent if the patient has sought advice for the earliest symptoms. In only a few cases is deformity of the spine one of the earliest symptoms. When the morbid process occurs in the cervical region marked deformity is often absent until the disease has made considerable progress. In the dorsal or lumbar region slight lateral or backward displacement of a spinous process may be detected as soon as the body of one of the vertebræ begins to break down. As I desire to call attention only to the early symptoms of caries of the spine it is unnecessary for me to speak of the formation of abscess further than to remind you that when we find evidences of accumulation of pus in the groin or in parts adjacent to the spinal column we should carefully examine for bone-disease.

A person, either a child or an adult, who can jump from a low chair down on the floor and light on his feet without experiencing considerable discomfort in the spine is probably not suffering from an inflammatory condition of the spine. An easier and safer test than the one just referred to is to get the patient to jump from the floor and light on his heels. This will usually cause pain in the spine if caries is present. Children suffering from caries of the spine, especially in its early stages, often sleep poorly and not infrequently they cry or scream in their sleep from sudden and acute pain in the spine, caused in all probability when turning in bed, either by muscular contraction or by movements of the affected vertebræ on themselves.

<sup>2</sup> Gowers.



I have met with only one case of unilateral caries of the spine in which the symptoms were distinctly unilateral for a period of several months. This case developed bilateral symptoms about 6 months after the first appearance of the unilateral ones, and the subsequent arrest of the disease for a period of some years would exclude tumor of the spine, which it closely resembled for a time. It must be remembered that early in the disease caries may give rise to unilateral symptoms, but bilateral ones soon develop.

**NERVE-ROOT SYMPTOMS.**—The spinal nerves are most frequently damaged when the bone-disease is situated in the cervical region. Nerve-root symptoms may be divided into four classes: Sensory, motor, reflex, and trophic. The earliest of these are, as a rule, the sensory, but even these are not often sufficiently early to permit a diagnosis of the disease in its incipency, except when external pachymeningitis is associated with caries of the spine. In a number of cases radiating pains along the course of the nerves are quite prominent. When the disease is high up in the cervical region, the pain extends over the posterior portion of the head; when in the cervico-dorsal region, the arms suffer; and when the lumbo-sacral is the seat of the morbid process the pain may be felt along the course of the sciatic nerves. If the symptoms are unilateral, as they not infrequently are for a few weeks early in the disease, one sciatic nerve may be the seat of pain, and the case be mistaken for sciatica. A little care, however, in the examination, will prevent such an error, because in pressure-neuritis the nerve along its course in the leg is not tender on pressure until several months have elapsed, and not then unless the neuritis has extended down the nerve in the leg. When the pains are first felt, the skin over the area to which the affected nerves are distributed is hyperesthetic, but later irregular areas of partial or complete anesthesia are present. It is only after the disease has made considerable progress in the lower portions of the spinal column that muscular weakness due to nerve-root involvement is discoverable in the legs. In disease of any of the cervical vertebræ muscular weakness that may occur in the arms is easily detected. Muscular rigidity from irritation of the nerve-roots is not an early symptom, and it is rarely a very prominent one from this cause. Muscular rigidity, however, when due to voluntary and involuntary efforts of the patient to fix the spine, in order to lessen the pain caused by movements of the spinal column, is a diagnostic symptom of considerable importance early in the disease.

The deep reflexes of the legs are probably not affected in caries of the upper two-thirds of the spinal column unless the cord is involved. Not infrequently, the knee-jerks are increased early in the disease when the dorso-lumbar region is the seat of the morbid process in cases in which there is no apparent involvement of the cord. In disease of the hip-joint or of the sacro-

iliac articulation the knee-jerk is increased on the side corresponding to that of the joint-trouble. This is probably due to an increased excitability, either from direct or reflex causes, of the nerves supplying the muscles that extend the leg at the knee. The superficial reflexes are abolished over the area supplied by the affected nerves. Gowers calls attention to increased plantar reflexes as an early symptom of caries of the spine. I have seen a number of cases in which the plantar reflexes were greatly increased, and others in which they were normal or lessened, before the disease had made much apparent progress. The mechanism by which the plantar reflexes are increased under such circumstances is not easily explained. It is not entirely, if in part, due to irritation of the nerve-roots.

Trophic disturbances from irritation of the spinal nerve-roots are seen only occasionally early in the course of caries of the spine, but more commonly they are found later. When the lower cervical nerve-roots are irritated, some derangement of the sympathetic nerves and ganglia may take place, resulting in irregularities of the pupils and other vasomotor disturbances, with sweating of one or both sides of the face. At times muscular wasting of the arms and hands is prominent in caries of the cervico-dorsal region, and occasionally atrophy of some of the muscles of one or both legs takes place in affections of the lumbo-sacral bones. According to my experience, herpes zoster, occurring along the course of the irritated spinal nerves, is a very infrequent manifestation of vertebral diseases. I saw, about two years ago, in consultation with Dr. Packard, a case of caries of the extreme upper portion of the cervical spine in which unilateral atrophy of the tongue existed from damage to the hypoglossal nerve.

**CORD-SYMPTOMS.**—Symptoms of impaired function of the cord are quite frequent as the result of caries of the vertebræ. In the majority of instances they occur after the bone-disease has made considerable progress, and are then due to compression of the cord and the resulting myelitis. Occasionally, however, the cord is involved before the bone-disease is suspected, and, under such circumstances, the spinal marrow probably suffers from inflammation rather than compression, except in cases in which the dura has become sufficiently thickened to exert pressure on the cord. I shall not attempt to go into an extended and detailed discussion of the cord-symptoms, lest my paper should reach greater length than I had intended. In some cases the development of symptoms that point to disease of the cord leads to an examination of the spine, which is found diseased, although before it had been thought to be healthy. In other instances paralysis may supervene from caries of the spine, yet careful examination reveals no positive evidence of bone-disease. The mode of onset of the cord-symptoms varies greatly in different cases. They may come on slowly and require months or a year or more to reach their height. In a few cases complete

paralysis, especially of the legs, has developed suddenly. Under such circumstances it is reasonable to suspect a sudden displacement of bone and compression of the cord. Not infrequently one leg or one arm may be greatly affected weeks before its fellow is involved to a great extent. It is the common experience, especially at a comparatively early period in the development of cord-symptoms, to find one leg more affected than the other. Indeed, this often exists late in the course of the disease. In one case under my care some years ago one leg was almost completely paralyzed 6 months before the other was perceptibly affected. Such cases, however, are exceptions to the rule.

The cord-symptoms are motor, sensory, ataxic, reflex, and trophic, and vary somewhat according to the seat of the bone-lesion. The motor disturbance is usually greater than the sensory unless the damage to the cord is very grave. It is not uncommon to have almost complete muscular paralysis of the parts below the lesion, with sensory functions intact. If the lesion is high up in the cervical region, so that the arms are not involved from damage to the nerves that supply them, the legs may be paralyzed before the arms. When the bone-disease is on a level with the origin of the nerves that supply the arms the latter will be affected by paralysis and wasting before the legs exhibit much impairment of motion. When the bone-disease causes paralysis by pressure on the cord above its lumbar enlargement the muscles of the legs will be in a state of spastic rigidity, there will be little muscular wasting, and the myotatic irritability will be greatly increased. When caries of the spine affects the lumbar enlargement of cord, flaccid paralysis, muscular wasting, and other pronounced trophic disturbances, with abolition of the reflexes of the legs, will be found. In exceptional cases, in which the lumbar enlargement is injured and the sacral is comparatively healthy, the plantar reflexes may be present and active. I have, in two such cases, obtained ankle-clonus, although there was no vestige of the knee-jerks. I have seen several cases of caries of the spine that had been mistaken for locomotor ataxia on account of the marked degree of muscular incoordination, together with the shooting pains that were present. The ataxia in the legs is often well marked when compression of the cord is slight in the dorsal region.

I may sum up the cord-symptoms in a few words: The reflexes are abolished on a level with the lesion and increased below. Flaccid paralysis occurs in the legs with lesions of the lumbar enlargement of the cord, and spastic paralysis of the muscles below the level of the lesion when this is above the lumbar enlargement. Sensory symptoms may be absent, slight, or pronounced, in accordance with the extent of damage to the cord. Trophic disturbances are most marked with lesions of the lumbar enlargement, and next when the nerves supplying the arms are affected. Persistent loss

of voluntary control over the sphincters of the bladder and the bowel, with continuous dribbling of urine, may occur as a result of comparatively slight lesions of the lumbar enlargement. Ataxia of the legs occurring with caries of the spine is most pronounced when the dorsal region of the cord is affected. Under these circumstances ascending degeneration of the posterior columns of the cord takes place; shooting pains are present, and the arms as well as the legs may become ataxic from ascending degeneration of the posterior columns, so that were we off our guard we might be easily misled into making a false diagnosis of locomotor ataxia.

I shall not attempt to describe the complications nor the variable course of the disease, as I have already said sufficient to afford a basis for a diagnosis.

DIAGNOSIS.—The diagnosis of caries of the spine is in the majority of instances not difficult, if the chief symptoms of the disease are borne in mind, and repeated and careful examinations are made. Pain in a limited region of the spinal column, increased often by extreme lateral, forward, and backward flexion of the spine; deep tenderness, limited to one or two spinous processes, often associated with slight irregularities of the spines at the seat of greatest tenderness; rigidity of the muscles that fix the bones of the affected part of the spinal column; the presence of tuberculosis, the history of an injury to the spine, or of tuberculosis in the family; if the patient is a child, the manner of standing and walking, with short mincing steps, the feet wide apart, the legs bent at the knees, the body at the hips and shoulders, with the chin protruding; nerve-root pains, with excess of cutaneous reflex action, especially of the soles of the feet early in the disease (Gowers); areas of hyperesthesia, anesthesia; muscular wasting in the arms, rigidity or flaccidity of the muscles of the legs; and the youth of the patient in many cases—these are aids in the diagnosis of caries of the spine, and none should be overlooked in a doubtful case. The earliest, most important, and most constant of these, especially in the adult, are pain<sup>s</sup> and tenderness limited to a small vertical extent of the spinal column, together with rigidity of those muscles that fix the spine at the seat of pain and tenderness.

When evidences of bone-disease precede cord-symptoms, a diagnosis of caries, with sequential nervous lesions, will rarely be wrong. When caries and cord-symptoms develop at the same time, the caries may be overlooked unless care is exercised in examining for it. When cord-symptoms or nerve-root symptoms precede distinct evidences of bone-disease, there is danger of mistaking the nervous lesion for the primary one. In such cases an error in diagnosis may be prevented by carefully examining for the early symptoms of bone-

<sup>1</sup> Gidney says it should be remembered that in Pott's disease, particularly in children, there is very rarely tenderness over the spinous processes. *Med. Rec.*, March 5, 1888, p. 346.



disease, such as pain, tenderness, and slight irregularity of the spines, in all cases of myelitis. It should be borne in mind that rigidity of the muscles of the back may entirely disappear as soon as paralysis from the cord-lesion occurs.

In addition to transverse myelitis there are several diseases for which caries of the spine may be mistaken.

**PRIMARY PACHYMEINGITIS** gives rise to nerve-root symptoms and cord-symptoms similar to those following caries of the spine. The absence of positive evidences of bone-disease and the diffuse character of the nerve-root symptoms would be in favor of primary pachymeningitis. The latter disease in children, young adults, or tuberculous subjects, is much more likely to be secondary to bone disease than to be primary. The absence of such causes of pachymeningitis as syphilis, alcoholism, and repeated exposure to cold, is in favor of caries.

**PROGRESSIVE MUSCULAR ATROPHY.**—When caries occurs in the cervical region, there may be little or no deformity, and the muscular wasting in the arms may simulate progressive muscular atrophy, but the irregular distribution of the muscular atrophy due to caries, the severe pains along the course of the spinal nerves injured as they emerge between the diseased vertebræ, and the presence of areas of hyperesthesia or anesthesia, with, perhaps, local evidences of bone-disease, such as pain and tenderness in a limited portion of the cervical spine and rigidity of the posterior cervical muscles, would serve to distinguish caries from progressive muscular atrophy in which the atrophy attacks certain groups of muscles, and in this affection the only sensory symptoms are vague rheumatoid pains in the affected muscles.

**SPINAL IRRITATION.**—I have met with a number of cases of caries of the spine in which the diagnosis of spinal irritation had been made by physicians of no mean ability. I have seen, however, a greater number of cases of *irritable spine* in which the opposite error had been made. In spinal irritation there are usually two or more areas of spinal tenderness of considerable vertical extent, or the parts over the entire spinal column may be sensitive to light pressure. In cases of spinal irritation deep pressure does not cause greater pain than slight pressure, and in some instances firm pressure gives a sense of relief. I am not prepared to accept Dr. Gibney's statement that "in Pott's disease, particularly in children, there is very rarely tenderness over the spinous processes." At an extremely early period in the disease, I feel that this statement does not hold good. I cannot recall a single case of caries in its early stage in the adult in which the spinous processes of the affected vertebræ were not somewhat sensitive to firm pressure and forcible lateral movements of the spines. In very young children, especially if they are irritable and easily made to cry, it is not always possible to

determine whether or not there is local tenderness of the spinous processes. In children who are old enough to answer intelligently and are not frightened and made nervous by an examination, it has been my experience that tenderness of the spinous processes of the affected vertebræ could be elicited in the incipient stage of caries of the spine. I regret to be forced to differ with so great an authority in orthopedic surgery. There is no man for whose opinion on the diseases of the spine I have greater respect than that of Dr. V. P. Gibney, but I cannot help thinking that he has drawn his conclusion from cases of caries of the spine seen later than those that I have seen. It must be remembered that it is possible to encounter caries of the spine and symptoms of spinal irritation in the same subject at the same time, although I cannot recall having had such an experience. In doubtful cases, in which the diagnosis rests between caries and irritation of the spine, the absence of irregularities of the spine, of limited local pain and tenderness, or of areas of anesthesia, would be in favor of spinal irritation, especially if the subject were a nervous and anemic female.

**HYSTERICAL PARAPLEGIA.**—A diagnosis of hysterical paraplegia with spinal irritation has been made in young women suffering from caries of the spine resulting in myelitis.<sup>5</sup> The presence of distinct evidence of bone-disease in the vast majority of such cases, and the undeniable proof of an organic lesion of the cord, will be found if carefully searched for, and should prevent such a mistake. The danger of mistaking hysteria, when paraplegia is present, for caries of the spine, is much less than the opposite error, and will not occur if care is used in the examination.

**SCIATICA.**—When both sciatic nerves are the seat of pain from caries of the lumbosacral vertebræ, the danger of mistaking the disease for bilateral sciatica is not great if it is borne in mind that double sciatica is exceedingly rare, and that every such case should arouse suspicion of the pain being symptomatic of other and usually graver trouble than inflammation of the sciatic nerves. When, however, only one sciatic nerve is involved from caries beginning unilaterally, error in diagnosis may occur; but it can, as a rule, be prevented if it is remembered that in neuritis due to pressure, the nerve below the seat of pressure, while it may be the seat of pain, is not tender until sufficient time has elapsed for descending neuritis to affect the peripheral portion of the nerve. Further, with pressure-neuritis the greatest pain is usually experienced at the seat of pressure and at the distal portion of the affected nerves.

**TORTICOLLIS.**—It should be remembered that some persons, more especially children, suffering from caries of the cervical region of the spine, may carry their heads in such a position as to simulate torticollis. A mistake in diagnosis may usually be prevented if it is remembered that with torticollis the head is fixed by

<sup>4</sup> *Ibid.*, p. 346.

<sup>5</sup> Buzzard. Two persons, observations.

muscular contraction, and the face and head are turned to the side opposite that of the tense sternocleidomastoid muscle, while with caries this muscle is tense on the side toward which the head is turned, from being simply stretched by the fixation of the head from the bone-disease.<sup>6</sup>

**NEURALGIA.**—In all cases of supposed neuralgia of the fifth cranial nerves, and of the spinal nerves, the spine should be carefully examined. Gowers states that he has known unilateral abdominal pain due to caries to be mistaken for that of a renal calculus.

After we have satisfied ourselves of the presence of disease of the spinal column, we must go a step further, and determine, if possible, whether the trouble is due to *syphilis, rheumatism, gonorrhea, typhoid fever, infectious diseases, Paget's disease (a progressive rarefying osteitis),<sup>7</sup> rickets, hydatids, a nontuberculous traumatic inflammation, aneurysm, malignant disease, or tuberculosis.*

**SYPHILIS.**—The cervical region is thought to be most frequently affected, possibly on account of its close proximity to the throat and pharynx, in which syphilitic lesions are so commonly located.<sup>8</sup> I have never seen a case of disease of the spinal column in which I could, with any degree of confidence, make a diagnosis of syphilis; neither am I able to learn from the literature on the subject any reliable diagnostic symptoms, by the presence of which a syphilitic lesion of the spinal column alone may be diagnosticated. T. Halsted Myers<sup>9</sup> lays some stress on the history of syphilis and the presence of dactylitis. It must be remembered, however, that it is sometimes impossible to distinguish between a tuberculous and syphilitic dactylitis.

A colored woman has been in the Arapahoe County Hospital for a period of about 23 years, whose whole dorsal region is arched forward, with shoulders and hips thrown backward. There has been no tenderness of the spine, no positive evidence of disease of any of the vertebrae, and no symptoms of spinal-cord or nerve-root lesion. The deformity is gradual, not acute, and involves 6 or 8 vertebrae. The muscles of almost the entire dorsal and lumbar regions appear to the touch nearly as hard as wood, and are not tender under firm pressure. The woman's condition does not appear nearly as desperate as it did at the time of her admission into the hospital. She improved considerably at one time under large doses of potassium iodid and inunctions of blue ointment.

I must leave this subject, confessing that I am unable to diagnosticate syphilis of the spine. Dr. W. R. Townsend's experience at the Hospital for Ruptured and Crippled, New York, led him to believe that the relative proportion of syphilis to tuberculosis of the spine is about 3 or 4 in 1,000.<sup>10</sup>

**RHEUMATISM** may affect the spinal column, espe-

cially the ligaments and intervertebral substance, and probably the bone; or it may attack the muscles of the back. If the latter are the seat of the disease and the spinal column is uninvolved there is no tenderness on pressure over the spines if the spine is held steady by pressing from before backward with one hand on the abdomen or chest while the index-finger and thumb of the other hand are used in examining the spine, and there is no deformity. If the rheumatism attacks the joints of the spine there is said to be no pain caused by jarring the spine as in walking or by crowding the vertebrae on themselves in vertical pressure.<sup>11</sup> I am inclined to think that this test of Ransom's is unreliable. In case deformity of the spine takes place from rheumatism the kyphosis involves several vertebrae and is less acute than with caries from tuberculosis. In the vast majority of cases in which rheumatism affects the vertebrae other joints of the body will be attacked. Dr. Ransom states that "in nearly 1,000 cases of rheumatism and gout treated at Richfield Springs, he had notes of only 3 or 4 in which the intervertebral joints were alone involved."<sup>12</sup> The disease is said never to be attended with suppuration. It may affect the ribs as well as the vertebrae. The cervical region is the last to be affected.

**GONORRHEA OF THE SPINE.**—I have had no personal experience with gonorrhea of the spine. T. Halsted Myers says: "This affection of the spine is exceedingly rare. In a series of 119 cases of gonorrheal rheumatism reported, the spine was not involved in any of them, and of another series of over 100 cases in only two was the spine affected."<sup>13</sup> R. H. Sayre, of New York, has met with only one case that he regarded as exhibiting gonorrhea of the spine. "There were decided pain and disability of the spine in this case, with a very slight kyphosis, but there was a definite history of gonorrhea."<sup>14</sup> The most reliable points in the diagnosis are the presence of gonorrheal rheumatism in other portions of the body and great tenderness of the spine.

**TYPHOID SPINE.**—Seven or 8 years ago Dr. V. P. Gibney called attention to a painful condition of the spine following typhoid fever. About 3 or 4 years later I published a clinical lecture, delivered at the Arapahoe County Hospital, on a case of tender and disabled spine following an attack of typhoid fever.<sup>15</sup> Some months subsequent to the report of my case, Dr. William Osler<sup>16</sup> published a paper in which he gave a graphic description of painful conditions of the spine following typhoid fever. I have seen 2 cases of this affection during the past 2 years, and one of them at the expiration of 18 months is scarcely well yet. The trouble, as described by Dr. Gibney, was thought to be

<sup>6</sup> Gowers.  
<sup>7</sup> Hypertrophic pulmonary osteoarthropathy would be readily distinguished from caries of the spine by the enlarged hands and feet, dry and roughened skin, and pulmonary complications usually found in the former. Spinal pain and tenderness are absent, and the deformity extends over several vertebrae in the former.

<sup>8</sup> Myers, *Med. Rec.*, March 5, 1898, p. 345.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*, p. 344.

<sup>11</sup> Dr. C. C. Ransom, *Doc't.*, p. 46.

<sup>12</sup> *Ibid.*, p. 345.

<sup>13</sup> *Ibid.*, p. 45.

<sup>14</sup> *Ibid.*, p. 346.

<sup>15</sup> *Kansas City Medical J.*, Jan., 1893.

<sup>16</sup> *Am. Jour. of Med. Sci.*, 1893.



an inflammation of the fibrous structures of the spine. The diagnostic points are its onset a short time after an attack of typhoid fever, the presence of great pain and tenderness of the spine, often of considerable vertical extent, and absence of deformity, except that caused by muscular contraction. Dr. Wm. H. Welch thinks that osteomyelitis may develop months or years after typhoid fever.<sup>17</sup>

**INFECTIOUS DISEASES.**—Personally I have had no experience with diseases of the spine following such infectious diseases as diphtheria, scarlet fever, and measles. It is said that the cervical region is the portion of the spine most commonly attacked by the germs of these diseases. The apparent cause, the sudden onset, the acutely painful condition of the spine without deformity, the affection of several vertebræ, and the rapid recovery would distinguish this morbid condition from caries.

**PAGET'S DISEASE.**—This is a progressive, rarefying osteitis. It usually occurs late in life, and is attended by a stiffening of the spine, which is not very painful, and an exaggeration of the normal curves of the spinal column. I am not satisfied that I have seen any such cases. At all events, if I have, they were not typical.

Some 6 years ago Dr. L. E. Lemen referred to me an Englishwoman, about 60 years of age, whose chief complaints were slight pain in the legs, both front and back, but mainly in front and on the inner aspect of the thighs; inability to abduct her legs more than about one-third of the normal distance; great difficulty in stepping upon the platform of a car, into a carriage, or in ascending stairs. I could find no nervous or muscular lesion. On watching her ascend a flight of steps I found that she had to tilt and rotate the pelvis before she could lift one foot on the step above that on which the other foot rested. In this way she dragged one foot after the other up the whole flight of stairs, allowing both feet to rest on one step for a short time, before she dared to try to mount the next above. There was no tenderness or deformity of the spine or pelvis so far as I could determine. I examined the posterior surface of the spine, and the pelvic portion by the rectum. Drs. Rogers and Packard saw the patient with me. The latter made a diagnosis of Paget's disease. I see this woman occasionally yet. She is in nearly the same condition. If there is any change she is a little more helpless. No treatment that I have adopted has seemed to influence her trouble. She has visited England, consulted a number of physicians, but found no relief. No diagnosis was given her by the English physicians.

A case very similar to this is now in the Arapahoe County Hospital, except that the trouble is in the person of a young man now about 28 years of age, and has been attended with considerable suffering. The disease began about 5 years ago, was acutely painful at first and soon led to great difficulty in walking, because of the inability to abduct the legs or take a step more than a few inches in length. The man has been practically bedridden for two years, or probably more. There is no deformity of the spine, which also is not especially tender. This patient has been seen and examined by nearly all the physicians connected with the hospital and by a few others. Dr. Packard is the only one who, to my knowledge, has attempted a diagnosis. He thinks it is a case of Paget's disease.<sup>18</sup>

Dr. R. H. Sayre, of New York, refers to one or two cases of what, I think, he wrongly terms "neurotic spines, in which the diagnosis had not been very clear

to him. In one of these there had been marked limitation of motion in the neck and decided pain. The application of a support relieved the pain, but after a while nearly the entire spine became involved in the disease, and it was almost absolutely rigid from one end to the other. The stiffness even involved the articulation of the ribs and other joints in the body."<sup>19</sup>

The cases of rickety spines need no comments, as they are attended with other evidence of rachitis.

**HYDATIDS OF THE SPINE** are attended with many of the symptoms of caries of the spine, and the deformity is well marked. It is probable that a diagnosis can be made only after the character of the cyst is ascertained.

**NONTUBERCULOUS TRAUMATIC INFLAMMATIONS OF THE SPINE.**—I shall say nothing of this, believing that they should be treated with as much care as the tuberculous forms. It is probable that most inflammatory conditions of the bodies of the vertebræ, if they are not tuberculous at first, soon become so if the disease is not arrested.

Finally, is the disease caries, tumor, or an eroding aneurysm? Gowers states: "In the first half of life the presence of bone-disease is practically tantamount to the recognition of caries." It must be borne in mind, however, that both—aneurysm, especially in syphilitic subjects, and tumor of the spine—occur before the thirty-fifth or fortieth year. The only safe rule to follow, in all cases of disease of the vertebræ occurring in persons after the twentieth year, is to examine carefully for tumor and aneurysm. Exceptions to rules in medicine are constantly happening and often when we least expect them. The presence of a tumor in another portion of the body, or the history of the removal of one from a person suffering from disease of the vertebræ, should lead, at least, to a suspicion of tumor of the spine. Tumors of the spine, when of a malignant character, are usually secondary, and, especially in the female, often follow the removal of a growth from the breast. The symptoms of disease of the vertebræ due to aneurysm or tumor are more likely to be unilateral in their early stage than those caused by caries, and the pain resulting from aneurysm or tumor, especially on movement, is usually intense to a degree out of all proportion to the pain of caries.

I might elaborate the points in the differential diagnosis between caries, tumor, and eroding aneurysm of the spine, but I have already taken up too much time.

**Test for Formaldehyd.**—Phenylhydrazin has been proposed by Vitali, as a test for the presence of formalin. A mixture of the two gives rise to a milky discoloration; eventually a yellowish deposit is precipitated upon the sides of the test-tube. In concentrated solution, the turbidity appears immediately. In solutions of a strength of 1-100, the reaction occurs after a few seconds; in those 1-1,000, in 1 minute; in those 1-10,000, in 5 minutes; in those 1-100,000, in 2 to 3 hours.

<sup>17</sup> Myers, *Ibid.*, p. 345.

<sup>18</sup> After a further examination made recently, Dr. Packard and I are agreed that it is one of rheumatoid arthritis.

<sup>19</sup> *Ibid.*, 1, 306.

SOME OBSERVATIONS ON BRAIN-ANATOMY AND  
BRAIN-TUMORS.<sup>1</sup>

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IN my study of the human brain in the laboratory and at the bedside, two facts, one anatomic, the other clinical, have presented themselves with unusual force; first, the ease and facility with which the knowledge of the anatomy of the brain disappears from memory, and secondly, the almost universal presence of optic neuritis in cases of brain-tumor. The first observation, I dare say, is not an original one—or one connected with the newer researches in neuro-anatomy—but has been common property of all those who ever conscientiously tried to master the subject. One of the leading brain-anatomists of Europe informed me that he was obliged to relearn brain-anatomy every time he gave the course to his students. My former teacher in anatomy used to remind his classes that they would get brain-anatomy twice—get and forget it. It seems almost impossible for the memory to retain the countless names of the various divisions, subdivisions, and multitudinous parts which go to make up the architecture of this most important organ. Much of this difficulty arises from the different terms applied by different writers to identical portions of the brain—the synonyms; but this is about to disappear, as much progress has lately been achieved in neuroanomy under the able leadership of Prof. Burt G. Wilder, of Cornell University. His report<sup>2</sup> was adopted unanimously at the 1896 meeting of the American Neurological Society, at Philadelphia, and will help to lessen many of the difficulties which brain-investigators have to contend with. The first five sections are substantially identical with reports that were adopted unanimously by the Association of American Anatomists in 1889 and 1892. The recommendations are as follows:

1. That the adjectives dorsal and ventral be employed in place of posterior and anterior, as commonly used in human anatomy, and in place of upper and lower, as sometimes used in comparative anatomy.

2. That the cornua of the spinal cord, and the spinal nerve-roots, be designated as dorsal and ventral, rather than as posterior and anterior.

3. That the costiferous vertebra be called thoracic rather than dorsal.

4. That other things being equal, mononyms (single-word terms) be preferred to polyonyms (terms consisting of two or more words).

5. That the hippocampus minor be called calcar; the hippocampus major, hippocampus; the pons varolii, pons; the insula Reilii, insula; pia mater and dura mater, respectively pia and dura.

6. That the following be employed rather than their various synonyms: Hypophysis, epiphysis (for conarium and corpus pineale), chiasma, oblongata, lemniscus, monticulus, tegmentum, pulvinar, falx, tentorium, thalamus, callosum, striatum, dentatum, mesencephalon, pallium, oliva, clava, operculum, fissura centralis (for f. Rolando, etc.), F. calcarina, F. collateralis, F. hippocampi, cuneus, precuneus, claustrum, fornix, infundibulum, vermis.

But even with the universal adoption of these terms, brain-anatomy will seem almost as complex and evasive as before, and any aid or rules which will lighten this burden will prove welcome.

The following rules which I have formulated have been a great aid to me in remembering the gross anatomy of the brain, and may be of assistance and benefit to others:

RULE OF TWO.—1. The nerve-centers are divided into two great divisions: (1) encephalon, (2) myelon.

2. The encephalon is divided into two subdivisions: (1) cerebrum and (2) cerebellum.

3. The cerebrum, cerebellum and myelon are divided into two hemispheres each: (1) right and (2) left.

4. The encephalon is indented by two great fissures: (1) longitudinal and (2) transverse.

5. Into these two great fissures there dip two folds of the dura: (1) the falx cerebri and (2) the tentorium cerebelli.

6. There are two varieties of brain-matter: (1) white and (2) gray.

RULE OF THREE.—1. There are three layers of membrane surrounding the brain: (1) the dura, (2) the arachnoid, and (3) the pia.

2. Each hemisphere is indented by three major fissures: (1) the sylvian, (2) rolandic or central, and (3) parieto-occipital, these serving as boundary-lines between the different lobes.

3. Three lobes, the frontal, temporal, and occipital, on their convex surface, are divided into three convolutions each: the superior, middle, and inferior, or 1st, 2d, and 3d.

4. There are three pairs of basal ganglia: (1) the striata, (2) thalami, and (3) quadrigemina.

5. The hemispheres of the brain are connected by three commissures: (1) the anterior, (2) medi, and (3) post-commissure.

6. The cerebellum consists of three portions: (1) the right and (2) the left hemispheres, and (3) the vermes.

7. There are three pairs of cerebellar peduncles: (1) the superior, (2) middle, and (3) inferior.

8. The number of pairs of cranial nerves in the classifications of Willis and Sommering can be determined by adding 3 to the number of letters in each name; that of Willis making 9, and that of Sommering making 12 (or the name containing the more letters has the larger number of pairs of nerves, and vice versa).

<sup>1</sup> Presented to the 92d Annual Meeting of the Medical Society of the State of New York, at Albany, January 25, 1898.

<sup>2</sup> *Journal of Nervous and Mental Diseases*, December, 1896, p. 793.



9. The cortex of the cerebellum is divided into three layers of cells: (1) the granular, (2) Purkinje's cells, and (3) a molecular layer.

RULE OF FIVE.—1. Each hemisphere is divided externally into five lobes, of which four are visible: (1) frontal, (2) parietal, (3) temporal, (4) occipital; and one invisible, the fifth or insula (Isle of Reil). Roughly speaking, the visible lobes correspond to the bones of the cranium; that is, the frontal lobe is underneath the frontal bone, the parietal lobe beneath the parietal bone, and so on.

2. The brain contains five ventricles, of which four are visible, the right and left, or 1st and 2d, the 3d, and the 4th; and one invisible, the 5th or pseudo-ventricle, between the two layers of the septum lucida.

3. The cortex of the brain contains 5 distinct layers of ganglion-cells.

# RECAPITULATION.

Rule of "Two"	Nerve centers—	1. Encephalon. 2. Myelon
	Encephalon—	1. Cerebrum. 2. Cerebellum.
	Cerebrum	1. Right hemisphere. 2. Left hemisphere
	Cerebellum	
	Myelon	
	Fissures—	1. Longitudinal. 2. Transverse
	Dura-folds—	1. Falx. 2. Tentorium.
	Brain-matter—	1. White. 2. Gray.
	Membranes—	1. Dura. 2. Arachnoid. 3. Pia.
	Hemispherical fissures—	1. Sylvian. 2. Central (Rolandic). 3. Parieto-occipital.
Rule of "Three"	Convolutions—	1. Frontal. 2. Temporal. 3. Occipital.
	Lobes—	First, second and third, or superior, middle, and inferior.
	Central ganglia, pairs—	1. Striata. 2. Thalami. 3. Quadrigemina.
	Cerebrum—	1. Right hemisphere. 2. Left hemisphere. 3. Vermes.
	Cerebellar peduncles, pairs—	1. Superior. 2. Middle. 3. Inferior.
	Cerebellar cortex-layers—	1. Granular. 2. Purkinje's. 3. Molecular.
	Cranial nerves, pairs—	W-i-l-l-i-s plus 3 = 9. S-o-m-m-e-r-i-n-g plus 3 = 12.
	Hemispherical lobes—	Visible: 1. Frontal. 2. Parietal. 3. Temporal. 4. Occipital. Invisible: 5. Insula.
	Ventricles—	Visible: 1. First. 2. Second. 3. Third. 4. Fourth. Invisible: 5. Fifth (pseudo-ventricle).
	Cerebral cortex—	Five layers of ganglion-cells.

CHOKED DISC, OPTIC NEURITIS OR PAPILLITIS.<sup>3</sup>—Having noted the continued presence of this symptom in my cases of brain-tumor 12 times out of 13 cases, and once probably present, I determined to ascertain, if possible, the class of cases in which choked disc was absent, or whether the nature of the growth, its location, size, or period of growth, had any decided influence over the determination of a neuritis. If choked disc depended upon an increased intracranial pressure, its absence would be looked for in tumors of small size and slow growth. If to microbic influences, then its absence would be noted in nonpathogenic neoplasms.

Another problem, the solution of which was attempted, was whether the location of the tumor had any bearing upon the appearance of optic neuritis; as, for instance, as has been remarked by some observers, that Pons tumors or basal tumors predispose less to optic neuritis than cortical tumors; or that cerebellar tumors are more often accompanied by choked disc than cerebral tumors.

Some of the other queries whose solutions were desired were as to whether unilateral choked disc determined the hemisphere in which the tumor was located; whether the greater intensity of the neuritis in one eye indicated the side containing the tumor, and whether the early or late appearance of optic neuritis indicated anything in the nature, character, location, or period of growth of the tumor.

To study these different problems, 100 cases of brain-tumor (cerebral) were selected from recent literature, in which an ophthalmoscopic examination had been made and the presence or absence of choked disc, or optic neuritis, had been definitely determined. The symptoms, location of growth, and its nature were carefully tabulated and the results obtained are briefly as follows:

Of these 100 cases, choked disc or optic neuritis was absent in 9 cases and present in 91, and, as a symptom of brain-tumor, was second in frequency to the head-pains. These figures are somewhat higher than those reported by other observers as the following percentages will show:

Gowers found optic neuritis present in 80% of his cases; Oppenheim<sup>4</sup> in 82%; Köster<sup>5</sup> in 8 out of 9 personal cases, or as frequently as the head-pains; Knapp 66 $\frac{2}{3}$ %; Edmunds and Lawford in an analysis of 107 cases of brain-tumor found it present in 68 cases.

In those cases in which it was absent, 6 were tumors in the motor areas, 4 on the left and 2 on the right side. Two were tumors in the temporal lobe, 1 was a tumor in the frontal lobe. This result would appear to favor the motor areas (ascending frontal and ascending parietal convolutions, or precentral and postcen-

<sup>3</sup> In this paper the terms optic neuritis, choked disc, and papillitis are used synonymously.

<sup>4</sup> Die Geschwulste des Gehirns, 1895.

<sup>5</sup> Abstract Neurologisches Centralblatt, 1897, No. 22.

tral) as the region of the brain least favorable for the development of optic neuritis; but on examining the 91 cases in which optic neuritis was present, 33, or over one-third, were found to be tumors in the motor areas. In 18 cases of tumor of the frontal lobe, optic neuritis was present, while it was absent in only one case. In 3 cases of temporal-lobe disease optic neuritis was present, while its absence was noted in only 2 cases. In pons-tumors, in which according to some authors optic neuritis is very prone to be absent or very late in making an appearance, it was present in 11 cases, and in no case was it reported absent.

\* In an analysis of 100 cases of cerebellar disease reported to this society in 1895,<sup>6</sup> optic neuritis was present in 66 cases, absent in 12, and not reported in 23. This would tend to show that it is more frequently met in cerebral than in cerebellar tumors. It is well known that cysts and abscesses of the brain predispose less to optic neuritis than tumors. Thus, in an analysis of 50 cases, optic neuritis was present in 16 cases; absent in 24; doubtful in 2, and not mentioned in 8. In the majority of the cases in which optic neuritis was present it appeared very late and was generally very slight.

The size, growth, and character of the tumor, as bearing upon the increase of intracranial pressure in calling forth an optic neuritis, is worth considering, and in the 9 cases<sup>7</sup> in which optic neuritis was absent the following conditions were present:

Case 1 was a fibroma of slow growth, size not mentioned; case 2 was a glioma of five years' growth, a small part of which was the size of a hickory-nut; case 3 was a general case of tuberculosis of the brain with distended ventricles; case 4 was an infiltrating tumor, the size of an orange; case 5 was a cicatricial-looking mass, about 1½ in. in diameter; case 7 was a small perithelioma; case 8 was a spindle-celled sarcoma the size of an apple, and case 9 was a tumor the size of a hen's egg surrounded by an infiltrating glioma.

The size of the tumors, therefore, as shown by the autopsy-findings, varied from a small perithelioma to a spindle-celled sarcoma, the size of an apple (case 8). Nearly all tumors were of large size, as in cases 2, 9, 6, and 5, the smallest of the group (5) being 1½ in. in diameter. In case 3, although the size of the tubercular nodules is not mentioned, yet the lateral ventricles were enlarged and distended, increasing intracranial tension greatly thereby. In the case of the fibroma (1), such a dense, firm, unyielding mass, however small its

size, would also greatly increase the pressure. It would seem probable, therefore, if optic neuritis were totally absent in these cases up to the time of death, that some agent or process, other than increased intracranial pressure, were necessary to have produced choked disc or optic neuritis, because here was pressure very pronounced even, and yet no neuritis, according to competent, careful observers, had been found. If the Leber-Deutschmann theory be accepted, then the neuritis is the result of some irritating agent from the tumor, or inflammation, finding its way into the cerebrospinal fluid and by the increased intracranial pressure being forced into the sheaths of the optic nerves, producing edema and a true optic neuritis. This is perhaps the best explanation of the origin of optic neuritis, and shows how the increased intracranial pressure is made to play an important part in the etiology of this important symptom.

The period of growth varied considerably in these tumors between the first manifestations of the symptoms and the termination in death, or operation. In case 1, over a year elapsed; in case 2, five years; in case 3, a very short time; in case 4, over seven years, and 54 days after the operation; in case 5, ten months elapsed before the operation; in case 6, nearly two and one-half years transpired between first symptom and operation; in case 7, nine months elapsed; in case 8, a trauma was received in 1893, and the patient was operated on in 1896; and in case 9, over two years had elapsed.

It would seem, therefore, that slow-growing tumors, such as these all were with the exception of case 3, predisposed less to the occurrence of optic neuritis than those of rapid growth.

The nature of the tumors in these cases varied, and it is questionable whether any of them, with the exception of the tubercles in case 3, can be considered of microbic origin. The sarcomas have as yet not been definitely placed among the parasitic tumors, hence, their toxins were not able to produce a toxic neuritis. Out of the 91 cases, 8 were of tubercular and 15 of syphilitic origin, while 37 were sarcomatous and 17 gliomatous. Here again it is impossible to derive any positive data regarding the relation between the tumor and the development of the neuritis. It is hardly probable, however, that the optic neuritis depends upon a specific virus emanating from specific tumors, thus producing a toxic neuritis. The "irritants" of Leber, Deutschmann, Adamkiewicz, and others, which are supposed to play such an important role, have not been, as yet, defined.

The data upon which to base an opinion regarding unilateral optic neuritis, the unequal intensity of the neuritis and its early or late appearance as indicative of special location, were so meager that nothing very positive can be affirmed. It is probable, however, that a unilateral neuritis and the neuritis of greater intensity

<sup>6</sup> *New York Medical Journal*, June 1, 1895. Transactions New York State Medical Society, 1895.

<sup>7</sup> Case 1. Pel, *Berliner klinische Wochenschrift*, 1894, No. 5.

" 2. Mills and McConnell, *Journal of Nerv. and Mental Dis.*, Jan., 1895.

" 3. Finlayson, *Glasgow Medical Journal*, Aug., 1896.

" 4. Sinkler, *Trans. American Neurological Assoc'n*, 1896.

" 5. Church and Faulk, *Amer. Jour. Medical Sciences*, July, 1896.

" 6. Thomas and Bartlett, *Hibernian Monthly*, May, 1890.

" 7. Zehl and Roth, *Deutsche medicinische Wochenschrift*, 1897, No. 19.

" 8. Schultz, Fr., *Deutsche Zeitschrift f. Nervenheilkunde*, 1896.

" 9. Pershing, *Trans. American Neurological Assoc'n*, 1897.



stand in communication with the diseased hemisphere; or, in other words, that a neuritis will be found in the eye corresponding to the side of the brain affected.

A point not always stated in these negative cases was the number of times an ophthalmoscopic examination had been made, and also the length of time before death, or operation, of such examinations. In many of the cases analyzed, optic neuritis was reported as occurring "very late" or "just before death," and some observers held the diagnosis of brain-tumor in abeyance because of the nonappearance or rather tardy appearance of this symptom. Thus, in a case of my own, operation was postponed for some weeks because of the normal appearance of the discs, and then undertaken on the sudden acute manifestation of the neuritis, and yet on autopsy the brain had evidently been the seat of disease (multiple sarcoma) for months. It is possible, therefore, that an optic neuritis may be discovered in some cases reported as negative if the ophthalmoscope were used daily and up to the time of dissolution. Sanger reported a case to the Hamburg Medical Society in which the absence of optic neuritis and a previous history of syphilis led him to the belief that a syphilitic basilar meningitis was present. A day or two before the patient's unexpected sudden death, a light degree of optic neuritis appeared; the autopsy revealed a sarcoma of the right occipital lobe penetrating the cerebellum.

In all suspected brain-cases the fundus of the eye should be examined repeatedly, if not daily, for the appearance of a papillitis, as its presence is almost pathognomonic of cerebral neoplasm and may aid definitely in differentiating between a diagnosis of functional brain-disturbance and organic brain-disease.

Despite the fact that optic neuritis was absent in these cases, the other symptoms were so prominent, especially localizing symptoms, as paresis (8 out of 9 cases), that an operation was resorted to in cases 1, 4, 5, 6, 7, and 8. Death occurred in all cases, except 5 and 7, from a few hours to 54 days (case 3) after the operation. As to the sex of these patients, while not exerting any influence over the production of optic neuritis, it may be interesting to know that five were males, and three females, while the sex of one patient, a child of 19 months, was not stated. The age varied from 19 months (case 3) to 60 years (case 7), and in this case a second operation was performed and the patient recovered.

The importance of trauma in the production of brain-tumors should not be lost sight of and seemingly exerts considerable influence, as three of these cases ascribe the beginning of their affliction to some blow on the head.

In the 91 cases a large number gave similar evidence, and in one case the symptoms gradually followed the boxing of a pupil's ears by a brutal school-teacher.<sup>8</sup>

Another similar case was reported by Donath,<sup>9</sup> of an apprentice who was struck on the side of his head by his master, and an extensive sarcomatous disease of the cerebellum was disclosed at the autopsy.

The conclusions to be drawn from my study of these cases are as follows:

1. Optic neuritis is present in about 90% of all cases of brain-tumor.
2. It is more often present in cerebral than in cerebellar cases.
3. The location of the tumor exerts little influence over the appearance of the papillitis.
4. The size and nature of the tumor exert but little influence over the production of the papillitis.
5. Tumors of slow growth are less inclined to be accompanied with optic neuritis than those of rapid growth.
6. It is probable that unilateral choked disc is indicative of disease in the hemisphere corresponding to the eye involved.
7. It is doubtful whether increased intracranial pressure is solely and alone responsible for the production of an optic neuritis in cases of brain-tumor.

## THE ADVANTAGE OF PHYSICAL EDUCATION AS A PREVENTIVE OF DISEASE.<sup>1</sup>

BY CHARLES DENISON, A.M., M.D.

OF DENVER, COLORADO.

IF we view man as a trinity of mind, body, and soul, all equally developed toward perfection, then to us physicians the intellectual and moral parts must fall far short of the goal, judging from man's physical shortcomings and defects which are ever before us. We cannot forget, so thoroughly has history impressed the fact upon our minds, that there was a time in the Grecian ascendancy when both intellectual supremacy and national strength were due to the interest of the government in the physical education of the people; when the gymnasium for the education of the body shared equally with schools for the education of the mind, and a type of man was produced to be ever since emulated all over the world. Whatever may be our explanation of the decline of the human race from that physically successful era, the fact of decadence, and an inherent tendency thereto in the human constitution, furnishes the strongest reason possible for physical education.

There is practically no stationary point in this matter. It is either advance or retreat. Disease has to be fought by combating or extinguishing its cause; but the causes of disease are so intricately interwoven with our very existence that the battle of life is an ever-present reality. The prevention of disease, therefore, supplants the cure, and this is the reason for physical education.

<sup>8</sup> Hofman, Virchow's *Archiv*, vol. clvi.

<sup>9</sup> *Wiener med. Wochenschrift*, 1896, Nos. 29 and 30.

<sup>1</sup> Read before the American Academy of Medicine at Denver, June 4, 1898.

The germs of disease select unhealthy tissue, in fact require a departure from the normal for their growth. Especially is this the case with the bacillus of tubercle—the reputed cause of consumption. In perfect health of the organs attacked by it, this microbe finds so much resistance to its prospering that reason is warranted for believing it to be a result rather than a cause of the disease. If it were not for the opposition of healthy tissue to this germ, we would all have succumbed to it instead of only about one-sixth of the human race, which mortality-records say now die of it.

I think it was Dr. Hutchinson, the inventor of the water-spirometer, who originated the term “vital capacity” as representing the total respiratory power of an individual. In the mind of that great advocate of physical education this term was appropriate because it involved the truth that the breathing power is the proper index of a person’s life-possibilities. To know one’s breathing capacity is to know the measure of his vitality. His resistance to disease and physical degeneracy is largely dependent upon the amplitude and perfection of his pulmonary apparatus. A recognition of the evils resulting from imperfect breathing habits is sufficient for the wise, whether it be to bring reforms in the posture and the school-habits of children, to remedy the relaxed tendencies of college-life, to straighten up and expand the desk-bent chests of mercantile clerks, or to oppose the nerve-exhausting and waist-squeezing dictates of fashion among women. The human body is not a machine that can be finished and then packed away for some future use. It is a living organism that has to grow to its perfection, and then only by use can it be kept there. Exercise is the best guarantee of perfect health.

The completeness of blood-oxygenation and the correct circulation of this vital fluid, giving warmth of hands and feet and glow of healthy skin, depend almost wholly upon the sufficient action of the respiratory organs. Exercise, so far as muscular development is concerned, whether it be of the muscles of the chest, the arm or the leg, in fact all physical culture, has to come back to the healthful work of the lungs for its foundation. Show me a blacksmith’s arm with its bunching biceps and I will bare his breast and show you the capacious chest which can support it. So also with the thigh of a Sandow. The capacity in his pulmonary spaces is ample to back up those huge muscles, and that, too, without any exaggeration of his chest-expansion measurements through extra muscular effort.

The purely muscular-development system may be characterized as the old; the new system of physical education involves the problem of the relation of the *voluntary* to the *involuntary*. It shows how the lungs, heart, stomach, bowels, and kidneys, involuntary in their work, may be assisted and influenced by voluntary action. At present the muscular-development

theory has an ulterior object. Its purpose is the promotion of a wholesome tissue-change and the healthy development of these organs named. The normal digestion and assimilation of food, the circulation and oxygenation of the blood, and the secretion and excretion of waste products, are now appreciated and constitute the basis of belief of the advocates of physical training. In our American system of physical education, whether the German method is copied or the Swedish, it is encouraging to note that this ulterior object is recognized. The colleges are inaugurating a higher type of training. The study of anatomy and physiology is, as it should be, made to go hand in hand with physical culture, to make the system scientific, to give it direction and utility. The good results of both gymnasium-work and field-discipline impress upon college-governors the necessity of adding the best gymnastic teachers to their faculties. Even out-of-door competitive games demand and receive this needed fostering care and regulation. Though it is not my own Alma Mater, I wish to commend Amherst College for the compulsory physical-training course and the enlightened supervision of her students’ health, which is made a prominent feature of the college-curriculum. The value of physical education as a disease-preventive is shown in the results reached by Dr. E. H. Hitchcock, the Professor of Hygiene and Physical Education. Estimated in days lost during term-time by students being too sick to study, there was 8% less loss from ’85 to ’89, after the exercises became compulsory, than before that time, namely, for the years ’61 to ’65, and the death-rate was nearly twice as great for the decade ’61 to ’70, as for that of ’81 to ’90. Another item of statistics also shows the value of physical education in the prevention of disease. The measurements of the same 80 men when freshmen and when seniors gave the following percentages of increase in the four college years:

In bone-structure.....	1.31 % gain.
In muscular size.....	4.47 “ “
In vital organs.....	4.51 “ “
In bodily weight.....	7.42 “ “
In muscular power.....	24.90 “ “

These creditable figures speak for themselves. It is a wonder that professors in other institutions do not appreciate these facts when they see among their pupils the suicidal results of all study and confinement, and the ignoring of their physical needs. With the responsibilities of these young lives on their shoulders, they have never appreciated the inspiration of Emerson when he wrote: “The tell-tale body is full of tongues. The wise man reads its private history in its looks, in its gate, its behavior.”

Since the fellows of the American Academy of Medicine have taken upon themselves this study of the “Physiologic Side of Education,” and have come up



here to this literally higher school of Pulmonary Gymnastics, where in fact the gymnastic air is the recognized basis of the prevention as well as of the cure of disease, it is fitting that we should now turn our thoughts to the æro-therapeutic side of physical culture. This is not only appropriate, but essential, if we are to appreciate the great and fundamental bearing of respiratory exercise upon the prevention of disease. All the mechanisms of the trunk are intricately concerned in the movements of respiration and circulation. Even the muscles that hold the stomach in place and contribute to its activity are associated in respiration. It is understood by many, happily some women included, that summit-respiration, or high-chest breathing, is only partial breathing. It does not exercise the stomach and viscera; only deep, full breathing does that. For the exercise of the involuntary organs nature cries out for sympathy and assistance from her voluntary agency, respiration; illustrating the appropriateness of the name of that important nerve, *the great sympathetic*.

Did you ever attempt to analyze the gape and stretch which in a healthy person ushers in the waking day? It is not, as popularly credited, a lazy sign. It is one of the best forms of pulmonary gymnastics imaginable, because it is so natural. It is the cry of the air-cells and associated muscles for a renewal of that activity which has been annulled by sleep. There is, first, with mouth open, a full and long inspiration, till every usable air-cell is filled; then there is the setting of nearly all the muscles of the body, especially those connected with expiration, the diaphragm, intercostal muscles, etc. Their contractility is not only renewed and assured, but the epiglottis just then closing, prevents the exit from the trachea of this large volume of imprisoned air. This is pushed around into every tardy cell, till the lagging portions are all brought into forcible activity, or, as we will call it, *mechanical distention*. The locally delayed blood-current, perhaps in feeble regions ready to invite disease, receives a push from this squeezing of all the circulation-tubes, which sends it flying on to be itself renewed. Then, on relaxation, comes the refilling of the blood-channels with oxygenated blood, pushed on by the quickly responding heart, and with venous blood drawn in by the recurring act of inspiration. What more useful or complete method of exercise than this natural example can be conceived of for us to copy in our artificial efforts to prevent disease? It is natural, therefore right. It is efficient, therefore reasonable. Every possible experience, especially that of living in these high altitudes, proves that to prevent the abuse of these air-cells, their use must be assured, and sometimes this use can only come through their mechanical distention, or through voluntary effort.

Among other practical physicians, Dr. T. N. McLean, of Elizabeth, N. J., from his "Personal Observations in

Pulmonary Phthisis," has come to exactly the same conclusion that my own studies, covering considerable time, experiment, and research, have led up to, namely: that it is the habitual "mechanical expansion" of the lungs which furnishes the best opposition possible to pulmonary consumption. In other words, it is the will-power that has to be brought into operation in every successful form of physical training in order that a practical *fixation of the thorax results*, thus making the mechanical expansion of the air-cells possible. It may be said that this voluntarily increased use of the lungs is but a theory. It is more than that. It is an essential fact, based upon physiologic experiments and experiences sufficient to dispel all doubts as to this question.

W. Einthoven, supported by his own and the experiments of such men as Prof. Draper, Dr. Samuel West (London), Dr. W. P. Northrop, Dr. W. Gilman Thompson, the late Dr. O'Dwyer, and others, asserts that the "intrathoracic pressure remains negative through life." At the same time Draper computes that the inspiratory force of the lungs is only about one pound, while we know that the normal expiratory force is twice as much. What does that mean, except that it is only by the expiratory effort that this natural vacuum-tendency within the thorax, due to inspiration, can be overcome.

Here is then a purpose of exercise which is essential: namely, that muscular exertion or physical training must be directed to the voluntary increase of the expiratory power, for it is only during that part of the respiratory act that the feeble air-cells or obstructed tubes may be opened. This mechanical expansion is the essential feature in breathing-tubes made to develop and strengthen the pulmonary air-cells. It has been my own aim and success to devise such a means, so convenient in form as to be constantly carried in the vest-pocket for desired frequent use; so adjustable to the strength of an individual as to be universally applicable; and so capable of medication with volatile oils and salts as to be in a measure curative as well as preventive of disease.<sup>2</sup>

That this voluntary muscular activity directed to the pulmonary field furnishes the best preventive we have to consumption of the lungs is a striking fact which is easily demonstrated. Let us, however, first rid ourselves of misconceptions upon this subject, which show the need of such a demonstration.

Not long since one of Chicago's most distinguished physicians, in a paper read before the Chicago Medical Society upon "Voluntary Respiratory Exercise in the Treatment of Phthisis," wrote: "During expiration the lung-tissue is not under pressure and fills with blood, or with lymph, which is again pressed out by a deep, full inspiration, just as by the hand we can squeeze water from a sponge." Now let us have a clear understanding of this matter. "Voluntary respiratory exer-

<sup>2</sup> The In- and Exhaler. The Denver Surgical Instrument Company

cise" does not change the intrathoracic pressure-conditions, which are exactly the reverse of that just quoted. The air does not enter the lungs because some outside pressure forces it in, but because it is drawn in to fill a vacuum; and that vacuum or tendency thereto is caused by the distention of the thorax during inspiration. The automatic elevation of the ribs and descent of the diaphragm enlarging the chest-cavity pulls the air in, and while that traction is continued one cannot get increased pressure. The pressure is all on the outside of the body, and if the air cannot get in, a less flexible fluid, the blood, will do so, and increased tension in its channels results. This is a fact wonderfully illustrated by the pulmonary congestion of the lungs occurring in laryngeal diphtheria, which congestion, and not the diphtheric poison, has killed one-half the unoperated fatal cases of laryngeal stenosis due to diphtheria. The air and blood in the chest-cavity are then reciprocal in their movements, and respiratory activity influences both, that one the more which is the easier used.

I have devised this instrument placed before you, which we will call an *illustrating air-cell*, to show these intrathoracic conditions.

To better understand the illustration, imagine, if you can, this whole building in which we are, to be one-half of your chest-space, or one lung, and the air-cells all enlarged to the size of the rubber balloon within this sealed glass jar. Imagine also that these thus magnified air-cells are the ends of, and connected with, tubes which double in capacity as, coming down this way from the ceiling, they unite with each other. This is the system of microtomy, or equal subdivision of the bronchi, which exists, and causes an even flow of air, in the lungs. Finally, in imagination, one large tube is reached down here near the center of this room. Now you have an enlarged idea of the lungs, of one air-vessel of which our illustrating air-cell is even yet an exaggeration. It is purposely made large enough to appeal to your sight, that you may see the effect of our expanding and contracting the air within the globe around the flexible air-cell. It will then be quite apparent, substituting the illustrating air-cell for our own lungs, why at a little above the altitude of Denver we have to breathe a fifth more air to get the same amount of oxygen as at sea-level. You can recognize the fact that as the density is increased to the equivalent of sea-level pressure, the lung-space in use is contracted. This is in accordance with what scientists have remarked of the size of the pulmonary organs in the inhabitants of low-lying countries, especially under the equator. You can also see, as you will appreciate by your own sensations, if you ascend to the summit of Pike's Peak, how, when the air in the globe is diminished in pressure to the equivalent of that height, your air-cells are stretched to their utmost capacity, especially on exercise.

We can exhaust the air around the balloon to the ex-

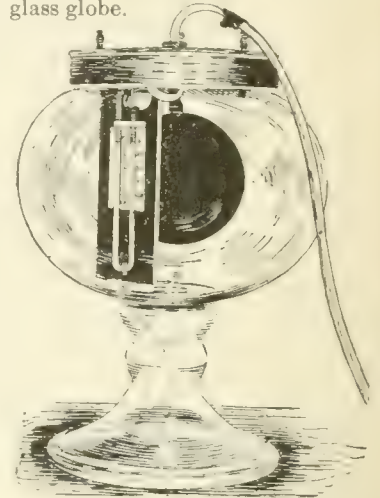
tent of three pounds pressure, as shown by the manometer within the globe, and then the conditions are nearly the same as at Pike's Peak; then watch this expanded "air-cell" contract as we not only return to our present the Denver pressure, but by an increase of three pounds more reach that at or below sea-level.

In addition there is here an illustration of what we have just been arguing about, namely: the agency of increased pressure produced within the chest during expiration. Let one of the exit tubes from this globe represent the exit bloodvessels from the lungs. I have placed in this tube a musical valve which you perceive will whistle when the air-cell is distended, thus demonstrating the pressure to be outside of it, but within the globe. This is equivalent to, and a fair representation of, the bloodvessels surrounding our own air-tubes.

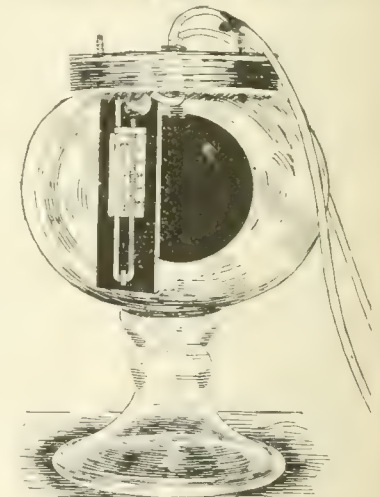
Another application of our illustration may be appreciated by corset-bound woman. Imagine your flexible air-cells held in such a rigid envelop. You try to draw the air into the "air-cell" or out of the globe from around it, and you see by the recording of the manometer within that you have only a little more than half the inspiration-power

#### THE ILLUSTRATING AIR-CELL. (DENISON.)

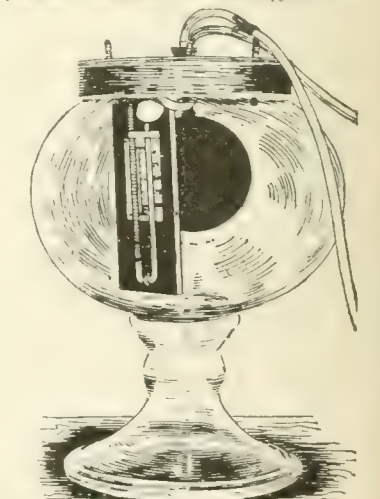
To show the expanding effect of lessened atmospheric pressure upon the pulmonary organs by toy balloon and manometer inside a sealed glass globe.



DENVER PRESSURE.  
5,200 feet elevation, about 12½ lbs. to square inch. Diameter of cell (balloon), 1½ inch.



13,000 FT. ELEVATION PRESSURE.  
9 lbs. to square inch, same air in balloon expanded. Diameter of cell about 1½ inch.



SEA-LEVEL PRESSURE.  
15 lbs. to square inch, same air contracted. Diameter of cell about 1½ inch.



that your blowing in or expiration-force shows. What, I ask, is the poor diaphragm going to do when it is so handicapped as it is by a tight corset?

How altitude, exercise and the practice of exhaling under restraint tend to drive out the stagnant or congested blood in infiltrated areas of lung-tissue, is so apparent that the advantage of the habitual and voluntary distention of the lungs must be recognized by even the casual observer. The heart is a strong organ and a constant worker, but the blood does not flow *only* because the heart pumps it, but *also* because the lungs draw it into the thorax and push it out again. How important and essential then is habitual activity of the pulmonary air-cells to produce a complete and healthy blood-circulation. The chances are more than even that it is not the heart's fault if your hands and feet are habitually cold, but that you don't know how to breathe properly, or, knowing, you have lost the incentive to do it.

In this lack of incentive, or of the due appreciation of the benefits of exercise, lies the greatest difficulty in securing the best results. The father may scold and the mother implore, yet the relaxation and lassitude incident to commencing disease in the round-shouldered, thin-chested and rapidly growing boy or girl, continue in evidence of the need of proper exercise because a sufficient incentive for it is lacking. It is because exercise is voluntary, as well as muscular, that it must be a part of education. Likewise, because it is voluntary, regularity and method are essential features of whatever form of training is chosen. Of all times of life, this is most needed in school and college. If one does not get right exercise there, or by substituted out-door activities or pleasures, then it should in some way be engrafted in the curriculum of his home-life. Without proper physical exercise the natural tendency is to physical decadence and death. It was Washington Irving who said, "I am convinced that he who devotes two hours each day to vigorous exercise, will eventually gain those two hours and a couple more into the bargain."

## THE DANGERS OF SPECIALISM IN MEDICINE.<sup>1</sup>

By L. DUNCAN BULKLEY, A.M., M.D.,

Physician to the New York Skin and Cancer Hospital, Consulting Physician to the New York Hospital, etc.

THE American Academy of Medicine has always represented the highest altruistic aspect of the medical profession, and few medical societies, I think, have ever been actuated by more unselfish principles, or have aimed higher for the real benefit of the profession to which they belong. To be President of this Association is, therefore, the highest position attainable, and it

is needless to say that I feel most deeply sensible of, and grateful for, the quite unmerited honor of being called to preside over your learned deliberations. I am still more sensible of my unworthiness when I look back at the line of distinguished men who have preceded me, during the last twenty-two years, and when I remember how little I have done to advance the work and interests of the Academy during the nearly twenty years of my connection with it.

But regrets are only valuable as they serve as a stimulus to increased zeal and effort; and many of us, I think, may well repent of lack of earnestness in forwarding the objects of the Academy, and may well resolve to strive harder, hereafter, to advance, not only its interests, but the highest and best interests of the profession to which our lives are devoted. I suspect that our noble and indefatigable secretary is almost the only one to whom this stricture is not more or less applicable.

The Academy has had a singularly peaceful and increasingly useful life. Beginning in a very small and unobtrusive manner, it has steadily grown in strength and importance, until now it represents an influence, exerted by the educated men of the medical profession, which is second to none in this country. The high class of work which has been done at its sessions and the interesting and valuable contributions on our program for this meeting are such as must command the respect of thinking men, and exert an influence for good which will never be measured.

It is certainly encouraging that there has been such a steady and healthy growth in the roll of the Academy; it now numbers between 700 and 800 members, residing in 39 different States of the Union, besides those in the Army and Navy, Canada, and elsewhere. All the best academic colleges are represented in our ranks, and it is safe to predict that our numbers will grow and our influence extend with the coming years, until all who are eligible will be glad to be enrolled as members of this guild of college-educated medical men.

With the growth of the Academy its usefulness has certainly increased, and the admirable arrangements of later years, whereby there have been topics for discussion by a number of gentlemen, have certainly contributed very materially to the interest of its meetings and the effectiveness of its work. Many aspects of education have been considered, and many matters have been presented relating to the best development of the medical profession. As yet, however, very little has been said in reference to the development of specialties in the profession, although these form a very important feature in the actual work of the day. I think the Academy might well devote some time at a future meeting to the exchange of views regarding such as "The education and training of the special consultant;" "How far has specialism benefited the ordinary practice of medicine?" "What are the duties and

<sup>1</sup> President's Address before the American Academy of Medicine, Denver, June 6, 1898.

privileges of the special consultant?" "The proper limit of specialism in medicine," etc.

On two former occasions<sup>2</sup> I ventured to bring some thoughts before you on "Specialties and their relation to the medical profession," and "On the relation between the general practitioner and the consultant or specialist," and I would like now to direct your attention for a few moments to some of the dangers of specialism in medicine.

First let me in a few words define what I consider to be the present status of the special consultant in the medical profession; this may be stated in a few propositions which all will be inclined to accept without controversy.

1. The science and art of medicine has, in company with other sciences, become so vast and extended that no one mind is capable of fully grasping and perfectly understanding every portion of it, and practising in every line in the best manner possible. Every medical man is unconsciously more or less of a specialist, or more qualified in certain lines of knowledge and experience than he is in others.

2. Specialism is, therefore, a natural, healthy outgrowth from general medicine, as one and another person engaged in the study and practice of medicine has emphasized and developed one portion or another of the vast field in which all have labored.

3. Specialism has aided greatly in the advancement of the science and practice of medicine, by the concentration of thought and experience in special directions, and by collecting and utilizing large numbers of cases for the instruction of those engaged in medical study and practice.

4. The several branches of specialties into which medicine is divided are each so great and extensive that the study and practice of one branch are sufficient to fully occupy the time and thought of any one individual, it being difficult even to follow completely all the advances pertaining to any one particular line or department of medicine.

5. In order to properly follow and develop one of the specialties in medicine, the medical man should be particularly well educated, theoretically and practically, in all the departments of medicine, and should have experience in general medical practice before taking up any special branch. The highest and best type of a specialist is one who, after thorough training and experience as a general practitioner, develops a special branch in his practice, and more or less gradually comes to devote the greater part or all of his time to the same. In other words, the specialist should be a good physician *plus* the particular knowledge of his specialty; or, as some one has put it, he should know something of everything, and everything of something.

6. The tendency to specialism in medicine cannot be arrested; first, because the vastness of medical science

demands it, and, second, because the public require and will pay for the highest attainable knowledge, experience and success in this as in all other matters relating to human comfort and welfare.

This being the case, it remains for the medical profession to seek to so influence and mold medical and public opinion that this great and important part of medical practice shall be conducted in the best manner attainable. It seems to me that the American Academy of Medicine can do much toward the accomplishment of this very desirable end by repeated and proper agitation of the matter.

Having briefly considered the status and relations of medical specialism, let us look for a moment at some of the dangers growing out of the same and which may tend, if not checked, to a lower rather than a higher standard of education and practice in special lines.

First, let us speak of the education of a specialist or special consultant. Fortunately the laws of the land compel the specialist to have a general medical education and to pass more or less of an examination on all the branches of medicine, in order to acquire the diploma which gives him the privilege and right to practise; the law also provides penalties for practising without a certain measure of qualification; otherwise it is feared that the standard of real medical knowledge among those practising specialties might be lower than it really is.

But the question arises, is the education commonly obtained sufficient to fit the specialist to practise in the best manner possible, and what are the educational dangers in connection with specialism in medicine, as actually existing at the present time? Pretty close observation has convinced me that there are dangers in several directions. Let us first consider those relating to the education and preparation of the special consultant.

While it must be granted that the course of study in the medical colleges has greatly improved during the past 20 years, is it not true that the vast multiplication and increase of the matter offered to the medical student for his learning and absorption have put a tax on the mental powers of the young man which is about all he can possibly stand? The amount of material which he is required to digest and assimilate in the three or four years is really enormous, and can hardly be appreciated by those who have not had opportunities of personal acquaintance and association with recent medical students. At the close of the college course he has a mass of knowledge and information, largely about scientific and theoretical matters, compressed and condensed to such a degree that it is little wonder that the powers of observation and deduction are warped, and there is little relish for, or appreciation of, the minor details and also the generalities of medicine, which form so important a part of all true and successful practice. I also claim that the tendency of the teach-

<sup>2</sup> *Journal of the American Medical Association*, Dec. 13, 1884; Feb. 2, 1889.



ing of the schools, and, indeed, of many text-books, is too much toward the personal element, as exhibited in the various aspects of surgery and diagnosis, and with too much skepticism in regard to therapeutics in the broadest sense. One has only to examine a number of recent graduates for interne hospital positions, and to be associated much with them in their hospital duties to understand fully what is meant by this criticism.

Such being, then, the first education of the embryo specialist, what is the future development of many specimens of this nineteenth-century product of medical development, the special consultant?

Let us recall the definition previously given of the highest and best type of specialist: he is one who, after thorough training and practice as a general practitioner, develops a special branch in his practice, and more or less gradually comes to devote the greater part or all of his time to the same. This was true of most of those who were educated 25 or 30 years ago, and is true of many of those who have in times past shed the greatest luster upon the various departments of medicine and surgery. But in the rush and hurry of these later days this process is too slow and laborious, and the specialist must be produced to order on very short notice; consequently, as in many other directions, the forces of nature and art rise to the emergency, but, unfortunately, as in other lines, it is often "shoddy" that is produced.

Not only cannot the aspirant to a "specialty" afford now to waste long years in general practice, whereby he would gain acquaintance with the human system as a whole, which would be of inestimable value to him, if he only knew it, but, unfortunately, even a year or two spent as interne in a general hospital is often considered as unnecessary; "for," he says, "you know I am going to practise a specialty;" he intimates, and often seems to believe, that it is not necessary to know much of medicine outside of the specialty at which he is aiming. All this is not said in any wrong spirit of criticism, but is suggested by what has come under my observation for some years past, and is uttered as a warning which those most interested in the well-being of the profession at large should seriously consider.

The would-be specialist of to-day too often plans to enter a specialty from the first, or while in the medical college, instead of being led into it by circumstances, after experience in general practice. With this end in view, if the means are at hand, he will often go at once abroad, and by a longer or shorter stay at the principal capitals of Europe seek to become acquainted with the particular branch which has been chosen. Here again is a double error; for with the rudimentary knowledge of general medicine acquired in college he is not fitted even to assimilate the clinical material which is at once given, much less to appreciate any relationships which the lesions of the particular organ may have to the general economy. The

result is, too often, very great attention to the diagnostic elements of the branch and very little attention to rational therapeutics, and practically no consideration of the greater relationships of the special diseases to the condition of the rest of the system. Fortunately the tide of general medical opinion is turning, and constitutional influences are beginning to be again recognized in many directions where local pathology held high sway a few years ago; but it often takes the young specialist a long time and sometimes hard experience to find this out practically.

Returning to this country, the newly-fledged specialist, with an ill-digested European experience, seeks at once to put in practice what he has there acquired, having in the meantime forgotten much that had been learned in the medical college, simply from want of practical application to the same. I know that many of my hearers will agree with me as to the personal feeling of disqualification and inexperience encountered when first entering practice after graduation, and will recall the severity of the effort necessary to apply the principles learned to the actual disease-state presented for treatment. How greatly must this be increased when, instead of personally meeting and overcoming difficulties in general practice, the freshly graduated student has at once turned to acquire quickly an entirely new subject, and has had his mind filled with innumerable details pertaining only to the specialty he has sought to master.

But the difficulties in the way of a specialist becoming an all-round man do not end here. Feeling the necessity of developing the branch to which he has devoted his attention in the best and fullest manner possible, his reading, often in the foreign languages, is generally very largely along the same line; indeed, so vast has become the literature in each branch of medicine that it is now really a physical and mental impossibility for one to read all that is written pertaining even to one special line; thus, very naturally, general reading and study must necessarily be neglected.

The same is true in regard to practice. The rising young specialist feels the need of seeing and doing as much as possible in his special department, and so every effort is made to secure a dispensary service in that line alone, and it would generally be considered a waste of time and energy to enter any other branch of practice. I remember very well, over a quarter of a century ago, how, on returning from foreign study, I was more than annoyed and disappointed because I could not at once secure a skin-service at one of the leading dispensaries. In order to get a foothold I was led to take charge of a large class in general medicine; and I have always felt thankful to the kind Providence which thus directed my attention again to the ordinary ailments of life, instead of permitting my thoughts and experience to run alone in the narrow channel belonging to the study and practice of a pure specialty.

This experience, following a father's wise instructions, together with general medical service as interne in the old New York Hospital, has been of inestimable service in connection with the subsequent development of a specialty along the lines of general medicine. From past experience and study of the question I would most strongly urge that those who contemplate practising any specialty in medicine, should most certainly secure the experience of interne in the medical side of a general hospital, and afterwards attend a general medical class at a dispensary for as long a period as possible, even in connection with a special clinic along the chosen line of practice. It would also be very desirable if specialists could serve as visiting physicians to general medical hospitals, in order to broaden their views and to avoid the risks of routine which threaten them.

The question often arises in regard to younger specialists taking general practice, and, as far as I can learn, it is quite customary for them to avoid it, and to seek to confine their practice exclusively to the branch which they are seeking to follow. This is too large a question to discuss fully at the present time, and there are reasons for and against the specialist engaging in general practice. But in point of fact it is a misfortune for him not to do so, from a broad medical aspect; the tendency to narrowness of vision, generated by close attention to the details of one line of thought and practice, cannot be too vigorously combated.

We have spoken of the education of the specialist abroad, which was seen to be not without its drawbacks and objections; but, unfortunately, many who of late years have entered the ranks of specialists have not even had the advantages thus afforded. Without these opportunities of special study there are many who have in other ways entered upon and followed special lines of practice with greater or less success, sometimes with relatively little equipment. All honor to those who struggle against difficulties and rise to a well-earned position, and I should by no means disparage laudable efforts in this direction. There are many practising in special lines who are ornaments to the profession, and who have done much to advance their special departments, who have had exceedingly meager advantages in regard to early training, but whose indomitable courage and patient labor has more than compensated for the lack of early training. But the success of the few has been a temptation to very many others to seek through a specialty a short road to success in medicine, and I fear that the tendency to this is rather on the increase, and the note of warning should be sounded. It is, of course, quite possible for the physician, after many years' devotion to a special branch, and seeing many cases of one particular line of diseases, to become skilled therein, even without the best antecedent qualifications. But in the past few years there have been many who, soon after graduation

and after a brief course of instruction in one of the post-graduate medical colleges, have launched out as specialists, and who in one way or another have been more or less recognized by the profession as leaders in this or that line, upon a very slim basis; and, in the light of what has just been said, it is feared that they are far from being in the way of making substantial advances in the branches to which they have exclusively devoted their attention.

The means by which these aspirants for recognition as specialists come before the medical (and too often the lay) public are familiar to all. Prominent among these is undoubtedly the unfortunate state of journalism, whereby, in the excessive multiplication of cheap medical periodicals, dependent largely upon semi-quack advertisements, there is such a demand for literary material that there is no difficulty in securing publication for everything, however trashy. We all feel, in looking over files of medical journals, that there is very much written that should never have seen the light; and it is difficult for a thoughtful person to say where this is to end.

Another fertile means for the advancement of quasi-specialists is found in the medical societies, also multiplied so greatly of late years. Too often it has happened that the misdirected zeal of officers of societies has led to the production and presentation of papers quite unworthy of the occasion, and opportunities are offered in the papers and in discussion for the advancement of individual interests not always the most desirable from a scientific point of view.

The colleges are also responsible in a measure for the development of the modern specialist. In the desire to have all the branches of medicine represented, special chairs are created and filled by the authorities by those who may or may not be best fitted for them; often it is difficult to secure those thoroughly qualified.

In one way or another, therefore, medical specialism has run rife of late years, and, as remarked before, many have been led prematurely into special practice as an easier and quicker path to success than the relatively slow and laborious road through general practice.

This leads us to the second aspect of the dangers of specialism in medicine, namely, that relating to the pecuniary phase of the subject. The good Book says: "He that maketh haste to be rich shall not be innocent," and "They that will be rich fall into temptation and a snare;" and while the general practitioner has always been regarded as too negligent of monetary affairs, the charge of the reverse has sometimes been brought against the special consultant, perhaps with some shadow of justification, in particular instances. Time and space forbid our entering largely upon this delicate subject, but it is alluded to as an important element connected with the dangers of specialism in medicine. The fair fame of the medical profession, as a whole, as



regards its beneficent and self-sacrificing character, suffers when any of its members give occasion for uncharitable judgment by the public.

Many of the grounds for this criticism are familiar to all. Such are, exorbitant charges for service or fees for operations; prolonged and unnecessary treatment; unjustifiable operations; appearing in the public print; securing patients by questionable means; criticism of other practitioners, and many unethical practices which have sometimes been charged. Our noble profession should be above reproach; but sadly enough, to err is human, and also the bars leading to its entrance have been so widely thrown open that stray and black sheep have at times entered the fold. Fortunately such are the great exception; but, realizing the dangers connected with specialism in medicine, those who have its best interests at heart should be watchful and seek to recognize and meet them.

How far the American Academy of Medicine can be able to stem the tide of what sometimes seems to be degeneracy in medical educational matters, cannot be foretold. It has done much already in advancing the cause of higher education, and by constant effort we can yet hope for further advances. All medical societies, as well as individuals, should labor together for the highest professional and ethical standards, and seeing and recognizing the dangers connected with specialism in medicine we will be better able, in season and out of season, to elevate the status of the profession in all its relations. It is in this spirit that I have endeavored to develop the subject proposed, and not from any hypercritical or captious desire to minimize the efforts of the steadily increasing army of those who are working in special fields. When the profession fully realizes that there is a difference between the *true specialist* and the *exclusivist*, who knows only his own branch, however well that may be, and when the broadest medical education and experience are recognized as the only fit qualifications for the true specialist, there will be an improvement in the grade of special consultants and a higher meed of praise for those whose opportunities, talents, and labor have raised them from the rank and file of the general profession to positions of eminence as consultants in regard to particular classes of diseases. The general and medical public are not slow in recognizing the good from the bad, the spurious from the true; and if only the leaders of the medical profession, and such leading societies as ours, utter the note of warning, there will be an improvement in the mode of developing specialists to meet the demands of a more enlightened general and medical public.

Let the American Academy of Medicine, therefore, take courage and encouragement; let it press forward still more earnestly and bravely in all its excellent work, not only of urging better preliminary education, but also of improving the curriculum of medical study and

preparation for all the departments of medical work. Its supporters and the profession will then more and more feel and realize its altruistic character; and if honor and renown do not come in the greatest measure upon its members, they will have the highest of all satisfaction—that of having labored unselfishly for the best interests of their profession and for their fellow-men.

### INTENTION-TREMOR OF THE ARMS AND HANDS.<sup>1</sup>

By HAROLD N. MOYER, M.D.,

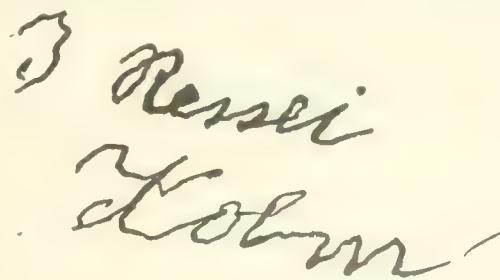
Assistant Professor of Medicine, Rush Medical College, Chicago, Ill.

This patient is 18 years of age, of Jewish descent, and has lived in this country since early childhood. Her parents were born in southern Russia; they are both living and well. She is intelligent and gives a good account of her family history, which is free from neuroses of any kind.

She consults us for a tremor of the hands, which she says is so marked that she is unable to do any fine work, such as sewing. She supports herself by housework, which she says she is able to do, though at times the tremor is so marked that she drops articles. In handling a plate it is often necessary to grasp it with both hands to keep from spilling the contents. Notwithstanding this serious disability, she has been able to retain a situation as a domestic. She consults us today in the hope that she may obtain some relief from the tremor and that in this way she may enter a more remunerative employment.

She says that the tremor has existed for about 10 years. When 8 or 9 years of age she was attacked by a cow and tossed on its horns. She was not injured, but was greatly frightened. At that time the tremor began and has persisted ever since. She thinks it is worse now than at first; but when closely questioned on this point, she says she is not sure, as it is possible with advancing years, and increasing use of her hands in work, that the tremor may have been more noticeable.

In observing her closely it is seen that the tremor belongs strictly to the "intention" variety. With the hands resting quietly in the lap there is no noticeable tremor, but with voluntary effort the hands are immediately thrown into a fine tremor, which is increased in direct proportion to the amount of coordination required in effecting a movement. Upon asking her to hold out her hand with the fingers separated there is only a perceptible tremor. When she is asked to convey a glass of water to her mouth, the tremor is much more marked. Writing, she says, is almost impossible, but after considerable urging she succeeded in writing her name.



The writing shows the wavy outline, similar to that seen in advanced senility, parietic dementia, and insular sclerosis.

The tremor is confined to the forearm and the flexor muscles of the arm. In grasping one's hands the tremor is perceptible, and the same is true if the fingers are extended against the hand of the examiner. The same fine oscillation is noted if the biceps muscles are brought into action. The triceps extensor and the shoulder-muscles are free from the slightest sign of vibration, as are the muscles of the neck, face, and eyes. There is no nystagmus nor alteration in the pupillary reactions or eye-grounds. The tongue and eyelids

<sup>1</sup> A clinical lecture at Rush Medical College, Clinic for Nervous and Mental Diseases.

are free from tremor, as are the lower extremities. The tendon-jerks are normal and there is no incoordination.

The girl appears to be what she claims, a perfectly healthy young woman; she is well-developed, with normal digestion and uterine functions, and excellent nutrition. She sleeps well and says she is free from nervousness.

The question of diagnosis is one of considerable difficulty in this case. The character of the tremor and the age at which it appeared would naturally suggest a diagnosis of multiple disseminated sclerosis. A progressive condition would have some bearing upon this question, but, unfortunately, the history is not clear on this point. The absence of nystagmus, and the strict limitation of the tremor to the forearms and flexor-muscles of the arms, the unchanged knee-jerks negative but do not exclude a diagnosis of disseminated sclerosis.

After a careful consideration of all the elements in this case we do not see that we can do more than label the case as one of tremor, with the full understanding that this is no diagnosis, but a mere statement of the most prominent condition present. Other conditions, such as neurasthenia, hysteria, and toxemia, are excluded by the history and examination.

Of treatment we can say next to nothing. If the tremor could be traced to a toxic condition, or a functional neurosis, something might be done, but in the absence of such indications our therapeutics must be of a most random character. Arsenic is supposed to have some value, and we will place her on full doses for a short time. The prospect of cure or material improvement is certainly remote.

## A NEW METHOD OF PREPARING SILK LIGATURES

By F. A. SHERRER, M.D.,

Resident Physician, Philadelphia Hospital.

IN reviewing the different suture-materials we find that, at present, no one of them fulfils all indications. The following objections may be summed up against them:

1. Difficulty in sterilization.
2. Sloughing of the ligature when buried in tissues, the blood-supply of which is poor, or has been interfered with by traumatism.
3. Absorption before the wound has properly healed.
4. Mechanical properties, as stiffness, etc., the ends of the sutures irritating the surrounding parts.
5. Expense.

Prior to the days of asepsis and antisepsis, many good results were obtained by the use of silver wire, particularly so in those regions which were liable to infection by the passage over the wound of secretions, and in the suturing of ligamentous tissues, as in herniotomies. We now know that these good results were due to the antiseptic virtues of the silver, which was partly dissolved by the body-juices and acted directly upon the pathogenic organisms. The disadvantages of silver wire are, needless to say, mechanical ones. To-day Halsted

and many others are using silver wire for many operations, particularly herniotomies.

With these merits and demerits in view, I have prepared silk in the following manner, hoping that the practical results may justify the theory:

The silk is first wound about a microscope-slide, so as to present the greatest possible surface, and boiled for five minutes in a dilute solution of sodium bicarbonate, to remove all fatty and resinous material. It is then washed in running water for half an hour to remove all the soda. I next boil it for five minutes in a strong solution of silver nitrate and then drop it in a dilute *boiling* solution of sodium bicarbonate, and in five minutes remove it. The sodium bicarbonate has precipitated upon the silk, metallic silver, which colors the silk a deep brown. The silk is now washed for half an hour in running water and dried. To sterilize the silk it is only necessary to boil it. The process does not rot the silk, and it will be found as strong after the process as before. A strand of this silk placed in a culture of colon-bacilli, was found to retard their growth for an area of  $\frac{1}{8}$  inch from the silk, while farther away they grew luxuriantly. Dr. G. M. Boyd, of the Philadelphia Lying-in Charity Hospital, kindly used this silk in two cases requiring oophorectomy, both in tying off the pedicles and in the suturing of the abdominal wall. He reports that the silk was all that could be desired. I have used it in one herniotomy and six circumcisions. While it may not be justifiable to draw conclusions from so few cases, I will say that none of the sutures showed any signs of sloughing, nor of pus, nor did they cause any pain or reaction. These results I attribute to the ease of sterilization and to the silver contained in the silk. The process is cheap and simple, and I hope the profession will give it a trial.

**Hydatiform Degeneration of the Placenta.**—R. S. T. Nariman (*Indian Med. Rec.*, July 16, 1898) reports the case of a woman, 26 years old, in the eighth month of her tenth pregnancy, who had been "flooding" nearly 5 hours. There was some collapse; the extremities were cold; the pulse was feeble, and a dirty cloth-pad saturated with blood was found tightly pressed into the vagina. The woman had been married eleven years; menstruation had been regular; there had been no miscarriages. Menstruation had appeared four months after the birth of her last child; had then stopped for two months, when it reappeared and lasted for twenty-four hours only. From that time she had flowed profusely seven times. Although the signs of pregnancy were present, the uterus was smaller than normal at that period of gestation; a uterine souffle was heard, but the fetal heart could not be distinguished; nor could the fetal parts be made out in the enlarged doughy-feeling abdomen. As the condition of the patient made the emptying of the uterus imperative, the first and middle fingers were carried into the uterus, and a mass feeling like a large blood-clot was removed. This was found to be a bunch of hydatids, connected together by slender pedicles. The remaining contents of the uterus were removed with finger and curet, but no vestige of an embryo could be found. The uterus was freely irrigated with hot carbolized water, and stimulants were administered. On the following morning irrigation was again practised, as the temperature had risen to 102° F., and the pulse to 140, and a small amount of debris came away. The temperature now fell, and from the third day there were no symptoms of fever.



# The Philadelphia Medical Journal

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**Virchow's Address.**—It is with satisfaction that we present our readers in the present number with the address of Professor Virchow, synchronously with its appearance in London. For this privilege our readers will unite with us in recognition of the great courtesy of the editors of the *British Medical Journal*.

**Meetings of Medical Societies.**—The table published elsewhere has been compiled from information kindly furnished by request by the secretaries of the respective societies; so far as given, it is, we trust, correct. But the table is incomplete, and we beg secretaries of National and State Medical Societies to help us make it full and accurate. We do not wish to misinform even the readers of our kind contemporaries who may again copy the table without a hint of credit or thanks to us.

**A Newspaper Enterprise.**—When business is dull the yellowish newspaper turns to the doctor to help him. We were recently interested in quizzing a wide-awake reporter who was sent to us to secure personal data for a forthcoming "write-up," in which "all the famous physicians and great surgeons of the city are to be included, etc., etc." We found that the advertisements of the great men are to be flattering and long and detailed, exactly in accordance with the amount of money contributed by the bepraised ones. For \$15.00, for example, so much; but for a larger sum the educational attainments, the great operations, the great books, discoveries, the office hours, etc., etc., could be mentioned, with the butter laid on as thick as the bread could wish. One conversant with the newspapers of a city could foretell precisely what names would have the longest notices and the most fulsome eulogies. One not so well acquainted would wonder why newspaper fame and true professional honor do not seem to tally exactly.

**The British Government and Malaria.**—A commission has been appointed by the British Colonial Office conjointly with the Royal Society of London, to make a detailed investigation of the various questions associated with malaria. The commission is a small one, consisting only of three gentlemen, Dr. C. W. Daniels, of Georgetown, British Guiana; Dr. J. W. Stephens, who has done good work in the pathological laboratory of Cambridge University; and Dr. S. R. Christophers, who has quite recently carried off many

honors in physiology at the medical school of University College, Liverpool. The commissioners being all comparatively young men, it is understood that their duty will be to collect facts rather than to formulate theories to account for the gaps in our present knowledge, and with such a scope to their labors their youth is certainly much in their favor, as malaria has to be investigated in an environment of physical discomfort and strain. Dr. Stephens and Dr. Christophers are to join Professor Golgi in his famous laboratory at Pavia first, are then to make themselves masters of recent Roman work, and later to join Dr. Daniels in Africa. The earliest joint work of the commission in Africa will be to determine the clinical varieties of malarial fever occurring there, and if the commissioners are successful in this feat they will have accomplished a most useful task, for at present the word "malaria" means almost nothing, so many varied conditions being covered by the term.

**Suggestions to Writers, No. 11: Hybrid Words.**—The reasonable view of hybrid terms seems to be embodied in the following remark of Barclay in 1803: "Notwithstanding the opprobrium attached by some to certain connections and intermarriages among harmless vocables, I should be inclined not to reject the cooperation of the two languages (Greek and Latin) when experience shows it to be convenient, useful or necessary." Abstractly, we may all prefer horses to mules, but this need not hinder us from recognizing that, under certain circumstances, the latter are more efficient than the former, and that, in a given case, a horse may not be even so handsome as a mule.

Apparently, also, Professor Kolliker objects to hybrid words as "Barbarismen." Yet the German list, adopted by a committee of which he was chairman, contains at least fourteen compounds of Greek and Latin elements, viz., epidurale, mesovaricus, parumbilicales, parolfactorius, perichoroidiale, suprachorioidea, choriocapillaris, pterygopalatinus, pterygomandibularis, phrenicocostalis, sphenopalatinum, sphenoccipitalis, occipitomas-toidea, and squamosomastoidea.

Was language made for man or man for language? Is it a fetich or a useful tool? There can be nothing but contempt felt for the dilettanteism that would reject a good word because its roots are found in two languages. There are thousands of such existing words, and if this method of formation had been more

frequently used we should have avoided many ridiculous examples of philologic "jewels that on the stretched forefinger of time sparkle forever."

**The Bacteriology of Rabies.**—Though there are some who would deny the existence of such a disease as hydrophobia, its reality is generally admitted. Both it and rabies are looked upon as infectious diseases, although the microorganism of each or both has hitherto eluded isolation. Whether or not the two diseases are identical and dependent upon the same cause, also yet awaits determination. In the few diseases thus far successfully treated with products of the biologic activity of their bacterial cause the isolation of the microorganism has preceded the separation of the therapeutic agency; the reverse is true of hydrophobia and rabies. There can no longer be any doubt of the utility of Pasteur's method of treatment. Even the Germans have tacitly acknowledged this, by the establishment of institutes for that purpose. Recent observations justify the hope that we shall soon know the microorganism of rabies and thus be able to place the treatment of the disease upon a rigidly scientific basis. Several investigators have found in the secretions and the spinal cord of rabid animals a bacillus believed to be specific, and Memmo (*Centralbl. f. Bakt.*, Bd. xxi, Nos. 17, 18) has described a blastomycete that he has found in the cerebrospinal fluid and the substance of the brain and spinal cord, in the saliva and the parotid gland, and in the aqueous humor of dogs dead of rabies, and of inoculated rabbits, guinea-pigs and pigeons. This organism has been cultivated upon artificial media, and with the cultures the disease has been reproduced by inoculation in dogs, rodents and birds. If these observations are verified we shall have a substantial basis for the Pasteur treatment, and we shall have advanced a step farther, not only in bacteriology, but also in prophylaxis and therapeutics.

**Concerning Popular Ingratitudes and Heroes.**—The principal item of Behring's defence is one that, whether in his case it be true or not, still deserves most serious consideration. The popular blindness as to who are real heroes, the public ingratitude for real service are strange and ancient facts. Let a man grapple with a fundamental evil of life and he will be likely to find absolute neglect; let him, by the highest heroism, conquer it, and the world will generally let him starve and die unknown. It is an easy trick to catch the attention and win the applause of the superficial and emotional masses by some bit of cunning or selfish buffoonery, but men of character despise such cheap fame and stupid heroism. Behring brings straight before the world the question of the world's ingratitude to its real heroes. We may leave aside the question whether Behring is himself a hero or not. There is something absolutely wrong with civilization when it gives riches

to the maker of a popular toy, song, play, or politician, and lets a man who saves a thousand lives by laboratory experiments and research starve to death. Our rich men gain a cheap self-satisfaction and a more worthless fame by ministering to popular fancies and demagogueries by their foundings and endowments, and all the time the men who are extinguishing diseases and transforming the future by their silent and lonely work are as much ignored and neglected as hibernating bats. It is true that the neglect has its uses, and that he who does real work for humanity would be often spoiled by the dirty breath of the world's applause. The schooling of self-dependence and adversity is good for true greatness, and not seldom produces a more perfect good both in character and work, but it is also true that the fatuous and stupid idolatries of the *Zeitgeist* are carried to absurd extremes nowadays; and the fact of refusing food and tools to the far-sighted scientific worker shows how oblivious to genuine self-interest society can be. Some method should be devised whereby the rich could be shown the good of endowing preventive medicine. Society and governments should be instructed, and the fact kept before the world's consciousness, that to prevent the causes of disease and evil is better than to cure their results, and that with a little help and money the death-rate of all civilized peoples may be reduced one-half.

**Physiologic Exclusion of the Intestine.**—The possibility of completely isolating a section of intestine by invaginating its ends, closing them by Lembert sutures, and leaving it in the abdomen, has been proved by the experiments on animals of Barcz, Wiesinger, Friele, and Obalinski. A practical application for this procedure exists in cases of tuberculosis of the intestine, or ulceration from any cause, in which case the isolation of the gut and the consequent prevention of any irritation by the passage of fecal matter through it would tend toward a cure. Obalinski records a case in which, after resecting a badly diseased tuberculous cecum, he closed both ends of the ascending colon and left it in the abdomen. Up to 14 months after its closure the isolated colon gave no trouble, and on operating at the end of this time for ventral hernia it was examined and found in good condition. However, one year after this it was necessary to remove the intestine because of the serious symptoms arising from retained intestinal secretions and the continued advance of the tuberculous process. Salzer has modified this operation by establishing a fistula in connection with the excluded portion. Senn, in a paper on the surgical treatment of intestinal tuberculosis, states that the danger of closure of the intestine is nearly as great as that of resection, and recommends partial exclusion by enteroanastomosis as a substitute for it. In a recent paper, Keen recommends the establishment of a permanent abdominal anus and of total



closure of the sacral end of the rectum in operations for carcinoma of the rectum, and two cases are reported in which this procedure was carried out. The closed lower end of the rectum gave no trouble in these cases, but every few days a small amount of mucus from the intestine was expelled by reversed peristalsis. There seems to be no good reason why any portion of the intestine could not be closed at one end and open at an abdominal anus at the other, provided too large a section were diseased to make resection seem safe, as in Obalinski's case. This would obviate the danger which Obalinski found arose in time from retained intestinal secretions and which is not removed by the establishment of a fistula, as recommended by Salzer. In any case, experience thus far seems to show that total physiologic exclusion of the intestine is not safe, although partial exclusion may be safely practised, at least within certain limits.

**The Bacteriology of Cirrhosis of the Liver.** One of the most important additions recently made to medical literature is the published observations of Dr. J. G. Adami on the bacteriology of progressive portal cirrhosis. A communication on this subject appeared first in the *Montreal Medical Journal* for July, 1898, and a further communication in the *Lancet* for August 13, 1898 (an abstract of which appeared in this JOURNAL for September 3, 1898, page 453). Other references on the subject are contained in the PHILADELPHIA MEDICAL JOURNAL for July 2, p. 8, and July 9, p. 52. Dr. Adami's work seems to have been most careful and painstaking. Beginning with a series of observations upon animals dead of Pictou cattle-disease, he obtained a characteristic microorganism, which he was able to isolate and to grow on suitable media, and which proved pathogenic for rabbits, guinea-pigs and mice. The chief pathologic lesion of Pictou cattle-disease is extensive cirrhosis of the liver, and this fact led to a comparison of the disease in cattle with cirrhosis of the liver in man, and a search for similar microorganisms in the livers obtained at autopsy from subjects dead of hepatic cirrhosis. Adami has found in the cirrhotic human liver an organism that resembles that found in the liver of animals dead of Pictou cattle-disease, and which he has been able to cultivate, in at least one case, from the human liver-juice. He does not contend that the two organisms are identical, but he indicates a line along which it would seem profitable to pursue further investigations. One must be careful, in these days of accurate bacteriologic methods, not to become an extremist with regard to the role of the organisms that are now known to play such an important part in pathogenesis. New organisms are being discovered constantly, and fields that formerly seemed foreign to the domain of bacteriology are being encroached upon daily. But we must be watchful to retain the judicial mind and to distinguish carefully

between cause and effect. Whether this newly discovered bacterium is the cause of cirrhosis of the liver is, of course, not a settled question; and one may expect to witness a wordy war waged concerning its proper position. In accrediting the new organism with causative power in hepatic cirrhosis, we must not ignore the action of such substances as alcohol and lead, the poisons of rheumatism and gout, and microbic toxins, in lowering the resistance of the liver-tissue and thus predisposing to the invasion of the bacillus.

#### Abortionist Advertisements in the Newspapers.

—A sensational trial came to a temporary conclusion in London during the last week of September. A Mr. John Lloyd Whitmarsh, a surgeon, was accused of having performed criminal abortion upon a girl named Alice Bayley, who died of peritonitis in Charing Cross Hospital, after making a dying deposition to a magistrate of the treatment that she had received. To comment upon the evidence would be unfair at this juncture, inasmuch as the jury were unable to agree upon a verdict, and Mr. Whitmarsh remains in custody awaiting a new trial at the next sessions. But upon one point which was mentioned during the proceedings we may found a few remarks. It was suggested that the unfortunate girl, many of whose symptoms were due to mercurial poisoning, had had recourse to some quack pill-vendor and had obtained from him so-called abortifacients, which had produced fatal internal mischief. No one who has access to the newspapers published nowadays can fail to be struck by the remarkable increase both in number and in frank indecency of advertisements from persons selling abortifacients.

From an Eastern daily paper of good standing, edited by an LL.D., and especially advertising itself as a "Family Newspaper," containing columns of quack-medicine advertisements, we find a number of advertisements of "Ladies' Private Homes during confinement, infants adopted, satisfaction guaranteed," "Preventives for Women," "cures of irregularities," etc. Here is one to illustrate the style:

DR. ———— ST., GIVES  
 whole attention to all cases of irregularities  
 of women, from whatever cause or circumstance,  
 from irreg., from whatever cause or circumstance,  
 should call at once; 28 years' exp.; no failure.

Pills and potions of all sorts are offered through the medium of the press to the female public at a moderate cost and are guaranteed "to remove all obstructions however obstinate," "to restore the figure whatever may be the cause of the swelling," and even "to regulate the size of the family." Most of these nostrums are harmless from a medical point of view, but they work none the less moral mischief. Wretched girls pay a dollar, or possibly five dollars, for a weak solution of aloes, and protected as they believe from the consequences of incontinence yield to their lovers' invitations. On the other hand some few of the mixtures are strong mineral

poisons, and may really produce miscarriage, by their general shock to the system, though particular ecboic qualities are wanting. It is probable that a strong movement will be set on foot soon, and that it will be supported by, if not actually started by, the medical profession of England, to get a short act through Parliament permitting magistrates to exercise some sort of authority over the advertisement-columns of newspapers. Such a piece of legislation, savoring as it must of a curtailment of the liberty of the press, will meet with considerable opposition, but if discreetly managed by its promoters would run a good chance of receiving the sanction of Parliament. For these indecent advertisements are comparatively new in England, while the mischief that they do is increasing day by day with the impunity enjoyed by the advertisers—facts which will make legislators ready to stretch the prerogative of the law with the view of rooting out the abuse before it is of old establishment.

**The Work of the Pennsylvania Society for the Prevention of Tuberculosis** deserves the heartiest encouragement and the most cordial support. It has labored earnestly and quietly in the endeavor to educate the community that tuberculosis is a communicable and a preventable disease, and to inculcate the principles upon which its prophylaxis must be based. These ends it has sought to attain by the publication and distribution of pamphlets, by constant efforts to induce those in influential positions to encourage the observance of the requirements necessary to prevent the spread of the disease, and by striving to obtain the requisite conditions whereby those in the early stages may be restored to usefulness, and those in the advanced stages may not become a source of danger to others. During the year 5,000 copies of a pamphlet entitled "How Storekeepers and Manufacturers Can Help to Prevent the Spread of Tuberculosis," were distributed, as well as 20,000 reprints of earlier publications. The energies of the Society have, however, been especially devoted toward the establishment of a Municipal Hospital for Tuberculous Patients, and of a Sanatorium in some elevated portion of the State. A desirable location in Luzerne County, near White Haven, has been offered for the latter, free of expense and incumbrance, on condition that the Society raise the necessary funds for building and equipping the institution. As the Sanatorium is intended especially for the tuberculous poor, the State Board of Charities has recommended that an appropriation of \$30,000 be made, on condition that a like sum be raised by private subscription.

The site under consideration is a plateau of several hundred acres, about 1,225 feet above sea-level, and 250 feet above the Lehigh river. It is readily accessible by rail. The prevailing winds are from the northwest, and protection is afforded by Green Mountain, while the sun-exposure is admirable. The soil is porous and

the drainage good. The mountain-side is well wooded with pine. The atmosphere is remarkable for its purity and it is fairly dry.

The report points out that whereas 15 years ago about 14% of all deaths in Philadelphia were due to pulmonary tuberculosis, now only 10% are due to that cause, and this reduction is rightly attributed to increasing knowledge concerning the disease and the means for its prevention. The Society has made a strong effort to limit the evil practice of expectoration in public places, and the Philadelphia Board of Health has, at its request, issued circulars and notices cautioning against it. Reference is made to the laudable work of the State Live Stock Sanitary Board of Pennsylvania, which, during the 2½ years of its existence, has, as a result of its inspections, caused the condemnation and destruction of more than 3,500 tuberculous cattle. The proportion of diseased cattle in infected herds has, during the same time, fallen from 30% to 10%. In this way the liability of the conveyance of tuberculosis through milk and meat has been materially diminished.

The facts that we have cited indicate the good work in which the Pennsylvania Society for the Prevention of Tuberculosis is engaged, and their mere recital should be sufficient to strengthen its hands, by increasing its membership and adding to its treasury (Mrs. Helen C. Jenks, 920 Clinton Street, Philadelphia, is the treasurer), in order that it may to the utmost fulfil the beneficent objects of its organization and existence.

**Leprosy in Hawaii.**—Among the new national responsibilities which we have lately assumed, or are about to assume, are some interesting problems of disease. In Hawaii, for instance, we have made ourselves responsible for the sanitary management of a large leprosy-area, including a special settlement for lepers. The recent paper, therefore, of Dr. J. Ashburton Thompson, on leprosy in Hawaii—read at the Berlin Leprosy-Conference in 1897—has special interest for American readers. Dr. Thompson is favorably known as a writer on leprosy in Australia; and although he was only a visitor for a short period in Hawaii, his observations and data are doubtless of value.

The author forms the opinion, from a critical study of historical data, that the time of the first appearance of leprosy in the Sandwich Islands is altogether uncertain; as is also the locality from which it may have been imported. He seems to believe that as the islanders had communication, possibly for centuries, with other peoples, many of whom, as the Chinese, came from leprosy-areas, it is quite impossible to decide just when the disease was introduced; and as others than the Chinese mingle with the Hawaiians, the disease cannot certainly be attributed to any particular nation or race. It was first distinctly noticed in Hawaii about 1833, and by 1855-63 it began to be recognized as a com-



monly occurring disease. But evidently it was already well-established, and had simply not been recognized.

The practical part of Dr. Thompson's paper deals with the segregation of the lepers in a settlement. This plan has been tried for years in the Hawaiian Islands, and the settlement forms an object-lesson for the rest of mankind. The impression which we get from the author's description is that it has been a lame expedient, and has shown plainly the defects always likely to be observed in such schemes. In the first place, it has never been a strict quarantine and could not be made and kept such. Visitors, such as relatives, have come and gone, or even resided for varying periods in the settlement, and then returned to the outside world. The natives from the environs would sometimes steal into the place at night in order to share the lepers' mats, food and tobacco; and, worst of all, many of the natives have even tried to contract the disease in order to have a free billet for the rest of their lives. This reminds us a little of the natives in India breeding poisonous snakes in order to claim the Government bounty on their heads. Such things simply show how a government, instead of repressing, may even offer a premium for disease. In 1895 there were 1,087 lepers on the books—a proportion of about 12 to 1,000 of population, but this probably did not include all the lepers in the islands.

Dr. Thompson is skeptical about the contagiousness of leprosy. This question, oddly enough, is the one that is still most agitated of all those concerning the disease. According to Dr. Thompson's statistics there is little evidence that the "helpers," who, in the Hawaiian settlement, are mostly relatives, ever developed the disease in undue proportion. As they had been exposed to precisely the same conditions as their leprous kinfolk, they presumably took the disease in most cases otherwise than by direct contagion. The natives, on their surrounding farms, having frequent communication with the lepers in the settlement, and exposed for thirty years to this great inroad of the disease into their midst, remained remarkably free from it. Dr. Thompson may be too dogmatic in his conclusions, but the fact that he can say, after a critical study of the leprosy-question on such a great scale as in Hawaii, that the evidence is against the contagiousness of the disease, gives food for reflection on the wisdom of harsh and repressive measures against the malady of Saint Lazare.

The etiology of leprosy is not materially advanced by the author. He concludes simply that leprosy has existed for an unknown period in Hawaii, and that when and whence it came are past finding out. In these remote islands of the Pacific the disease existed probably before the (comparatively recent) historic period. Its mode of dissemination also is not clear, because if, as Dr. Thompson believes, the disease is not contagious, the infection must be due to conditions of food or living that are more or less general, but as yet unde-

termined. The author has practically nothing to say about the bacillus, but he denies that the disease is inoculable. In some of these respects his paper seems to us to be weak and unsatisfactory.

Anyhow, as the leprosy in Hawaii is now an American possession, let us hope that in the future it will be so carefully studied, in the advantageous conditions in which it exists, as to receive new light on all aspects of the subject.

## Selection.

### PATHOLOGY AND SURGERY vs. ETIOLOGY AND THERAPEUTICS.

For many years the American Ophthalmological Society has been giving less and less attention to refraction, and this year, by the "conspiracy of silence," killed it altogether. The program of 1898 was made up of thirty-seven papers, not one of which was upon eye-strain or errors of refraction. In this studied neglect the American Ophthalmological, however, differs but little from other societies, and especially the foreign ones. Sarcomas and other tumors, operations, trachoma—of these we hear without end—but of the infinitely subtle and thousand unsolved problems of nine-tenths of the daily office-work of the oculist scarcely or not at all a word! Why is this? Is it that we have all decided that "the passing of the reflex" is already passed? Are there no such things as eye strain, reflex neuroses, headache, and so forth? Have we determined all the problems in connection with these things? Is our hullabaloo about the prescribing optician and his sins sincere if we scientifically ignore refraction? Are pathology and diagnosis everything and etiology and prevention nothing? The causes of the indifference and neglect are many and recondite, perhaps, but the facts are none the less greatly to our discredit.

In the first place we are permitting ourselves to drift with the *Zeitgeist*, born of self-interest, which is throttling medicine and exalting surgery. "So soon as the fashionable oculist can afford an assistant, he turns refraction over to him," we overheard recently, and we fear it is too true. Now surgery is the despair of medicine—i. e., so long as disease may be prevented or cured by strictly medical means, the surgeon should not be called in. But in the hunger for success, eclat, and money, we humor our deluded patients and consciences by talking and writing and busying ourselves with operations. They pay better, and make us more fame. All of which, so far as it is morbid and exaggerated, is neither the science nor the art of medicine.

Another reason is that pathology and ophthalmic surgery are fashionable, and require a comparatively low order of talent. It is a comparatively small thing to do the few operations of ophthalmic surgery, and a tyro can soon learn the trick, but it requires a fine nervous system, keen judgment, and inexhaustible patience to diagnose and treat a complicated case of eye-strain. It is easy and satisfying to make a thousand slides of a hundred diseased and dead organs. After they are made, however, do we always even draw the lessons and make them practical, which might be drawn from these dead tissues of a past disease that killed the forgotten patient? More than this, can pathology always, nay, can she generally tell anything of the

Old unhappy far-off things  
And battles long ago,

the habits and malfunctions that instituted the beginnings of the morbid process? It is, for instance, the conviction of many scientific-minded and careful men that eye-strain has a great deal to do with functional gastric troubles, with anemia, with the origin of cataract, glaucoma, etc.—but would the "visitor from Mars" attending our medical gatherings or reviewing their reports suspect the fact? In a recent article in the PHILADELPHIA MEDICAL JOURNAL the greatest living specialist in diseases of the stomach, in the paragraph epitomizing the subject of gastric neuroses, never even dis-

tantly alludes to their frequent reflex source in eye-strain. Yet articles attesting the frequency and directness of this causal nexus have been published by numerous oculists, and by general physicians of the most scientific and conservative characters.

Many other reasons might be adduced for the shameful neglect of refraction—which we treat as a naughty and dirty boy we will neither mend nor commend, but whom we keep carefully out of sight of the aristocratic world of Science—with a big S. Not only is such "science" truly unscientific, but it is unethical. We directly relieve ten times the suffering every day by refraction that we do by operations, and we prevent one hundred times this amount. In every town and village and farming community one-half the people are suffering from headaches, etc., and bringing on ocular diseases, and to the traveling "Professor," and the prescribing optician, they are consigned by our folly. They are learning the costly lesson that the Professor is a fraud, and they cannot afford to visit the city; so they continue to suffer and endure.

Doctor Robertson at the recent meeting of the British Medical Association spoke as follows:

The increase of refractive errors of the eye has been especially by the profession, and the increase is continuing, by the very greatly increased numbers of the profession, who do not, from time to time, and often as to the practice of ophthalmology. Forty years ago, in the whole of Scotland there were only two ophthalmic surgeons, one residing in Edinburgh and one in Glasgow, whereas now they abound in Edinburgh and Glasgow, while Aberdeen, Dundee, and other places have representatives. We cannot think one cause of this increase, which is the recognition of the prevalence of refractive errors and the necessity of consulting an oculist with regard to them. Thus, forty years ago, the set of test lenses employed by the ophthalmic surgeon was of the most imperfect and primitive character, and it was not until the last century that the oculist to recommend the patient to go to the opticians to be fitted with glasses, while the profession in general did not consider it necessary to send such cases to an oculist for advice. Cylindrical lenses were then practically unknown, only being constructed at great cost and with great difficulty to meet some very exceptional case of marked astigmatism, in which the nature of the error and its degree had been worked out by long and patient investigation on the part of the surgeon. The difference in these respects at the present time is patent to you all. With the advent of Donders (whose colleague and successor, Professor Snellen, we welcome among us to-day) a new era dawned, and refractive errors and their consequences rest on a satisfactory scientific basis, and constitute a very large proportion of the cases applying to the oculist for relief.

These are hopeful and encouraging words, coming from the president of a society devoting its entire time also to the consideration of other things than refraction and functional muscle-troubles. We smile, however, at the words "forty years ago," when we remember that two or three years ago the chief optician of London could not make a rimless or a cement bifocal lens, and said that he very rarely was ordered by the oculists to make a cylindrical lens, and, if so, almost never one below a diopter in strength.—[*The Ophthalmic Record*.]

## Correspondence.

### THE ARMY MEDICAL SERVICE OF DR. NICHOLAS SENN.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:

OUR daily and illustrated papers have done much to keep the public informed of events and as it were to conduct one personally to the seat of war with the camera; but unskilled men, political complications, and newspaper sensationalism have made it difficult to sift out truths and draw conclusions. The medical world, on the other hand, has had the good fortune of securing a detailed account and an accurate picture of the medical aspect of this war. By the wise foresight of Col. C. R. Greenleaf, a man peculiarly skilled and adapted for the duty intrusted to him was selected to oversee the medical and surgical treatment of our sick and wounded and to report his observations. By his untiring efforts and great capacity for work, Col. Nicholas Senn more

than accomplished this duty. He gave his personal skill, time and again, to our wounded, he treated our diseased, and he has kept the War Department and medical profession informed of the details of the medical work done during the war in Cuba, Porto Rico, and this country. It will be of interest to follow him in a brief account of his work. When hostilities were first declared, Dr. Senn left his practice and the chair of professor of surgery in the Rush Medical College for an indefinite time and volunteered his services to the country, taking his position at the head of the Illinois medical staff. He conducted personally the examinations of several thousand men for their enlistment in the Volunteer Army and proceeded with them to the camp at Chickamauga, where he was the brigade-surgeon. Here he completed the organization of his corps, and largely through his influence and energy the Leiter Hospital was established. When the active campaign was opened and troops were started for Cuba he was ordered to Washington, and on June 27th he accepted the position of Lieutenant-Colonel of Volunteers and Chief of the Operating Staff to the troops in the field, with orders from General Miles to proceed to Santiago de Cuba to superintend the operating and to supervise reports for the medical history of the campaign. It was at this time that I had the good fortune to be ordered to report to Col. Senn, assigned as his first assistant, and it has been my pleasure to have served with him thus, through the war. Troops had started for the field of action and news was watched for hourly announcing an engagement with the enemy. Senn was impatient, and he frequently fretted over the delay in the arrival of the *Yale*, which was to take us, with General Henry's division, to Cuba. He was anxious to be the first of the Illinois men to arrive in Cuba and to enter the city of Santiago with what he felt would be our victorious army. This did not, however, prevent him from writing a complete account of the work that came under his observation at Chickamauga, and doing considerable other literary work demanded at the time. The heat of Washington was intense, so he proceeded to Old Point Comfort to finish his writing and to await the sailing of the transport. On the evening of July 2d news came of the encounter of our troops with the enemy, and it was with the greatest pleasure that we received word that we should sail at once for Cuba on the hospital-ship *Relief*, which would stop for us on its way from New York. On the afternoon of July 3d we steamed quietly and rapidly away for the eastern extremity of Cuba. Col. Senn at once busied himself in finding out all of the particulars of our beautiful ship, and wrote a full description of this floating hospital before our arrival at Siboney. Anchorage at Siboney was impossible and landing was hazardous because of a rough and choppy sea, but Col. Senn and Major Torney made the trip with no little risk to limb or life to visit the general hospital under Major La Garde and find out the needs and the work to be done. Here he found operations necessary, and without stopping for further inquiry nor thinking of his return for clothes and baggage, he rolled up his sleeves and worked until late at night. The following morning he took horse and orderly for the front, a distance of 10 miles, not without its dangers, to report to General Shafter. While at this camp some Spanish wounded were to be returned under a flag of truce, and he was invited to accompany the escort. This proved to be a novel and interesting experience, especially as he was well known to, and most cordially received by, the Spanish physicians. The hour was late for his return to Siboney, but he considered his presence necessary, and started, against the most earnest



protest. While fully half way, he missed the road, and his horse fell with him over an embankment, which, on examining later, we found to be over eight feet high. He landed in a tangle of barbed wire, which the Spaniards had used for obstructing the way, but by some chance he came off unscratched; he was obliged to retrace his course. At Siboney he directed his attention to improving the arrangements for major operative work, if the occasion should demand, and to policing the camp and establishing proper sinks. As men were scarce, he took a soldier to assist him, and started in search of Cubans loafing in the camp. He soon returned with quite a squad of the most motley-looking specimens of humanity, armed with broken boxes and rusty shovels, or some other substitute, and urged on by the threatening bayonet of the sentinel. The men with shovels he set to work disinfecting and covering-in the old sinks, while those with boxes were made to police the camp and remove the scattered discharges. He then personally constructed excellent closets on the cliff overhanging the sea. This day's work has ever since been an untold comfort to the camp. As a battle was expected, he was again sent for to come to the front to the division-hospital to operate. This battle never took place; but, while waiting, and in a furious storm, he wrote a full description of the camp at Siboney and the work done there. Here at the front he performed several major operations and then returned to Siboney, walking the distance through a tropical jungle and over the worst of roads, where there were long stretches of watery mud, in places almost knee-deep. On his return to Siboney, yellow fever was found to have reached much larger and more serious proportions, requiring that all noninfected surgical cases should be removed for transportation. There was now no necessity for Colonel Senn to longer remain in Cuba; his chance had come for return to the United States before going with the next expedition to Porto Rico. Despite the risk of being detained by quarantine in this miserable place, where his tent was surrounded on three sides by cases of yellow fever, and where this dreaded disease was cropping up in every direction, he personally supervised the removal of the Red Cross nurses and Dr. Lesser from their infected quarters, packing their valises for them himself, and that same afternoon, after his ten-mile walk from the front, went out to the Spanish prison-hospital one mile distant from camp, and performed three major operations on the prisoners there, these patients being quartered with two yellow-fever cases. He was then detailed on the hospital-ship *Relief* with orders to return with her from New York to Porto Rico. During the voyage, after the destruction of much of his personal property, and thorough formalin-disinfection of self, he wrote an elaborate treatise on the observations of the nature and the effect of treatment of the gun-shot injuries, reporting in detail the cases that had come especially under his supervision; he was also consulted freely as to the operative work on the *Relief*. The next trip was again made on the *Relief* to a more beautiful land. Favored with splendid weather we soon made the trip from New York to Porto Rico. Typhoid fever was prevalent here to an alarming extent, presumably imported from home camps, but a careful investigation was necessary. Col. Senn was at once selected by Col. Greenleaf for this work. He set out to examine the hospitals and sanitary conditions of Ponce, and the following day, with the assistance of Gen. Terry (Surgeon-General to the New York State Militia) and myself, examined and wrote the histories complete of 165 patients at the general hospital, working from 8 A. M. to 9.30 P. M. with but a short stop for luncheon. This list he com-

pleted to 200 from cases gathered from Guayama and Mayaguez, which places he also visited for careful inspection. While visiting the camp at Guayama and taking notes on the wounded, Col. Senn and Gen. Terry overstopped their time for returning to the *Relief*. In the meanwhile the ship had finished taking aboard its load of sick and wounded, night had fallen, as it does in this country very rapidly, and as the weather was very rough the *Relief* sent no more boats ashore, hoping that their guests had remained in camp over night. Unfortunately this was not the case, and these two remained on the wharf through a stormy night without supper, shelter, or extra clothing, thinking pleasant thoughts about the *Relief*, as she lay in plain view, lighted from stem to stern.

In the four days of our return journey Dr. Senn wrote a report on the typhoid-fever situation, for the Department and for the medical profession, which was printed in the *Journal of the American Medical Association*, of September 10th. He also wrote an account of the Porto Rican campaign from a medical standpoint.

The situation which at this time was commanding the attention of our country and taxing the energies of the War Department to its utmost—now that war was only to be continued by the diplomats—was the care of our army returning, exhausted and diseased, from Cuba. Transport after transport was unloading its human freight at Camp Wikoff. The care for the sick from Cuba became a task of huge proportions and most difficult to deal with, especially as means for transportation and securing of supplies from New York were limited. The Department now availed itself of the invaluable services of men especially skilled in the profession, and we find among them such men as Drs. Nancrede and Delafield. On the arrival of Colonel Senn from Porto Rico he was ordered to Camp Wikoff for duty. On reporting there he immediately set to work to provide conveniences for the proper treatment of the surgical cases which would necessarily accompany so much disease and exposure. He found, to his great convenience, among the Sisters of Charity of the Order of St. Vincent de Paul some of his operating nurses from St. Joseph's Hospital, Chicago. With their able assistance he soon had arrangements completed and, although with only a limited armamentarium, he was operating within 48 hours. After this time he did from three to eight operations a day. A careful record was kept of these cases during his three weeks' stay, and at the end of that time he had completed an article descriptive of the camp and an elaborate report and treatise on the surgical cases. His resignation was now accepted, and on September 18th he took his departure from Camp Wikoff to resume his lectures in surgery at the Medical Department of the Chicago University.

It is with pride indeed that at such a time when our country calls, and distress from disease and injury is imminent, we see such men as these from our profession leave practice and luxurious homes to endure the greatest hardships with an invading army. We find in the list of such men the well-known names of Prof. Nancrede, E. C. Martin, V. C. Vaughan, George Dock, Lawrence, Smith, Delafield, and many others. To these men our country owes the greatest gratitude, for to them the danger to life is disease. Their work in the field is in the rear of the army, away from the glories of the battle, and their motive is pure patriotism and humanity without prospect of gain.

Respectfully yours,

H. S. GREENLEAF, A.B., M.D.,  
Acting Assisting Surgeon, U. S. A.



## THE PREPARATION OF VACCINE VIRUS.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

IN reference to the letter on the relation of "Vaccination to Tuberculosis," in your issue of October 1st, it is quite evident that Dr. McGovern is not familiar with the production of vaccine virus according to modern methods. We find, for example, this statement: "Notwithstanding this fact, and further, that compulsory vaccination is the order of the day in all or almost all of the States, there is, nevertheless, no State inspection of vaccine farms." With regard to Pennsylvania, at least, this is not the case, as our State Board of Health has provided to carry out a most thorough system of inspection of vaccine farms within the State, and only grant endorsement when the Board's strict requirements are complied with. In addition to this, Dr. Robert Pitfield, bacteriologist to the Board, has inspected almost every plant in the United States; his report is published in *Public Health*.

It is, again, said that "the owners of these vaccine farms may be ignorant men with but one idea in their heads," but I am sure that there are several who can set him right on questions of mixed infection. His conception of the extraneous organisms frequently found in vaccine virus do not correspond with the admitted facts.

The most striking error is the following: "Diluting the virus with glycerin or water should be strictly prohibited, the addition of a preservative agent alone being allowed as a diluent." The active agent being an organism (a diplobacillus, which in pure culture gives us a typical vesicle of vaccinia) there is only one preservative known at the present time that will kill all organisms, even the most resistant (except that of vaccinia), and when artificially introduced or mixed with vaccine virus; this agent is glycerin.

The "bacillus vacciniæ," it is said, thrives and increases in activity upon a glycerin medium of such a strength that the extraneous organisms rapidly die out, and it is just this storing in glycerin to which Dr. McGovern objects so strongly that has given to the physician a safeguard and enables him to produce with almost absolute certainty a pure vaccination, without unpleasant local or general reaction.

The trouble, I think, lies largely with the medical profession, which adheres to old-fashioned methods, ivory points or other forms of dried virus in which the sterilizing performed by the glycerin cannot be made available; virus in this form is liable to be handled by various persons before it reaches the doctor, and thus renders useless all precautions taken by the producer. The medical profession can obtain any quantity of pure active virus, in liquid form, packed in various glass tubes or bulbs, and that will retain its activity many months. Such virus will not produce a mixed infection, and all that it is necessary to do is to insist on being supplied with glycerinated virus that has been stored for at least four weeks and *not fresh from the cow*. If this were done there would not be work for "some philanthropic outsider to start the ball a rolling."

Very truly yours,

RICHARD SLEE.

Swiftwater, Pa.

A monument to the memory of Guy Patin, a famous physician, who was born in 1602, was recently erected in the village of Oise, France. Upon the occasion of the dedication, addresses were delivered by Dr. J. Championnière, representing the French Academy of Medicine, Dr. Coquerel, of Beauvais, and M. Emile Chevalier, deputy from Oise.

## Society Proceedings.

## AMERICAN PUBLIC HEALTH ASSOCIATION.

Twenty-sixth Annual Meeting, held at Ottawa, Canada, September 27, 28, 29, and 30, 1898.

In the transaction of its routine business the Association elected 66 additional members.

DR. C. L. WILBUR, of Lansing, Mich., offered resolutions, which were adopted, recommending that a plan be incorporated in the Act to provide for the taking of the next United States census, whereby reliable vital statistics might be secured for the non-registration States. The Association recommended the Bertillon classification of causes of death, and urged that it be adopted by all registrars of vital statistics in the United States, Canada and Mexico, as soon as the change from the systems now in use could be conveniently made.

**An Outbreak of Typhoid Fever Due to an Infected Water-supply.**—DR. JOHN L. LEAL, of Paterson, N. J., dealt with the pollution of water as supplied to the residents of that city. This outbreak established the fact that the germs originating from a single case of typhoid fever might infect even a large body of water, so as to reproduce the disease among those dependent upon the same water for their public supply, even though the supply be taken at a point some distance from the focus of infection.

**The Cause and Prevention of Infectious Diseases.**—DR. PETER H. BRYCE, of Toronto, divided infectious diseases according to their mode of causation, their growth, and development. With reference to methods for suppressing outbreaks of diphtheria in a community, he said that in a number of municipalities in Ontario where the disease appeared, principally among school-children, the practice was introduced of a morning visitation by the Sanitary Inspector to all the public schools to obtain a list of the children that were absent. The homes of these were promptly visited and when any evidence of malaise and sore throat was present, the parents were at once required to send for a family-physician and have a swab taken and forwarded to the medical officer by the afternoon. The swabs were sent at once by mail to the laboratory, and the patient was isolated, until an answer by telegraph of the result of the examination was received. When the cases proved to be diphtheria, the patient was isolated until further examination proved the freedom of the throat from diphtheria-bacilli. The children of the household were kept from school and the public, and the homes were subsequently disinfected with formaldehyd when the children had not been removed to the hospital.

**Annual Address of the President.**—DR. CHAS. A. LINDSLEY, of New Haven, Conn., said that the primary and ultimate purpose of the Association was the protection and preservation of public health. He dwelt at length upon the rapid progress that medical science has made during the past few years. Provincial, State and local Boards of Health are coming to be recognized everywhere as necessary forces for the safety and well-being of all civilized communities. The movement has gained an impetus that cannot be resisted. It must go on, nurtured, sustained, and guided in its progress by the skill, judicious enterprise and intelligent energy so characteristic of the people of North America until, in practical utility and successful results, it will have no superior among the nations of the earth.

**The Report of Committee on the Etiology of Yellow Fever** was presented by DR. HENRY B. HORLBECK, of Charleston, S. C. Reference was made to the labors and experiments of Sanarelli, who claims that he has found the bacillus icteroides in 58% of the cases examined by him, and believes that the reason of his non-success in finding it always is due to the incidental causes. Reference was made also to the investigations of Drs. P. E. and John I. Archinard, of New Orleans, who have studied the subject of yellow fever in relation to diagnosis by the Widal method. In 50 cases of yellow fever, agglutination, with cessation of motion, was observed in over 70% of the cases, the reaction being as characteristic as in cases of typhoid fever. This work demonstrates the practical value of serum-diagnosis. The test



may be utilized as early as the second day. The dried-blood method of Dr. Wyatt Johnston proved perfectly satisfactory. The serum-diagnosis of yellow fever should be instituted in all countries wherein the disease may exist endemically, or which may be occasionally visited by epidemics. It is especially valuable at the beginning of epidemics in the diagnosis of early and doubtful cases. While the bacillus of Sanarelli is not the exclusive cause of the disease, it is still of sufficient importance to warrant its closer study. DR. E. LICEAGA, of Mexico, said that yellow fever has been known to be transmitted through the bagging that carries corn, sugar and coffee. It has also been transported by the clothing of persons who have been attacked by the disease. Another material that serves to propagate yellow fever is the ballast that is shipped by the vessels in Vera Cruz after having landed their cargoes. The propagation of yellow fever through the medium of water has not been well established, although this was a probable means. The general conditions that favor the transmission of the disease are: humidity, heat, want of light and of ventilation. Mosquitos are known to carry the germs of the disease.

**The Report of the Committee on the Cause and Prevention of Infant-mortality** was read by DR. ERNEST WENDE, of Buffalo, who said that several scarlet-fever and diphtheria epidemics have been averted in Buffalo by promptly tracing the source of infection to a particular milk-supply. Most satisfaction has been found in the general condemnation of the long tube, death dealing nursing-bottle. Buffalo, through its city health-department, has interdicted the use of the long rubber tube, and as a consequence a suit, prompted by commercial interests, is now pending in the Courts to test the validity of such action. In preparing for this litigation, to be able to demonstrate the danger of such nursing-bottles and the justification for suppressing them, the department of health has resorted to a series of microscopic, bacteriologic, and chemic investigations, which have revealed innumerable bacteria of varied morphology in connection with the use of the proscribed bottles.

**Some Observations from Practical Experience with Bovine Tuberculosis in New Hampshire.**—DR. IRVING A. WATSON, of Concord, N. H., gave a brief history of the official recognition of bovine tuberculosis in his State and presented the following deductions: (1) It is impossible to eradicate bovine tuberculosis, but it may, without inflicting too great a burden upon the State, be reduced to a degree that will subserve the interests of the stock-raisers and likewise protect the public health; (2) only a small percentage of animals infected with tuberculosis in any way endanger the public health, and the indiscriminate slaughter of the cattle reacting to the tuberculin-test is wholly unnecessary, inasmuch as in many of these animals either recovery takes place or the disease is permanently arrested; (3) a proper sanitary condition of stables and stable-enclosures will do more toward preventing the spread of bovine tuberculosis than any other measure that can be adopted; (4) the danger of infection from this disease may be reduced to exceedingly small proportions, if it can not be wholly eradicated by sanitary measures, inspections, and physical examination by the State in cooperation with local authorities; (5) such inspections, once inaugurated, can be maintained without an expense that would be burdensome to the State.

**Report of the Committee on Demography and Statistics in their Sanitary Relations.**—The first part of this report, which was read by the chairman, DR. WILBUR, of Michigan, recommended the adoption of the Bertillon system of classification of causes of death, in accordance with the resolutions previously offered and adopted. Reliable and thoroughly comparable mortality-statistics are absolutely essential for the use of sanitarians, and deductions based upon them are recognized as being of the greatest practical importance in public-health work. The formulation of a plan of international union of the countries using this system occupied a considerable part of the report. The plan provides for consultation of pathologists, sanitarians, and all persons making use of mortality-statistics, as well as the registration-offices. The system of classification and plan of revision were adopted by the association, and the members of the national commissions for the countries represented were appointed.

**Leprosy in Minnesota.**—DR. H. M. BRACKEN, of Min-

neapolis, called attention to the following facts as emphasized by the records: (1) The impression that leprosy-immigrants from the Scandinavian Peninsula are all from Norway is a wrong one, as 5 of 11 lepers placed on file by the Board during 1897 and 1898 were from Sweden. (2) The feeling that physicians can quarantine against lepers by watching immigrants is an unsafe one. The family-history of all immigrants from the countries where leprosy prevails should be secured before they are allowed to embark for America, and no member of a leprosy family should be permitted to land on our shores. (3) It would appear that the conditions antagonistic to the spread of leprosy in Minnesota are also opposed to sterility, as borne out by the families of several lepers. (4) It is quite possible for leprosy to die out in certain favored sections of the country, such as Minnesota, without segregation, provided the importation of lepers is discontinued. (5) Even in Minnesota, one has but to visit some of the lepers to feel that segregation should be insisted upon in all cases. One cannot but feel, on entering a filthy home and seeing a leprosy mother, careless in her habits, that the children are not safe. (6) Segregation in single States is not practicable. It would tend simply to drive lepers from States enforcing such a practice to those that are not carrying out the system. (7) A Federal home should be provided for these unfortunates. They could thus be cared for more economically and more satisfactorily than through any State provision. (8) In spite of all precautions taken, there will be some leprosy individuals in this part of the world for many years to come. The Scandinavian Peninsula does not furnish all the leprosy individuals found in the United States.

**Flies from a Hygienic Standpoint.**—Two papers were presented on this subject. Abundant evidence was adduced to show that diptera are active agents in the spread of epidemics and of contagion. They are also known to be important causative factors in the spread of typhoid fever and dysenteric diseases.

The following officers were elected for the ensuing year: President, Dr. George H. Rohé, Sykesville, Md.; first vice-president, Dr. Henry Mitchell, Asbury Park, N. J.; second vice-president, Dr. J. E. Monjaras, San Luis Potosi, Mexico; secretary, Dr. C. O. Probst, Columbus, Ohio; treasurer, Dr. Henry D. Holton, Brattleboro, Vt.

Minneapolis was selected as the place for holding the next meeting, the time of which will be in November, 1899.

**Round-Cell Sarcoma Originating in the Site of an Abscess.**—A. H. Clarke (*Australasia Med. Gaz.*, July 20, 1898) reports a case in which an abscess, about the size of an egg, situated a little above the umbilicus and beneath and seeming to infiltrate the sheath of the rectus abdominis muscle, was incised and curdy pus evacuated. About two months later the patient returned with a swelling about the size of a coconut in the same situation. An incision was made, but a mass of friable tissue was cut into, which microscopic examination proved to be a round-cell sarcoma. The size of the tumor seemed to make removal unjustifiable, and the patient died about two months later.

**Paracentesis of the Pericardium.**—Demange and Spillmann (*Gaz. Hebdom. de Méd. et de Chir.*, Sept. 11, 1898) report the case of a man 20 years of age, who had passed through an attack of influenza and bronchitis, and entered the hospital with a temperature of 39° C., complaining of severe pain in the left hypochondrium. His face was cyanosed, his pulse was feeble, irregular and intermittent, the area of cardiac dulness was considerably enlarged, the apex-beat was not perceptible and a tumultuous bruit was heard. Examination of the blood disclosed the presence of staphylococci. The cyanosis and dyspnea increased, and asphyxia seemed imminent. Aspiration was practised in the fourth intercostal space four fingers' breadth from the sternum, and 100 grams of serous fluid tinged with blood were withdrawn. The symptoms were at once ameliorated, but the fluid reaccumulated, and aspiration became again necessary four days later. Recovery was slow, but the patient was discharged cured about three months later. A second case similar to the first, but following acute articular rheumatism, was observed in a man 22 years old. In both cases a condition of staphylococemia existed and the infection of the pericardium probably arose through the blood.



## American News and Notes.

**Dr. J. L. Hildreth** has resigned as dean of Tufts Medical School, Boston.

**Dr. Casey A. Wood** has been appointed professor of clinical ophthalmology in the Chicago College of Physicians and Surgeons (Medical Department University of Illinois).

**An epidemic of diphtheria at Bridgeport, Pa.**, has assumed such alarming proportions that the Board of Health has determined to close the schools in an attempt to check the progress of the disease.

**Dr. Frank Billings**, professor of medicine in Rush Medical College, affiliated with the Chicago University, delivered the inaugural address at the opening of the School on September 28, 1898, his subject being: "Limitations in Medicine."

**Baltimore Medical College.**—Dr. J. Williams Lord has been elected professor of dermatology, vice Dr. T. C. Gilchrist resigned, Dr. Charles H. Potter lecturer on bacteriology and pathology, and Dr. J. G. Wiltshire clinical lecturer on diseases of the nervous system.

**Bellevue Hospital, New York.**—The following have been appointed members of the visiting staff: Dr. Egbert Le Fevre, physician; Dr. B. Farquhar Curtis and Dr. George D. Stewart, surgeons; Dr. L. Bolton Bangs, genito-urinary surgeon, and Dr. Henry C. Coe, gynecologist.

**Diphtheria in Pennsylvania Mining Towns.**—Diphtheria has spread to an alarming extent in several of the towns about Hazleton, Pennsylvania. The public schools have been closed at Tomhicken and Drifton—117 cases having been reported in the latter village. Twenty fatalities have thus far been reported.

**A Post-Office Physician.**—The Chicago post-office is to have a new permanent employe in the person of a physician, at a salary of \$1,700 per year. He will be stationed at the main office for the purpose of examining employes who report themselves as being sick; and it is expected that he will make a large saving to the Government in salaries.

**Correction by Dr. Charles G. Cumston.**—Dr. Cumston writes as follows: In the issue of October 1, 1898, page 649, of your excellent journal, in the discussion on intussusception in infants, I am credited as having seen four cases of this affection. I beg to say that this is an error. I stated that I had seen four cases *presenting symptoms of intussusception*, but all recovered without operation.

**Japanese Studying our Hospitals.**—With a view of establishing in Japan a hospital with all modern improvements, the Mikado has commissioned Dr. Haroda, of the Japanese Navy, to assume charge of the undertaking. In pursuance of his commission, the doctor and Sadazuchi Uchida, Japanese Consul in New York, are inspecting the hospitals of New York, and it is assumed will ultimately visit those of other cities.

**The Treatment of Hemoptysis by Intrapleural Injections of Nitrogen.**—Dr. Walker Schell reports, in the *New York Medical Journal* for October 1st, a case of hemoptysis from pulmonary tuberculosis, showing the efficacy of the intrapleural injection of nitrogen, following the method advocated by Dr. J. B. Murphy. The patient had had repeated hemorrhages, and was almost exsanguine. Although,

as a consequence of dense pleural adhesions, the lung was necessarily compressed irregularly, hemoptysis ceased, the patient's temperature fell from 103° F. to normal in three days, and she became quite comfortable, except that there was considerable dyspnea on exertion. At the end of a week, however, she was able to walk to the physician's house, a distance of a city block.

**New York State Medical Association.**—The Committee of Arrangements has secured a reduction in railroad fare from the Trunk-Line Association, of 1½ fares for the round trip for members of the association and their families visiting New York at the time of the meeting—October 18, 19, and 20, provided that 100 persons who pay full first class fare of 75 cents, or upwards, coming to the meeting, avail themselves of this privilege. To make this reduction effective, certificates must be obtained from the ticket-agent at the starting-point, or nearest station issuing through tickets to place of meeting. Such certificates, to be valid for the reduction on the return fare, must be endorsed by the chairman of the committee of arrangements, and *viséd* by a special agent of the Trunk-Line Association, who will be present at the place of meeting for that purpose on October 19 and 20. The committee has also completed arrangements for a banquet at the Manhattan Hotel, Madison Avenue and Forty-second Street, on the evening of October 19. Already over one hundred have signified their intention of being present.

**The will of the late Dr. T. S. Robertson**, who died recently in New York, after making sundry bequests, directs that the residue of his estate be sold, and out of the proceeds he gives \$5,000 to the Faculty and Medical Department of the University of Vermont, at Burlington, three-fourths of the income from which is to be used to purchase yearly a microscope to be awarded to the student of the University writing the best essay on any neurologic subject, the remainder of the income to be invested in a pocket surgical case to be awarded yearly to the student of the University composing and writing the second best essay on the same subject. These are to be known as the "Robertson Prizes." If there is any surplus from the residuary estate it is to go to the Faculty and Medical Department of the same university, with directions that the Faculty purchase a large cabinet with microscopes for the use of the students of the Medical Department, on condition that it shall be placed in a conspicuous place, having a brass plate with the inscription "Robertson Memorial Cabinet."

**Obituary.**—DR. JOHN D. KNIEF, of New York City, at Liberty, N. Y., September 8th.—DR. WINTHROP B. HALLOCK, Cromwell, Conn., September 23d, aged 61 years.—DR. JOSEPH KUFNER, New York City, September 14th, aged 60 years.—DR. T. S. BELL, Wapell, Iowa, September 16th, aged 70 years.—DR. F. D. WHEELWRIGHT, Washington, D. C., September 12th, aged 81 years.—DR. F. CASPAR, Warren, Ohio, September 19th, aged 82 years.—DR. NOAH T. CLARK, Canandaigua, N. Y., September 16th, aged 81 years.—DR. JOHN F. ISOM, Cleveland, Ohio, September 26th, aged 67 years.—DR. JOHN W. DETWEILER, Newport, R. I., September 26th, aged 47 years.—DR. F. A. TODD, first assistant physician at the Toledo State Hospital, died September 30th, of hydrophobia, at the Presbyterian Hospital in Chicago. Dr. Todd was bitten by a stray dog on August 29th and the body of the animal was sent to the laboratory of Dr. A. P. Ohlmacher, at the Ohio Hospital for Epileptics, where control-experiments proved it to have been rabid.



**The Care of Assembly Rooms.**—The Michigan State Board of Health respectfully recommends to all school-boards and other officers and persons having in charge assembly-rooms, that, in the interests of public health, they cause to be observed the following methods of care:

That the regular care of school-rooms includes sprinkling the floor before sweeping, the subsequent dusting of desks or wiping them with a clean damp cloth, and the airing of the room before its use; that interchange of books be allowed only under such conditions as render the transmission of disease impossible; that the use of slates be discontinued; that persons known to be affected with tuberculosis of the lungs, or who persistently cough and expectorate, be denied the privileges of such room, either as teachers or pupils; that all spitting upon the floor by any person be strictly forbidden, and that proper conveniences for receiving sputa be supplied; that, at least once a year, the room and contents be thoroughly disinfected, the woodwork and floor washed with an antiseptic solution, the walls whitewashed, and the plumbing and ventilating inspected.

**Killed and Wounded in the Recent War.**—Official reports received by the War Department from time to time, giving the number of men and officers who have been killed and wounded and who have died from disease in the army from the beginning of the war up to August 31st, show the following figures, which are accurate as far as reports have been received, and will be used by the Military Investigation Commission:

	Officers.	Men.
In Porto Rico, killed . . . . .	0	3
" " " wounded . . . . .	4	35
In Manilla, killed . . . . .	0	15
" " " wounded . . . . .	10	83
In Cuba, killed . . . . .	23	237
" " " wounded . . . . .	99	1332
Died from wounds received . . . . .	9	82
" " " accidents . . . . .	0	30
" " " disease, etc. . . . .	75	2150

These figures, which may be changed slightly by later official reports, show the total number of deaths in the army of 265,000 to have been 2,624, or a little less than 1%.

**The Illinois State Board of Health Auxiliary Sanitary Association** met in fourth annual session at Springfield, September 27 and 28. The program was as follows: The Sanitary Needs of the State, Dr. John B. Hamilton, Chicago; How can Sanitary Science aid in Preventing Nervous Diseases? Dr. D. R. Brower, Chicago; The Possibility of Supplying Cities with Milk Produced Under Modern Methods, Dr. Adolph Gehrman, Chicago; Vital Sanitation, Dr. Jas. L. Reat, Tuscola; Prevention and Restriction of Communicable Diseases, Dr. H. M. Bascom, Ottawa; Sanitation in Town and Country, Dr. C. B. Johnson, Champaign; Public School Sanitation, Dr. J. T. McAnally, Carbondale; The Relation between Sanitary Engineering and the State, A. N. Talbot, C. E., University of Illinois, Urbana; The Soil and some of the Sanitary Phases of Saint Clair County, Dr. H. C. Fairbrother, East St. Louis; A Plea for a State Laboratory of Hygiene and Diagnosis, Dr. Frank Parsons Norbury, Jacksonville; Water-Supply for Town and Country Places, Arthur W. Palmer, Sc.D., University of Illinois, Urbana.

**Memphis Medical Society.**—At a meeting held September 6th, Dr. T. A. JONES presented a patient for diagnosis, the possibilities being, **hypertrophic cirrhosis of the liver, leukemia, and malaria**. Dr. Jones also read a paper entitled: **Where are we at?** The paper lauded the clinician and disparaged the pathologist. The disap-

pointing results of microscopic and bacteriologic research were referred to, as well as the small practical utility of serum-therapy and the X-ray in medicine. Needless to say, the accuracy of such statements was warmly combated.

Dr. F. D. SMYTHE reported **two cases of Syme's amputation**, and another case of **lymphosarcoma of Scarpa's triangle**.

Dr. E. C. ELLETT presented an **auxiliary skiascope** for facilitating the use of skiascopy at one meter as a confirmatory test. The instrument consists of a hard-rubber disc, carrying + 0.25, + 0.5, + 0.75, and + 1. D. lenses, and fastened to the trial-frame, rotating in such a manner that the lenses are stopped in front of the pupil of the eye under examination. It is used by first correcting the refraction in the ordinary way under a mydriatic, and then, with the lens that corrects the meridian under test before the eye, and the surgeon throwing the light into the eye from a distance of one meter, the disc is rotated by the patient turning the lenses successively in front of the eye. When the + 1. D. lens is in position, the shadows should reverse. An earlier reversal indicates over-correction. If they do not reverse with the + 1. D., the correction is too weak. In cases of simple myopia and hyperopia, all meridians are corrected at once, but in cases of astigmatism each must be corrected separately. Dr. Ellett presented the instrument as an aid to the test-lenses and trial-frame, and not as a complete skiascope.

**Memphis Pathological Society.**—At a meeting held September 2d, Dr. WILLIAM KRAUSS exhibited specimens of **pus from a fecal fistula**, which showed, upon bacteriologic investigation, the **colon-bacillus** in pure culture. Dr. M. GOLTSMAN presented specimens of **blood** from a case of **double tertian malarial fever**. The daily exacerbations of temperature had reached 106° F. and over, and the diagnosis of malaria had been doubted, as 110 grains of quinin, administered during 72 hours, had failed to relieve the symptoms. It was contended that quinin could not be absorbed from the stomach during the presence of such high temperature. It was advised that the fever be reduced by baths and phenacetin, and that quinin hydrochlorate with urea be given hypodermically under proper microscopic control, according to indications. It was contended also that it is useless to administer quinin when the parasites are in the small hyalin unpigmented stage. Dr. E. E. FRANCIS related an instance, in which arsenic had proved most efficacious when quinin had failed. Dr. S. E. RICE said that most authorities are agreed that fevers resisting quinin are not malarial. Dr. J. H. VENN said that quinin should be administered just at or before the budding stage of the organism. Dr. Krauss said that there is undoubtedly about Memphis a form of malaria evidenced by a small extra-corporeal hyalin body that resists quinin, and that this little organism has its prototype in the crescents seen elsewhere, but not about Memphis. He emphasized the fact that unless typical paroxysms prevail, quinin is useless, and, that to assert that because a fever resists quinin, it is not malarial, is both dogmatic and unscientific.

**The Medical Society of the Missouri Valley on Behring's Patent.**—The following resolution was offered by Dr. F. S. Thomas, Council Bluffs, Ia., at the semi-annual meeting of the Medical Society of the Missouri Valley, September 14 and 15, 1898:

WHEREAS, prevailing conditions of patent and trademark laws enable anyone to secure proprietary rights to chemical

compositions associated with or without trademarks, thereby inflicting an injustice upon the American people; and

WHEREAS, under our lax laws, Prof. Emil Behring and his agents have secured a patent on Diphtheria Antitoxin;

*Resolved*, that the Medical Society of the Missouri Valley expresses its unqualified condemnation of the course pursued by Prof. Emil Behring and the Farbwerke of Hoechst-on-the-Main, Germany, in securing a United States patent on Diphtheria Antitoxin, and that this Society regards such action as a violation of professional ethics, as an injustice to the medical profession, and as an imposition upon the American public.

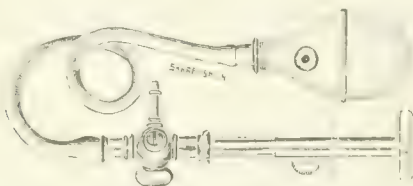
*Resolved*, that this Society earnestly reprobates the prevailing laxity in our patent-laws, which bestow upon foreigners special privileges, concessions and monopolies that they cannot secure in their native lands.

*Resolved*, that while it is the duty of our Government to encourage invention, it is eminently unjust and contrary to public policy to grant a perpetual property in a trademark name and to accord patents on the chemical composition of medicinal substances, thus preventing their manufacture by other processes or their sale under different names.

*Resolved*, that copies of these resolutions be transmitted to the members of the Commission appointed by President McKinley for the revision of the United States Patent and Trademark Laws, namely, Mr. Francis Forbes, of New York City; Hon. Arthur P. Greeley, Assistant Commissioner of Patents, Washington, D. C., and Hon. Peter Grosscup, Chicago, Ill.

*Resolved*, that we commend the action of the American manufacturers of antitoxin who have agreed to protect the profession in the use of their serum, and recommend the use of the American product in preference to Behring's.

**Chicago Medical Society.**—At a meeting held September 28th, Dr. WELLES VAN HOOK, who had long contemplated the advantages of **air-distention of the biliary passages during operations for gall-stones**, stated that he had recently found opportunity to apply the principle in the case of a woman suffering from almost complete obstruction of the common duct. The gall-bladder was drained for a few days, to do away with cholemia and a part of the cholangitis. In operating for the relief of the obstruction a small sterilized bicycle-pump was fastened into the gall-bladder by means of a tube carrying one of the bulbous tips of an aspirating syringe. After adhesions about the gall-bladder had been separated, air was very gently and cautiously forced into the biliary system. The operator was at once able to palpate the ducts from without, to confirm the existence of partial obstruction and to demonstrate the ducts and the seat of obstruction to the bystanders by alternately relaxing and distending the ducts. After removing the stone the ducts could be easily explored with a uterine probe, in consequence of the flattening out of the folds of mucous membrane. The system of ducts could be followed with the probe well up into the hepatic branches and down into the duodenum. The patient made a rapid recovery. Dr. Van Hook has had made by Sharp & Smith, of Chicago, an apparatus for this purpose, so simple in design that the wood-cut annexed will suffice to convey an idea of its construction and method of use.



Apparatus for inflating the biliary system. At the end of the metallic portion of the tube over which the incised gall-bladder is held by means of a purse-string suture. A small clamp serves to make the union air-tight. A two-way cock is introduced, to allow the operator to let out the air from the gall-tracts at will.

Dr. W. X. SUDDUTH read a paper on **habitual constipation**, directing attention to functional derangements only. He considers the condition a bad habit, a vice of civilization—almost unknown in semi-civilized and barbarous races. Among the causes that tend to produce it, he mentioned urban life, food, varieties of occupation, and mental hebetude. The treatment should be based upon the knowledge that the condition results from atony of the muscles concerned in defecation. An effort should therefore be made to establish a better muscular tone in the coats of the colon and abdominal parietes—thus relieving the direct cause of the torpidity—and by diet and suitable exercise to maintain a healthy state of functional activity. Finally the possibility of developing voluntary action in so-called involuntary muscles was discussed.

**Health Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending October 1, 1898.

#### SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
MICHIGAN:			
Detroit	Sept. 24	Reported present.	
OHIO:			
Dayton	Sept. 23	1	

#### SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp	Aug. 27-Sept. 3	4	1
Ghent	Sept. 4-10	1	
BRAZIL:			
Rio de Janeiro	Aug. 6-12	2	1
ENGLAND:			
London	Sept. 3-27	3	
INDIA:			
Bombay	Aug. 16-23	2	
" "	Aug. 23-30	2	
RUSSIA:			
Moscow	Aug. 20-27	1	1
" "	Aug. 27-Sept. 3	2	
Odessa	Aug. 27-Sept. 3	1	
" "	Sept. 3-10	2	
St. Petersburg	Aug. 27-Sept. 3	2	6
URUGUAY:			
Montevideo	Aug. 3-10	5	

#### YELLOW FEVER—UNITED STATES.

LOUISIANA:			
Baton Rouge	Sept. 25	1	
New Orleans	Total to Sept. 27	12	1
MISSISSIPPI:			
Jackson	Total to Sept. 27	9	2
New Edwards	" "	1	
Orwood	" "	67	3
Oxford	" "	13	1
Taylor	" "	82	8
Water Valley	Sept. 28	1	

#### YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro	Aug. 6-12	10	8
" "	Aug. 12-19	19	11
MEXICO:			
Tampico	Aug. 27-Sept. 4	27	
" "	Sept. 4-11	26	
" "	Sept. 11-18	12	
Vera Cruz	Sept. 16-22	4	

#### CHOLERA.

INDIA:			
Bombay	Aug. 16-23	2	
" "	Aug. 23-30	1	
Calcutta	Aug. 16-20	1	

#### PLAGUE.

RUSSIA:			
St. Petersburg	Aug. 6-13	1	
INDIA:			
Bombay	Aug. 23-30	157	
Calcutta	Aug. 13-20	2	

**Preliminary Requirements of those who Expect to Practise Medicine in Pennsylvania.**—The preliminary examinations for medical students will be held under the supervision of Prof. N. C. Schaeffer, Superintendent of Pub-



lic Instruction, on October 29th, at 9 A.M., in the Robert Vaux School building, Wood Street, east of 12th, Philadelphia, and in the Allegheny High School, Sherman Avenue, Allegheny.

The following schedule states the amount of knowledge expected by the medical council of those who take its examination:

**ARITHMETIC.**—Embracing notation, numeration, fundamental rules, multiples, factors, fractions both common and decimal, ratio and proportion, percentage, denominate numbers including metric system, mensuration, square and cube root.

**GRAMMAR.**—Embracing the use of capitals, rules for punctuation, parts of speech, declensions, the formation of plurals and possessives, distinction of gender, comparison, classification and properties of verbs, elementary knowledge of the syntax of words, and analyses of easy sentences.

**GEOGRAPHY.**—Including the outlines of mathematical, statistical, political, with some of the elements of physical, the political divisions, routes of commerce and travel, staple productions of the different sections of the United States.

**ORTHOGRAPHY.**—Such words as are commonly used in current literature.

**AMERICAN HISTORY.**—Geography of North America, the early discoverers, the character and mode of life of the natives, our forms of government, from Colonial times to the present, embracing the period of the Revolution, Declaration of Independence, Federal Constitution, successive administrations, with important events under each, general principles of civil government, civil war, and general development. Special attention given to the history of Pennsylvania.

**ENGLISH COMPOSITION.**—A general knowledge of the varieties in both prose and poetry.

*Sentence:* Embracing capitalization, punctuation, grammatical classifications according to form and use, words into phrases, phrases into clauses.

*Paragraph:* Uses of the paragraph, requisites in its construction, combination of miscellaneous sentences into paragraphs.

*Prose Composition:* Embracing common business forms and the principal varieties of letter-writing, transformation of poetry into prose.

*Theme:* Its form or outline, introduction, discussion, conclusion, its kind, narrative, descriptive, persuasive, or argumentative.

The diploma of a college, academy, seminary, normal school, or high school; or a teacher's permanent certificate; or a student's certificate of examination for admission to the freshman class in a literary college, will be accepted in lieu of examination.

**For the Prevention of Typhoid Fever.**—The following circular has been issued by Dr. Arthur R. Reynolds, Commissioner of Health, of the City of Chicago:

*To the Producers, Handlers and Shippers of Milk for Chicago:*—

The return to their homes of so many of our soldiers sick with or convalescent from typhoid fever has a special interest for milk-producers as well as for health-authorities at the present time. Hundreds, and probably thousands, of these sufferers are scattered throughout the area in which milk is produced and shipped to the Chicago market—on farms and in villages, small towns and other places, which drain directly into the streams that furnish the water-supplies of dairies and milch-cows.

It is highly probable that many of these streams will be or

already are polluted by the typhoid-fever poison, and it is positively known that the disease may be conveyed in milk received and carried in vessels washed in such polluted water. One observer, the eminent sanitarian Ernest Hart, has investigated 97 outbreaks of typhoid conveyed by milk, which caused upward of 5,700 cases and 656 deaths.

The quality of the milk-supply is of vital importance to Chicago. It has greatly improved during the last few years and the deaths of infants and young children, for whom milk is the staple article of diet, have diminished in direct proportion to this improvement. A recent report of the Department shows a saving of 1,530 children's lives last year compared with the average number prior to 1894, when the supervision of the milk-supply was fully undertaken by the Department of Health.

In this supervision, it has been the aim of the Commissioner to secure the coöperation of milk-producers by showing that their interests are best promoted by improving the quality of their supplies. Such improvement and its effects have been repeatedly shown to the Chicago public by diagrams, tables, and other matter furnished to the newspapers, and published in them and in the Department reports. One result of this publicity is seen in the great increase in the milk-shippments to the city. In 1896 the average daily receipts of milk by railroad amounted to 13,275 cans. Last year 16,450 cans were received daily, or 48,034,000 gallons during the year. This is an increase of 9,271,000 gallons more in 1897 than in the previous year, or nearly 24%. There has, of course, been no such increase in the population of the city, and the conclusion is, therefore, irresistible that mothers, having been taught that the milk-supply is of better quality, are feeding their children more generally and more liberally with this best of all food for the young.

This consideration alone would warrant the Commissioner in directing the attention of milk-producers to the threatened danger of typhoid, and in asking their cooperation and assistance in preventing or restricting the evil as much as possible.

No producer can afford to have his milk infected with the typhoid poison. The methods of the department are such as to make it certain that any outbreak of this disease in Chicago, caused by infected milk, will be located in the dairy from which the milk was shipped, and it would then not only be the bounden duty of the Commissioner to prohibit the receipt and sale of such milk in this city, but the publicity which would surely be given to such prohibition would ruin the business reputation of the unfortunate producer.

All concerned in the production, handling and shipment of milk for the Chicago supply are, therefore, earnestly requested for their own interests, as well as for the interests of health and life in Chicago:

First, to keep posted as to typhoid fever in the vicinity of their places of business, especially with relation to the sources of their water-supplies.

Second, to notify the Chicago Health Department immediately on learning of any case of the fever in their respective neighborhoods.

On receipt of such information an inspector will be sent direct to the locality to ascertain the exact condition of affairs and the extent of the danger of milk-infection, and to advise and assist in proper precautions.

No charge will be made for such inspection and assistance, but all the resources of the department, its laboratory and its skilled experts, are freely offered to those to whom this circular-letter is addressed.



## Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon STEPHEN M. GONZALES will proceed from Montauk Point to New York City, to take first transport for Ponce, Porto Rico, and, upon arrival there, will report for duty.

Acting Asst. Surgeon JAMES CARROLL will proceed from Washington to Camp George H. Thomas, Chickamauga Park, Ga., on official business pertaining to the Medical Department.

Captain JOHN S. KLEE, A. S., is relieved from duty with the 3d Army Corps, and will proceed from Anniston, Ala., to Fort Niagara, N. Y., and report for duty.

Acting Asst. Surgeon ROBERT F. JONES will proceed from this city to New York City, take transport sailing on Sept. 21 for Ponce, Porto Rico, and, upon arrival at that place, will report for duty.

Major GEORGE A. SMITH, brigade surgeon, U. S. Vol., is honorably discharged. Sept. 20.

Major JOHN B. GUTHRIE will report to Col. Charles C. Byrne, A. S. G., Major JOHN B. GUTHRIE will report to Col. Charles C. Byrne, A. S. G., president of the examining board appointed to meet at Governor's Island, New York City, for examination as to his fitness for promotion.

Leave for four months on surgeon's certificate, with permission to go beyond the limits of the Department of the Colorado, is granted Captain EDWARD EVERTS, asst. surgeon. Sept. 20.

S. O. 218, September 15, as relates to Acting Asst. Surgeon H. P. JONES, is revoked.

Acting Asst. Surgeon BAILEY STREET is relieved from duty at Camp Hamilton, Lithia Springs, Ga., and will proceed to Camp Hamilton, Ky., and report for duty.

Major JOHN M. G. WOODRUFF, chief surgeon, U. S. Vols., now in New York City, is relieved from duty with the 6th Army Corps, and will proceed to Montauk Point, and report for duty.

Leave for two months, from September 7, on account of sickness, is granted Major WILLIAM J. WAKEMAN, brigade surgeon U. S. Vols. Sept. 20.

Captain JOSEPH T. CLARK, asst. surgeon U. S. A., upon the expiration of his present sick leave will report at Madison Barracks, N. Y., for duty.

Major ROYCE D. FRY, brigade surgeon, U. S. Vols., is relieved from duty at Montauk Point, to take effect when his services are no longer required, and will proceed to Jacksonville, Fla., and report for duty.

Acting Asst. Surgeon FRANCIS E. HOLLIDAY will proceed from this city to Camp Hamilton, Lexington, Ky., and report for duty.

Leave for one month on surgeon's certificate is granted Major WILLIAM G. GORGAS, surgeon.

Acting Asst. Surgeon WILLIAM G. YOUNG, is relieved from duty at the Sanger U. S. General Hospital, Camp George H. Thomas, Chickamauga Park, Ga., and will proceed to New York City to take the transport sailing Sept. 29, for Ponce, Porto Rico, and, upon arrival there, will report for duty.

Leave for one month on account of sickness is granted Acting Asst. Surgeon A. H. SIMONSON, Sept. 21.

Acting Asst. Surgeon W. O. TAYLOR is relieved from duty at the division field hospital, and will report to the commanding officer, battalion heavy artillery, Cal. Vols., at Camp Merriam, Presidio Reservation, for duty.

A contract having been made by authority of the Surgeon-General with Dr. WILLIS J. RAYNOR, of Denver, Col., for duty as acting asst. surgeon, he will proceed at once to Fort Logan, Col., and report for duty.

First Lieutenant OLWAY W. RUSH, asst. surgeon, will proceed to Jackson Barracks, La., by Oct. 1, to make the physical examination, required by existing orders, of the personnel of the three light batteries of La. Vol. Art., preparatory to their muster out of service.

On account of quarantine restrictions, S. O. 113, relieving Acting Asst. Surgeon G. R. PLUMMER from duty at Key West Barracks, and directing him to proceed to Fort Clinch, Fla., to relieve Acting Asst. Surgeon FRANCIS LIENH, and directing the latter to proceed to Fort McIntosh, Tex., for duty, is revoked.

A contract having been made by authority of the Surgeon-General with Dr. ELMER A. SHERRER, of Denver, Col., for duty as acting asst. surgeon, he will proceed at once to San Carlos, Ariz., and report for duty.

Acting Asst. Surgeon RAFAEL ECHEVERRIA will proceed from Tampa, Fla., to Jacksonville, Fla., and report for duty. Sept. 22.

Leave granted Acting Asst. Surgeon C. L. G. ANDERSON is extended fourteen days on account of sickness. Sept. 22.

Acting Asst. Surgeon H. LINCOLN CHASE will proceed from Fort Crook, Neb., to Brookline, Mass., and, upon arrival there, report by letter to the Surgeon-General of the Army.

Captain EDWARD L. MESSON, asst. surgeon, is detailed as a member of the examining board appointed to meet at the War Department, this city, Sept. 20, vice Major JAMES C. MERRITT, surgeon, who is hereby relieved.

Lieutenant-Colonel RUSH HUBERKOFF, chief surgeon, U. S. Vol., is relieved from further duty with the U. S. troops in Porto Rico, and will repair to this city and report to the Surgeon-General of the Army.

Major GEORGE COOK, chief surgeon, U. S. Vol., is honorably discharged Sept. 30, 1898. Sept. 22.

So much of S. O. 221, Sept. 19, as relates to Acting Asst. Surgeon S. H. WADSWORTH is revoked.

S. O. 44 is so amended as to require Major WILLIAM MONAGHAN, Add. P. M., U. S. Vol., instead of Major WILLIAM H. HAMMER, P. M., to pay the troops at Forts Leavenworth and Riley, Kan., Sill and Reno, O. T., and Logan H. Roots, Ark., for the month of August last.

Major JAMES CANBY, Add. P. M., U. S. Vol., will proceed to Fort Logan H. Roots, Ark., and pay the 1st Ark. Vol. at that post for muster of Aug. 31.

Major F. C. LOAN, Add. P. M., will proceed to Carson City, Nev., for payment of 1st Battalion Nev. Inf. Vol., on rolls of Aug. 31, for payment of 1st Battalion Nev. Inf. Vol., on rolls of Aug. 31, leave for one month on surgeon's certificate is granted Major JOHN S. WITCHEL, P. M., Sept. 16.

Major PHILIP DALLAM, Add. P. M., U. S. Vol., will pay the 1st Ill. Vol. Eng. Corp at their armory in Chicago, Ill.

Leave granted Major WM. H. HAMMER, P. M., is extended one month on surgeon's certificate. Sept. 22.

Acting Asst. Surgeon JOHN W. WRIGHT is relieved from further duty in Porto Rico, and will return to the United States on the first Government transport leaving Ponce.

S. O. 216, Sept. 13, is amended to read as follows: Acting Asst. Surgeon H. W. ELLER and R. C. HORCOMB will proceed from Montauk Point to Willets Point, N. Y., and report for duty.

First Lieutenant EVAN H. HOWELL, asst. surgeon, 5th Regiment, Fort McPherson, Ga., will proceed to join his regiment at Santiago, Cuba.

First Lieutenant MARSHALL M. CLOUD, asst. surgeon, now on duty at the U. S. General Hospital, Fort McPherson, Ga., will proceed to Anniston, Ala., and report for duty.

Acting Asst. Surgeon H. E. SEARS is relieved from duty at Montauk Point, and will proceed to New York City, and report to Major NATHAN S. JARVIS, brigade surgeon, U. S. Vol., for transportation on transport sailing Sept. 28, for Ponce, Porto Rico, and, upon his arrival there, will report for duty.

Major WILLIAM H. DEANE, brigade surgeon, U. S. Vol., is honorably discharged. Sept. 20.

Acting Asst. Surgeon ALEXANDER F. McMASTER will proceed from this city to New York City, and report to Major NATHAN S. JARVIS, brigade surgeon, U. S. Vol., for transportation on steamer sailing for Santiago, Cuba, on the 28th inst., and, upon his arrival there, will report for duty.

Major JOHN J. ARCHIBALD, surgeon, U. S. Vol., will report to the chief surgeon, these headquarters, for an assignment to duty.

Asst. Surgeon JOHN F. CROXIN will report to the chief surgeon for duty.

Acting Asst. Surgeon J. B. DABNEY is, upon the recommendation of the chief surgeon, assigned to the 5th U. S. Vol. Inf.

Acting Asst. Surgeon C. H. TORALTE, Jr., U. S. A., is hereby relieved from duty at the Medical-Supply Depot, and is, upon recommendation of the chief surgeon, assigned to the Central Beneficence Hospital as attending physician. He will report to the brigadier-general commanding the city of Santiago de Cuba for instructions.

Acting Asst. Surgeon H. L. GILCHRIST is relieved from duty at Camp George H. Thomas, Chickamauga Park, Ga., and will proceed to Camp Hamilton, Lexington, Ky., and report for duty to the chief surgeon at that place.

The following named acting asst. surgeons will proceed from this city to New York City, and thence by transport sailing on the 28th inst., to Ponce, Porto Rico, and report for duty: W. C. BERTIN, J. CARLISLE DE VRIES, GEORGE G. MORRIS.

Acting Asst. Surgeon ROBERT W. ANDREWS is relieved from duty at Camp George H. Thomas, Chickamauga Park, Ga., and will proceed to New York City, and report to Major NATHAN S. JARVIS, brigade surgeon, U. S. Vol., for transportation on transport sailing for Ponce, Porto Rico, Sept. 28th, and, upon arrival there, will report for duty.

Acting Asst. Surgeon HARRY R. LEMEN, now at Alton, Ill., on leave, is relieved from duty at Montauk Point, and will proceed to Camp Hamilton, Ky., and report for duty.

Acting Asst. Surgeon SIDNEY J. MYERS is relieved from duty at Camp George H. Thomas, Chickamauga Park, Ga., and will proceed to Jacksonville, Fla., and report for duty.

So much of S. O. 205, Aug. 31, as relates to Acting Asst. Surgeon GEORGE S. FITCHER is amended, so as to direct him to proceed from Portland, Me., instead of from Portland, Ore.

Leave granted Captain HENRY R. STILES, asst. surgeon, is extended one month on account of sickness.

S. O. 219, Sept. 16, is amended so as to direct Acting Asst. Surgeon GEORGE D. DOCK to proceed to Camp Meade, Middletown, Pa., and report for duty.

Leave for one month is granted Acting Asst. Surgeon E. T. HAYCOCK. Sept. 24.

## Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon J. F. BRANSFORD, appointed Passed Asst. Surgeon from Sept. 21.

Passed Asst. Surgeon A. R. ALFRED, from Recruiting Rendezvous, San Francisco, to Navy Yard, New York.

Surgeon W. MYRIN, retired, to Recruiting Rendezvous, San Francisco, temporarily.

Passed Asst. Surgeon J. F. LAYS, from the "Vesuvius," and to continue duty at Navy Yard, Boston.

Passed Asst. Surgeon N. R. PIERCE, from the "Kanawha," to home.



The following are honorably discharged: Passed Asst. Surgeon R. F. O'NEIL, Asst. Surgeon W. H. TURLEY, Asst. Surgeon P. S. FILLER, Asst. Surgeon P. S. RILEY, and Passed Asst. Surgeon G. W. ALLEN.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 Days Ended September 29, 1898.

Surgeon R. D. MURRAY to proceed to New Orleans, La., and await orders. Sept. 17. To proceed to Orwood, Miss., for special temporary duty. Sept. 29.

Surgeon A. H. GLENNAN to proceed to Tampa, Fla., and thence to Jacksonville, Fla., for special temporary duty. Sept. 21.

Surgeon EUGENE WARDEN to proceed to Georgetown, S. C., as inspector, there to await orders. Sept. 16. To proceed to New Orleans, La., and report to Surgeon CARTER for special temporary duty. Sept. 26.

Passed Asst. Surgeon W. P. McINTOSH to proceed to Jackson, Tenn., for special temporary duty. Sept. 19. To proceed to Memphis, Tenn., and assume temporary command of service. Sept. 26.

Passed Asst. Surgeon G. M. MAGRUDER to proceed to New Orleans, La., for special temporary duty. Sept. 26.

Passed Asst. Surgeon J. J. KINYOON to proceed to Philadelphia, Pa., for special temporary duty. Sept. 22. To proceed to Philadelphia, Pa., for special temporary duty. Sept. 28.

Passed Asst. Surgeon G. T. VAUGHAN granted leave of absence by department letter of Aug. 18; revoked, to take effect Sept. 16. Sept. 28. Re-assigned to duty at the port of Washington, D. C. Sept. 17.

Passed Asst. Surgeon J. O. COBB to proceed to Oxford, Miss., for special temporary duty. Sept. 26.

Passed Asst. Surgeon J. B. STONER to proceed to Mobile, Ala., and await orders. Sept. 17. To proceed to New Orleans, La., and report to Surgeon CARTER for special temporary duty. Sept. 23.

Passed Asst. Surgeon H. D. GEDDINGS granted leave of absence for thirty days on account of sickness. Sept. 26.

Passed Asst. Surgeon W. G. STIMPSON to proceed to Meridian, Miss., for special temporary duty. Sept. 24.

Passed Asst. Surgeon J. M. EAGER to inspect Sabine Pass, Tex., Quarantine Station. Sept. 21.

Passed Asst. Surgeon C. H. GARDNER to proceed to Delaware Breakwater Quarantine Station, and report by letter to commanding officer for temporary duty. Sept. 23.

Passed Asst. Surgeon J. H. OAKLEY to proceed to Chattanooga, Tenn., for special temporary duty. Sept. 28.

Asst. Surgeon H. S. CRUMMING to proceed to Montgomery, Ala., and await orders. Sept. 17. To proceed to Chattanooga, Tenn., for special temporary duty. Sept. 21. To proceed to Jackson, Miss., for special temporary duty. Sept. 29.

Asst. Surgeon S. R. TABB to proceed to Delaware Breakwater Quarantine Station for special temporary duty. Sept. 23.

Asst. Surgeon W. M. JORDAN granted leave of absence for one month from Oct. 1. Sept. 23.

Asst. Surgeon TALIAFERRO CLARK to proceed to New Orleans, La., and report to Surgeon CARTER for special temporary duty. Sept. 23.

Asst. Surgeon C. H. LAVINDER to proceed to New Orleans, La., and report to Surgeon CARTER for special temporary duty. Sept. 23.

Asst. Surgeon H. C. RUSSELL to proceed to Evansville, Ind., and assume temporary command of service. Sept. 23.

Asst. Surgeon R. H. VON EZDORF to proceed to Taylor, Miss., for special temporary duty. Sept. 17.

Asst. Surgeon M. H. FOSTER granted leave of absence for thirty days on account of sickness. Sept. 26.

Asst. Surgeon L. L. LUMSDEN to proceed to New Orleans, La., and report to Surgeon CARTER for special temporary duty. Sept. 23.

Asst. Surgeon W. C. HOBBS to proceed to Reedy Island Quarantine, Del., and report to commanding officer for duty and assignment to quarters. Sept. 29.

Asst. Surgeon Wm. M. JORDAN resigned, to take effect Oct. 31.

## Foreign News and Notes.

**Dr. F. W. Dafert** has been appointed director of the Agricultural Chemical Station in Vienna.

The third Italian Congress of Pediatrics was held at Turin from October 1st to 6th.

The ninth Italian Congress of Internal Medicine was held at Turin, October 3d to 7th. The questions discussed in general were bleeding and organotherapy.

**Sir Joseph Ewart, M.D., St. And.**, having been invited by the Liberal party in Brighton, England, to become their candidate for Parliament, has declined the proffered honor.

**Pauperism in the west of England**, according to recent statistics, has become so prevalent, that in certain of the counties the pauper-population is no less than 40 per 1,000 of the inhabitants.

**A fire** broke out recently in the great central pharmacy of Paris. By quick action on the part of the fire department, it was confined to the machinery-department and storehouses, and, after some effort, was subdued.

**Professor Koch**, at present in Italy studying the malarial fevers, will shortly proceed to Athens. The university professors and students and the medical practitioners in general of the city are organizing elaborate festivities in honor of his visit.

**The Morphin-habit in Prussia.**—Recently published statistics as to the morphin habitués treated in Prussian sanitariums, show that of 62 male patients, almost one-third were physicians, and of 18 married female patients, 3 were wives of physicians.

**The Welby prize** of \$250 offered for the best essay on "The Causes of the Present Obscurity and Confusion in Psychological and Philosophical Terminology and the Directions in which we may hope for Efficient Practical Remedy," has been awarded to Dr. Ferdinand Tönnies, of Hamburg. A translation of the essay is to appear in *Mind*.

**Benzyl-morphin** is a new morphin derivative prepared by the action of benzyl-chlorid on morphin in the presence of alkali in alcoholic solution. The resulting benzyl-morphin is converted by HCl into the hydrochlorate. This new salt forms shining prisms, soluble in most organic solvents. Its formula is  $C_{17}H_{16}NO_2 \cdot O \cdot CH_2C_6H_5HCl$ . It is suggested as a substitute for codein (methyl-morphin).

**Obituary.**—**DR. MAX WIENER**, extraordinary professor of obstetrics in Breslau, aged 48 years.—**DR. J. CROCQ**, professor of special pathology and therapeutics in the University of Brussels, and a member of the Belgian Senate, September 18th, aged 74 years.—**RICHARD ELLIS**, F.R.C.S. Edin., formerly vice-president of the section on otology of the British Medical Association, at Newcastle-on-Tyne, September 14th, aged 67 years.

**Professor Michael Foster** has been chosen president for next year of the British Association for the Advancement of Science. Professor Foster, who is 62 years of age, has been for 17 years secretary of the Royal Society, and for about the same space of time Professor of Physiology at Cambridge University. His teaching has the same blend of close reasoning with philosophic speculation that is so well exhibited in his well-known treatise on physiology.

**The Tenth Congress of Russian Naturalists and Physicians** was held at Kieff, September 3d, under the presidency of Professor N. A. Bunge. Professor Bunge presided also over the deliberations of the section on chemistry; Professor M. A. Tikhomiroff, over those of the section on anatomy, physiology, and medicine; and Professor V. D. Orloff, over those of the section on hygiene. Nearly 1,500 members were in attendance.

**Consequences of the Heat-wave in Paris.**—As a result of the intense heat lately prevailing in Paris there has been considerable augmentation of the morbidity-statistics of the city. Cases of sunstroke and heat-prostration were common, but in addition there was a great increase in the number of cases of gastrointestinal affections. These latter were owing to the water-supply being temporarily enhanced

by water taken from the Seine, the ordinary sources of supply being insufficient to meet the demand. Some cases of gastroenteritis were of exceedingly severe type, death occurring in about three days; others were milder, and but few Parisians escaped an attack of this mild form.

**The conscientious objector** to vaccination is making his appearance now in various parts of England. Such an one in Birmingham stated that he considered that vaccination would be prejudicial to the life of his child, and that if our Creator thought it necessary for man to be inoculated with cowpox, He would have done so before we were born. His objection was considered valid by the magistrate, and his child was released from the necessity of undergoing vaccination.

**The Study of the Diseases of Plants.**—To facilitate this study and to further other investigations, the city of Hamburg has established a station for the protection of plants, which has been placed under the direction of Dr. Brick, of the Hamburg Botanical Museum. Particular attention will be directed to the supervision of imported plants and to the study of the diseases that affect these, as well as indigenous plants, more especially those that abound in the neighborhood of Hamburg.

**The water-supply of Paris** is insufficient to meet the demands upon any occasion of increased demand. This was especially evident during the recent protracted heat-wave, when the available supply of drinking-water had to be augmented by water from the Seine. The authorities, however, are making every effort to increase the supply of drinking-water, and expect to have available next year water from Lunain. A few weeks ago an artesian well was bored at the Butte aux Cailles. This well, the boring of which was originally commenced in 1864, gives a minimum supply of 6,000,000 liters per day at a temperature of 27° C. The water, which is pure and appears to come from the shell-beds of the Jura, will be used in part for a thermal bathing establishment, and in part, after having been cooled down to 12° C., for drinking purposes.

**Lectures and Demonstrations for Sanitary Officers and Students.**—A course of 17 lectures has been arranged by the British Sanitary Institute for the special instruction of those desirous of obtaining knowledge of the duties of sanitary officers and of other persons desirous of obtaining a practical knowledge of sanitary requirements and regulations. The lecturers for October are Sir Douglas Galton, Dr. Louis Parkes, Dr. Herbert Manley, Dr. W. A. Bond, Professor A. Bostock Hill, Dr. J. F. J. Sykes, and Professor W. H. Corfield. Inspections and demonstrations have been arranged in connection with the lectures, and will include visits to disinfecting stations, dairy premises, municipal depots, artisans' dwellings, offensive trades, waterworks, common lodging-houses, sanitary works in progress, refuse and sewage-disposal works. There will also be demonstrations of meat inspection and diseased meat.

**New Physiologic Laboratories in Liverpool.**—The Rev. Mr. Thompson-Yates, a wealthy English clergyman, has presented University College, Liverpool, with completely equipped laboratories of physiology and pathology, his gift constituting one of the most magnificent donations to science of modern times. The buildings are now complete and will be opened by Lord Lister on Saturday, October 8th, before a select company of medical men, scientists, and others interested in educational work. It is said

that Professor Virchow, who will be in England on that date, has promised to be present. The scientific side of the Liverpool medical school already commands respect, and with the additional facilities now afforded to them Professor Sherrington, F.R.S., the professor of physiology, and Professor Rubert Boyce, the professor of pathology, may be expected to do still better with the student-material under their hands.

**The attendance at the International Congress of Physiology**, recently held in Cambridge, Eng., numbered 226 members, who were distributed among the different nationalities as follows: Austria-Hungary and Germany, 33 members; Belgium, 9; Denmark and Sweden, 3; Egypt, 2; France, 29; Holland, 3; India, 2; Italy, 9; Japan, 4; Roumania, 2; Russia, 7; Switzerland, 9; United States, 16; Great Britain and Canada, 98. Among the many valuable results of the deliberations of the congress was the appointment, on the suggestion of M. Marey, of a committee to consider methods of standardizing and making comparable physiological instruments. The committee consists of Professors Bowditch, Foster, von Frey, Hürthle, Kronecker, Marey, Mislavsky, Mosso and Weiss. The members of the committee are expected to secure information in their respective countries, and will meet in M. Marey's laboratory at Paris in September, 1900.

**The Opening of the London Medical Schools.**—The majority of the London medical schools and of the English provincial medical schools open on October 3d, for the winter session of 1898-1899. At about half the schools the old-time custom of an assembly of past and present pupils, new students and their parents, professors and others connected with the school, to listen to an inaugural address from some distinguished surgeon or physician, has now been done away with, while the other half continues to honor the ancient usage. Of all the introductory addresses to be delivered in London this October, the one that promises to create the most stir is that to be given by Professor Virchow at Charing Cross Hospital. The hospital has been unable to find accommodation for the audience that will be present within its own walls, and has consequently had to hire the town-hall of St. Martin's Parish, a new and commodious building, only a block or two away from the hospital medical school. Lord Lister has promised to take the chair, both at the inaugural address and at the dinner to be given afterwards by London medical men to their distinguished German visitor. Applications for seats at this dinner have come in at such a pace that in all probability every available place was taken some weeks before the function.

**Rabies in Paris.**—According to the *Lancet*, the Prefecture of Police has taken severe measures with regard to vagrant animals, owing to the number of cases of rabies recently reported in Paris. At a recent meeting of the Board of Hygiene, M. Proust expressed his approval of these measures, which consist (1) in the application of the regulations of May 30, 1892, and (2) in the application of the resolution that the owner of any animal that has bitten a person should be promptly prosecuted. M. Proust has drawn up a table of the cases of rabies reported in 1897 throughout the department of the Seine. There were 351 persons treated at the Pasteur Institute, with 5 deaths—that is to say, 1.4%. In 1896 there were 2 deaths; in 1895, 1; in 1894, 1; in 1893, 4; in 1892, 5; in 1891, 5; in 1890, 1; in 1889, 6; in 1888, 19; in 1887, 9; in 1886, 3; in 1885, 22; in 1884, 3; in 1883, 4; in 1882, 9; and in 1881, 21. In 1897 there were 17,700 dogs seized by



the police in the houses of the public, of which number 17,241 were seized in Paris and 529 in the suburbs. Animals known to have bitten people in 1897 in Paris and the suburbs as well, number 1826; of these 1594 were dogs, 84 were cats, 146 were horses, and 2 were other animals. 564 were in a state of rabies, 1212 were healthy, and 50 were unknown. 164 adults and 58 children were bitten by animals suffering from rabies, 742 adults and 407 children were bitten by healthy animals, and 34 adults and 9 children were bitten by animals whose condition was not certain. 787 dogs, 212 cats, and 3 other animals were bitten by rabid animals in 1897.

**Conscientious Objection to Vaccination.**—It will be remembered that by the new English Vaccination Act a man is enabled to prevent his children from being vaccinated by making an affirmation before a magistrate of his conscientious objection to the process. The first three weeks of September have furnished at the various police courts of London some extraordinary examples of conscientious objection. One parent conscientiously objected to the "Jennerian rite" because if his baby had a sore arm it would keep him—the parent—awake. Another asked for a certificate of exemption for his children because he did not think it right that "God's skin should be cut about." A third was against vaccination because public opinion was against it. This gentleman was told that public opinion was by no means against it, but only the opinion of a section; when his conscience became at once relieved. The magistrates have been placed in an awkward position by the clause, or rather by its wording. Who is to decide what is a conscientious objection? Some of the magistrates make no attempt to apprise the merits of the parent's objections, but consider that it is sufficient for the purpose of the meaning of the Act that he should make an objection of some sort. Others try to determine if the objector's reluctance to have his children vaccinated is founded upon reasoning of some sort. The interpretation of the law is thus left to the individual fancy of the magistrate, and wherever this occurs a feeling of insecurity is introduced into the public mind. It is becoming daily clearer that the "conscientious objection" clause was a great error.

**The Association for the Prevention of Consumption and other Forms of Tuberculosis** was founded in London during the past summer, and more recently a similar association was organized in Durham, England. The objects and scope of the associations may be judged from the following statement issued by the former association, as taken from the *Lancet*:

1. OBJECT.—The prevention of tuberculosis.
2. MEMBERSHIP.—The Association consists of ordinary and of life members. The subscription of ordinary members is 5s. annually. Life members give a donation of 5 guineas.
3. METHODS.—I. The education of public opinion and the stimulation of individual initiative by means of—
  - (a) A central bureau for the collection and distribution of information as to modes of diffusion of tuberculosis and measures of prevention.
  - (b) The circulation of pamphlets and leaflets setting forth in plain language the results of scientific investigation of the above points.
  - (c) Public lectures by men approved by the council; addresses at congresses and other public gatherings.
  - (d) Cooperation with other societies having for their object the promotion of public health.
  - (e) The cooperation of the public press.
  - (f) The holding of periodical congresses and the issue of an annual report.
  - (g) The promotion of the establishment on a self-supporting basis of open-air sanatoria for tuberculous patients.

II. The influencing of Parliament, county councils, boards of guardians, and other public authorities on matters relating to the prevention of tuberculosis.

A large number of medical men and laymen have already joined the association.

**The Prince of Wales** went to Scotland in the second week of September, and may now be considered convalescent. He can walk a little, but of course is not allowed to exercise his powers to any extent in this direction. It is the belief as well as the hope of his medical attendants that the Prince will have a thoroughly useful limb. It is possible that he will have to curtail some of his athletic amusements, but this must soon have come in any case, for his Royal Highness will be fifty-seven years of age in a few days. But if his sporting achievements will no longer be so vigorous, he will still be able to take all necessary exercise as well as to discharge the State functions of the heir-apparent to the crown—which, by the way, are by no means light, as any one would see who followed his movements for a day or two. The decision of Sir William MacCormac and the rest of the Prince's surgical advisers to trust to splinting for obtaining union between the fractured halves of the patella has not gone uncriticised in England, but it has been left to an American contemporary to sneer, and to a famous French surgeon, M. le Dr. Lucas-Championnière, to make a formal indictment. In the *Journal of Medicine and Practical Surgery*, published in Paris, Dr. Lucas-Championnière, who is the senior surgeon of the Beaujon Hospital, records his amazement that the fracture was not treated by suture, while he predicts the gloomiest future for the Prince's general health under enforced inactivity. It is probable that Dr. Lucas-Championnière was ignorant of the past medical history of his Royal Highness as well as of the presence of certain local conditions in the injured limb which determined Sir William MacCormac to adopt the milder measure—with the full acquiescence, it should be remembered, of Lord Lister, who probably knows as much of the indications for suturing the fractured patella as any surgeon in France, or elsewhere.

## Philadelphia News and Notes.

**The Jefferson Medical College Hospital** despatched a hospital train to Camp Meade October 3d, and brought 49 sick soldiers to the hospital.

**Obituary.**—DR. CHARLES A. VOORHEES, a graduate of the Medical Department of the University of Pennsylvania, in the class of 1861, September 28th, aged 63 years. DR. VOORHEES was, at the time of his death, chief physician to the Masonic Home.

**The Medical Colleges.**—The introductory lecture of the session 1898-99, of the Medical Department of the University of Pennsylvania was delivered October 1st, and similar lectures at the Jefferson Medical College and the Medico-Chirurgical College, October 3d.

**Poisoned by Cream-Puffs.**—The members of four households in the upper part of the city were seriously poisoned last week by eating cream-puffs. It is surmised that the poisonings were due to some salt of copper coming from the vessel in which the pastry was prepared. The patients were afforded prompt medical attention, and all eventually recovered.

**College of Physicians of Philadelphia: Section on General Medicine.**—At a stated meeting to be held on Monday, October 10th, at 8.15 P. M., Dr. Abram Jacobi, of New York, will by invitation deliver an address on "Some Preventions." Members of the profession are cordially invited to be present.

**Bequests to Public Institutions.**—The will of Henry Pfander, which was recently admitted to probate, contains the following charitable bequests: The Jewish Foster Home and Orphan Asylum of Philadelphia, \$2,000; the Jewish Hospital Association of Philadelphia, \$2,000; the Jewish Maternity Association of Philadelphia, \$1,000; the Society of the United Hebrew Charities of Philadelphia, \$1,000.

**Vital Statistics of Philadelphia** for the week ending October 1, 1898:

Total mortality ..... 382  
Children under 5 years of age..... 113

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis .....		43
Diphtheria .....	133	31
Heart-disease .....		27
Typhoid fever.....	157	24
Gastro-enteritis.....		20
Pneumonia.....		19
Marasmus.....		19
Nephritis.....		17
Inflammation of the brain.....		12
Apoplexy.....		13
Cholera infantum .....		10
Scarlet fever .....	15	1

**Philadelphia County Medical Society.**—At the meeting, September 28th, Dr. GEORGE ERETY SHOEMAKER read a paper entitled: **The Prevalence and Prevention of Puerperal Infection in Private Practice.** Attention was directed to the marked improvement noted of recent years as regards the morbidity and mortality statistics of lying-in institutions. As great improvement cannot be said to have been effected in the treatment of puerperal women in private practice. In considering the cause of this and the means of improving the conditions in private practice, attention was directed to: (1) Conditions which affect the patient herself; (2) The attitude of the community towards ideal conditions; and (3) The attitude of the physician. Details of obstetric asepsis were then related. This was to be secured: (1) By the vigorous use by the physician of the hand scrubbing-brush; (2) By the use of mercuric chlorid or some equally efficacious antiseptic; (3) By the use of sterile napkins; and (4) By the physician wearing a clean, preferably clean duck, suit. Dr. C. P. NOBLE referred to the difficulties attending the procuring of ideal obstetric asepsis in private practice, especially as regards the room, and to the danger of infection arising through the nurse. Dr. R. C. NORRIS spoke of some statistics as regards puerperal asepsis, related some personal experiences seen in consultation practice, mentioned the means of avoiding puerperal sepsis, and warmly recommended the use of rubber gloves in dealing with puerperal septic cases. Dr. L. C. HAMMOND mentioned that some cases will inevitably arise despite the most energetic precautions. These are most likely to be cases in which there has been some laceration—the infection being accounted for on the supposition of "metamorphosis of bacteria of the wound-secrections." Dr. R. C. CLEEMAN thought that the liability of infection had been much exaggerated, and that possibly some physicians might be unconscious carriers of less infection than others. Dr. WM. S. HIGBEE had trained two women as nurses and especially instructed them to keep their hands clean. This with the employ-

ment of a clean aseptic skirt for each patient had operated to prevent the development of puerperal sepsis in his practice. Dr. GEORGE I. MCKELWAY discussed methods of avoiding infection. Dr. ANNA FULLERTON thought that at times infection was the result of retained clots, especially if lacerations exist. These, particularly those of the cervix, should be closed. In addition, an iodoform suppository is a useful adjuvant. Dr. DANIEL LONGAKER advocated always getting the patient up to micturate during the puerperium. He had never seen any ill effects from this, and thought many cases of infection might be thus avoided. Dr. SKIDELSKY spoke of her methods of securing asepsis among the poorer classes, and of the utility of endeavoring to educate these people in the importance of surgical cleanliness during the puerperium.

Dr. ANNA FULLERTON read a paper entitled: **Gonorrhea of the Uterus and its Appendages**, and presented specimens and drawings illustrating the conditions. The widespread effects of the gonococcus, once infection has taken place, were spoken of; latent gonorrhea was referred to, and the influence of traumas in relighting such latent conditions mentioned. It was thought that many cases of puerperal infection were due to gonorrhea. The pathology, diagnosis, and treatment of the conditions were detailed. The paper was discussed by Drs. C. P. NOBLE, LEVI J. HAMMOND, RICHARD C. NORRIS, GEORGE I. MCKELWAY, and GEORGE ERETY SHOEMAKER.

**Academy of Surgery.**—At the meeting, October 3d, Dr. O. H. ALLIS read a paper entitled: **The Importance of Always Employing a Needle-holder When Suturing is Required.** Dr. Allis contrasted the attitude of surgeons at the time when he began the study of medicine, when attention to details was considered beneath the physician's notice, with that of the present time, when the greatest care is given by all surgeons to details of antisepsis, the preparation of ligatures, etc. He did not wish to make a plea for a new instrument, but for the more general use of one already well known. Surgeons are often obliged to use a needle-holder when working in cavities not readily accessible and when dealing with tough or rigid tissues, and find themselves at a disadvantage for want of practice in its use. The importance of practice in using the needle and of employing the left hand as well as the right was urged, and a piece of embroidery was shown which had been done with needle and holder, and in which the right and left hand had both been used. A modification of the Hagadorn needle-holder was shown which was believed to possess some advantages. Dr. J. C. DACOSTA showed a needle-holder which was used with satisfaction for some time. Dr. DEEVER stated that he generally preferred to use his fingers, and in working in cavities he finds that hemostatic forceps can be used as readily as any holder. Dr. HARTE uses his fingers except in cavities, in which he uses a holder similar to Dr. Allis'. Dr. JOHN B. ROBERTS uses some sort of a long-beaked holder in cavities; elsewhere he prefers his fingers. The use of a thimble on the second or third finger is sometimes helpful in dealing with tough skin or rigid tissues. Bad suturing is generally due to bad needles. An English needle, with a portion of the head filed away, so as to allow the rest of the needle and knot to pass readily, was described, which Dr. Roberts has found satisfactory. Dr. J. E. MEARS stated that, after a struggle with various holders, he had adopted a form of needle with the eye at the point, which could be fixed in a handle.

Dr. W. J. TAYLOR read a paper entitled: **A Case of In-**



**Intestinal Obstruction by a Band of Omentum.** A woman of 40 was taken ill with nausea, vomiting, abdominal distention and pain. When seen on the fourth day, rectal injections were advised, for the reason that it was stated that there had been two movements of the bowels and passage of flatus. This treatment proved unavailing, and fecal vomiting set in. The abdomen was opened in the middle line and the intestines were found dark and distended. A short distance above the ileocecal valve was a small band encircling the intestine and passing through the mesentery. The mesentery was divided and gauze was packed about the intestines; an opening was made in the intestine, fecal matter removed, and the intestine and abdominal wounds were closed. Recovery followed. About two years later the patient was again taken with symptoms of intestinal obstruction after washing clothes. Celiotomy was performed at once; the bowels were found adherent and enormously distended. The obstruction, which resulted from the intestine becoming caught under a band of adhesion, was relieved and recovery followed. DR. DEEVER mentioned the case of a girl who had an attack apparently of intestinal obstruction, but was in a condition of such extreme collapse that operation was not thought advisable. She recovered, however, and later in the summer was taken with a similar attack. Celiotomy was performed, adhesions broken up, and recovery again followed. A third attack followed, and at the operation the appendix was found to have been constricted completely off by a band of omentum. Dr. Deaver believes that it is always wise to open and empty the intestine as was done in Dr. Taylor's case, and in several cases he has injected magnesium sulphate in the opening. DR. ROBERTS mentioned a case in which the intestine had become caught in a hole in the mesentery, producing obstruction without adhesions. Oftentimes the bowel is bent at a sharp angle, but not constricted. In another case the bowel had become constricted by a remnant of the omphalo-mesenteric duct becoming wound around it, and the patient died while preparations were being made for operation. The general practitioner should be educated to send for the surgeon early before the case becomes hopeless. DR. BARTON mentioned a case in which the symptoms of obstruction disappeared while scrubbing the abdomen of a patient suffering with strangulated umbilical hernia.

DR. J. EWING MEARS read a paper, entitled: **A Case of Osteitis Resulting in Circumscribed Suppuration or Abscess of the Lower End of the Tibia.** The patient was injured on the lower surface of the tibia, causing considerable swelling and pain. For the first few days he received no medical treatment; afterward various local applications were made, change of climate, apparatus, etc., were prescribed by various physicians. Skiagraphs were taken and the opinion given that the case was one of osteitis. An incision was made and a groove was cut with a chisel in the tibia, but an attempt to drill into the medullary cavity was unsuccessful. A few days later pus was seen and the bone had softened so that it was possible to curet it away freely. The temperature fell and a good recovery followed. DR. HARTE stated that he frequently uses Hay's saw in inflammatory osteitis to open the bone. DR. ROBERTS suggested that relief follows in many of these cases because the periosteum is cut and tension relieved. DR. BARTON believes that the trouble is more deeply seated than the periosteum in most cases; that it is more likely to be due to osteitis or osteomyelitis. DR. G. J. DAVIS believes that necrosis may be avoided in many cases by timely operation.

**Successful Operation for Congenital Umbilical Hernia in a Child One Day Old.**—A. L. Levy (*Australasian Med. Gaz.*, July 20, 1898) reports the case of a child that presented at birth an umbilical hernia covered by peritoneum only. The bowel was replaced and a pad of lint and cotton was bandaged over the hernial opening. On the following morning the hernia had returned and was irreducible. The intestine was turning dark in color, and there had been no movement of the bowels from shortly after delivery. Chloroform was administered, but the bowel remained still irreducible. A circular incision was then made external to the umbilical ring, the sac dissected out and opened and the bowel returned. The fibrous ring was excised and the opening closed with catgut-sutures. The child was much collapsed, but revived and made an excellent recovery.

**The Ultimate Results of Alexander's Operation.**—William Alexander (*Liverpool Medico-Chirurgical Journal*, July, 1898) discusses the indications, method of procedure in his operation, and the after-treatment, and states that he has operated upon nearly 400 cases, with a mortality of 0.5%, due, not to the operation, but to erysipelas. He has been able, in 69 cases, to obtain accurate information with regard to the patients two or more years after the operation, and he gives brief notes with regard to their condition. Records are published of 16 cases 10 or more years after operation, and of 17 cases 5 or more years after operation. In all cases in which examination was made the uterus was found in good position, backache, pelvic discomfort, and pain and nervous symptoms being cured or ameliorated in most but not in all cases. Several of the patients were married and bore children after the operation. Brief notes are also given from the published statements with regard to the operation which Alexander has been able to collect, most being favorable, although all are published regardless of criticism.

**Surgical Treatment of Traumatic Insanity.**—D. Harrison (*Liverpool Medico-Chirurgical Journal*, July, 1898) gives the results of an analysis of 77 cases of traumatic insanity subjected to surgical treatment since 1878 that he has collected. The number of cases of insanity due to head-injury is stated to be about 2% of all cases, and only a limited number of these are susceptible of relief by surgical measures. Of the 77 cases, death occurred in 5, mental recovery in 51, great improvement in 12, slight improvement in 5, and no improvement in 4. Among the conditions for which operation was undertaken depressed fracture is mentioned in 48 cases; cicatrix without depression in 13 cases; cysts of the dura in 3; thickening of bone in 9. Harrison reports 3 cases in which he has operated personally. The first patient had received a blow in the right frontal region, causing a scalp-wound and a fissured fracture. Suppuration and exfoliation of bone followed, and later the patient became melancholic and had homicidal impulses. On reflecting a semicircular flap the bone was found depressed and about one inch in thickness. A subdural cyst, containing about three teaspoonfuls of serum, was evacuated, and, on pushing a fine trocar into the brain-substance about three-fourths of an inch, a cavity was opened, from which one-half an ounce of serum was removed. The patient made a good recovery, and was well nine years after the operation. The second patient had received a blow over the frontal region four years previously, and his mental condition had gradually become so bad that he was removed to an asylum. Upon opening the dura, extensive adhesions were found over the base of the second frontal convolution, which were separated, and the scalp-wound sutured without replacing the bone. Gradual improvement followed, and the patient was perfectly well and working as a cabinet-maker 18 months after the operation. The third case reported is that of a man who had received a heavy blow on the back of the head. Two months later he began to suffer from hallucinations, and four months after the injury he was seized suddenly with suicidal mania. A semicircular flap was reflected from the region of the second occipital convolution, and a piece of bone  $1\frac{1}{2}$  by 2 inches was removed. No abnormal condition was found, except adhesion between the cicatrix and the bone, which was not replaced. The patient recovered mentally after the operation and was well when last heard of  $4\frac{1}{2}$  months after the operation.



## The Latest Literature.

### British Medical Journal.

September 17, 1898. [No. 1965.]

1. Introduction to a Discussion on the Prognosis of Cardiac Disease in its Bearings upon Life-Assurance. SIR WILLIAM T. GAIRDNER.
2. Does Evidence of Limited Family Vitality Call for an Advanced Rate of Premium? JAMES RITCHIE.
3. Gout as a Factor in Life-Assurance. JAMES MEIKLE.
4. Pregnancy in Relation to Life-Assurance. JOHN PLAYFAIR and T. WALLACE.
5. The Medical Advisers of Life-Assurance Offices: Some of their Duties and Difficulties. JOHN M. McCANDLISH.
6. Extra Rating as a Statistical Problem. GEORGE M. LOW.
7. Insurance-Companies and Medical Examinations: A Plea for Uniformity. T. GARRETT HORDER.
8. Discussion on the Secretion of Bile in Man. WILLIAM BAIN, WILLIAM RUTHERFORD, S. MONCKTON COPEMAN, E. WAYMOUTH REID, A. W. MAYO ROBSON, and G. NEIL STEWART.
9. The Action of Anesthetics on Vegetable and Animal Protoplasm. AUGUSTUS D. WALLER.
10. The Selective Power of Tissues, Especially as Illustrated in the Mammary Gland. A. CORSAR STURROCK.
11. Introduction to a Discussion on Intestinal Absorption. E. WAYMOUTH REID.
12. Experiments on the Production of Complementary Color-Sensations. DAWSON F. D. TURNER.
13. Experiments on Molecular Concentration and Electrical Conductivity. G. NEIL STEWART.
14. Some Points in the Micro Chemistry of Nerve-Cells. A. B. MACALLUM.
15. The Physico-Chemical State of Caseinogen in Milk. DAVID FRASER HARRIS.
16. Protoplasm and Zymin-Action. D. NOEL PATON.
17. An Experimental Contribution to the Study of the Mechanism of Bile-Secretion. WILLIAM BAIN.
18. Changes that Occur in Some Cells of the Newt's Stomach during Digestion. E. WACE CARLIER.
19. On the Metabolism of Nucleins under Physiological and Pathological Conditions. T. H. MILROY and J. MALCOLM.
20. The Occurrence of Nerves on Intracranial Bloodvessels. G. LOVELL GULLAND.
21. Chemical Changes in Pelagic Ova during Maturation. T. H. MILROY.
22. Aseptic Midwifery. ROBERT JARDINE.
23. "Missed Labor." Report of a Case Verified by Operation and also Postmortem. MARY SCHARLIEB.
24. The Treatment of Cystocele. AMAND ROUTH. (*Illustrated.*)
25. Extirpation of the Myomatous Uterus by the Vagina. W. J. SMYLY.
26. A Speedy Method of Dilating a Rigid Os in Parturition. J. FARRAR.
27. On the Conservative Surgery of the Ovary. CHRISTOPHER MARTIN.
28. Treatment of Displacements of the Uterus by Operation Based on 200 Cases. A. LAPHORN SMITH.
29. Two Symphysiotomies in Domestic Practice. R. C. BUIST.
30. Vaginal Section. ARCHIBALD DONALD.
31. An Historical Sketch of the Medical Profession or Medical Craft in Britain, from the Earliest Period to the Victorian Era. T. VINCENT JACKSON.
32. Further Report upon Aseptic and Septic Surgical Cases. C. B. LOCKWOOD.
33. On Tubal Abortion, with Clinical Notes on 8 Cases of Ectopic Gestation. J. FURNEAUX JORDAN.
34. Diphtheria of Throat, Nares, Conjunctiva, and Urethra; Serum-treatment, Recovery. W. HERBERT GREGORY.
35. Inversion of the Uterus. JOHN J. BINGHAM.
36. Three Simultaneous Rashes. YARNOLD H. MILLS.
37. Chorea Complicating Pregnancy. R. H. A. HUNTER.
38. Intestinal Casts. A. J. MACKINTOSH.
39. A Possible Case of Superfetation. W. R. THOMPSON.
40. Stomatitis Following the Administration of Antipyrin. C. KING MARTYN.

41. Cantharides as a Hemostatic in Hematuria and its Use in Albuminuria. OCTAVIUS BEVEN.
42. A Case of Sulphonal-poisoning. J. F. GILLET.
43. A Case of Hydatid Mole with Staphylococcus-infection. FRANK A. NIULASY.

1.—Gairdner discusses the effect of **cardiac disease** upon **life-insurance**. In speaking of the same subject 11 years ago he mentioned 10 cases of severe cardiac disease in which life had been prolonged beyond the usual period. Of these, 1 was in a physician, who died at about 70 years of age from some other disease. Another patient is mentioned who when a boy had had a loud post-systolic murmur and suffered from occasional attacks of cyanosis, but who was, nearly 40 years later, in good health. Another case is mentioned of a man with a tricuspid systolic murmur, which autopsy, many years later, showed to be due to a tumor acting as a ball-valve in the right auriculo-ventricular orifice. No accurate statistics have been gathered upon the relation between cardiac disease and life-insurance, and it is difficult to say when the former should be considered a cause for rejection. Diseases of the pericardium do not necessarily influence the duration of life, and Gairdner believes that the so-called white patches are evidences of old pericarditis that has healed without leaving a greater lesion. He also thinks that an acute pericarditis may heal perfectly. Functional disorders of the heart render the task of the medical examiner exceedingly difficult. Intermittence may have absolutely no effect upon the health of the individual. Bradycardia and tachycardia are also of doubtful significance, although it is believed that there must be something pathologic in a pulse less than 50, or over 100. In chorea it is probable that there exists organic heart-disease, for Gairdner has seen no case in which death occurred in the acute stage without vegetations upon the aortic valve. In cases of large or small heart without distinct lesion the other organs should be carefully examined. In some cases of pseudo-angina there is no reason to refuse life-insurance. In the discussion of this paper Thompson mentioned cases in which life was prolonged to a great age, although the pulse rarely exceeded 32. Tyson believed that many cases of aortic valvular disease had a better prognosis than is usually supposed; the important factor being the condition of the wall of the heart. Jefferys mentioned cases of bradycardia in healthy persons, and called attention to the importance of the character of the apex-beat. Poynton mentioned the destructive action of the rheumatic poison upon the heart-wall in childhood. Ritchie believed that irregularity of the pulse is usually a suspicious symptom. Eastes called attention to the irregular heart produced by excessive indulgence in tea or coffee.

2.—Ritchie considers the importance of the **family-history** in deciding the **amount of premium**. Thus, in cases of family-longevity, partial weakness on the part of the applicant may be overlooked; and, on the other hand, a tendency on the part of the ancestors to die, particularly if the deaths occur between 50 and 60 years of age, is most suspicious. Moreover, certain races and even certain sects of the same race may show, on account of their different modes of life, a different rate of death. Gairdner rather doubted that diseases formerly supposed to be inherited, such as tuberculosis, are actually such.

3.—Meikle made a study of 525 lives on which an **extra premium** had been charged on account of the presence of **gout**, and he found that while the expected deaths were 120, the actual deaths were 160. Therefore, the rate of excess should theoretically be 33%. However, expectation of life after 70 is not less among the gouty than among those apparently well. At the close of the observations 272 insurances were still in force. Of these, 210 have since been traced. The expected deaths were 111, the actual deaths 184; showing an excess of 66%. The 184 gouty persons had a total expectation of life of 3,132 years and 7 months, but they actually lived only 2,190 years and 11 months, a shortage of about 5 years each. Gout is apparently produced by the over-consumption of animal foods, and the drinking of poor alcoholic beverages. Thus, about six times as many inn-keepers die of the disease, and five times as many brewers as normal persons. Among the English soldiers in India who are intemperate, gout is three times as common as among the Indian soldiers, and rheumatism five times as common. Statistics of 6,500 total abstainers, with an expect-



tation of 31,000 years, showed a mortality of 152, only about one-fourth of that which occurred in the same number of gouty patients.

4.—It has been stated that during **pregnancy** a woman is less liable than at any other time to contract **diseases** other than those peculiar to her state, and if the statement be correct it might be inferred that the mortality of the period of gestation is comparatively low. It must not be forgotten that the diseases peculiar to pregnancy are themselves full of danger and often prove fatal. Besides, when other ailments are contracted during pregnancy they may assume an aggravated form, or they may cause abortion or miscarriage, with blood-poisoning. From a study of the data furnished by hospitals and insurance-companies, Playfair and Wallace arrive at the following conclusions: (1) For the uniform extra premium at present charged, an extra, varying in amount according to age, should be substituted. (2) The extra premium for a first pregnancy should be at least three times as great as that for a subsequent pregnancy. (3) A proposal for insurance from a woman aged 30 or upward, pregnant for the first time, should be delayed. (4) A proposal for insurance from a pregnant woman aged 40 or upward, whatever the number of the pregnancy, should be delayed.

5.—McCandlish calls attention to some of the **difficulties experienced by life-insurance examiners**. Thus, a patient suffering from some fatal disease not readily discoverable by ordinary methods may have his life insured by speculators for a large amount. Often applicants attempt to practise fraud; many of them are untruthful, and make an effort to suppress facts of their ancestral history or own condition.

6.—Low argues that the **statistical method** is only one by which **extra rating** can be made to approach precision. Extra risks should be allowed for pulmonary tuberculosis, gout, obesity, and other diseases. Regarding these a table is given showing that the proportion of actual to expected deaths was 110 to 100. Certain occupations, particularly traffic in intoxicating liquors, seem to be prejudicial to life, as it has been found in a large series of cases that the actual exceeded the expected by 83%.

7.—Horder suggests the advisability of having a **uniform method of examination** in all insurance-companies. He believes that the patient should be given a paper containing questions regarding his family-history, and be instructed to fill it up at his home, obtaining the information required from others, if necessary. Questions relating to complexion should be omitted, and the medical officer be merely required to furnish evidence that the principal organs of the body are free from disease. Probably the family medical attendant is the one most competent to give the required information.

8.—Bain believes that there is no relationship between the **weight of the individual** and the amount of **bile secreted**. The nervous system has some influence on the secretion, as has also the quantity and quality of the food; at any rate the amount of bile secreted seems to depend on the amount of fluid ingested. Exercise not accompanied by sensible perspiration increases the flow of bile. As to drugs the evidence is conflicting; bile and bile-salts are cholagogues, and so is a substance called iridin. Rutherford made some observations on a patient on whom cholecystotomy had been performed for carcinoma of the pancreas. The bile-secretion rose regularly about an hour after meals; the high secretion that regularly followed dinner was maintained for about seven hours. A few observations were made on the influence of drugs. Morphin did not affect secretion; neither did alcohol in the form of whisky. Sodium salicylate increased the fluid and salts of bile. The results obtained with salicin were conflicting. Robson did not find that drugs influenced secretion to any great extent. Soda-water seemed to act chiefly through the amount of fluid taken; iridin had some stimulant action; calomel did not have any marked action of this kind; sodium salicylate was believed to be the best stimulant.

9.—Waller shows that the **action of anesthetics** is the same on nerves as on other forms of protoplasm. The action of nitrous oxid was found to be neutral. Carbondioxid had a partially paralyzing action on nerve-power. Ether and chloroform showed a marked contrast, the effect of the former passing off rapidly, while that of the latter was permanent. The retina and spinal cord of the frog presented

the same differences in response to the action of the different drugs.

10.—Sturrock points out the wonderful **selective power of the mammary gland**, which takes from the blood of the mother a food resembling, in the proportion of its constituents, the freely chosen diet of an adult, but differing in certain respects: (1) The suckling requires more proteid and salts than an adult for the building up of its tissues; (2) the suckling requires more fat for heat-material, as it has not to such an extent as the adult the muscular source of the heat-supply; (3) the adult requires more carbohydrate, because he performs more work. The glands of various animals select the constituents of milk in proportions adapted to the diverse conditions of life under which they are placed. Animals that grow rapidly are supplied with milk having more of those constituents that aid in building up tissues, *i. e.*, proteids and salts. Animals living under different conditions of temperature are provided with milk containing ingredients in proportions more or less useful for the maintenance of body-heat. Animals compelled to early muscular exercise receive milk adapted to supply energy. Reference is made to the importance of phosphocarnic acid, which is probably a decomposition-product of caseinogen. It is more largely present in human than in cow's milk and is the richest phosphorus-holding body in milk.

11.—Reid discusses the subject of **intestinal absorption**, concerning which three views prevail: (1) that osmosis and filtration are sufficient in themselves; (2) that the epithelial cells of the villi take part in the process; and (3) that both processes are in simultaneous action. As to the first, absorption might occur as the result of osmosis and filtration, but it occurs, also, in the experiment, when these two processes are positively excluded. If in a loop of gut the epithelium is removed, absorption is slow, and the conclusion is justified that epithelium is an agent in absorption, though not necessarily the sole one. No evidence has been obtained of absorptive nerve-fibers in the mesenteric nerves comparable to the secretory fibers in the nerves of the salivary glands, and it appears that the activity of the epithelium of the gut is controlled directly by its blood-supply.

12.—After demonstrating a method of producing **complementary color-sensations**, Turner refers to the value of stereoscopic Röntgen photographs. Radiostereoscopy might, he believes, indicate to the surgeon the exact position of foreign bodies in the tissues.

14.—Macallum details some studies made by one of his pupils, Mr. Scott, on the development and nature of the **Nissl granules**. At an early stage the cells of the anterior horns consist almost entirely of nuclei. Later on the cell-body elongates, the nucleus becomes less rich in chromatin, and a cap of peculiar nature stainable with toluidin-blue appears close to the nucleus. At a still later stage, this substance becomes uniformly distributed throughout the cells and it finally forms the spindles found in the adult. There is, therefore, reason to believe that the spindles are derived from the nucleus of the nerve-cells. They resist peptic digestion, but are digested slowly with trypsin, and hence are of the nature of nucleoproteid. The spindles contain both phosphorus and iron.

15.—Harris has as the result of a study of the **physio-chemic state of caseinogen in milk** reached the following conclusions: (1) Caseinogen is not in solution in milk-plasma, but (2) it is present along with fats in both the globules and the particles in a state of minute subdivision; (3) the globules contain a maximum of fat and a minimum of caseinogen; the particles contain a minimum of fat and a maximum of caseinogen; (4) the globules are not pure fat or oil and the particles are not pure caseinogen. In nature casein is never seen apart from fat, and in milk the fat never apart from caseinogen. Caseinogen is not a chemic entity *sui generis*, but it and the fat together constitute a highly complex organic substance that might be called oleonucleoproteid. If the term caseinogen is to be retained, its connotation must be extended so as to embrace the fat-molecule.

17.—Bain has made a series of experiments on dogs to study the **mechanism of bile-secretion** and has arrived at the following conclusions: (1) Stimulation of either vagus has no effect on the biliary secretion; (2) 100 cu. cm. of saline solution have little or no effect on the secretion of bile; (3) a solution of Plattner's crystals and sulphur-water (Harrogate) injected into the jugular vein accelerates the flow of



bile, presumably by acting directly on the hepatic cells; (4) the ingredients to which the old sulphur-well at Harrogate owes its efficacy as a cholagogue are probably barium chlorid and sodium sulphid.

**19.—Nucleins and nuclein-containing tissues** produce after absorption marked hyperleukocytosis. The question presents itself as to which part of the nuclein acts in this way. Milroy and Malcolm found after nucleic acid had been taken a marked rise in the number of leukocytes, and this was accompanied by a distinct, absolute, and relative increase in the secretion of  $P_2O_5$ . The rise in the alloxur-bodies was exceedingly slight, and not at all comparable to that of the  $P_2O_5$ . Attention is drawn to the fallacy of considering a rise in alloxuric excretion as a gauge of the amount of nuclear disintegration. Thymic acid obtained from nucleic acid by splitting off the alloxur bases and cystosin, also was investigated. The small doses that could be given had no effect on the number of leukocytes or the excretion of  $P_2O_5$ . Metaphosphoric acid was found to have no action either on the leukocytes or on the excretion of  $P_2O_5$ . The principal pathologic condition studied was leukocythemia (medullary). In this  $P_2O_5$  was diminished, both absolutely and relatively, while the alloxuric excretion was raised. It is believed that this was due to interference with the development of the adult leukocytes in the bone-marrow, and hence a check probably in the leukolysis or in the excretion of the phosphorus-containing decomposition-products of the nucleins derived from the nucleus of the leukocyte. In other words, there is an alteration in the developmental life-history of the leukocytes as compared with that occurring under normal conditions. The rise of alloxuric excretion is not to be regarded wholly as a sign of increase of nuclear disintegration, but rather as a check upon the normal nitrogenous metabolism. In a case of plumbism in which the leukocytes were slightly increased in number the excretion of  $P_2O_5$  and alloxur-substance was practically normal. In answer to a question how the increased excretion of uric acid in leukocythemia was to be explained, if there was a check upon leukolysis, it was stated that it is quite possible for uric acid to arise as a result of altered metabolism in the nuclei, without their actual destruction.

**20.—Gulland** has found **nerves** in the **bloodvessels** of the **brain** in human beings and in dogs.

**21.—Milroy** discusses the **changes** that **pelagic** and **demersal ova** undergo during **maturation**. The ripe pelagic ova differ from the demersal in being able to float on sea-water. The specific gravity of the former is only slightly below that of salt-water, while the demersal ova, even when fully ripe, have always a distinctly higher specific gravity than sea-water. The process of maturation, however, is in both cases essentially of the same type. In the immature ovum the germinal vesicle is large and is centrally placed, and the protoplasm around it varies from a finely granular to a coarsely granular state. The final stage of maturation consists in a marked distention of the egg and a clearing up of its contents. This increase in volume is accompanied by the disappearance of the germinal vesicle. These changes occur in both classes of cases.

**22.—Jardine** states that **puerperal sepsis** is a **preventable disease** and that obstetricians should face this fact and do their utmost to accomplish it. In all cases the source of infection is from without, with one exception, and that is exceedingly rare—namely, a pelvic abscess present at the time of labor and bursting into some part of the genital tract during labor or the puerperium. Under such conditions the primary source is from without. Defective drains constitute another occasional source, but the vast majority of cases are due to want of care on the part of the attendants. Parturition may be said to be a physiologic act, but among highly civilized women it is dangerously near a pathologic one, and very little may turn the scale. In the vast majority of cases the genital tract is perfectly aseptic at the onset of labor; *i. e.*, it is not free from organisms, but only non-pathogenic germs are present. In fact, these are not only non-pathogenic, but they are actually protective. The cervical canal also is closed by a plug of mucus—the operculum—which shuts off the uterine contents from the vagina. In the management of a case of labor the hands and instruments should be absolutely clean, as well as the external genitals. Vaginal examinations must be as few as possible, and the external parts should be swabbed in ad-

vance. In an ordinary case *antepartum* douching is unnecessary, and in fact is as likely to do harm as good. It will remove the normal secretions of the vagina, corrugate and harden the tissues, and increase the danger of laceration. Under certain conditions a douche is necessary: (1) If there is any purulent or putrid discharge from the vagina, as from gonorrhea or carcinoma of the uterus; (2) if any operation is to be performed in which the hand or instruments must be introduced into the uterus. A 1% solution of lysol makes the best douche. Postpartum douching should not be practised as a routine measure. Under certain conditions it is necessary: (1) For *postpartum* hemorrhage; then it should be with very hot water (120° F.); (2) if there has been any purulent discharge previously to labor; (3) if the fetus has been putrid; (4) if the hands or instruments have been introduced into the uterus; (5) if the parts have been lacerated to any extent, and if the labor has been a prolonged one. During the puerperium the external genitals should be frequently washed with Condy's fluid (solution of potassium permanganate). The patient should be encouraged to sit up in bed by the third day, if she is strong enough, and she should be allowed to rise on her hands and knees to urinate. This ensures thorough drainage of the uterus and vagina.

**23.—Scharlieb** reports a case of **missed labor**, which she knows to be genuine and believes to be unique. She states that up to the present time there is no record of a case that has borne the test of either operation or postmortem examination. Missed labor is not protracted gestation, although undue prolongation of pregnancy may be the precursor of missed labor. The dividing line must be drawn sharply at the death of the child. Up to this time a pregnancy continuing beyond the usual period is to be classified as protracted gestation, and after this as missed labor.

**24.—The treatment of cystocele** depends greatly upon its causation. A cystocele may be primary or secondary. It may be primary from stretching of the anterior vaginal wall in labor, the bladder being drawn up out of harm's way during the first stage; or when the membranes rupture before the cervix is fully dilated. The head, then, is the dilating body, and may force down the anterior lip, dragging with it the anterior vaginal wall and base of the bladder. Secondary cystocele is predisposed to by a deficient perineum, from absence of support to the anterior vaginal wall, and is directly produced by prolapse and procidentia of the uterus, and by the rare condition of primary hypertrophic elongation of the supravaginal cervix. Cystocele is not easy to treat satisfactorily. Success depends much upon whether it is primary or secondary. Anterior colporrhaphy, involving the removal of portions of mucous membrane of varying shape and size, and drawing the resulting free edges together, thus puckering up the underlying bladder, is often only of temporary value and therefore not satisfactory. Lately, Routh has modified this operation by making a central longitudinal incision, stripping off the bladder underneath and thus freeing the anterior vaginal wall. The edges can then be everted, and the raw surfaces made into a sort of ridge, which is fixed to a celluloid plate, previously prepared and kept in position for a fortnight. This rigid wall does not give way as easily as the cicatrices of an ordinary colporrhaphy. Routh thinks, however, that it is useless to expect a permanent cure unless the bladder is completely stripped off the uterus and vagina. When elongation of the supravaginal cervix complicates cystocele, whether as cause or effect, and failing of relief by pessaries, the cervix must be amputated high up.

**25.—Smyly** states that **hysterectomy for myomata** is mainly to be credited to Amussat, Péan, and Doyen. The mere presence of a myoma is not in itself an indication for operation, and there are a number of cases in which operation is not only uncalled for, but to be condemned. The chief conditions that call for interference are: (1) Pressure upon important organs, especially the bladder and rectum; (2) Rapid enlargement, especially in young women, whether it be due to simple growth or to cystic or malignant degeneration; (3) Suppuration and sloughing of the tumor; (4) Pain; (5) Hemorrhage; (6) When a woman who has to earn her living is incapacitated from so doing by the disease; (7) When the tumor, though protruding through the os, involves so much of the uterus that its preservation is impossible. Myomectomy is an ideal operation; nothing but



diseased tissues are removed, and the uterus is left structurally and functionally perfect. Removal of the uterine appendages is the operation that is most frequently practised in the treatment of small myomatous uteri. It recommends itself as generally simple in performance and satisfactory in its results, but it is not always either the one or the other. Vaginal hysterectomy, when possible, is the best operation to be employed. It is a radical procedure, altogether removing the disease and ensuring a cure. The shock is less and convalescence more rapid than after any abdominal operation. The mortality is small, and there is no abdominal cicatrix that may lead to hernia. Landau, of Berlin, thinks it not wise to wait too long before operating, for the following reasons: (1) There might be sarcomatous degeneration in the simple myoma; (2) There might be necrosis of the tumor owing to obliteration of the vessels by pressure and septic results following; (3) It is not right to believe that the tumor will cease growing after the menopause.

**26.**—Farrar recommends the use of a 10% solution of cocaine hydrochlorate, applied to the cervix, as a rapid and simple method of **dilating a rigid os in parturition.**

**27.**—Martin states that in cases of ordinary **cystoma of one ovary**—the other ovary being healthy—it is unjustifiable to remove both. If, however, the case be one of sarcoma of the ovary, it is not only justifiable, but it is imperative to remove both organs, in order to diminish the chance of recurrence. In cases of inflammatory disease of the uterine appendages, if the disease be confined to the organs on one side, it is unnecessary to remove both appendages. In cases of double pyosalpinx vaginal hysterectomy is to be preferred with removal also of the tubes, endeavoring to leave behind one or both ovaries, unless they are obviously diseased. Resection of the ovary is to be performed for fibroma, dermoid tumor, and cystic disease, and ignipuncture of the ovary for chronic and cystic ovaritis. Martin has performed the last-named operation fourteen times—all the patients making easy recoveries from the operation. He recommends conservation of the ovary whenever possible in the removal of parovarian and broad-ligament cysts, and also in hysterectomy, in order to avoid the disagreeable symptoms of the induced menopause.

**28.**—Smith has adopted the following definite rules in the **treatment of displacements of the uterus:** (1) If they cause absolutely no symptoms and are discovered accidentally, they are left severely alone. (2) If the uterus is found to be retroverted, gentle efforts are made to replace it either by bimanual manipulation, with or without the help of the forceps to draw it down, or of the sound, to lift it forward, or by means of the genupectoral position with the clothing loosened. (3) If the uterus be found to be absolutely free from adhesions, it is replaced and a pessary is introduced to support it, while every effort is made to tone up the muscles of the pelvis and uterus, that are concerned in holding the uterus up to its proper level and forward. (4) Only when several months' treatment with hygienic, medicinal, and mechanical means has completely failed to relieve the patients of their symptoms, is recourse had to operative procedures. (5) Then, if the uterus is too long, the cervix is amputated by the method of Schroeder; if chronically inflamed, it is dilated, curetted, and treated with rest, hot douches, iodine, boroglycerid-tampon, until its size and weight are reduced. If the vaginal outlet is torn or relaxed, it is tightened up by means of anterior and posterior colporrhaphy. If it is absolutely certain that there are no adhesions, and that the tubes and ovaries are healthy, Alexander's operation is performed. If there is the slightest doubt as to the mobility of the uterus, ventrofixation is chosen.

**29.**—Buist records the performance of **symphysiotomy** in two cases in domestic practice, both patients recovering, one with a movable symphysis however.

**30.**—Donald states that in the last six years he has performed **vaginal section** in 59 cases, excluding those in which the uterus had been removed. In 18 of these, exploratory incision was made, in 11 incision for pelvic abscess, in 8 incision for ectopic pregnancy; in 20 vaginal ovariectomy was practised, and in 3 cases vaginal myomectomy. The advantages of the operation, as compared with abdominal section, an absence of shock, less risk of septic peritonitis, quicker recovery and less troublesome convalescence, the avoidance of an abdominal scar, more perfect drainage, better control of oozing of blood from the pelvic cellular tissue

and peritoneum, and the simplicity of the procedure. A distinct contraindication to the operation exists in cases in which there is a possibility of the tumor being malignant. The anterior incision is to be preferred in cases of chronic thickening and adhesion of the appendages, in the presence of broad-ligament cysts, in cases of pelvic cellulitis, of fibroid tumors of the uterus, and of exploratory incision generally. Posterior incision is most applicable in cases of pyosalpinx and of ovarian abscess lying behind the uterus, in those of hematocele and of ectopic pregnancy, and in most cases of vaginal ovariectomy.

**32.**—Lockwood continues his reports on **aseptic and septic surgical measures**, especially showing results in detail in the disinfection of sponges, towels, silk, fishing-gut, and of the hands and skin. Sponges were cleansed and sterilized by the sulphurous-acid method, kept in 1 to 20 carbolic-acid solution, and placed in a bowl containing a solution of 1 to 2000 of mercuric iodid when used. The disinfection of catgut depends mainly upon the thorough removal of grease. The skin of the scrotum and of the scalp is exceedingly difficult to disinfect, and has a higher proportion of sepsis. Results of the technic employed in various cases are given.

**33.**—Jordan records **tubal abortion** and 8 cases of **ectopic gestation**, because of their pathologic interest. The records show that hematoceles were mostly due to hemorrhage from the outer ends of the tubes, while "tubal mole" exists. In 2 cases, the fetus escaped into the interior of the tumor. The cases go to show that "a fairly copious hemorrhage may become limited within the cavity of the peritoneum and form an intraperitoneal hematocele, with definite tumor," as stated by John W. Taylor.

**35.**—Bingham reports a case of **inversion of the uterus** in a tertipara, 23 years old, whose labor was uncomplicated. When straining to pass urine, "something" came down, but she had previously suffered from constant bearing-down, sometimes from forcing and a feeling of something in the vagina. A midwife attended the delivery.

**36.**—Mills reports the case of a girl 9 years of age, presenting the prodromal rash of measles, consisting of bright coral-pink spots, pin-head in size, unfading on pressure. The characteristic rash of measles developed on the second day, and on the third, urticaria appeared on the abdominal wall and thighs. All three rashes were visible at once.

**37.**—Hunter records a case of **chorea complicating pregnancy** in a unipara, 21 years old, affecting the left side of the face and left arm, although the entire body was in constant movement. Forcible delivery was successful, a healthy male child being born.

**38.**—Mackintosh asks for successful treatment for a condition in which **intestinal casts**, probably due originally to inflammation from tapeworm, are passed with regularity. A tapeworm was expelled entire with the head, but two months afterward an intestinal cast several inches in length was passed. At intervals for twenty years similar casts have passed. No soreness or rawness ensued. Codliver-oil and *pix liquida* have been tried.

**39.**—A multipara, 42 years old, gave birth to a full-term female child, and two days afterward to a 2 or 3 months' fetus with membranes intact. The latter bore no sign of atrophy or degeneration, as it would if impregnated at the same time as the mature fetus, but less favored in nutrition. It is thought possibly to have been a **superfetation.**

**40.**—Martyn reports the case of a man, 35 years old, who was suffering with rheumatic neuralgia and was given **anti-pyrin** in mixture. On the next day three or four patches of superficial stomatitis appeared on the buccal mucous membrane and two or three on the hard palate. No erythematous rash appeared. Forty grains of the drug was the entire amount taken.

**41.**—Bevan reports a case in which **hemorrhage from the urethra, from unknown cause**, after the unavailing use of catechu, logwood, galls, oak-bark, alum, iron, ergot, tannin, hamamelis, etc., was checked in 24 hours by 5-minim doses three times daily of the **tincture of cantharides**, and regular exercise. Blood-corpuscles and a few casts were found in the urine. Rest had nothing to do with the cessation of the hemorrhage. The patient was 68 years old, a joiner, in good health. Albumin in those with "large white" kidney may be lessened by tonic doses of tincture of cantharides.

**42.**—Gillett records a case of **sulphonol-poisoning** in



a neurotic girl 17 years old, after the ingestion of 60 grains in three doses of equal parts. Nausea, ataxia, muscular twitchings and other symptoms, including hallucinations, ensued 7 hours after the final dose. Strychnin and brandy hypodermically relieved pressing conditions. Croton-oil, after hyoscin hypodermically, operated (36 hours from the commencement of the attack). Five ounces of urine (free from albumin) were passed, and recovery ensued.

43.—Niulasy reports the case of a primipara, 20 years old, who discharged a large **hydatidiform mass** after 3 months' pregnancy. The chief dangers, exsanguination and septic infection, were successfully passed through. Two unusual facts are, the youth of the patient and her being a primipara.

### Lancet.

September 17, 1898. [No. 3916.]

1. Tuberculosis and the Milk-supply, with some General Remarks on the Dangers of Bad Milk. SHERIDAN DELEPINE.
2. The Plague in Calcutta. FRANK G. CLEWOW.
3. Note on a Case of Saturnine Amblyopia. CHARLES BELL TAYLOR.
4. Strange Succession of Fractures in a Collier, with Remarkable Coincidence in Time of Occurrence. D. T. RICHARDS.
5. Sarcomatous Degeneration in an Undescended Testicle; Castration; Recovery. JAMES R. WALLACE.
6. Re-breathed Air as a Poison *per se*. JOHN HARTLEY.
7. A Case of Large Cystic Abdominal Tumor probably of the Broad Ligament or Ovary of Unusual Duration and Slow Growth. J. H. DAUBER.
8. A Case of Laparo-nephrectomy in an Infant 16 Months old. J. A. CAMPBELL KYNOC.
9. Two Cases of Acute Diffuse Cellulitis of the Submaxillary Region (Angina Ludovici) in which Tracheotomy was performed; Recovery in one. H. W. WEBBER.
10. Three Cases of Plague in Pregnant Women; Recovery in all Three Cases. B. H. F. LEUMANN.
11. A Note on the Occurrence of Cartilaginous and Bony Nodules of the Tonsils. WYATT WINGRAVE.
12. A Case of Large Fatty Tumor. J. A. HAMILTON.
13. Ipecacuanha in a case of Epilepsy. C. KNOX BOND.
14. A Case of Gastro-jejunostomy in which the Artificial Opening was surrounded with a Triple Row of Sutures and Lined with Mucous Membrane. (Under the care of C. B. Lockwood.)
15. A Case of Perineal Abscess; Pyemia treated with Anti-streptococcic Serum; Recovery. (Under the care of Mr. Lawford Knaggs.)
16. A Case of Rupture of the Patellar Ligament; Suture; Recovery. (Under the care of Dr. D. Macartney.)

1.—Delepine refers to the great **vitality of the tubercle-bacillus** and describes the media through which it gains entrance into the body of human beings and animals, its mode of development and extension within the body, and its avenues of escape from the body in order to infect other individuals. He gives some clear illustrations of children infected through the intestinal tract from drinking tuberculous milk. He also shows that deaths attributable to forms of tuberculosis other than the pulmonary form occur most often during the first five years of life. It has been well demonstrated that calves are born tuberculous with exceeding rarity, and then only when the uterus becomes tuberculous. The so-called hereditary tendencies in both children and calves depend upon the fact of weakness at birth and consequent diminished resisting power of the tissues in the first place, and in the second to exposure to infected places and association with infected people. By preventing the infection in these cases tuberculosis can be avoided. The results are given in detail of the examination of 208 samples of milk, 7 of which were from cows not known to be tuberculous; none of these contained tubercle-bacilli. Twenty-two were from cows nearly all in advanced stages of tuberculosis; six of these samples contained tubercle-bacilli. Fifty samples were from town-dairies; three of these contained tubercle-bacilli. Ninety-three samples were collected at railway-stations in Liverpool and Manchester; of this number 22 contained tubercle-bacilli.

This same milk produced septicemia in 9% of the cases examined, and in from 16 to 24% considerable irritation of the tissues. These noxious properties are considered to be mostly due to contamination at the time of or after milking. In order to protect the public from the dangers of milk infected with tuberculosis, the following public measures are recommended: (1) The boiling of all milk used. Boiled milk is not as injurious as has been thought. (2) Analysis of samples from time to time, and rejection of all milk that is to any extent infectious. (3) Systematic inspection of cow-sheds and milk-cows by veterinary surgeons, and the application of the tuberculin-test. It is further recommended that the tuberculous be separated from the healthy cows, and that all tuberculous cows in which the disease has not reached serious proportions be fattened for slaughter, and that those in which the disease is advanced be destroyed. The infected sheds should be thoroughly disinfected, and all sheds should be so constructed as to allow of thorough cleaning, lighting and ventilation. (4) All imported cattle should be examined by veterinary surgeons; all cattle kept in the country be registered and branded to indicate that they have been inspected and tested, and all cow-sheds should then be inspected at least twice a year, any newly infected animals removed, and the breeding of healthy cattle should be encouraged. (5) Of all the measures mentioned, the two most essential are the systematic and periodic inspection of cow-sheds and herds, and the testing of all cattle brought into the country from abroad. The utmost care should be exercised in the preparation of the milk. The udder and the milker's hands should be kept absolutely clean. The milk-pails should be washed with boiling water or be sterilized by steam. The milk should be cooled immediately after milking, and its temperature kept below 40° F. until it is treated in the dairy by filtration, separation, sterilization, etc. Milk not sterilized, that is to be sent by rail to any distance, should be kept packed in ice until it reaches the consumer. The authorities should be compelled to regulate the importation of foreign milk and dairy-products in order to insure the cautions already mentioned. All kinds of neglect rendering milk dangerous to health should be adequately punished by law.

2.—The **epidemic of plague** reported by Clemow has not thus far been of a severe type. The first case recognized occurred on April 16, 1898, and up to July 31st the total number of cases reported had been 190, a daily average of 2, the highest number reported in any one day being 8. The evidence seems to point to the existence of some cases prior to the one reported on April 16th, even as early as March 30th. There were certain plague-centers throughout different portions of the city, and only 7 of the 25 wards reported no cases. All sanitary measures to prevent the extension of the disease, such as disinfection, isolation, etc., were carefully carried out. As soon as the existence of the disease was formally recognized by the Government, a violent panic occurred. About one-fourth of the population, amounting to some 200,000 persons, fled from the city. There were numerous strikes and riots and the murder of several inoffensive persons. The native press encouraged the state of panic. An attempt by the Government to promote general, but voluntary inoculation with Haffkin's prophylactic gave rise to great rebellion, and led to the murder of several officials. The source of the infection in this epidemic is uncertain. It was probably introduced by ships trading from some infected port. The plague has abated very rapidly until only an occasional stray case is reported. Clemow feels that there is a possibility of a new manifestation when the colder season, the time at which plague is most prevalent, returns. There has been no striking rise in the general mortality of the city, which is considered the most hopeful feature in the present outbreak. In infected districts the general mortality is ordinarily greatly increased. It is thought probable that women in India are more exposed to plague-infection than men, as they are more confined to the house and engaged in brass-polishing with the dirt collected from the floors of their houses. The mortality has been among the males of all classes 83%, and among the females of all classes 76%, or, among all classes of both sexes 82%. Attention is called to the remarkably low mortality among Eurasians, a point that was observed in the Hong Kong epidemic. The existence of an endemic fever with buboes in India makes the fixing of an exact date for the beginning of an epidemic



difficult, as such cases are almost indistinguishable from those of true plague. The condition is milder in character, its mortality lower, the glands rarely suppurate, and there is no concurrent disease in rats. The bacteriology has not been studied. In almost all outbreaks of human plague rats have had the disease both before and during the epidemic. Dogs, pigs, pigeons, and domestic fowls have occasionally been attacked. Before there was any evidence of plague-infection among human beings in Calcutta the disease was quite extensive in rats. In the office and warehouses of a shipping company near the wharves the nature of the disease was proved bacteriologically.

**4.**—Richards records a **strange succession of fractures sustained by one individual**, remarkable for the coincidence in the time of their occurrence. On August 26th, at the age of 10, the patient fractured his right index-finger; at the same date at the age of 13 his left leg; at the age of 14 both bones of the left forearm; at the age of 15 he sustained a compound fracture of the left leg, and in the following year a compound fracture of both legs, the right requiring amputation. After this accident he did not work on August 26th for 28 years, but in the year 1890 he forgot his fateful day and went to work, with the result that he sustained a compound fracture of his left leg. Since then he has studiously avoided working on that day, but never missing any other time.

**5.**—Wallace records the case of a man, 25 years of age, born a cryptorchid, his left testis having remained undescended from birth. At the age named he had at various times attacks attended with acute pain in the gland, often associated with nausea and vomiting. Subsequently finding that the slightest exertion provoked a renewed attack, orchidectomy was advised and submitted to. The gland that was removed proved to have undergone sarcomatous degeneration. The case is interesting from the diagnostic value of reflex testicular vomiting, as characteristic of the disease present.

**7.**—Dauber records the case of a woman over 50 years of age who presented a large abdominal cystic tumor that had been present ever since she was fifteen years of age.

**8.**—The question of **operative treatment in cases of malignant tumors of the kidney in children** is one concerning which there is still difference of opinion. Statistics should, however, discourage such operations, as not only are they attended with a large mortality, but early recurrence is the rule rather than the exception. Thus, among 45 nephrectomies in infants, the mortality was 48%, and early recurrence took place in 75%. Kynoch removed from an infant 14 months old, a sarcomatous kidney, the child surviving the operation and showing no sign of recurrence two years after the operation.

**9.**—Webber reports two cases of **acute diffuse cellulitis of the submaxillary region**, in both of which alarming dyspnea developed, requiring immediate tracheotomy. In one instance the operation was performed in time to save the patient's life; in the other, upon the sudden development of dyspnea, the attempt to open the trachea was delayed by the fact that the trachea itself had been displaced two inches from the median line. When at last an opening in the trachea was effected, all attempts at resuscitation failed and the patient died.

**10.**—Leumann records three cases of **plague in pregnant women**, all three of whom, contrary to expectation, recovered. Two of these women came into the hospital in a pregnant condition; one of these aborted at the beginning of the tenth day of her illness, while the other left the hospital without any accident. The case aborted before admission into the hospital, and soon after admission was considered by Yessin too far advanced to be injected with his serum.

**13.**—Bond reports the case of a single woman, 29 years of age, who had had epilepsy from the age of 8 years, without any prolonged cessation of the attacks. She had been treated with potassium bromid without any effect. The use of ipecac was suggested, in the first place because it had not been observed that the drug was of value in the convulsive attacks of children, due to gastro-intestinal irritation; secondly, because it was a remedy likely to check the voracious appetite, and thus overcome the neglect of mastication, so frequently observed in epileptics. Ten minims of the wine of ipecac were given and this dose increased until the patient was taking 40 minims three times a day. The frequency of the fits dimin-

ished, and they eventually ceased entirely without recurrence through a period of 4½ months.

**14.**—The method of **inserting the sutures** in the performance of **gastrojejunostomy** as described by Lockwood has certain attractive features. The wound thus made is more secure and has the advantage of being lined with mucous membrane. The steps of the operation are in short as follows: three layers of sutures are applied, one including the peritoneum, one the peritoneal and muscular coats, and the last the mucous membrane. These rows of sutures are first introduced on but one side of the proposed artificial opening. When the latter has been made, three similar rows of sutures are introduced on the opposite side in reverse order, first through the mucous membrane, then through the muscular and peritoneal layers, and lastly through the peritoneum. The artificial opening is thus lined with mucous membrane throughout, and by virtue of the three rows of sutures carefully introduced there is no danger of leakage. The one objection to this method, as compared with that which employs a mechanical contrivance, is that it takes longer time. Therefore, in all cases in which the life of the patient is placed in jeopardy by the additional time required, it is advisable to use sutures in these plastic operations.

**15.**—Knaggs reports the case of a man, aged 43 years, who had a large perineal abscess, and developed evidences of general septicemia. An examination of the pus in the abscess disclosed the presence of numerous micrococci. In the course of a week the patient was given 10 cu. cm. of anti-streptococcic serum; and the same dose was repeated almost every day for two weeks. At the end of a week the patient had mended rapidly. There were no further local manifestations, and an inflammatory patch in the subcutaneous tissue on the inner side of the patella gradually subsided without suppuration. The excursions of the temperature-chart steadily but slowly diminished from the commencement of the treatment, and fifteen days after the beginning of the attack it never rose above the normal.

**16.**—**Rupture of the patellar ligament** is of itself of comparatively rare occurrence, especially as in the case reported by Macartney, in which the tendon was severed just below the apex of the patella. During the operation, at which the rent in the tendon and capsule were united by catgut-sutures, it was noted that the wound in the ligament presented an exceedingly ragged appearance. Four months after the operation the patient had resumed work, and suffered no inconvenience as the result of his injury.

### New York Medical Journal.

October 1, 1898. [Vol. lxviii, No. 14.]

1. The History of a Case of Cerebral Abscess of Unusual Origin. CHARLES PHELPS.
2. The Use of the Bernays Aseptic Sponge in the Nose and Nasopharynx, with Special Reference to its Use as a Pressure Hemostatic. W. K. SIMPSON.
3. A Case of Cretinism following an Attack of Acute Thyreoiditis. EDMUND SHIELDS.
4. Enlargement of the Lingual Tonsil as a Cause of Cough. BEVERLEY ROBINSON.
5. Sensational Journalism and Hysteria. WILLIAM LEE HOWARD.
6. The Scientific Border Line between Sanity and Insanity. EDWARD C. RUNGE.
7. Epilepsy and Digestion. EDGAR J. SPRATLING.
8. A Study of the Sitting Posture and a Proposed Apparatus for Patients shortened by Pott's Disease. A. B. JUDSON.

**1.**—**Abscess of the brain** due primarily to caries of the inner table of the skull is an uncommon occurrence. Phelps reports the case of a man, 25 years of age, who had never suffered from disease of the auditing passages, had never received any injury to the head, and gave no history of previous syphilitic infection. He was of a strumous diathesis and from his fifth to his thirteenth year had suffered from repeated manifestations of tuberculosis. In his twenty-third and twenty-fourth years, and during the previously mentioned period, abscesses had developed in the left posterior parietal region, causing intense pain, only to be relieved by free incision. These, it was afterward learned, were of intercranial origin, the pus being forced through the



minute opening in the biparietal suture, and had a proper search been then made for the true source, and appropriate treatment applied, the patient might have been spared a lingering illness and an untimely death. In his twenty-fifth year the man presented a train of symptoms that pointed to an abscess of central origin, finally invading the cortex; these were the sudden occurrence of unilateral convulsions and limited paralysis of the left upper extremity, with digital contraction. A trephine was applied over the motor center for the left arm and a large subdural collection was evacuated. The improvement that followed the operation was only temporary, however, as later on complete hemiplegia and hemanesthesia, with trivial and stationary facial paralysis, followed as a result of the disintegration and extrusion of cerebral tissue (fungus cerebri). The absolute integrity of all the mental faculties that prevailed almost constantly till the end is regarded as having a negative value in localization. The slightly elevated temperature, the unaccelerated pulse and respiration were points of interest, rather characteristic of cerebral abscess, while the chalked discs and the retinal hemorrhage that were noted, both conditions uninfluenced by the evacuation of the abscess, bespoke an absolutely unfavorable prognosis. The case was finally terminated by a meningeal infection engrafted in the deep cerebral lesion.

2.—**Bernay's aseptic sponge**, an artificial product composed of cotton fiber subjected to many hundred pounds' pressure, has certain characteristics that make it especially fit for use in the nose and nasopharynx. The sponge may be rendered absolutely aseptic and, as its power of absorption continues, it becomes much increased in size, thus being able to exert pressure limited only by the limitations of the cavity in which it may be placed. For these reasons it is efficient in the control of hemorrhage in the anterior or posterior nares, either following operations or in severe forms of epistaxis; it serves as an excellent splint in the later stage of the Asch operation, or in the treatment of fractures of the nasal bones. Finally, it may be used for conveying medication to various portions of the nose, or for producing irritation and moisture in cases of atrophic rhinitis.

3.—Shields reports the case of a girl that was normally developed until ten months old, when she had an attack of acute **thyroiditis** that lasted one week, was accompanied by fever, swelling of the gland, and symptoms of pressure on the trachea. The throat was normal; there was no abscess-formation. After recovery there was complete atrophy of the thyroid. The child's growth and development ceased immediately, and she became a typical **cretin**, 33 inches in height and weighing 33 pounds. The child is at present 7 years old.

4.—Robinson considers recurring attacks of **inflammation of the lingual tonsil** of frequent occurrence even in small children. The failure to recognize the condition is due to ignorance or lack of skill or of attention. The difficulty of examination makes the condition hard to recognize in young children, in whom it is likely to be confused with the irritative cough of beginning pertussis. The causes are the same as those that give rise to faucial congestion or irritation. The symptoms are irritative frequent cough, with little or no expectoration in the beginning, frothy expectoration after each paroxysm in a day or two, and, finally, a small amount of tough, thick muco-purulent expectoration occasionally streaked with blood. The cough is likely to be worse on lying down. There is often a sense of stricture of the throat which may be unilateral or bilateral. Their is neither fever nor soreness. Examination shows the lingual tonsil to be red and swollen. The left side of the tonsil is more frequently enlarged than the right. The condition occurs oftener in the female than in the male sex, and lasts from one to two weeks. The best treatment consists in local applications of equal parts of tincture of iodine, glycerin, and water applied twice daily. External counter-irritation by blistering or compound tincture of iodine is valuable. The inhalation of warm antiseptic vapors of creosote or eucalypti by means of a croup-kettle is valuable in treating children. In persistent cases a change of air to an interior locality is almost sure to be beneficial.

5.—Howard thinks the basis of **yellow journalism** is certainly as hysterical a one as were the manifestations of the wonder-making, miracle-producing epidemics of the fourteenth and fifteenth centuries. The apparent demand for yellow journals is the result of the contagiousness of hys-

teria. The seed planted in the insane and criminal, which ripens into lust, murder, and plunder, is the result of suggestions offered by the owners of sensational journals.

6.—Runge reaches the following conclusions in regard to the division between sanity and insanity. Insanity is the symptom of any pathologic process implicating the psychic centers of the brain, hence the border-line between sanity and insanity lies at a point where brain-disease parts ways from brain-health, by brain being meant its psychic centers. (2) The words insanity and insane should apply to any condition manifesting deviations from the normal psy-function. (3) Such views as propounded in the foregoing would assist in dispelling the misconceptions of insanity and the insane. It is believed that when insanity is finally accepted as a symptom of actual disease of the brain, namely, a disease like any other, there will be fewer obstacles in the efforts to obtain rational and truly humanitarian methods. The terms insanity and insane might be eradicated for others less obnoxious, as they carry with them an atmosphere of medieval superstition and prejudice.

7.—Spratling says that he has never seen a case of so-called **idiopathic epilepsy** in which indigestion and malassimilation were not the basis of the trouble. In over 100 cases taken haphazard all were found to have abnormal nutritive conditions; in 40% the stomach was dilated, in 90% the alimentary tract was more or less catarrhal. It is believed that if the art and science of cooking were properly regulated, epilepsy would after a few generations become a thing of the past.

### Medical Record.

October 1, 1898. [Vol. liv, No. 14.]

1. Some Desperate Cases of Typhoid Fever Treated with and without Cold Baths. SIMON BARUCH.
2. The Differential Diagnosis and Treatment of Cuban and Camp Fevers. CHARLES E. NAMMACK.
3. Some Remarks on the Midwifery-Question—Must the Midwife Perish? THOMAS J. HILLIS.
4. The Technic of Closing Cecal Fistula. CARL BECK.
5. Schleich's General Anesthesia Not a Success. H. RODMAN.
6. Tuberculosis of the Mammary Gland. C. C. WARDEN.
7. Some of the Special Germs in Inflammation of the Middle Ear, with an Interesting Case. WILLIAM CHEATHAM.
8. A Practical Mode of Administering Iodin Hypodermically in the Treatment of Pulmonary Tuberculosis. CHARLES WILSON INGRAHAM.

1.—Baruch reports a number of cases of **typhoid fever** treated by more or less deviation from the Brand method. The first patient, in spite of stimulation with digitalis and whisky, became comatose and had slight convulsive movements in the body when touched. This contraindicated the external use of water, and he was given strychnin hypodermically, and water-and-milk diet. Another patient seemed to be suffering from sepsis in addition to typhoid fever. He was extremely weak, with a rapid pulse, and therefore ablutions of water at 65° F. were made. Recovery ensued. The third patient had persistent hyperpyrexia, which failed to yield to alcohol-sponges. He was given ablutions at 65° and hydrochloric acid. The fourth patient had subsultus, tympanites, and high temperature. He was treated with wet compresses at 65° and subsequently effusions as a cardiac tonic. A fifth patient had pulmonary hyperstasis, which was relieved by strychnin and compresses. A sixth was actively delirious. The delirium was controlled by hyoscin and the wet-pack, and she was able to go to sleep. Baruch has abandoned the use of sponges and of the ice-coil. He believes that the application of cold to the surface produces shock, which is followed by a reaction that stimulates the nervous system. The ice-coil does not produce the shock, and, therefore, there is no reaction.

2.—Nammack examined the blood of 360 **soldiers**, the majority of whom had **malaria**, usually of the quotidian variety. Excellent results were obtained with the formula by Alonzo Clark: quinin sulphate, gr. 10; opium, gr. 1; capsicum, gr. 3, in capsules. In a case of comatose pernicious malaria, quinin was injected. The patient recovered. In cases in which the fever was not broken by quinin the blood



was examined for the Widal reaction, which was found in two patients also suffering from malaria. In neither was the bacillus of Eberth found in the feces. In one interesting case of typhoid fever, the malarial plasmodium was not active until convalescence occurred. As a rule, the patients recovered rapidly as soon as they were put under favorable hygienic conditions.

3.—Unlike most obstetricians of to-day, Hillis is strongly in favor of the retention of the **midwife**. He claims that by her removal the people would lose much. By suppressing the midwife the gates are opened wide to women-physicians.

4.—Careful attention to the following points involved in the **technic of closing cecal fistulae** will better the chances of success: thorough preparation, a most extensive separation of the adherent intestine, a sufficiently large wound-surface of the margins of the intestinal opening, straight-cut wound-margins, and lastly a simple but minutely applied continuous catgut-suture. Beck reports three cases in which, by attention to those points, he succeeded in obtaining direct union.

5.—From observations in 700 cases of **general anesthesia induced by the Schleich mixture**, Rodman concludes that this is inferior to both ether and chloroform. Its one advantage seems to be its pleasant inhalation, while the objections to it are numerous. Compared with the other two anesthetics, it is less free from danger, while it has the same baneful effects upon lung and kidney, and is a marked respiratory and cardiac depressant. Vomiting is quite as constant, as is the general discomfort, during recovery from anesthesia. The time required to induce complete anesthesia is from 15 to 20 minutes. In six cases there was noted the sudden development of general cyanosis, due to cardiac or respiratory failure, requiring most energetic measures to resuscitate the patient. This condition develops apparently without any warning. The reflexes, especially of the conjunctiva, are lost so early as to deprive the anesthetist of one of his most important safeguards. The Schleich method has been practically abandoned in Mount Sinai Hospital.

6.—Warden refers to the meagerness of the literature upon **tuberculosis of the mammary gland**, but 58 authentic cases having been reported. Of these, 89.6% occurred in females and 10.4% in males. The disease is most common between the ages of 20 and 35, during a period when menstruation and glandular activity are thoroughly established. Persons of tuberculous tendencies are more prone to the disease, which may be primary, depending upon infection through the milk-ducts or through fissured nipple, or secondary from contiguous foci of infection in the chest, ribs, or pleura, or through the lymph-channels or blood.

7.—Cheatham reports a case of **acute otitis media** secondary to a **tonsillitis**, in which both the primary and the secondary lesions were due to the **diplococcus of Fränkel**.

8.—Ingraham recommends **iodin**, administered hypodermically, in the treatment of **incipient pulmonary tuberculosis**, and uses the following mixture, which smacks somewhat of polypharmacy: Iodin, gr.  $\frac{1}{2}$ ; bromin, gr.  $\frac{1}{16}$ ; phosphorus, gr.  $\frac{1}{160}$ ; thymol, gr.  $\frac{3}{8}$ ; menthol, gr.  $\frac{3}{8}$ ; sterilized oil, 1 fluidram. The commencing dose is 15 minims, the maximum daily dose one dram.

### Medical News.

October 1, 1898. [Vol. lxxiii, No. 14.]

1. The Abuse and Dangers of Cocain. W. SCHEPPEGRELL.
2. Acute Delirium. H. R. COSTON.
3. The Value of Electricity in Gynecology. W. E. FORD.
4. Bicycle Urethritis. JOHN M. ROBINSON.
5. Intraligamentous Fibroid of the Uterus with Adhesions to the Ovary; Myomectomy. J. COPLIN STINSON.
6. A Case of Syringomyelia. THEODORE DILLER.

1.—Scheppegrell calls attention to the **danger of death** after the **local use of cocain** and refers to reports of a large number of cases in which death occurred after its application to various parts of the body. He urges that diluted solutions, of which large quantities are used, are quite as dangerous as strong solutions, particularly if applied to mucous membranes that absorb readily. A further disadvan-

tage of the drug is the liability that its use may lead to habituation to its use. It is urged that cocain should never, under any circumstances, be placed in the hands of the patient himself.

2.—Coston reports the case of a girl, 15 years old, who suddenly became restless, delirious, and used exceedingly coarse language. Morphin and bromids failed to quiet her. The temperature was slightly elevated, the pupils normal, the sense of hearing acute, but she seemed to be rational, and recognized everybody. She was not violent, but very destructive. Death occurred on the thirteenth day, from exhaustion. During the last five or six days of life she ceased to be rational, the delirium being of a typhoid type. A second patient, a girl of 13, had similar symptoms and complained of headache. The temperature was slightly over 100°, and she died suddenly on the fifth day. A third patient, a girl of 20, well nourished, with a good family-history, was suddenly seized with what was supposed to be a chill, but with slight elevation of temperature. The delirium was out of proportion to the fever, and the chill was not followed by sweating. Although the girl was able to recognize people, she talked foolishly. The temperature was 101°, the pupils contracted, the bowels constipated, and the kidneys acted poorly. The language of the patient was not profane, as in the other cases, but hearing was acute, and the body was in constant movement. About 35 pounds in weight were lost in 10 days. At night hyoscin was employed, and various other hypnotics. On the tenth day the girl became totally blind, but afterward she improved, and in four days more the blindness had disappeared. Ultimately, recovery ensued, and the patient appeared to be in perfect health mentally. The characteristics of acute delirium are: Delirium, fever, contracted pupils, headache, hyperacusis, insomnia, constipation, and diminished action of the kidneys. The language is usually vulgar and profane, and there is great motor excitement. The disease resembles closely typhoid fever and hysteria. The pathology is still obscure. Coston believes that the most valuable drug is hyoscin.

3.—Ford advocates the use of **electricity** in cases of **amenorrhea** in young women not dependent upon true anemia, but associated with an undersized uterus, or with exhausting nervous affections; in cases of simple metritis, in which the ovaries and tubes are not infected; and in cases of dysmenorrhea dependent upon a neuralgic tendency, or upon slight bands of constriction about the oviducts.

4.—In the male, the deep urethra, the prostate gland and the base of the bladder are subject to pressure and bumping in bicycle-riding, but when healthy they are seldom thus harmed. Robinson records an instance of **bicycle-urethritis** in a clergyman of 45 years. The prostate gland was enlarged and sensitive; the urine contained pus-cells, mucous shreds, was of high specific gravity, with an abundance of urates and uric-acid crystals. The general health was good, and venereal disease denied. Bicycle-riding was stopped, lithia-water was given, and all the symptoms abated. A return of the symptoms occurred on again riding and finally the wheel had to be discarded. Four other cases are cited. Robinson's experience leads him to conclude that perineal inflammations caused by bicycle-riding have nearly always secondary and underlying causes.

5.—Stinson records a case of **intraligamentous uterine fibroid** in a woman, 35 years of age, relieved by myomectomy.

6.—Diller reports the case of a man, 39 years old, who for 2½ years had noticed weakness in the shoulder-muscles, which later began to atrophy. At the time of examination there was marked scoliosis in the upper portion of the spinal column, with loss of muscular power in the hands, arms, and shoulders, exaggerated knee-jerks, and clonus of the left foot. Tactile sense was generally preserved, but on the skin of the arms, trunk, head, and neck, pain-sense was lost.

### Boston Medical and Surgical Journal.

September 29, 1898. [Vol. cxxxix, No. 13.]

1. Auenbrugger and Laennec, the Discoverers of Percussion and Auscultation. EDWARD O. OTIS.
2. The Surgery of Gastric Ulcer, with the Report of a Case of Gastrolysis. J. COLLINS WARREN.



3. Observations upon Stone in the Bladder; Recurrence of Stone; Choice of Operation. A. T. CABOT.

4. Complete Torsion of the Whole of the Small Intestine. JOHN HOMANS.

2.—While **fatal perforation** occurs in a small percentage of cases of **gastric ulcer**, there are numerous other conditions that justify **surgical interference**, such as hemorrhage, persistent spasm of the pylorus, dilatation, stenosis, and finally perigastritis, with the formation of adhesions and abscess. According to Leube the conditions demanding operation prevail in about 4% of all cases. The propriety of interference in cases of perforative gastric ulcer is undoubted. The mortality of operative cases has been placed at 71%; of those operated on in the first 12 hours, 29%, and between 12 and 24 hours, 76%. As to the choice of operation in cases of perforating gastric ulcer the suture-method is more rapid and less liable to increase shock. The next most serious complication is hemorrhage, which causes a fatal termination in from 3 to 5%. The outlook in cases of profuse hemorrhage subjected to surgical treatment is not favorable, while indications are much clearer in cases of frequent and persistent bleeding extending over a period of weeks or months. If it be possible to find the bleeding vessel and to tie it, this is the most rational method, although in many cases difficult, and in some impossible. The complication of gastralgia, often attended with persistent hemorrhage, will, in extreme cases, require operative interference, in the form of gastroenterostomy or resection of the ulcer. Three operations may be employed for the relief of stenosis: resection of the stomach, gastroenterostomy, and pyloroplasty. Of these gastroenterostomy is in the majority of cases the one of choice, as resection is attended with a high mortality, and pyloroplasty is contraindicated when there are adhesions and when there is an open ulcer near or in the pylorus. Loreta's operation should be discarded, as it does not seem to insure against relapse. Perigastritis is a condition attended often with adhesions, more or less extensive, to the abdominal walls or neighboring organs. The operation of gastrolisis, devised for the relief of this complication, is eminently successful. The last complication to be considered, namely, the so-called hour-glass contraction, may be relieved by one or two operations, gastropasty or gastroanastomosis. Of 187 cases of gastric ulcer that have been treated in the Massachusetts General Hospital in the last 10 years, 22.8% were "well" or "relieved" when discharged from the Hospital, and 54 of 110 cases were permanently relieved by treatment. Of these 187 cases probably 14% were suitable for operation; not including the 39 cases of relapse.

3.—From personal observations in 135 operations for **vesical calculus**, Cabot draws the following conclusions as to the **causes of recurrence**: In 19 instances of recurrence the calculus was phosphatic. When recurrence is not due to the persistently alkaline condition of the urine, or to failure to remove the entire stone at the primary operation, it is usually indicative of the existence of some local cause, such as tumors and granulated surfaces on the bladder-wall. From the observations of Rainey it is known that the presence of colloid or albuminoid substances in solution causes crystalline material to become spheroidal and to coalesce in rounded form. Thus, when albumin is present in the urine, either in pus resulting from some irritation or in the serum exuding from a granulating surface, conditions are present favorable to molecular coalescence. Litholopaxy is the operation of choice, as it is attended with the lowest mortality, and it is usually competent to effect a complete cure. The suprapubic operation is to be reserved for those patients in whose bladders may exist such conditions as would of themselves require treatment, or would predispose toward the reformation of stone.

4.—**Intestinal obstruction due to complete torsion of the entire small intestine** is of extreme rarity. Homans reports the case of a girl, 7 years old, who complained first of pain in her stomach, afterwards becoming intense and attended with vomiting and persistent constipation. Two days later there was considerable distention, tympanites and tenderness in the epigastrium. At the operation, performed on the fifth day after the initial symptom, the small intestine was found completely twisted on itself and obstructed. The child survived the operation for 24 hours, and examination after death revealed an acute peritonitis and several necrotic areas in the intestines.

## Journal of the American Medical Association.

October 24, 1898. [Vol. xxxi, No. 13].

1. Immunity the Fundamental Principle Underlying all Treatment of Tuberculosis. LAWRENCE FLICK.
2. Life History of Bacillus Tuberculosis in its relations to the Treatment by Tuberculin. ROBERT REYBURN.
3. Antistreptococcic Serum. WARREN B. HILL.
4. Some Observations on the Auri et Sodii Chloridum U. S. P. DANIEL R. BROWER.
5. Gold Cures in Inebriety. T. D. CROTHERS.
6. The Treatment of Insomnia. ROBERT T. EDES.
7. The Continuous Use of Digitalin in the Vasomotor and Cardiac Lesions of Senility. HENRY BEATES, JR.
8. Recognition of Temperament: A Factor to the Selection of Remedies and their Dosage in Diseases. J. E. MOSES.
9. Iritis Spongiosa. ADELINE E. PORTMAN.
10. A New Perimeter. CHARLES H. WILLIAMS.
11. Some Severe Cases of Tobacco and Quinin Amblyopia. E. C. ELLETT.
12. Some Results in Cases of Tobacco Amblyopia. LOUIS J. LAUTENBACH.
13. Amblyopia from Auto-intoxication. H. B. YOUNG.
14. On the Use of Epithelial Grafts for Replacing the Ocular Conjunctiva. F. C. HOTZ.
15. Regular Corneal Astigmatism is Not Always Congenital, Neither is it Unchangeable. WILLIAM C. BANE.
16. The Conservative Treatment of Epiphora and Affections of the Lachrymal Apparatus. S. D. RISLEY.
17. Colpoperineorrhaphy and the Structures Involved. BYRON ROBINSON.

1.—Flick asserts as a basis for **treatment of tuberculosis**: (1) That the disease is essentially a local one; (2) That as an entity it is a series of colonizations; (3) That each colonization debilitates; (4) That each successive colonization is more extensive and devastating; (5) That cure can only ensue through phagocytic blood-power; by necrosis and ejection or by encapsulation; and (6) That re-inoculation may take place during necrosis and ejection. He then describes immunity and its varieties, and states that tuberculosis differs from most germ diseases in the matter of immunity. In the treatment of this disease the important object is the maintenance of natural, and the establishment of artificial immunity. To this end, over-work among the poor and excessive exercise among the well-to-do are impediments; and the popular idea that tuberculosis is due to inactivity of the lungs is mischievous. The stomach is to be attended to in the treatment of tuberculosis, and iodine and creosote are the two drugs worthy of confidence. A change is coming over medical opinion as to the value of climate, the preponderance of views being on the side of the home. Serum treatment has been disappointing, as the one chief end of such has been to establish artificial immunity; but Flick looks forward to the discovery of a specific remedy from them. Of drugs, iodine comes nearest to a specific for tuberculosis.

2.—Reyburn compares the **bacillus of tuberculosis** with that of diphtheria in giving the **life-history** of the former. The usual routes of infection of tubercle-bacilli are set forth and especially in infants and young children. The preventive treatment is by far the most important, but the general principles of treatment are discussed. The preservative power of the blood-serum is referred to, and the high or low condition of health of the individual being the two factors affecting this power. A high state of health renders an individual immune to this disease. Koch's lymph is regarded as a "stupendous failure" more pregnant for evil than for good.

3.—The difficulty of obtaining, without deterioration, microbic cultures, is one of the obstacles in the path of obtaining specific agents for the treatment of bacterial diseases. **Antistreptococcic serum** is obtained with additional difficulty, suitable animals not being readily obtainable, and standardizing the antitoxin when obtained requiring 1 or 2 years, and other difficulties. This serum has cured 45 out of 46 erysipelas cases, one of puerperal septicemia, of puerperal peritonitis, of sepsis following operation, and has improved a case of scarlet fever, and one of puerperal toxemia, with symptoms of mania, etc. Hill reports a case of



his own of inoperable sarcoma, one of facial erysipelas, and one of puerperal fever, treated by antistreptococcic serum. Any disease of streptococcic infection is benefited by it, but this serum has not been perfected and has not yet been standardized.

4.—The mixture of **dry gold and sodium chlorid** is very soluble in water and easily decomposed by sunlight and organic matter. It is tonic, alterative, bactericidal and antiseptic; 6½ cg. (gr. 1) produce violent gastroenteritis in an adult. It is used in anemia, in small doses, and is a cerebral stimulant and aphrodisiac, and augments the menstrual flow. In large doses, it produces renal hyperemia and albuminuria. The kidneys chiefly eliminate it. It is useful in syphilis, where iodids and mercurials disagree; in the treatment of connective-tissue hyperplasia, as in cirrhosis of the liver, interstitial nephritis, arteriosclerosis and the spinal sclerosis; in diabetes mellitus and functional diseases of the nervous system; and in tuberculosis. Brower gives personal experiences with the use of the drug, and records those of other recent writers and practitioners.

5.—Crothers exposes the fallacies underlying treatment by **gold cures in inebriety**. He traces the history of the use of gold as a medicine, and shows that "gold-cures," whenever analyzed, contain no gold whatever. Gold is non-assimilable, and inebriety is not reached by drugs alone or by special, concealed plans of treatment. In many cases of inebriety which have been cured in gold-cure asylums, there is concealed periodicity. There are no facts to show that gold has any value in the treatment of this disease.

6.—**Treatment of insomnia** consists in getting the patient's brain into such a condition that he goes through normal, regular alternations of sleep and wakefulness. The first thing necessary, therefore, is to find a cause in irritation outside of the brain, in digestive or circulatory disorder, accidental disturbance or in abnormal activity. The demands of the nervous centers in insomnia probably regulate the supply of blood, rather than vasomotor conditions regulating their activity. Moderate circulatory activity seems necessary for normal sleep. Digitalis and aconite are the two drugs to typify opposite circulatory ends, while the nitrites, chloral and alcohol, are requisites. In chronic insomnia, the body-weight in reference to height, is a useful criterion for regulation of the diet, while the distribution of the blood is to be equalized. Insomnia from pain, discomfort, bright lights, loud noises, or extreme sensory irritation is hardly true insomnia. A vacation in *real* country is probably the best means of relief for chronic insomnia. The various indications for different drugs and their special effects are shown.

7.—The vasomotor system is the one which first indicates physiologic symptoms of senility. In 99 cases out of 100 cardiac muscle changes are secondary to a primary lesion of the peripheral arterial system. Beates draws a typical clinical picture of a case of senile cardio-vasomotor disease and states that the cases from which it was drawn were failures resulting from the secundum artem treatment. But the continued use of digitalin in doses sufficiently large to restore circulatory equilibrium brought wonderful results. When digitalin is prescribed, what is supplied? Of the 9 active principles contained in crude digitalis, what is the product the drops put forth? The so-called *digitalin German Merck* is the only one which will effect the result, as Beates states. Treatment with this drug for cases of senility must be practically continuous.

8.—A pure type of any of the 4 distinct varieties of temperament—the nervous, the sanguine, the bilious and the lymphatic—is seldom encountered. Moses then takes up the detailed description of each type and shows of what serviceable character to physician or surgeon, general or special practitioner, the knowledge of these various temperaments must be both for the benefit of the doctor and the patient. Failure to recognize the distinctions in the types must be unsuitable prescription of drugs and their dosage, and "obstruct the way to the placing of our beloved profession in a line to become a positive science."

9.—Sometimes the three forms of serous, plastic and suppurative iritis merge into one another, giving rise to sero-plastico—plastico-suppurative iritis or iritis spongiosa. The clinical picture is that of pain, suddenly relieved when absorption begins, and most severe after exudation. Portman enlarges on the symptoms and diagnosis. Prognosis is good. Treatment is as in plastic iritis: antiphlogistics, mydriatics

anodynes, and hot applications. The history of a case is set forth.

10.—See this JOURNAL, Vol. II, p. 99.

11. " " " " "

12. " " " " "

13. " " " " "

14. " " " " "

15. " " " " "

16.—Risley urges conservatism in the treatment of epiphora and lacrymal obstruction, and states that in his experience cutting operations are followed by only temporary relief and that subsequent contractions make strictures worse than before. Lacrymal retention often will disappear with the cure of intraocular conditions with no treatment whatever of the lacrymal apparatus.

17.—The modern operation of perineorrhaphy is indicated: (1) To restore rectal and vaginal functions. (2) To restore pelvic fasciæ and muscles. Normal fascia is required for normal circulation. (3) To restore the normal relation and support of the posterior wall (colporrhaphy posterior). The posterior vaginal wall sustains the anterior vaginal wall and bladder. (4) To provide as much support for the pelvic organs as the restoration of the perineal body will afford. (5) To remove the neurasthenic conditions; to relieve the innumerable nervous associations; in short, to relieve mental and physical disturbances. (6) To repair and check sacropubic hernia. (7) To narrow relaxed pelvic outlet. It is an operation to restore the integrity of the supports of the sexual organs, and its object to restore partial ruptures, rectal functions after complete ruptures and to prevent prolapse of the pubic segment of pelvic floor. The methods of performing perineorrhaphy are mentioned and cuts show methods of denudation and suturing the rectum. The etiology of prolapse is set forth with detail and summarily, and the various and varied operations animadverted upon. The neurasthenic condition resulting from perineal laceration is a fact not generally appreciated, Robinson explains, and he sets forth 12 advantages of the flap operation for the repair of the perineum. Five cuts exemplify Martin's operation for colpoperineorrhaphy.

### Annals of Surgery.

August, 1898. [Vol. xxviii, No. 2.]

1. The Surgical Occlusion of the Cerebral Sinuses. ROBERT THOMPSON STRATTON.
2. Hysteria from a Surgical Standpoint. JAMES E. MOORE.
3. Gunshot-Injuries of the Spine, with Report of a Case. THEODORE F. PREWITT.
4. Treatment of Fracture of the Patella. LEWIS A. STIMSON.
5. Report of Two Cases of Injury to the Thoracic Duct in Operations on the Neck. W. E. SCHROEDER and S. C. PLUMMER.
6. Two Cases of Recovery from Traumatic Tatanus after the Use of Antitoxin. GWILYM G. DAVIS.

1.—In the scanty literature upon **surgical occlusion of the cerebral sinuses** it is almost universally stated that, when necessary to attack them, they may be ligated and divided. Ligation of the cerebral sinuses is, however, attended with certain dangers; the sinus itself may be lacerated as the ligature is drawn taut, with the result of troublesome hemorrhage; or pressure upon the cerebral substance may be produced by increasing the tension on the dura or depressing it below its normal position. The latter complication may be avoided if appropriate incisions are made in the dura, but with the use of the ligature there is always danger of lacerating the sinus, and for this reason alone this method should be abandoned. Stratton calls attention to a radically different method by which closure of the cranial sinuses may be effected, namely by the application of a clamp. This procedure necessarily involves exposure of the sinuses by appropriate incisions in the dura, but this has been found expedient. The advantages that properly constructed clamps possess over ligatures reside principally in the relative ease and speed with which they can be applied, and in the absence of danger of lacerating the walls of the sinuses. Thus far the use of the clamp has not been attended with hemorrhage upon removal. A case is cited in which an opportunity was offered to employ this method, a large fibrosarcoma arising from the falx cerebri of the left side having been removed. The patient succumbed



on the fifth day after the operation, and at the autopsy it was found that death was due chiefly to failure in establishment of the collateral circulation. In order to outline a procedure that will minimize this danger one must know and understand the factors that predispose toward such failure, viz.: the sudden stopping of the flow of blood through the sinuses, a low degree of blood-pressure resulting from excessive hemorrhage, the shock of the operation and the prolonged administration of the anesthetic, producing feeble cardiac action and dilatation of the peripheral vessels. To prevent excessive loss of blood a tourniquet may be applied firmly to the scalp, a method of hemostasis that has proved efficient. If after the bone has been rapidly divided and the sulcus tamponed, and after the application of tampons to the cut edges of the dura, there should be much hemorrhage, the operation may be concluded at this stage, after the method of Park, by inserting between the edges of the scalp a layer of gauze to which an antiseptic ointment has been applied. In a week or two, when the effects of this stage of the operation have passed off, the clamps may be applied, and the lumen of the sinus closed by immediate or gradual occlusion. It is advisable to avoid injuries to the veins of the pia mater, through which the blood-current is to be maintained after the occlusion of the sinuses is effected. During and after the operation the posture of the patient should be such as will maintain a proper degree of pressure within the cerebral bloodvessels and facilitate the flow of blood through the sinuses and the vessels concerned in the anastomotic circulation.

3.—Prewitt discusses the **treatment of gunshot-injuries of the spine**, and includes a report of a case successfully treated by surgical intervention. The patient received a shot in the back of the neck from a small target-gun, the muzzle being within 2½ inches away when the piece was discharged. Complete paralysis on both sides resulted. Operative interference was decided upon, and it was found that the ball had struck the lower border of the lamina of the third cervical vertebra, driving in a portion of the bone and lodging in the canal. The fragments of bone were picked out, and the bullet, which could be seen lying on the cord, was removed. Four years after the injury the patient had perfect use of every limb except the right arm, to which functional activity was only partially restored. While it is the general opinion of the profession that in a case of fracture of the spine, laminectomy is a questionable procedure, operations for gunshot-injuries are more likely to be looked upon with favor. The indications for operation will depend upon whether the injury is a simple fracture of the arches, or whether the canal is invaded and the cord crushed, or whether the injury is complicated by some serious lesion of the abdominal or thoracic viscera. In the first class of cases the majority of surgeons would sanction immediate operative treatment; in the second class the question arises as to whether it is admissible to operate when the cord is completely severed. In answer it may be said that facts and experimentation have shown that the cord may be almost completely divided, and yet the patient or animal recover. It is argued that inasmuch as a divided nerve may itself reunite, it may be possible for the cord itself by the same process to undergo regeneration and reunite. Prewitt tabulates 49 cases of gunshot-injuries of the spine treated since the aseptic era. Of this number 24 were subjected to operation with recovery in 45.8%, while in the 25 cases that were not operated upon recovery ensued in 32. It is concluded that it is the surgeon's duty in all cases of gunshot-injuries of the spine to advise immediate operation, provided the wound has involved the posterior or lateral part of the spine at an accessible part. It is not advisable to wait to see whether nature is competent to restore the damage, as during the interim irreparable harm may be done. The delay permits of the continuance of conditions, whose removal is the purpose of the operation. The presence of complications, due to penetration of the great cavities and injury of the viscera, will influence the question of operation but not necessarily forbid it.

4.—From the point of view of the results obtained by the operative or non-operative **treatment of fracture of the patella**, the evidence clearly weighs in favor of the former. The element of danger attending such a procedure, however, is one that cannot be denied, and for this reason alone it is necessary to place certain limitations upon its employment.

"The general practitioner, and even the occasional surgeon, is not only fully justified in using a non-operative method, but ought to do so." Stimson's personal experience is limited to subcutaneous mediate silk suture through the tendon and the ligamentum patellæ employed in 40 cases from 1889 to 1892, and open incision with the subcutaneous mediate silk suture or the fibro-periosteal suture employed in 70 cases. In all the cases of the latter series recovery ensued without accident and with close union. The special advantage of this operation is that it can be performed without once touching the cut tissues with the fingers, thus eliminating the greatest source of infection. The operation is performed as follows: the incision slightly overlaps the fragments, its edges are retracted and the fragments lifted with a sharp hook and their surfaces freed from clot. While the fragments are held up, the joint is flushed with salt-solution. The fragments are then drawn snugly together with hooks and two or three catgut sutures are placed in the periosteum along the edge of the fracture, or a single suture is passed through the tendon and the ligament so that its two strands lie on the front of the bone. Rents in the lateral expansions may require additional sutures. The patient is kept in bed for a week with the limb elevated. A plaster cast being then applied, he is allowed to go about on crutches for a month, at the end of which time the cast is only worn during the day. Between the second and third months the cast may be discarded.

5.—Schroeder and Plummer report two cases in which in the course of dissection in the cervical region, in one for a cystic swelling, in the other for tuberculous adenitis, the **thoracic duct was injured**, but no serious consequence resulted. In one instance attempts to close the opening in the duct proved futile; every time the ligature was applied a new opening would appear in the wall of the vessel. Attempts at ligation were abandoned and the wound was packed with iodoform-gauze. After the lapse of 3 months the discharge from the sinus leading to the duct had practically ceased. In the second case, when the wound in the duct became evident by the free flow of milky fluid, a silk ligature was applied around the larger rent, as well as around the smaller openings. Subsequently to the operation there was no further discharge of chyle; nor did any difficulty arise from the ligation of the chyliferous vessels. [As authentic cases of operative injury to the thoracic duct are extremely rare, but 9 having been collected up to a very recent date, the report of 2 additional cases is of unusual interest. The ideal method, whenever it is practicable, of closing wounds of this duct is by suture. In the cases here reported this method was not resorted to, probably because it was impossible to isolate the duct.]

6.—Davis reports 2 cases of **traumatic tetanus**, treated successfully with antitoxin in liberal doses, one case receiving 42 doses of 10 cu. cm. in 18 days, the other 28 doses in 12 days. While chloral, bromid and calabar-bean formed a part of the treatment, and, though neither case was of the most severe type, it is believed that had not antitoxin been employed the results might have been otherwise.

#### American Gynecological and Obstetrical Journal.

July, 1898. [Vol. xiii, No. 1.]

1. The Nature and Management of Puberty. W. S. CHRISTOPHER.
2. How to Reconcile Modern Educational Methods with the Demands of Health. BAYARD HOLMES.
3. How to Reconcile Modern Educational Methods with the Demands of Health. (Illustrated.) W. O. KROHN.
4. Clinical Phenomena Relating to the Nervous System in Connection with Diseases of the Female Generative Organs. A. F. CURRIER.
5. Vaginal Incision and Drainage in Certain Cases of Ruptured Ectopic Gestation. WILLIAM D. HAGGARD, JR.
6. Partial Report of Eight Hundred Cases of Labor. H. S. CROSSEN.

1.—From a careful study of the **nature and phenomena of puberty**, Christopher concludes that this is the period for the latentization of force for reproductive purposes, and this latentization requires a high grade of nutrition and relatively low activity for its best effectuation. Failure to properly meet this demand leads immediately to the development of pubescent disorders, and ultimately to repro-



ductive deficiencies. In proof of the accuracy of these conclusions, the views of various scientists and zoologists are quoted who have made a study of the developmental period in the lower forms of animal life. The special data supporting the proposition as related to human puberty may be arranged in three classes: (a) The evidence from disorders occurring in pubescent individuals, in whom the elements antagonistic to genesis predominate. (b) The evidence from disorders of the sexual organs later in life in individuals in whom the pubescent period was neglected. (c) The evidence from the increased food normally demanded at this period.

2.—Holmes believes that many radical changes must be instituted in the **care and rearing and education of girls**. At the age of 11 or 12 the little girls begin to show their approaching puberty by surpassing the boys, not only in height, but also in intellectual activity. They are taller, brighter, gentler, quicker, and stronger than boys of their own age. They should at this time be separated from the boys. The ideal school for the girl will make the schoolroom into a house or home in which all the domestic duties will be systematically taught by actual exercise.

3.—In considering the same subject, Krohn calls attention to the **difference in lung-capacity between boys and girls**. Boys have larger lung-capacity than girls throughout the entire period of growth; at 6, girls have a lung-capacity of 810 cu. cm., and boys, of 905 cu. cm. There is relatively little increase in this difference up to and including the age of 12. Almost no growth occurs in the girl between the ages of 12 and 14, and likewise from 15 to 17, while the reverse is true in the case of boys. It is not certainly necessary to have separate education of the sexes at this critical stage of their careers, but a little more individualism in education should be insisted upon rather than the class-system.

4.—Currier has studied the clinical phenomena relating to the **nervous system** in connection with **disease of the female generative organs** and deduces the following conclusions: (1) The nerve-connections between the uterus and ovaries on the one hand, and the viscera and central nervous system (cerebrospinal) on the other, are such as to warrant a belief in the abundant transmission of influences from the one to the other. As a corollary, the removal of morbid conditions from the uterus and ovaries frequently results in the amelioration of disturbance in remote but related organs. (2) Surgical operations upon the female generative organs are sometimes followed by lesions of the nervous system, but not with much greater frequency than operations upon other structures. Their relative infrequency, especially when the uterus or ovaries are removed, demonstrates the wonderful accommodative power of the physical forces. (3) Insanity after operations of this character is of rare occurrence as a primary result of such operation, and is usually transitory in nature. As to its origin, it is either traumatic, toxic, or associated with predisposition.

5.—Haggard states that in cases of **unruptured ectopic gestation, the vaginal operation**, if congenial to the surgeon, may be elected. In non-active cases of encysted hematocele vaginal section and drainage constitute the operation of choice. The situation of the mass low down, and the broad, roomy vagina of parous women are favorable to the lower route. Before evacuating ectopic collections through the vagina, preparation for abdominal section should be made. In cases of free or uncontrollable hemorrhage, after removing the products of ectopic gestation vaginally, the abdomen should be opened at once. When abdominal section is necessary after colpotomy the preliminary vaginal incision will confirm the diagnosis, facilitate the abdominal work by removing clots through the vagina instead of through the abdomen, and establish an efficient avenue for drainage. The vaginal operation in appropriate cases is attended with less mortality.

6.—In the treatment of **contracted pelvis** Crossen recommends the following: When the true conjugate diameter is from  $7\frac{1}{2}$  to 9 cm. (3 to  $3\frac{5}{8}$  in.), if seen before the thirty-sixth week of pregnancy, premature labor should be induced and be followed by symphysiotomy if necessary. If seen early in labor symphysiotomy should be performed. If the disproportion between the head and the pelvis is slight, axis-traction forceps should be given a fair trial before symphysiotomy. If the disproportion between the head and the pelvis is so great that there is serious doubt as to whether the

head can be safely delivered after symphysiotomy, Cesarean section is to be chosen instead. If the patient is seen after prolonged labor or repeated attempts at delivery by forceps, craniotomy should be performed. When the true conjugate diameter is between  $6\frac{1}{2}$  and  $7\frac{1}{2}$  cm. ( $2\frac{1}{2}$  to 3 in.), if the patient be seen before the thirty-sixth week, pregnancy should be allowed to proceed to term. If seen early in labor Cesarean section is to be performed. If seen after prolonged labor or repeated attempts at delivery by forceps, craniotomy is to be performed. If the patient insists on Cesarean section a Porro operation is the best form for these late cases.

### Practitioner.

August, 1898. [Vol. lxi, No. 2.]

1. A Clinical Lecture on Uremia. THOMAS GRAINGER STEWART.
2. A Clinical Lecture on Amenorrhea. ALEXANDER RUSSELL SIMPSON.
3. On a Surgeon's Experience of Diphtheria, Enteric Fever, Scarlet Fever, and Pneumonia. HECTOR C. CAMERON.
4. Some Aural Neuroses. P. MCBRIDE.

1.—The features of **uremia** are made up of changes in the alimentary and nervous systems and result from a poisoning of the organism in consequence of damage of the kidney. Clinically there are acute and chronic forms; then those in which sensory and those in which motor changes are most marked; in others cerebral and mental phenomena predominate; and finally, others in which the organic reflexes are interfered with, as, for example, those of respiration. Stewart describes in detail the various forms and calls particular attention to the mental symptoms, the delusions, the wild deliriums, and the low muttering. The case of a patient is then detailed who when apparently recovering from nephritis was seized with uremia and died. There were some septic processes in the skin and intestinal symptoms, and it was believed that there were "uremic" ulcers of the bowel. At the autopsy none was found, but there were embolic processes in the spleen and vegetative endocarditis. The last, it was supposed, together with the dermal lesions had brought on the unexpected fatal uremic attack. Uremia may be precipitated by various causes—drinking-bouts, pregnancy, loss of blood, rapid absorption of dropsical fluids, and acute disease.

2.—The term **amenorrhea** includes a wide group of cases, ranging, on the one hand, from those in which there is a simple diminution in the amount of flow, so that the patient, instead of menstruating for the usual period of four or five days, menstruates only for three or four, or even two; or, in which the patient, who has been in the habit of losing five or six ounces of fluid, begins to lose only four, or three, or two ounces; to those cases, on the other hand, in which the discharge disappears entirely. There are cases in which sometimes the red discharge is replaced by a white, mucous discharge, with menstrual leukorrhea; there are often cases in which the patient has her "menstrual memory," so to speak, so that at the usual menstrual period there is a certain amount of disturbance, local or general; and so on to the cases in which there is no hint in the system that there is any tidal-wave passing through it whatever at the usual season. Further, the term amenorrhea is applied not only to the cases in which the discharge has appeared, and then has more or less completely disappeared, but it is applied also to cases in which menstruation still goes on, but the secretion fails to escape externally in consequence of some obstruction. In many cases of amenorrhea the nervous system is at fault; for instance, in some there is paralysis, in others even hysteria. In some cases the patients are seized with a chill, and that, perhaps, first affects the nervous system; while in others there is simply a mental impression, as was pointed out by Raciborsky, in which the patient has either a dread or an eager hope of conception; and it has been noted that under one or other of these emotional states, the menstrual flow will sometimes be arrested for a month or so. So also, in cases in which the patient has had a fright or a disappointment, or has been subject to a fit of passion. In many cases of amenorrhea there are defects in the circulatory apparatus or there is imperfect development of the bloodvessels. The conditions that produce hydremia are likely to give rise to amenorrhea. Scanzoni noted, that in patients with a stru-



mous tendency, menstruation is likely to be delayed in its first appearance. Tuberculous patients are very likely to be amenorrheic in the course of their history. With myxedema and some cases of obesity, and notably with alcoholism and morphinism amenorrhea is common. Further, all conditions that deteriorate the general health, such as unhygienic surroundings and employments, and overwork of various kinds, act as causes. There are also morbid conditions of the ovaries that lessen the menstrual flow, as, for instance, cystic degeneration, or atrophy of the organ. Then there are supposed to be cases in which the oviducts are at fault. This Simpson doubts. Uterine deformities and lack of development may, however, result in amenorrhea, as may also some varieties of uterine neoplasms.

3.—Cameron refers to cases, in which he was called upon to treat **surgical complications arising during diphtheria, typhoid fever, scarlet fever, and pneumonia.** He mentions several cases of tracheotomy for laryngeal diphtheria, and calls attention to the proneness of the disease to occur in several members of the same family. Six cases of necrosis of the tibia following typhoid fever are reported, in two of which the shafts of both tibia were symmetrically affected; in one case the ulna was affected, and in several cases the ribs. In all the cases the fever was severe, the patients suffering in greater or less degree from hemorrhages, relapses, and the other grave accidents. Arthritis occurs in two forms in connection with the fevers under consideration; as an acute, painful inflammation, with effusion, which tends toward absorption; or as true pyemic arthritis, leading to suppuration and disorganization in the joint-cavity. Most of the cases of arthritis coming under Cameron's care were simple, but one young boy suffered from acute suppuration of the elbow, following enteric fever and leading to rapid and complete disorganization of the joint. A case of dislocation of the right hip-joint on the dorsum of the ilium, occurring in a boy, 13 years old, during the fourth week of a severe attack of enteric fever is also reported. In a case of scarlet fever, a large abscess of the right elbow-joint, and one of the adductor aspect of the right thigh were opened, excellent recovery following. The left knee was opened and pus evacuated soon after the crisis of an attack of double pneumonia in a patient aged 26: a second abscess was opened six weeks later in the right gluteal region, and good recovery followed. Another case of suppuration of the knee-joint occurred during pneumonia in a man who had four months previously fractured his patella. A young woman who had just recovered from an attack of enteric fever discovered a lump on the lower part of the abdomen, which increased in size, became painful, and fluctuated. On incision a large coil of hair and quantities of sebaceous material escaped. The suppuration of this dermoid cyst was determined by pyogenic organisms reaching it during enteric fever. A case of multilocular ovarian cyst suppurating during an attack of scarlet fever is also reported.

4.—McBride discusses **hysterical deafness, earache,** etc., and reports a case of deafness following emotion; one of deafness following violent grief; hysterical neuralgia of the mastoid; one of a sensation of a foreign body in the ear, etc.

#### Glasgow Medical Journal.

July, 1898. [Vol. 1, No. 1.]

1. Sympathetic Pains; Their Nature and Diagnostic Value, T. K. MONRO.
2. Aseptic Midwifery. M. BLACK.
3. Case of Acute Maniacal Excitement Complicating Bright's Disease. J. T. MACLACHLAN.
4. Notes on Alginic Acid and some of its Compounds as Therapeutic Agents. W. MACLENNAN.

1.—Monro discusses **sympathetic pains**, such as those that occur in the knee in conjunction with disease of the hip. In order to understand them it must be remembered that sensations due to irritation of a sensory nerve in any part of its course are referred to the peripheral distribution of the nerve, and that when energy travels along a sensory nerve-tract and reaches its termination in the gray matter of the spinal cord, it tends to diffuse itself there and so to influence terminations of neighboring sensory nerve-tracts. Attention

is drawn to the interesting fact that, in connection with sympathetic pain, the organs to which the pain is referred may themselves finally become diseased, probably because the attention of the individual is constantly directed to them. For the elucidation of these pains it is necessary to invoke the aid of the sympathetic system, remembering that both efferent and afferent impulses pass between the spinal nerves, the spinal cord and the sympathetic. These sympathetic sensations are not confined to pain, and instances are mentioned in which a tickling sensation was felt instead of pain.

3.—MacLachlan reports the case of a man with lead-colic, who had evidently suffered from symptoms of nephritis for some time, and was obliged to go to bed. Two days after this he began raving wildly, and had convulsive seizures. Later, he became maniacal with delusions of identity. He did not recognize bystanders, and had to be controlled by a half a dozen people. These attacks continued for over two weeks; after this, until death, two weeks later, the patient was in a semicomatose condition, but irritable and noisy when touched or spoken to. His organs of sense seemed to be hypersensitive. There was no elevation of temperature, and no local paralysis or twitching of any muscle. Re-establishment of the urinary secretions brought no relief from the mental symptoms. Hypodermic injections of morphin induced complete temporary relief from the excitement, but this persisted for only a short time.

4.—**Alginic acid** is a new organic substance obtained from algæ that combines with bases to form soluble and insoluble compounds, and that may be useful in the preparation of alkaloids. All its salts are little acted upon by the gastric juice, and, therefore, pass through the stomach almost unaltered, which may be of importance in the treatment of some intestinal affection. MacLennan draws special attention to iron alginate, which is a tasteless, insoluble powder, containing nearly 11% of iron. It is readily taken by children, as it is tasteless, and it has proved useful in the treatment of chlorosis, especially in cases complicated by gastric affections, as it is not irritating to the stomach.

#### Wiener klinische Wochenschrift.

August 18, 1898. [11. Jahrg., No. 33.]

1. A Communication Concerning Landry's Paralysis. MAX BIRO.
2. Concerning the Coloring Power and Iron contained in the Blood. S. JELLINEK.

1.—Biro reports the following unusual case of **Landry's paralysis.** The girl, 17 years of age, went to bed one night at 2 o'clock, completely well. When she awoke the next morning, she noticed that the right upper and lower extremities were weaker than usual. Two days later all the limbs were paralyzed. There was no pain, and no other symptoms of disease. All the organs were perfectly normal, and there was no history of any infectious condition at any period of her life. Five days after the attack the muscles of respiration were involved, but it was still possible to move the toes slightly. The following day there was some pain in the limbs which disappeared upon change of position; the ocular muscles were involved, and the respiration was more difficult and superficial. Examination of the muscles showed that although there were no reactions of degeneration, the response to electrical stimulus was weak. Death finally occurred from respiratory failure. The case in some respects resembles the paroxysmal family type of paralysis described by Goldflam. This, however, occurs suddenly, lasts for one or two days, and then disappears without leaving any symptoms. Hematomyelia usually occurs after an injury and rarely presents such a rapid course; moreover, there were no signs of sensory disturbance. Polyneuritis was excluded on account of absence of all pain, and paresthesia. The case, therefore, must necessarily be one of Landry's paralysis, with which, moreover, the symptoms agreed very closely. The involvement of the eye-muscles in this disease is, as far as Biro is aware, unique. According to Albu, the clinical symptoms indicate that the disease is produced by a poison antagonistic to that of tetanus, and Biro believes that possibly we may be able some day to combat it. An autopsy was not obtained.

2.—Jellinek has collected from literature the figures of various authors regarding the **amount of iron in the**



**blood.** This appears to vary from .04 to .05%. He has carried out a number of experiments, which have for their object the solution of the question whether the total quantity of iron in the blood is contained in the hemoglobin, and whether the color of the blood depends entirely upon the hemoglobin. He has used Jolles' ferrometer, which estimates the quantity of iron in a given quantity of blood, and the Fleischl-Miescher hemoglobinometer. One hundred and twenty-one comparative estimations were made upon 60 persons, 10 healthy and 50 sick. The results of the 10 healthy cases showed that the two instruments corresponded in 2 cases; 4 times the ferrometer gave a higher result than the Fleischl instrument, and 4 times the reverse was true. He concludes that the colorimetric method does not give any accurate information concerning the quantity of iron in the blood. Of the pathologic cases, 33 were of chlorosis. Of these the results were identical in 2. In general, the ferrometer shows that not only is the amount of iron in the blood reduced, but also the amount of iron in each individual corpuscle, thus proving the old view of the nature of this disease. Occasionally, the hemoglobinometer showed varied results, although the amount of iron in the blood remained constant, indicating that from time to time a certain proportion went into solution in the plasma. A number of these cases was examined repeatedly, in order to test the effects of treatment. It was shown that when improvement commenced, it was indicated earlier by the ferrometer than by the other instrument. Several of the cases were treated with an organic iron preparation. Of these, only 2 cases showed any noticeable improvement in equality of the blood, although some of the subjective symptoms disappeared.

#### Münchener medicinische Wochenschrift.

August 23, 1898. [45. Jahrg., No. 34.]

1. The Functional Test of the Organs of Hearing. R. ESHWEILER.
2. The Influence of Gastro-enterostomy on the Secretory Processes of the Stomach. GÉZA KÖVESI.
3. A Cyst of the Mesentery Mistaken for an Ovarian Cystoma. F. SFAETH.
4. Tuberculosis of the Pericardium. MELTZER.
5. A Form of Parasite not Previously Observed in Suppurative Exudates of the Pleura. EMIL WELCKE.

**1.—In testing the sense of hearing** 3 questions come under consideration: (1) How great is the general capacity for hearing? (2) What kinds of vibration are perceived? (3) Is the apparatus for transmitting sound or for perceiving sound disordered? The first is a quantitative test; the second qualitative. The question of general capacity for hearing is of greatest importance, and the watch and Politzer's hammer are the apparatuses considered of most value in testing it. As the intensity of tick varies with different watches, Politzer uses as a test the falling from a given height of a hammer of definite weight on a small steel cylinder. But often a patient is able to hear the hammer-stroke at a distance of 1 meter, who is so deaf as to be unable to understand when spoken to, hence the necessity of a speech-test. The whispered voice is best adapted for this test, only the residual air of the lungs being used. Various standards are required by different organizations: the Prussian army ordinance requiring for field service 4 m., whilst for garrison duty, 4 to 1 m. are required. To test accurately the qualitative perception of sound, Bezold has arranged a series of tones produced by 10 tuning-forks, 2 organ-pipes, and a Galton whistle with 55,000 vibrations per second. This range of tones covers 11 octaves and is an ideal means of testing the human ear. Imperfect perception of low tones indicates a diseased condition of the sound-conducting apparatus, whilst imperfect perception of high tones indicates disease of the labyrinth. To more definitely determine the condition of the conducting and receiving organs, the ear is tested as to its comparative sharpness of hearing for sounds transmitted through the air and through the bones of the skull. Under ordinary conditions, if a tuning-fork be set in vibration and held to the ear until its sound is no longer perceptible, its vibration will still be perceived if it is placed in contact with the skull. Rinne's test is to hold the fork to the ear until no sound is heard, and then to place it on the mastoid process. Weber's test is to place the handle of the

vibrating-fork on the patient's mastoid process and keep it there until no sound is noted, then the physician (supposed to possess normal hearing) places it on his own mastoid. Schwabach tests the comparative acuteness of the ears by placing the fork on the vertex. The value of the various methods of investigation, details with regard to their application, and disputed points concerning their merits and uses are discussed.

**2.—Kövesi** reports the examination of the gastric contents of a man suffering from **carcinoma of the pylorus** before and after operative interference. The patient, 56 years of age, had first suffered with pain in the abdomen 8 months before admission. Later, this was complicated by frequent vomiting and rapid emaciation. The stomach was dilated, and there was slight resistance on the right side. The examination of the gastric juice showed 0.164% of free HCl, a total acidity of 79, no lactic acid, undigested starch, spontaneous fermentation, 0.61% pepsinogen, and 2.5% of a substance that caused deviation to the right. A diagnosis was made of cicatrization in the region of the pylorus. In spite of treatment, the patient became very much worse, and gastroenterostomy was performed. Four weeks later, the results of examination showed decrease in the free HCl and total acidity, diminished fermentation, diminished pepsinogen, and increase in the substance causing deviation of light; five weeks later, there was slight increase in the free HCl, gas fermentation was diminished, otherwise the results were about the same. There was slight diminution in the dilatation of the stomach and considerable improvement in its activity. Kövesi believes that the diminution of the hyperacidity indicates that this is largely a result of irritation, particularly in cases of pyloric stenosis, and that the improvement in the starch-digestion is proof that the presence of an excess of acid interferes with this. He also calls attention to the fact that no distinct parallelism exists between the pepsinogen and the amount of HCl.

**3.—Spath** reports an interesting case of **mesenteric chylosis cyst**, which in its clinical features closely resembled an ovarian cystoma. The patient was a woman, 39 years of age, who had always been healthy, but who menstruated first in her twenty-second year. The menses were then regular and painless. She was married 1½ years at the time of the first observation, and had aborted 3 months after marriage, since when her menses had appeared every 3 weeks. For one month prior to her visit to the hospital she had suffered from severe pain in the abdomen, most marked on the left side, and palpation and vaginal examination revealed the tumor, which was midway between the umbilicus and symphysis, and was about the size of a double fist. It showed fluctuation. A diagnosis of ovarian cyst was made, and abdominal section was performed, when the true nature of the tumor was discovered. The uterus and ovaries were found to be normal. After its removal the cyst was the size of a hen's egg, and was found to contain a thin, chylous, reddish-colored fluid, which on microscopic examination was composed of many fat globules, red-blood corpuscles, and roset-shaped crystals of uncertain composition. It was a true mesenteric cyst.

**4.—Meltzer** reports the case of a lunatic of small stature, who died with the symptoms of cardiac weakness. At the autopsy, a chronic **mediastino-pericarditis** was found, and in the pericardiac wall, large milky translucent nodules from ½ to 1 cm. in diameter. The lymph glands in the neighborhood showed typical tubercular infiltration, and, microscopically, the nodules were found to contain giant cells in which were a few tubercle bacilli. The case, therefore, resembles one of pearl disease, and it is possible that the diet of the patient, who was an absolute vegetarian, may have had some relation to its development.

**5.—Welcke** reports the case of a man who was attacked suddenly with **acute pleurisy**, and at the end of 8 days was found to have a pleural effusion. Exploratory puncture showed the presence of a pleural exudate, in which, besides leukocytes and bacteria, a number of thread-like active parasites were found, some with and some without a spindle-like thickening at the anterior extremity. They resembled somewhat the *Cercomonas intestinalis* picture by Leukart, although they did not agree fully with the description. The patient, before operation could be performed, had a violent attack of coughing, and expectorated a large quantity of pus, and subsequently exploration of the pleural cavity was nega-



tive. Upon culture media, nothing but staphylococci were found, and from the pleural cavity of a rabbit, into which some of the pleural exudate had been injected, pus containing only staphylococci was obtained. Similar parasites are found in dust and in insects, and it is unlikely that in the present instance they were the cause of the pleural exudate, but merely a secondary infection.

### Deutsche medicinische Wochenschrift.

August 11, 1898. [24. Jahrg., No. 32.]

1. New Information in Regard to Inflammation. O. LUBARSCH.
2. Remarks Concerning the Cleanly Treatment of Wounds. J. HIRSCHBERG.
3. Concerning a New Albumose Milk. SCHREIBER and WALDVOGEL.
4. The Surgical Treatment of Pericarditis. BRENTANO.
5. Body-form and Position of the Kidneys. WOLF BECHER and RUDOLF LENNHOF.

1.—The features of the process of inflammation that are still the subject of controversy are: (1) the source of the cellular elements in the inflammatory swelling; (2) the origin of the pseudomembranes in fibrinous and diphtheric inflammations; (3) the share taken by the wandering cells in organization. Upon the answer to these questions depends the theory of inflammation. That the cells are exclusively leukocytes, in the sense of Cohnheim, can no longer be accepted; the cells consist of leukocytes and wandering cells, desquamated and loosened and fixed cells, and cells newly formed from the fixed elements. The subject has been studied chiefly in the cornea, both in artificial keratitis and in transplanted corneal tissue. During the course of keratitis peculiar spear-shaped formations appear, the nature of which is still in dispute, and which have the property of reducing cold. Grawitz and his pupil Buddee interpret them as cells formed from the corneal fibrils, in other words, as awakened slumbering cells; but Lubarsch denies this possibility, as in a large number of experiments, made by transplanting various kinds of tissue into the lymph-sac of a frog, he has never seen progressive, but only retrogressive changes.

2.—In the aseptic treatment of wounds in ophthalmic surgery the preparation of the patient is difficult. Hirschberg washes the lids the day before operation with neutral soap and afterwards boiled mercuric-chlorid solution, 1:5000. Immediately before operation he cleanses the conjunctival sac with the mercuric-chlorid solution, followed by sterilized normal salt-solution. With these preparations he has had no case of suppuration in 200 cataract-operations. The surgeon's hands, instruments, suture-material and dressings should be prepared as for work in general surgery.

3.—The addition of albumose to casein causes the latter to precipitate in fine flocculi, which are more readily digested by the child-stomach than the ordinary casein precipitate. Schreiber and Waldvogel use a substance called *caseose* (casein-albumose), which is not expensive, and which, they hope, will be produced on a large scale by some convenient method in all large creameries. They recommend three formulas, according to age:

	No. I. 1 TO 3 MONTHS.	No. II. 3 TO 6 MONTHS.	No. III. AFTER 6 MONTHS.
Milk (skimmed) . . . . .	350.	480.	720.
Cream . . . . .	300.	280.	280.
Water . . . . .	350.	240.	
Milk-sugar . . . . .	20.	15.	
Caseose . . . . .	3.2	2.4	1.6

4.—The surgical treatment of pericarditis is comprised in three procedures: simple puncture; incision through an intercostal space; and incision after resection of one or more ribs. Puncture always endangers the heart and pleura, and has so frequently to be repeated that Brentano believes it should be discarded. The disadvantages of incision are the obscuring of the field of operation by the thick pectoral muscles, the narrowness of the intercostal spaces in this region, and the danger of injury to the intercostal artery. Resection of the fifth and sometimes also the fourth costal

cartilage is a simple procedure, which may be carried out under local anesthesia, and is regarded as the safest and best method of operation. An incision is made over the middle of the cartilage, an elevator is passed under it, and it is divided with slight danger to the pleura. Before opening the pericardium it is considered wise to ligate the internal mammary artery. The pericardium is exposed and an exploratory puncture is made, after which it is opened, if found necessary. If pus, fibrin, or clots are found, the cavity should be flushed with sterile water, and in all cases drainage with a strip of iodoform-gauze is advocated. With regard to after-treatment, flushing with sterile water or lysol-solution is advocated in case pus is present. Brentano has performed pericardotomy five times, with satisfactory results. In a child, 7 years old, symptoms of pericarditis appeared during a severe attack of osteomyelitis. Pericardotomy was undertaken on the twelfth day after the appearance of the symptoms, and a purulent exudate was evacuated. Temporary improvement followed, but the child died from pyemia twelve days after the operation. At the necropsy, numerous abscesses were found in the internal organs.

5.—Becher and Lennhoff examined 24 Samoan women, ranging in ages from 13 to 26 years, who had never worn corsets or skirts fastened tightly about the waist. In six cases they were able to feel the right kidney, whence they conclude that the existence of a palpable kidney, movable with respiration, is not dependent on lacing. Being able, with remarkable certainty, to predict in a given case, from inspection of the patient merely, whether the kidney would be palpable or not, search was made for some sign on which a judgment might be based, and for this purpose dividing the patients into positive and negative cases, a number of measurements were made. By this means an index was found, namely:

$$\frac{\text{perilumbic distance}}{\text{circumference of the abdomen}} \times 100.$$

The larger this index the more likely is the kidney to be found palpable. This held good also for Berlinese women.

August 18, 1898. [24. Jahrg., No. 33.]

1. The Etiology and Treatment of Congenital Club-foot. L. HEUSNER.
2. Embolism of the Abdominal Aorta. HEILIGENTHAL.
3. Concerning the Pathologic Importance of Loeffler's Diphtheria-Bacillus. FRITZ SCHANZ.
4. The Latest Views Concerning Inflammation. (Continued.) O. LUBARSCH.
5. The Disinfection of Clothing with Formaldehyd-Gas. J. PETRUSCHKY and G. HINZ.

1.—Congenital club-feet cannot be accepted to be the effect of pressure in the later months of pregnancy. A study of the anatomy and development of the fetus in the sixth or seventh embryonal week furnishes evidence that leads to the belief that the deformity is not the result of pressure after the foot is fully developed, but that the foot is retained in a faulty position during the development of its bony framework by pressure from the surrounding structures. Heusner recommends, in the treatment of club-foot, the use of a spiral steel spring so attached to the shoes as to keep the feet in a position of pronation and outward rotation. After forcible reduction under anesthesia, and division of the tendo Achillis, the foot should be encased for several weeks in a plaster cast. Thereafter the child is allowed to run around in ordinary shoes during the day and the special spring is applied during the night. Massage, electricity, and braces may be dispensed with.

2.—Heilighenthal reports the case of a woman, 48 years old, who had been under observation for heart-disease and had presented mild local signs of stenosis and insufficiency of the mitral valve. She was discharged in fairly good condition, but about ten days later she was seized with most excruciating pain in her legs, with loss of power in these members. She was in collapse, cyanosed, and the extremities were cool. Examination of the lungs yielded negative results. The heart could not be satisfactorily auscultated owing to the woman's continuous cries, while both lower extremities were livid up to the hips, and there was slight edema. The discoloration extended up over the lower portion of the abdomen. The legs were entirely powerless, sensation was lost, there



was absolutely no pulsation to be felt in the arteries of the leg, and death took place on the same day. On postmortem examination a little fluid was found in the abdominal cavity, while at the point of division of the aorta there was a dark-red, firm thrombus, 17 mm. in breadth, strongly adherent to the walls of the vessel, and extending into the aorta for 21 mm., into the right iliac for 35 mm. and into the left iliac for 50 mm. The clinical diagnosis had been properly made. The most astonishing fact was that while clots were found in the right side of the heart there was no thrombus in the left side to have given rise to an embolus, and there was no definite history of overstrain or the like to have set free an embolus. The study of the few other cases of the same kind that have been reported shows that, in the condition under consideration, the temperature may sink in the affected extremities to as low as 70°. The diagnosis is usually not difficult. The condition is to be distinguished from thrombosis by the slower onset, and the more common occurrence of a collateral circulation with the latter, though more or less general gangrene is likely to occur with thrombosis. The sources that have been reported for these emboli were in two cases aneurysm of the heart, in three thrombus-formation in the ventricle, in two in the auricle, in three valvular disease with thrombus-formation, in seventeen valvular diseases without thrombus-formation, eight instances of mitral disease, and one of aortic. In one case a tumor compressed the aorta and pulmonary arteries. In all of the cases reported, recovery ensued after the establishment of a collateral circulation. The prognosis is, however, almost absolutely bad, and the treatment is entirely symptomatic. In the case reported here, the paralysis seems to have been purely a peripheral ischemic one, and in most of the cases that have been examined, there was no change in the spinal cord.

4.—Regarding the behavior of dead cornea transplanted into the lymph-sac of a frog, the results vary according as the cornea is hard and impenetrable or soft and pliable. In the latter event, especially when the cornea has been boiled in turpentine, the most beautiful spicules, impregnable with gold, can be found. Grawitz did not succeed because corneæ treated by boiling of strong disinfectants lose their porosity, and the wandering cells can not penetrate into them. Furthermore, the cells fixed by boiling or sublimate do not disintegrate, and thus substances attracting the wandering cells are not liberated, while on the other hand, some of the fixing poisons may be carried over and injure the wandering cells. If the gildable spicules and trellis-work originated from hematogenic or histiogenic wandering cells, they should be absent if the immigration of such cells were prevented. This actually occurs. A 5% salt-solution injected into a frog prevents the emigration of wandering cells. When a piece of cornea was introduced into such a frog, and later examined, it was found that it contained no gildable spicules. From these experiments it may be concluded that the largest part of the spicules and trellis-figures in keratitis are not the result of autochthonous cell-formation, but arise from the entrance of wandering cells. Other observations show too that newly formed corneal cells also may become wandering cells. The inflammatory cell-accumulation has, then, the following sources: (1) Hematogenic wandering cells (leukocytes); (2) histiogenic wandering cells; (3) newly formed cells from the fixed tissues; (4) newly formed cells the offspring of immigrated cells. The quantitative participation of these different types varies; in many forms of inflammation the immigration of hematogenic and histiogenic wandering cells predominates. Lubarsch then enters upon a consideration of the origin of the pseudo-membranes in fibrinous and diphtheric inflammation and deals exhaustively with the theory of Neumann concerning fibrinous degeneration. His own conclusion is that there is both a fibrinous exudation as well as probably a fibrinous degeneration; furthermore, that there is no fundamental difference among the various forms of pseudo-membranous inflammation, and that there are gradations from one to the other.

5.—Petruschky and Hinz have compared the effects of simple formalin-vapor and of a forced current of formalin-vapor in the disinfection of clothing and other like objects, and find that the latter will disinfect within an hour. Occasionally very resistant spores will escape destruction, but there is no doubt that the forced current of formalin-vapor is the best of all methods of disinfection.

## Berliner klinische Wochenschrift.

August 15, 1898. [35. Jahrg., No. 33.]

1. The Pathology and Therapy of Neuralgia. A. EULENBERG.
2. Concerning Tissue-changes in Stenosis of the Esophagus after Swallowing Caustic Potash. RICHARD BENJAMIN.
3. The Influence of the Administration of Suprarenal Capsule on Metabolism in Addison's Disease. MAX PICKARDT.
4. Concerning the Method of Determination, the Causes, and Treatment of Pernicious Anemia. E. GRAWITZ.
5. The Use of Tropon for Nourishing the Sick. D. FINKLER.

1.—**Neuralgias** are ordinarily defined as a group of nervous diseases chiefly characterized by spontaneous intense pain arising periodically and radiating along the course of a nerve and its ramifications. While this definition covers trigeminal and occipital neuralgias, it does not apply to hemicrania, for in the latter there is no radiation of the pain along definite nerve-paths. This is true of most headaches. Furthermore, many so-called intercostal neuralgias are only in part true neuralgias. In some cases the condition is a ganglitis and neuritis in the course of the affected dorsal nerves. In others there is disease within the spinal canal influencing the posterior nerve-roots. In many cases there are painful local affections for which the term neuralgia is in no way proper. Examples of these are pains arising from the vertebrae, the ribs, the costal cartilages, or from the skin, fascias, the muscles, the mammary glands, the pleurae, etc. The conditions are somewhat different with neuralgias of the sacral plexus. The pain is often localized at a definite point of the posterior pelvic wall, and not rarely it is at the exit of the nerves, at the sciatic notch. In other cases it is chiefly in the lower parts of the dorso-lumbar muscles, from which, as in ordinary lumbago, the disease-process extends by contiguity downward to the sheaths of the nerves at the sciatic notch. In other instances there is evidence of a primary acute or subacute localized perineuritis of the sacral plexus or the sciatic nerve itself. In this stage, characteristic signs of neuralgia are not yet present, and an injection of 2% carbolic-acid solution deeply into the psoas muscle may abort the process. The existence of a predisposition and probably in some cases of an infectious or toxic factor favors the recurrence of such conditions. Clinically, it is difficult to distinguish acute neuralgic sciatica from sciatica due to perineuritis or neuritis. Benedikt defines *true neuralgia* as a disease of the nerve-trunks and the plexuses. From this he separates *eccentric neuralgias*, dependent upon disease of the roots and radiation into the spinal cord, and *topical peripheralgias*, which are either circumscribed or diffuse. This classification Eulenburg believes useful. In the true neuralgias (diseases of the trunks or plexuses) there are well-characterized pains of a definite type, with distinct variations in intensity. In eccentric neuralgia, the pain occurs in momentary paroxysms, quickly subsiding. These pains are the so-called lightning, lancinating, or rheumatic pains. In the third group, the topical peripheralgias, there are neither intense paroxysms nor lightning-like attacks, the pain being instead less intense, but more persistent. The influence of the neuron-theory on the conception of neuralgia is then discussed. The morbid stimuli that affect any peripheral part of the neuron probably exert an influence on the trophic cells. It is intimated that the "neuralgic" change in nerve-cells is probably a structural one. In a "neuralgic" state of nerve-cells the threshold, as far as the central conduction is concerned, is lower, while that for reflex action is unaltered or even heightened. Neuralgia is, therefore, not a definite form of peripheral nerve-disease, but is dependent upon a peculiar ("neuralgic") state of the nerve-cells.

2.—Benjamin shows that in cases of **benign stricture of the esophagus**, if sufficient food is introduced, it is well assimilated, which is not the case with malignant stricture. Studies of metabolism in these conditions are therefore of diagnostic value.

3.—Pickardt found that the administration of **suprarenal extract** in a case of **Addison's disease** caused a disturbance of the nitrogen-equilibrium, leading to increased consumption of the body-albumins and to loss of weight. In Senator's case the influence of the extract was not unfavor-



able, and the two results, being contradictory, suggest further studies.

4.—There is no specific remedy for **pernicious anemia**; treatment must be directed to the removal of the cause, if possible. Rest in bed is one of the first requisites; the assimilation of food must be stimulated. Lavage of the stomach, intestinal irrigation, and saline laxatives are useful. In the rare cases with diarrhea, calomel may first be given, later astringents, such as tannin. If the urine contains much indican the intestinal antiseptics are indicated. When examination of the gastric juice shows an acidity, hydrochloric acid and bitter stomachics, bitter wines, porter, etc., should be given. The treatment can be carried out to best advantage in an institution. Iron is of no value, and in the beginning is really contraindicated. Arsenic, although not a specific, is at present the best remedy, and can be given with quinin. Inhalations of oxygen have been employed with advantage; bone-marrow has failed to be of use in Grawitz's hands. Massage and gymnastic exercises are often of service. Transfusion of blood may produce temporary benefit; cure is unlikely. More is to be expected of it in the pernicious anemia of pregnancy, when, after induced labor, hemorrhage has caused acute anemia. A number of cases terminating in apparent recovery are cited, and the suggestion is made to substitute the term Biermer's anemia for that of progressive pernicious anemia. After apparent recovery the patient must be carefully observed, as relapses are likely to occur, particularly if the hygienic and dietetic conditions are unfavorable.

5.—Finkler describes the various methods in which tropon may be administered, *e. g.*, in mineral water, beer, milk, soup; in zwieback or cake.

#### Centralblatt für Gynäkologie.

August 20, 1898. [22. Jahrg., No. 33.]

##### 1. Mooted Questions Concerning Retroflexion. F. SIELSKI.

Sielski reviews the entire question of the proper management of **retroflexions of the uterus**. He states that all retroflexions are usually divided into two groups, the fixed and the movable. Fixation occurs through inflammatory action with the formation of adhesions to the organs and parts around the so-called "contact adhesions." The essential difference between these two varieties of retroflexion is that the one, with the employment of force, will respond, while the other will not. In the one case, simple pressure from the fingers upon the vaginal portion will readily result in a correction of the misplacement. There are cases, however, in which between the posterior uterine wall and the posterior pelvic wall layers of bowel lie. To these loops of intestine the uterus becomes adherent in many instances. If the uterus is flexible, at one examination it may be found in retroflexion and the next time in antelexion. This will not be so in cases of fixed retrodisplacement. As to the etiology of virginal retroflexion in many instances it is a result of a defect in the development of the organ, and not of subinvolution as is the case in the more complicated puerperal retroflexion. In many of these virginal cases there is associated a descensus of the organ. This is not the cause of the retroflexion, but rather the retroflexion is the cause of the prolapse. Sielski believes that in other cases the displacements are due to the shortness of the vagina and to the general aphasia of the parametric and paravaginal connective tissue. In virginal retroflexion the uterus lies deeper in the pelvis, and becomes fixed in this situation. If this is the original condition of the uterus, and the bladder in these women is as large as it is in other women, sooner or later there occurs a tendency for the organ to fall backward from pressure from the bladder, and then further adhesions occur between the backward displaced fundus and the adjacent intestinal loops. Then shortly develops the typical symptoms of irritation of the bladder by the cervix uteri which is carried forward as the fundus falls backward. The adjacent organs soon become hyperemic and the woman then suffers from the symptoms of pelvic congestion. The uterus, which up to this moment may have been replaceable, now becomes hopelessly retroflexed, so that a spontaneous reduction is out of the question. In some cases fixation of the cervix will be noted. According to B. S. Schultze this will

result from: (a) The scars of an anterior parametritis; (b) the scars of a high cervical laceration, either the result of a non-aseptic bilateral discission or from some other operation on the portio; (c) the scars of a gangrenous ulceration around the cervix uteri resulting in a vesico-vagino-uterine fistula. Puerperal retroflexion of the uterus may result from irregular and imperfect involution, or from septic inflammation of the parametrium, resulting in the formation of inflammatory exudate, which, on contracting, drags the uterus backward. The muscular hypothesis is that in some instances there results a permanent muscular contraction, which, of course, is always pathologic in nature. The muscle-tissue in the uterine ligaments, according to this theory, shows an exquisitely delicate elastic function, and becomes tonically contracted, resulting in a dislocation of the uterus backward. In old women an extensive atrophy of the pelvic connective tissue will act just as does the aphasia of this tissue in young girls, and result in a backward displacement of the uterus. As to the treatment of retrodisplacement, this will vary according to the etiology of the condition. If it be due to an anomalous fixation of the cervix, this must be corrected before the uterus can be righted. When the uterus is not mobile, some good can result in many cases from properly applied pelvic massage. When the organ is brought forward it must be retained by means of a suitable pessary or by tamponade of the vagina. In a certain proportion of the cases some operative procedure will be indicated, such as vaginofixation or vesicofixation. The former operation has, because of improper technic very probably, resulted in severe obstetric complications. The proper course is not to correct the retrodisplacement by reposition and fixation, but, on the contrary, by reposition permitting of free motion of the uterine fundus.

#### Centralblatt für innere Medicin.

July 30, 1898. [19. Jahrg., No. 30.]

##### 1. Fluid Obtained by Puncture from a Pancreatic Cyst. JOHANN LENARIC.

##### 2. The Priority of Sounding the Esophagus, Stomach, and Intestines with the Spiral Sound. FRANZ KUHN.

1.—Lenaric reports a case in which the **fluid obtained by puncture from a pancreatic cyst** was brownish-red in color and yielded, on shaking, a faintly yellow foam. There was but little sediment, which consisted chiefly in red corpuscles and a few white cells. Compound granule-cells were absent. The specific gravity was 1.010; the reaction feebly alkaline. Spectroscopically, oxyhemoglobin was found; there was, besides, another derivative of the blood-pigment, but its nature could not be determined. Sugar was present; mucin also, but in small quantity; peptone, tryptophan, and urea were absent. The composition of the fluid corresponded closely with that of the pancreatic juice of the dog obtained through a fistula, and was as follows: Water 98.21; solids 1.79; organic substances 1.005; ash 0.785. The fluid had no proteolytic, but a strong amylolytic action.

2.—Kuhn claims to have preceded Turck in the employment of the method of **sounding the esophagus, stomach, and intestines with spiral sounds**.

August 20, 1898. [19. Jahrg., No. 33.]

##### 1. A Contribution to the Action of $\beta$ -Oxybuturic Acid and its Optically Active Salts. WALDVOGEL.

1.—Waldvogel prepared  $\beta$ -oxybuturic acid and directly from the urine of a diabetic patient. Experiments were made on lower animals by feeding and by injection. In only one case was it possible to obtain for some days Legal's reaction in the urine of an animal that had been given large quantities of the acid, causing deviation of the ray of polarized light to the left. Injections were made under the skin, into the peritoneal cavity and into an ear-vein. The first two methods caused only the symptoms common to injections of a strong organic acid, that is, local necrosis and nephritis. Rabbits that received into their veins the total daily quantity of the acid, excreted by a diabetic patient, and whose urine caused deflection of the ray of polarized light to the left, showed no symptoms of poisoning. The sodium-salt of the acid, however, produced a condition lasting for a few minutes, and closely resembling diabetic coma in frogs and mice. No conclusions are drawn.



## Original Articles.

THE HUXLEY LECTURE ON RECENT ADVANCES IN SCIENCE AND THEIR BEARING ON MEDICINE AND SURGERY.<sup>1</sup>By PROFESSOR DR. RUDOLF VIRCHOW,  
University of Berlin.

THE honor of being invited to deliver the second Huxley Lecture has deeply moved me. How beautiful are these days of remembrance which have become a national custom of the English people, and through which the memory of intellectual heroes is kept alive to posterity! How touching is this act of gratitude when the celebration is held at the very place wherein the genius of the man whom it commemorates was first guided towards its scientific development! We are filled not alone with admiration for the hero, but at the same time with grateful recognition of the institution which planted the seed of high achievement in the soul of the youthful student.

That you, gentlemen, should have entrusted to a stranger the task of giving these feelings expression seemed to me an act of such kindly sentiment implying such perfect confidence that I at first hesitated to accept it. How am I to find in a strange tongue words which shall virtually express my feelings? How shall I in the presence of a circle of men who are personally unknown to me, but of whom many knew him who has passed away, and had seen him at work, always find the right expression for that which I wish to say as well as a member of that circle itself could? I dare not believe that I shall throughout succeed in this. But if in spite of all I repress my scruples it is because I know indulgently my English colleagues will judge my often incomplete statements, and how fully they are inclined to pardon deficiency in diction, if they are convinced of the good intentions of the lecturer. I may assume that such a task would not have been allotted to me had not those who imposed it known how deeply the feeling of honor to Huxley is rooted within me, had they not seen how I fully recognized the achievements of the dead master from his first epoch-making publications, and how greatly I prized the personal friendship which he extended towards me. In truth, the lessons that I received from him in his laboratory—a very modest one according to present conditions—and the introduction to his work which I owe to him, form one of the pleasantest and most lasting recollections of my visit to Kensington.

The most competent witness of Huxley's earliest period of development, Professor Foster, put forth in the first of these lectures a picture of the rapidly increasing extension of our biological knowledge, which must have excited not only the admiration but also the emulation of all who study medicine. Upon me the duty is incumbent of incorporating with this presentment the newer strides of knowledge, and of stating their influence upon the art of healing. So great a task is this that it would be presumptuous even to dare to attempt its accomplishment in a single lecture. I have decided, therefore, that I must confine myself to merely sketching the influence of biological discoveries upon medicine. In this way also will the example of Huxley be most intelligible to us.

Huxley himself, though trained in the practical school of Charing Cross Hospital, won his especial title to fame in the domain of biology. As a matter of fact at that time even the name of biology had not come into general use. It was only recently, as I showed in my lecture "On the Position of Pathology amongst Biological Studies,"<sup>2</sup> that the idea of life itself obtained its full significance. Even in the late middle ages it had not sufficient strength to struggle through the veil of dogmatism into the light. I am glad to be able to-day, for the second time, to credit the English nation with the service of having made the first attempts to define the nature and character of life. It was, as I then pointed out, Francis Glisson, who, following expressly in the footsteps of Paracelsus, investigated the *principium vitæ*. If he could not elucidate the nature of life he at least recognized its main characteristic. This is what he was the first to describe as "irrita-

bility," the property on which the energy of living matter depends. He thus succeeded in setting aside the mystical idea of the spiritualistic "Archeus" which Paracelsus and his followers had placed in the forefront of their deliberations, and in locating the *principium energeticum* in matter itself.

How great was the step from Paracelsus to Glisson and—we may continue—from Glisson to Hunter! According to Paracelsus, life was the work of a special *spiritus* which set material substance in action, like a machine; for Glisson, matter itself was the *principium energeticum*. Unfortunately, he did not confine this dictum to living substances only, but applied it to substance in general, to all matter. It was Hunter who first announced the specific nature of living matter as contrasted with non-living. But he also did not attain perfect clearness of vision, because in the development of English medicine the idea had been allowed to take root and grow, that life was not bound up with structure, so that Hunter also was led to place a *materia vitæ diffusa* at the head of his physiological and pathological views. Hence he arrived at the assumption of the so-called plastic substances in respect of which the blood served both as rallying-point and seat of formation, and so it happened that in place of the old Greek humeral pathology which Paracelsus had overthrown, a new humeral pathology arose—hematology. According to the teaching of Hewson and Hunter, the blood supplied the plastic materials of physiology as well as the plastic exudates of pathology.

Such was the basis of the new biological method, if one can apply such an expression to a still incomplete doctrine, in 1842, when Huxley was beginning his medical studies at Charing Cross Hospital. Of pathology in England, John Hunter was the accepted master, and so remained for many years thereafter. So great was his influence that Continental medicine also recognized it. To this I can myself testify, as I was at this time at the end of my university studies. It would lead too far afield were I to recount in this place how it happened that I myself, like Huxley, was early weaned from the pernicious courses of humoral pathology; it must suffice to say that salvation lay in the same science which had already once before, in the sixteenth century, brought about deliverance from humoral pathology. It then came about that Vesalius threw over the authority of Galen and founded human anatomy upon direct observation, on necropsy. Since then anatomical studies have been much widened and improved. When Huxley himself left Charing Cross Hospital, in 1846, he had enjoyed a rich measure of instruction in anatomy and physiology. How great this was can be gathered from the interesting statistics which Professor Foster has collected with the aid of a fellow student of Huxley's, Joseph Fayrer. Of the lectures which junior students attended, one hundred and forty in each of the three years of study were devoted to anatomy and physiology. Thus trained, Huxley took the post of naval surgeon, and by the time that he returned, four years later, had become a perfect zoologist and a keen-sighted ethnologist. How this was possible anyone will readily understand who knows from his own experience how great the value of personal observation is for the development of independent and unprejudiced thought. For a young man who, besides collecting a rich treasure of positive knowledge, has practised dissection and the exercise of a critical judgment, a long sea-voyage and a peaceful sojourn among entirely new surroundings afford an invaluable opportunity for original work and deep reflection. Freed from the formalism of the schools, thrown upon the use of his own intellect, compelled to test each single object as regards properties and history, he soon forgets the dogmas of the prevailing system and becomes first a sceptic and then an investigator. This change, which did not fail to affect Huxley, and through which arose that Huxley whom we commemorate to-day, is no unknown occurrence to one who is acquainted with the history not only of knowledge but also of individual scholars. We need only point to John Hunter and Darwin as closely allied examples.

The path on which these men have achieved their triumphs is that which biology in general has trodden with ever-widening strides since the end of last century; it is the path of genetic investigation. We Germans point with pride to our countryman who opened up this road with full conviction of its importance, and who directed towards it the eyes of the world—our poet-prince Goethe. What he accomplished in particular for plants, others of our fellow-countrymen

<sup>1</sup> Delivered at the Charing Cross Hospital Medical School on October 23d.<sup>2</sup> Croonian Lecture, *Proc. Roy. Soc.*, vol. liii.



achieved for animals. I recall Casper Friedrich Wolf, Dörlinger, Joh. Friedrich Meckel, Carl von Baer, and our whole embryological school. As Harvey, Haller and Hunter had once done, so these men began also with the study of the "ovulum," but this very soon showed that the egg was itself organized, and that from it arose the whole series of organic developments. When Huxley, after his return, came to publish his fundamental observations, he found the history of the progressive transformations of the contents of the egg already verified, for it was by now known that the egg was a cell, and that from it fresh cells, and from them organs, arose. The second of his three famous papers, that on the relationship between man and the animals next beneath him, limned in exemplary fashion the parallelism in the earliest development of all animal beings. But beyond this it stepped boldly across the border-line which tradition and dogma had drawn between man and beast. Huxley had no hesitation in filling the gap which Darwin had left in his argument, and in explaining "that in respect of substance and structure man and the lower animals are one."

Whatever opinion one may hold as to the origin of mankind, the conviction as to the fundamental correspondence of human organization with that of lower animals is at present universally accepted. All biological science, particularly physiology and pathology, creates hence the impulse to corresponding studies, and in particular all that has to be based on experiment must in the first instance be investigated in animals, while all that requires morphological confirmation finds support in comparative anatomy, histology, and embryology. The basis of our comprehension of the theory of medicine actually rests nowadays on minute microscopy, for the elaboration of which the animal tissues form an indispensable control-object. Suffice it to say that in scientific biology the division between man and beast becomes less and less defined, but only let it be remarked the division between the abstract man and the abstract animal. It is the same relation as meets us in the differentiation between plants and animals. How many definitions of this have been put forth in the course of time, and how one after the other has been wrecked? But if we place a given animal and a given plant side by side we overcome the difficulties which we had only raised by our own definition.

The greatest difficulty in biology has arisen in this way—that mankind, following a natural tendency, has set the search after the sole basis of life in the foreground of its consideration. As a matter of fact, what is more natural than the conclusion that life as a special phenomenon must also have a special basis, and that the material process of life must be derived from a common cause? During the last century an attempt was made to satisfy this claim by the assumption, with ever-increasing conviction, of a special force—vital force. Nowadays we can still perceive the logical errors which this assumption rendered possible, revealing themselves in isolated examples. Time has, however, passed judgment upon it, and to-day no one continues to speak of vital force. And yet the necessity for a single basis of all vital manifestations remains. How is this to be satisfied? This is a question which is not alone of great theoretical interest, but which has become an indispensable foundation for practical work, and particularly for medical practice. But in order to reach this foundation, it is first of all necessary to dispense with all the dogmas of the schools, and to seek to construct an objective picture of the nature of vital processes.

As regards material construction, man, and the higher animals and plants, are no unitary, simple beings; on the contrary, they are put together from many units. They are hence called organisms. If they possessed but one single power which set all their parts in action, it would be impossible to understand how the special kind of activity which each one of these organisms exercises in its individual way comes about. This specific activity is present in the organism not alone in its perfect or fully-grown form, but also during its development and growth. How can a single power, whether we call it in the spiritualistic sense spirit, soul, spiritus rector, or, in the physical sense, vital force or electricity, build up such diverse organisms? Or if this power resided in a single organ—were it in brain, or spinal cord, or heart—how could those brainless and heartless creatures be explained which present so abnormal a condition that at the beginning of this century they were the proper battleground of the mystics?

There is here, in my opinion, only one solution possible. The life possessed by the higher organisms is not a single one. Their life and all their activities only become intelligible when we go back to the exact representation, based upon a kind of instinctive observation, of the life of their parts. Each constituent part of a living organism has its special life, its *vita propria*. No one of the older authors proclaimed this more distinctly than Paracelsus. But he at once undid this good idea again by attributing to each living part a particular *spiritus*, a special *Archæus*. The best of the succeeding biologists were also held by this notion as in a snare; instead of busying themselves in the observation of *vita propria*—that is, the action of the parts, they continued to devote themselves to research on the *Archæus*.

The advances in general science, based upon personal observation, and particularly those in medicine, have completely turned the attention of true observers to the study of individual parts. As I pointed out at the Medical Congress at Rome,<sup>3</sup> it stands most clearly revealed in the history of pathology that the division of the body first into larger regions (head, breast, abdomen, etc.), then into organs, then into tissues, and finally into cells and cell-territories, was the first step which opened up to us the comprehension of disease. The study of regions was followed by that of organs, and this again by that of the tissues, and finally by the cellular theory. But what is true of pathology must hold also for physiology, and as a matter of fact physiology has passed through the same developmental phases. One gradually comes to understand that the life of the individual parts is perfectly clear if one looks away from the *Archæi* of the organs or the tissues, and keeps in view only the life and activities of the single cells. For the life of an organ is naught else than the sum of the lives of the single cells which are gathered together into it, and the life of the whole organism is not an individual but a collective function.

If such a collective being is analyzed, no matter whether it be the whole organism, or a single organ, or only one tissue which is presented in its vital activity, the first requisite for a correct interpretation is that one should discard the fabled unity, and should regard the single parts, the cells, as the factors of existence. Single cells can be separated out even in a complex organism, but we should with difficulty arrive at a satisfactory theory if we did not also meet with single free-living cells in Nature. These have provided the first basis for objective investigation. Unicellular plants and animals have during this century been continually more fully and better studied. Botanists and zoologists have become the teachers of physiologists and pathologists. The ova of animals and the corresponding germ-cells of plants have bridged the gap between isolated living cells and higher organisms. It was the recognition of this fact which first raised the noteworthy theorem of Harvey to the high position which it merits.

In a medical school, where the teaching is almost entirely concerned with human beings, we might put this sentence at the head of the lesson: "The organism is not an individual but a social mechanism." An exact anatomical analysis of this mechanism always brings us at last to cells; they are the ultimate constituents of all tissues as they were their origins. Hence we call them the living elements, and hence we regard them as the anatomical basis of all biological analysis, whether it has a physiological or a pathological object in view.

In relation to this two propositions must be stated: (1) That every organism, like every organ and tissue, provided it is alive, contains cells; (2) that the cells are composed of organic chemical substances, which are not themselves alive, but the mechanical arrangement of which determines the direction and power of their activity.

The first proposition has of late slowly come to be realized. Schwann, who recognized the origin of tissues from single cells, still clung to the opinion that in the further development of many tissues the cells were used up. Among these tissues he reckoned in particular that important group which has subsequently become known as the supporting tissues, because it ensures form and stability to single organs, and to the whole organism. First among these stand the osseous and connective tissues, which also form so large a fraction in the quantitative constitution of higher organisms. The rep-

<sup>3</sup> Morgagni and Anatomical Thought.



resentation of the osseous and connective tissues as free from cells must now be given up. Where formerly only empty spaces or mere leaks (*lacunæ*, holes) were seen in the tissue, we now can demonstrate actual cells. We can even isolate them. Hence it is now desirable that the name "tissue," in the sense of living tissue, should only be applied to such parts as contain living cells. Outside the cells the tissue may contain a more or less rich share of organic (chemical) material, but this intercellular or extracellular substance must be regarded as a separate endowment, and not as a vital factor. Such parts as arose originally from living cells, but of which the cells have perished, must be excluded from biological consideration. As examples may be adduced the epidermis and the hair belonging to it, together with the enamel of the teeth. These consist in reality of dead tissue.

As regards the second proposition, that no living organic chemical substance exists, the fact has been objected that all living matter is put together from organic chemical materials; but whoever raises this point must have well-nigh overlooked the fact that these two kinds of substances, the living and the non-living, cannot be absolutely identified with one another. In spite of chemical similarity or even correspondence, they exhibit recognizable differences, not alone physiological, but also mechanical and physical. Thus since the application of dyes has secured us a glimpse of the variety of the finer mechanical, or if any one may say it, molecular, arrangements of matter, it has become possible to differentiate living and non-living parts *de visu*. We are admittedly only on the threshold of these investigations, but the latest researches upon ganglion-cells have shown that even beyond the effects of staining differences between living and no longer living parts may become optically recognizable.

The enthusiasm with which for centuries the doctrine of proximate principles and nutritive materials was built up has already become much abated, and has, in part, been entirely abandoned, through the knowledge that no single chemical substance, no kind of nutritive or constituent material which can be employed as such, and without further change, for the origination or formation of cells, has ever been found outside the living organism. And yet a chemist of Liebig's importance actually believed that fibrin could be conveyed directly from the meat consumed into the juices of the body, and thence deposited in the tissues. This was a misconception—a relic from the time of the old humoral pathology—which regarded the living body and its constituent parts as arising simply from the coming together of a few ground-substances (*humores cardinales*). Hence arose the doctrine of plastic materials which were pre-existent in the food and blood. With an obstinacy which was only surpassed by their superficiality, these theorists remained convinced that the plastic materials as such effected the construction and maintenance of living matter. They failed to see that the nutriment taken in had first to be prepared by special juices secreted by the cells of the digestive organs, and that both the digestive material and the plastic substance of the blood were only rendered assimilable by means of a new change, which had to be effected by the agency of the tissue-cells.

The plastic material theory appeared to have gained new strength through Schwann's cell-theory. One must be careful not to misunderstand this designation. Since the cellular theory of animal and plant life has been established, many have maintained that Schwann's cell-theory is identical with it. Not only is this not the case, but the two stand in exact opposition to one another. Schwann assumed, and believed himself to have directly observed the process, that cells arose in undifferentiated matter, in a fluid or a semi-solid mass, in the following way: First, small particles of a firmer kind were separated off, then these came together into little heaps or clumps, by the internal transformation of which a cell-nucleus gradually arose. Round this a new precipitate of firmer substance now slowly accumulated, and from this arose the body of a cell. Hence the original amorphous substance would be the special constructive material, while the nucleus was the true cell-builder; Schwann called the former *cystoblastem*, the latter *cystoblast*.

It was obvious that from these premises people must have been logically led to the conclusion that every form of organic tissue or organism, every kind of new cell must be separated from the preceding by a definite gap (*hiatus*), so that each

new formation must be grouped as a discontinuous vital origin. Strangely enough, this classification arose and was accepted at a time when Darwin was already at work proving that new species arise by the modification of preexisting forms. But Schwann's cell-theory was in truth a resuscitation of the archaic doctrine of spontaneous generation (*generatio æquivoca, epigenesis*). With the rule of such a creed Darwinism was incompatible.

The foundations of this *generatio æquivoca* have been, as far as zoology is concerned, gradually demolished. The formation of tissue-cells from the egg and its products of division has been observed throughout the whole animal kingdom. Apparently eggless animals, such as the cestoids and trichinæ, have one after the other been brought under Harvey's law; we know their eggs, their embryos, and their wanderings. There remained, in fine, but one great domain, though this is of the highest importance; it belongs particularly to pathology, and is that of the plastic exudates, which accompany the most important clinical processes, particularly those of inflammation.

It will be readily understood that so essentially pathological a subject would have but little interest for pure natural philosophers. They left it for medical men, who have to occupy themselves with it all day long. But in medicine this territory was held sacred; no one doubted that therein spoke old, well-attested experience. We old students were brought up in this belief, were endowed with the theorem of the plastic exudates from our earliest studies. Translated into our latter-day parlance, such a theorem would recognize discontinuity in most pathological new formations; it would establish—and this is well worthy of note—the grounds for the dogma of the origin of life from non-living matter. Experience has taught us the exact opposite.

Permit me here, gentlemen, to speak a little more personally than is elsewhere my intention. Perhaps it will be more intelligible to the students of this hospital, and will make more impression if I narrate how I myself arrived at quite other views.

It was towards the end of my academical studies, more than fifty years ago, that I had to take up the work of assistant in the ophthalmic clinic of the Charité Hospital at Berlin. My attention was at once directed to the diseases of the cornea. We had severe cases of keratitis, but I saw in them no exudation; numerous cataract operations were performed and the wounds closed, but not by plastic exudation; this was absent from all corneal scars. Could this be explained by the circumstance that the cornea, apart from its circumference, is a non-vascular tissue? My interest was at once focussed on the non-vascular tissues. I turned first to the articular cartilages, and behold, here also I found the greatest changes without the presence of exudation, or, at any rate, of plastic exudation. I need only recall the form of inflammation which I named *arthritis chronica deformans*, and which is often described by French physicians as *arthrite sèche*. My experimental studies on the inflammation of the walls of bloodvessels showed that the equally non-vascular intima of the larger arteries, and in part also that of the veins, can undergo great changes without even a trace of exudation being produced. Later, on anatomical investigations on endocarditis led to the same result, provided parietal thrombi were not regarded as exudations. But in all these cases and in every place there were found changes in the tissue-cells; active, such as swelling, multiplication of nuclei, etc.; or passive, as fatty degeneration.

I turned my attention next to vascular organs, and in particular to those which were recognized by pathology as the common seats of exudation processes. I refer, first, to the medullary infiltration of the lymphatic (follicular) tissue of the intestine and mesenteric glands in typhoid fever so strikingly depicted by the Vienna school: instead of the amorphous albuminous exudate which was described, I found only cells, and cells of the same kind as those which are normally present in these situations. The same was revealed in the so-called caseous exudates which were at one time ascribed to scrofula, at another to tuberculosis; the cheesy material was admittedly in the main amorphous, but it was in reality not an exudation at all, above all, not a primary product of disease, but rather the secondary product of degenerative necrobiotic changes in parts of the tissues which had formerly been organized, and not infrequently actually hyperplastic.



It is not requisite to go further into details in order that my address may suffice to show how great is the realm of this pseudo-exudative process. But I cannot help referring to another series of morbid processes affecting the bones. It was whilst studying rickets that I first learnt the biological significance of the cartilage-corpuscles the nature of which had till then been interpreted in very diverse ways. I believe that I was the first to distinguish in these bodies what must be actually recognized as cells from the merely capsular and extracellular coverings. The rachitic disturbance now brought an appearance into fullest evidence, which was repeatedly misunderstood even by later observers; this was the increase of these cells by division, and the consequent growth of the cartilage.

It was not difficult to follow out the direct transition of the epiphysal cartilage into the periosteum of the neighboring bone, and thus into connective tissue. At this time the whole world was convinced of the correctness of the statement made by Duhamel, according to which increase in thickness in the long bones was effected by the periosteal vessels exuding a nutritious juice out of which the new bone-substance was formed. Pathologists had extended this formula to periostitis and the formation of exostoses and hyperostoses; they assumed in particular that between the periosteum and the bone a plastic exudation was excreted and stored up, in which the new osteophyte arose by secondary organization. The consequence of my investigations was that in not one of these spots, neither in the cartilage nor in the periosteum, neither in normal growth nor in rickets or periostitis, was organization preceded by the presence of a recognizable amorphous exudation. On the contrary, it was indubitably shown that the first state of the changes was an active productive process of cell-multiplication; that at the same time the intercellular substance altered in character and underwent numerous successive changes till it assumed an osteoid appearance; and that then, and not till then, followed calcification and true ossification. There was also no difficulty in adducing the proof that the separate stages of these processes in cartilage and periosteum ran a perfectly parallel course, although the new tissue was in the one case at first true cartilage, in the other only cartilage-like. If one wishes to describe this process in general it must be called proliferation. Whoever calls the proliferative layer an exudation will never obtain an objective view of the actual circumstances.

There is thus not the slightest necessity for the genuine observer to hold on to the arbitrary and totally erroneous formula of a plastic exudation. There is no such thing as a plastic exudation which is ever simply amorphous; the cells which may be found in it have not arisen there. With this proof, which can be obtained in numberless other places, the doctrine of the discontinuous origin of pathological new formations is set aside. Every such new formation presupposes a tissue from which its cells arise; this is its matrix. There is no difference in principle between the descent of men and animals from one mother and the descent of pathological new formations from one matrix. Pathology has been somewhat late in arriving at the knowledge of this correspondence, but I think that it has acquired especial value for biology in general.

In order to avoid misunderstanding, it may now be noted that not every living cell is capable of becoming a matrix. All cells which are destined for the highest animal functions prove sterile, or at least very hypothetically capable of proliferation. Ganglion-cells, primitive muscle-bundles, red blood-corpuscles do not come under consideration as regards the theory of pathological descent. The more indifferent cells, on the other hand, above all those of cartilage, connective tissue, and epithelium, possess a marked predisposition to bring forth new cells. Many cells, again, such as bone-corpuscles and fat-cells, require a special preparatory, metaplastic stage, before they can produce a new brood.

Proliferation is thus an active property of special cells. That it cannot be performed by all cells alike alters in no way the fact that it can only be performed by cells. It is just as little a function of an entire organism, for this itself would then have to be unicellular. In this property lies the explanation of the origin of a whole organism from a single egg-cell, that wonderful process which comes to pass but once in the life of an animal. Once tissues have arisen each cell of a matricial tissue may in respect of proliferation be compared to an ovum; it brings forth a new progeny from

which new tissue grows. This tissue bears, as a rule, the stamp of its matrix—it is built on the maternal type. This is the nature of descent, and herein lies the key to the knowledge of heredity, that puzzling appearance with which mankind has ever busied itself.

According to the humoral theory, heredity was derived from the body-fluids, and in particular the blood. According to this idea the blood furnished the means of the continuance of the family and the race; blood-relationship explained the similarity not only of the juices but also of the organs and the whole body. Each according to its nature determined the goodness or badness of the organization; noble blood generated noble men and healthy organs, bad blood a debased posterity and organs predisposed to disease. In scientific works naught remains of these fantastic surmises; they persist like a superstition in lay circles, but no one now maintains their correctness in serious debate. In their stead has arisen the recognition of the particular value of the mother-tissue and its cells. These are the factors of inherited properties, the sources of the germs of new tissues and the motive power of vital activity.

During the development of a higher organism the constitution of the individual tissues changes; they become differentiated by means of metaplastic processes which are in their turn connected with cells and cell-territories. Thus it comes about that people have for ages spoken of dissimilar parts. The complete fully-grown organism is built up of similar and dissimilar tissues; their harmonious working gives the impression of a unity of the whole organism which is as a matter of fact non-existent. For the further the organism develops the more its social constitution comes into evidence. It consists of innumerable independent parts which together constitute a single social body. If we take the ultimate elements of these parts we must call them all, without exception, cells, for cells alone are truly alive, and scientific judgment is in the last instance concerned with them.

So little is the whole organism a definite unit that the number of its living constituents is in the highest degree inconstant. Looking at the gross structure of organs, we are accustomed to regard a certain number of them as typical peculiarities of human beings or the various genera and species of animals. We expect to find two of each paired organ and one of each unpaired in a single individual. Man, as all other mammals, has a fixed number of bones and teeth, and these numbers are rightly used as diagnostic of man or the particular variety or species of animal. But these numbers form no essential condition of existence; a man with six fingers or seven toes remains a man, just as a lung with superabundant lobes or a kidney with an excess of conical medullares remains a lung or a kidney. A woman with three, four, or even more mammary glands is thereby no more a lower animal than a man with a tail would be. These are theromorphs ("sports") which can have no influence on our opinion as to the sex of the affected individual or its position in the animal scale.

But it will be a long time before general opinion on the significance of "sports" will, even among experts, become unanimous. One sect will connect them with descent, and see in them a proof of atavism; while the other will regard them only as a pathological formation, and will trace this back to an acquired lesion. During the last century we have gone through violent disputes as to whether certain malformations were inherited or acquired. Those who pinned their faith to inheritance had very generally the *arrière pensée* that the variation was atavistic, and the question soon presented itself as to whether the atavism was derived only from human ancestors, or whether one would have to go back as far as the lower animals to account for it. A universally valid explanation of the amorphism is yet not found. In my opinion it will never be found. Each single example must be separately studied and explained, and the general value of this explanation will be by no means increased if we find atavism in any single case. Doubtless an acquired variation can also be transmitted, and the circumstance that it is animal-like (theroid) does not go to prove a not acquired but atavistically transmitted condition. In connection with this I may refer to my paper on Race-Formation and Inheritance.<sup>4</sup> I can here discuss only the principal

<sup>4</sup> Published in the *Reinhold's Monatshefte*, Berlin, 1896, pp. 33-38.



ground for the disputes regarding hereditary diseases which are special to pathology.

Medical men are accustomed to describe as hereditary all diseases which reappear in different generations of the same family. Thus one speaks of hereditary arthritis, hereditary tuberculosis, and hereditary cancer. It is in fact not difficult to produce genealogical tables which demonstrate the recurrence of a paternal or maternal disease in children or grandchildren. Much trouble has been devoted, in my opinion without result, to seeking the germs of such diseases in the ovum or the semen. One is hence compelled to pass on to generations of cells which took origin after conception. Here we reach what Roux has described as the *post-generative* region. The further we pass away from the time of conception the more numerous examples do we find of alterations in the formation of cells and in the formation of embryonal tissues. But there is at the same time the greater possibility of the alteration having arisen after the formation of the first cells, and hence that the existing cause may have commenced to act at that time. But if we set aside this possibility nothing else remains but to assume that from conception, or even from the organs which produced the ovum or the spermatozoon, a predisposition is transmitted which is already present in the earliest cells, but which cannot be recognized in them.

Upon this theory are built up all explanations of the inheritance of pathological and, we may add, physiological structures. There are, for example, many extraordinary anomalies in the disposition of hair either through excess or defect, and nothing is more common than to see the inherited transmission of such anomalies. But hairs are postgenerative structures, and a disturbance in their development can only make its first appearance in a later period of fetal life; not infrequently, indeed, it is first seen after birth. If such a peculiarity recurs through many generations in the branches of a family or a race it is called hereditary, and referred to a *hereditary predisposition*. But as undoubtedly excesses as well as defects in hairiness are brought about by acquired disturbances, such as actual diseases, it becomes necessary to seek a recognizable cause for such great anomalies as well. If such an one is found the aid of a predisposition need not, as a rule, be invoked; one may be quite contented with the cause, which is then the *causa efficiens*.

Very recent medical history affords the most notable example of a rapid and comprehensive change in opinion regarding a disease formerly regarded as hereditary. Leprosy has for thousands of years passed as a contagious disease. But when about a generation ago the number of lepers in Norway increased to an astounding extent, and one family after another was seized with the malady, the question arose as to its hereditariness. Zealous investigators ransacked genealogical tables and church registers, and families were discovered in which leprosy had persisted for decades, or even centuries. So universal was the conviction, that the Government, with the consent of the clergy, wished to promulgate a marriage-forbidding decree; only a small majority in Parliament threw out the proposition. I was then requested by the Government to travel through the leprosy districts and to make a report; I succeeded in collecting a certain, though small, number of indubitable cases in which all suspicion of inheritance could be excluded. These were in particular persons who came as healthy adults from quite leprosy-free neighborhoods into the infected districts, and after a long sojourn there developed leprosy.

A few years later Armauer Hansen discovered the leprosy bacillus. Medical opinion changed in a moment. The venerable idea of the contagiousness of the disease was revived. Inheritance was denied and predisposition vanished from the treasurehouse of dogmas. I will not assert that the grounds for embracing the present view are absolutely convincing, but I am positive that it is by far to be preferred to the dogma of inheritance. And it is an experience instructive to all of us that one single fact, the discovery of a *causa viva* should have sufficed to dash down the apparently best grounded theory. The safely-established recognition of a known cause has at once converted leprosy from an inherited into an acquired disease.

A similar thing happened a few decades earlier with two skin-diseases which were, according to the views of humoral pathology, traceable to a change in the blood, a dyscrasia, namely, tinea (favus, porrigo) and the itch. The first actually

bore the name of tinea hereditaria, or in German *Erbgrind*. But the microscope revealed to Schönlein that favus arises from a mycelial fungus, and as regards scabies the popular Italian view was confirmed, namely, that a mite (*Acarus sarcoptes*) was its cause. So unstable are the most plausible theories in the light of an objective, practical knowledge.

Exactly the same experience has been met with in relation to certain diseases of the hair. When fungi were found on the hairs, no one cared any more about predisposition, although this possibly does occur. It is certain that there are parasitic forms of alopecia. But fungi cannot be found in every case of alopecia. Still less is this the case in anomalies of the hair associated with excessive growth. Here no other explanation is possible, except the assumption of a predisposition. This holds equally for hirsute races and for families of hairy men as well as for those single hairy cutaneous patches (*nævus pilosus*) which are regarded as hereditary. The factors in the predisposition are the hair-roots, and moreover those which, although arising during fetal life, belong also to the post-generative group, since they are called later into increased activity.

The conjoint cutaneous coverings, in brief the "skin," although doubtless a kind of uniform structure of a generally similar type, is nevertheless in a double sense a socially constituted organ. Not only is it composed of numberless independent cells and cell-layers of various kinds; apart from the vessels and nerves of the connective tissue, cutis, and the horny epithelial tissue, which forms also hairs and glands, the individual constituents of the skin are differently arranged, and are exposed to various external and internal influences. This is best shown by the numerous morbid conditions to the definite scientific classification of which English dermatologists so early devoted themselves. The existence of maculæ, papules, pustules, and all the various other kinds of skin-spots is only rendered possible by the fact that in the skin a large number of little communities may be noted from the first as individual or hereditary factors of a particular predisposition. When mothers' marks (*nævi*), hairs, or even spines grow from them, it follows that in spite of their common origin there must exist a lasting difference between the various localities.

There is another highly remarkable circumstance which every year claims the attention of medical men more and more; this is what was described in the old medicine as *Aberratio loci*, in the new as *Heterotopia*. It has long been known that hairs are present, not alone on the external skin, to which they properly belong, but also in internal organs where they are quite out of place; and further, that other epithelial structures, such as epidermis, sebaceous glands, and cutis appear in such places. We unite this whole group under the general term "dermoids." Modern histologists have long struggled against this theory of aberration, but they have finally had to quit the field, and the view has become dominant that as a matter of fact even in fetal life smaller or greater rudimentary fragments can be separated from their natural places of abode, and removed to other spots, where they, so to speak, find a new home, and can undergo all the further changes which are dependent on their cutaneous nature. It is thus that cysts and other tumors can arise from them.

The most remarkable examples of such heterotopias are afforded by certain glandular organs which under normal conditions present communities of similar parts, arranged in special divisions. Among them a high place is taken by two organs which have recently demanded much attention the thyroid and the suprarenal glands. On their surface may often be observed the pushing forward and progressive isolation of separate parts in the form of nodules or small lobes. But occasionally these nodules pass completely out of association with the main body of the gland, and are found disconnected in a perfectly strange place more or less removed from their seat of origin. The furthest journeys are those of the broken-off nodules of the suprarenals; their wanderings lead them to neighboring spots on the kidneys, or even into the interior of those organs, and in other cases over the kidneys into deeper parts of the peritoneum as far as the pelvis. And at all these places they can undergo further change, thus affording starting-points for tumor-formation.

The same wandering has long been known in respect of teeth, and one knows that large tumors can arise from misplaced tooth-germs. The like holds with regard to cartilages,



in which similar separations are noted in fetal life. The history of rickets has shown that islands of cartilage which were originally connected with the primary cartilages of the epiphyses or diaphyses come later in the course of bone-growth to lie in the interior of the bones, completely separated from their matrix. From them may arise other new formations, such as enchondromata and osseous cysts.

Extraordinary, even astonishing, as many of these cases are, they lose the character of perfect strangeness which they exhibit on superficial examination when we recall a frequent heterotopia which was produced at first rather by accident, then in surgical practice, and finally experimentally, and which is known by the name of transplantation. Since the grafting of pieces of the epidermis has come into use in rhinoplasty, and has been applied, often with great success, to the healing of refractory ulcers, it is no longer surprising to think that living pieces of tissue may continue to exist in unwonted situations, and can there undergo further development. Experimentally—and this has also become important in surgical practice—the first place under this head is taken by the transplantation of periosteum, which can be carried into every possible corner of the body, even through the circulation into the lungs, and which conserves in all these places its vitality and also its power of serving as a matrix for osseous tissue.

In my opinion, the bearing of these observations upon medical theory has been overrated, in that a property possessed by the transplanted tissue, to wit, the property of forming a tumor by proliferation, has been applied to the explanation of tumor-formation in general. This is a mistake. Transplanted tissue has no fresh properties beyond those of the mother-tissue from which it is separated.

That a sarcoma can arise from a *nævus* is only possible because the latter is a part of the skin, and because the skin itself can also produce sarcomata. A cartilaginous tumor can arise from an aberrant piece of cartilage in the middle of a bone, and give rise to an enchondroma, but it may also grow out as a simple cartilaginous hypertrophy (ecchondrosis) from permanent cartilage. A dermoid cyst can serve as the basis for the outgrowth of a cutaneous horn, but cutaneous horns and spines can also grow out of ordinary skin. In each of these cases there is only the realization of a possibility of formation which is present in the matrix in general. At the same time each of these cases illustrates the law of the *vita propria* of the tissues and of their activity linked to this life.

It is not without great scientific and practical interest to reflect that these observations illustrate another ancient doctrine, the doctrine of parasitism. This doctrine also is traceable back to Paracelsus, who wished to have disease in general regarded as a parasite. One century after another spread this theory abroad, or at least kept its memory green, although there is a fundamental error of logic in assuming the universality of parasitism. For if the living organism is constituted by separate and independent living parts, each of which nourishes itself, and of which most can propagate themselves and perform their special functions, each one of these individual parts must occupy the position of a parasite with respect to the others: it lives on and lessens the common stock of nourishment. The generally accepted view regarding parasitism postulates at the same time the harmfulness of this condition. In reality, every part is endowed with individual life, so that it can act prejudicially on the remainder of the organism if its activity becomes excessive or defective. A *nævus* that becomes a sarcoma can assume a really hurtful significance. Hence it is requisite to remove the sarcoma, but it is not advisable to remove every *nævus*. Only an excess of caution can lead to an operation which finds its sole excuse in the possibility that a *nævus* can conduce to the formation of a sarcoma. In like manner every excessive proliferation (luxuriation) can act harmfully; it may then be described as malignant. But many proliferations are useful, benign or even salutary, as, for instance, the scars which cover a loss of substance. It is just for the sake of a trustworthy prognosis that one must be extremely careful in the application of designations which group whole categories of morbid processes under a common aspect.

The idea of parasitism which we have here discussed in regard to the relation between different parts of the same organism fits in much better where living organisms of a different variety or species enter into an organized corporation,

and continue their special life in commensalism. The animal parasites, which exist as entozoa in man and other animals, have been longest known. Since the end of the last century our acquaintance with these entozoa has greatly broadened. Many structures which were formerly regarded as mere bladders (cysts) have been recognized as cestoid worms (entozoa cystica). The trichinae, apparently sexless animals living in the interior of muscles, were first discovered in this century at Edinburgh; later experimental research succeeded in proving that after the consumption of infected meat these little worms rapidly became sexually ripe in the bowel, and produced not alone ova, but also living embryos and larvæ. Thus arise the worms which live in the blood, distomata and filariæ, and which later wander into the tissues. They all have a period during which they have their dwelling as entozoa in the midst of the living tissues of the organism, and become so perfectly incorporated that they carry on their own lives just like the proper cells. Quite new and pertaining exclusively to the investigations of our own time are the parasitic protozoa, beings of so rudimentary a kind that their position in the biological system is even yet not quite clear. Chief among these are the protozoa of malaria, quite microscopical organisms, many of which are such pigmies that they can penetrate into the smallest cells, such as the red blood-corpuscles. The darkness which for thousands of years had enveloped a group of most dangerous diseases—the tropical fevers—has been dispelled by the discovery of these tiny creatures. Important links in the history of these parasites are still wanting; we know nothing definite as to their origin or their career outside the great organisms which are their temporary dwelling-place, and nothing, also, as to their mode of action within these organisms, but we hold the threads by means of which perfect knowledge must be attained.

Lastly, comes the equally new field of microscopic plants which appear sometimes as mere grains (cocci), at others as minute rods or chains (bacilli), and from which many of the most severe diseases, the *élite* of the parasitic infectious maladies, take origin. Their recognition began with the study of two very great and most widely spread processes, fermentation and putrefaction. It will ever remain the imperishable merit of Pasteur, not only to have firmly established the dependence of these processes on the activity of microbes, but to have elucidated the further life-history of the germs and their power of producing active chemical or physico-chemical substances. Here for the first time were subjected to experiment parasitic beings which live and carry on their work outside the organism. Hence has been attained the wonderful result which has unlocked new methods both in medicine and in technical science. Above all, the results of microscopical research have been supported by trustworthy experiments, and their significance raised above all doubts; hence pathology in particular has won in directions which had hitherto been shunned by all who studied the nature of its processes, a clearness and certainty which has been reached in few other fields.

The first great stride in the special domain of pathology was made in veterinary medicine. The discovery by Brauell of the anthrax-bacillus opened the long series of new, and as we now call them, pathogenic bacilli. It would lead too far afield to refer to all of these, or even to enumerate them; it must suffice to mention the two severest diseases, the dreadful effects of which are accounted for by the action of bacilli—tuberculosis and Asiatic cholera. In both cases it was Robert Koch who was fortunate enough, by means of careful, and in part very delicate procedures, to demonstrate the constant presence of certain bacilli in the organs of patients. At the same time it became plain that in spite of the presence of bacilli in both diseases a totally different kind of infection could be recognized in the two; thus, while tubercle-bacilli invade the organs, and therein exhibit their deadly action, the cholera-bacillus remains almost exclusively in the intestine, and develops more after the manner of an infusorial plant.

For our discussion to-day it is inadvisable to go into minutely details. Only a few of the greater landmarks can be referred to. One of them I will mention but briefly, as I have written many long papers upon it: the necessity for distinguishing between the cause and the essential nature of infectious diseases. Parasitic beings, including, of course, bacteria, are never more than causes; the nature of the disease depends upon the behavior of the organs or tissues



with which the bacteria or their metabolic products meet. From my point of view this distinction is of cardinal importance.

Both my other landmarks require somewhat fuller statement. The first is the general relation of the smaller parasites to the diseases determined by them. Under one name, which reaches back even into the old days of humoral pathology, and which I was the first to introduce into common parlance, are grouped all the processes which are produced by the invasion of morbid substances, under the general designation of infection. The Latin *inficere* means as one should say "to dirty." The polluting substance (*res inficiens*) has been called for ages dirt, *impuritas*. The products of putrefaction (*materia putrida*) served as its prototype. In Greek they were called miasms (from *malwa*, *inficere*), so that these latter names were applied chiefly to such uncleanness as had been produced outside the body. That which had arisen inside the human or animal body was called contagium. Both miasmatic and contagious substances produced by their penetration into the body severe attacks recalling poisoning. To distinguish such a substance from a true poison (*venenum*) it was described as a virus. The relationship between infection and intoxication was presumed, but it was not without good reason, considering the origin of the impurity, that the difference in designation was retained.

Among the innumerable infectious diseases it was the contagions which, owing to the associated danger to health and life not for individuals only, but for numbers of men and animals, came most prominently to the front. Thus the remarkable property was observed in contagia that they increased in the body and so besides infection as such produced an immeasurable quantity of fresh virulent substance. In this respect they approached living beings, and the thought arose that they themselves were alive (*contagia viva*). With the discovery of parasitic animals and plants this conjecture soon became a fact. Nothing was easier than to generalize this fact and to assume the presence of independent organisms in each contagious disease. The younger generation of doctors and students disregarded with fiery enthusiasm the necessity of a practical proof, and was filled with the conviction that all infection depended on the invasion of parasitic organisms. And since it was just the severest infections which were produced by the minutest plants and in which bacilli and cocci, or as they are called for short, bacteria, were found in greatest abundance there was circulated for some time that beatific axiom, "Infection is pollution by bacteria."

It was known, however, that parasitic animals and protozoa can also give rise to infection, and that between bacteria and fungi there is more than a slight difference, but for convenience the name of bacteria is retained as a general designation. Further, a peculiar circumstance happened in that for most of the so-called bacteria there were no botanical names. Owing to the novelty of the circumstances in which they are placed, botanists have not even yet succeeded in their customary duty of giving every new plant its special name, of determining its genus and species, and of assigning it to its proper systematic situation. This can easily be understood and forgiven. But it does not in any way alter the erroneousness of a method which attributes every impurity to bacteria on the sole ground of its contagiousness. It may be said that a contagious disease affords suspicions of a bacterial origin, but it should not be called simply bacterial. To do so hinders further research and lulls the conscience to sleep.

A number of the most important contagious diseases have succeeded in resisting the struggle to find in them a parasitic contagium. Many have been the expectant hopes of finding the parasite of syphilis and as many have been the failures. The coccus of gonorrhea has alone been discovered; the bacterium of syphilis itself remains a *pium desiderium*. With still greater certainty was it expected that a pathological parasite would be tracked in variola; more than one bacterium was actually found, but none pathogenic. In hydrophobia (lyssa, rabies) all appearances seemed to promise that it would prove to be a microparasitic disease; its contagiousness is undoubted, even a vaccine has, as with small-pox, been prepared and yet no one has been able to cultivate a specific bacillus. And the same is the case with many of the most dreaded contagious diseases. Painful as it may be, one can do nothing but wait, observe, and experiment. Per-

haps pathogenic bacteria will be found, but as long as they are not discovered all assumption is useless if not dangerous. To have learnt this is a good omen for a mighty stride in biological methods.

The other, much further elaborated, point in the study of infectious diseases is the question of the mode of action of infection. As long as infection by animal parasites was regarded as the type of infection in general, the destructive action was described as the result of a mechanical action just comparable to a bite or eating up. But the exact study of the larger entozoa and organozoa soon brought about a complete conversion. Neither the *tæniæ solium* nor the *tænia echinococcus* possesses an oral opening. They undoubtedly take in nourishment and draw it from their auto-sites, or, as they are poetically called, their hosts, but this applies only to the absorption of fluids. The feeding of bacteria and other vegetable and plant-like parasites has to be regarded in the same way. They certainly injure the tissues and organs in which they reside by the consumption of important materials, but their action is not limited to this. This much we have already learnt in the study of fermentation and putrefaction. It is admitted that organic matter is destroyed by them, but in addition they produce new substances, some of them eminently poisonous. Thus, it has been known for centuries that alcohol is produced by fermentation. The putrefaction poisons could for a long time not be isolated; first Selmi and then Brieger came to this result. Gradually one ptomaine after the other was found; for the whole group the new term of toxins has been introduced by Brieger instead of the name virus. They are in part crystallizable, invariably diffusible, chemical substances which are bound up neither with cells nor other formed elements, but are produced by the cell activity of the parasites. They are nowadays described by preference as metabolic products, a perfectly platitudinous notion which has far more sound than sense. At one time people were contented to call them secretory products, and I venture to believe that it is better to stand by this term in order not to lose the analogy with glandular secretion.

There are thus two sides to infection; on the one the actual living parasites, on the other their often poisonous secretions. In the individual diseases, now one, now the other property comes to the front. In the case of the hæmatobiotic parasites poison-formation may well, as a rule, count as more important; with those that live in the organs the deprivation of nutriment is much more immediately evident. The invention of artificial nutritive media has now provided us with a convenient field for research and observation regarding all these questions.

It would be called carrying coals to Newcastle were I to sketch in London the beneficial effects which the application of methods of cleanliness has exercised upon surgical practice. In the city wherein the man still lives and works who by devising this treatment has introduced the greatest and most beneficent reform that the practical branches of medical science have ever known, everyone is aware that Lord Lister drew from it only those conclusions which the new theory of fermentative and septic processes has firmly established. Before anyone had succeeded in demonstrating by exact methods the microbes which are active in different diseases, or in establishing the special functions that they perform, Lister had learnt in a truly prophetic revelation the means by which protection against the action of putrefactive organisms can be attained. The opening up of further realms of clinical medicine to the knife of the surgeon, and a perfect revolution in the basis of therapeutics, have been the consequence. Lord Lister, whom I am proud to be able to greet as an old friend, is already and always will be reckoned amongst the greatest benefactors of the human race. May he be long spared to remain at the head of the movement which he called into existence.

It remains for me to say a word concerning the other great problem, the solution of which the whole world is awaiting with anxious impatience. I refer to the problem of immunity and its practical corollary, artificial immunization. It has already happened once that an Englishman has succeeded in applying this to the definite destruction of at least one of the most deadly infectious diseases. Jenner's noble discovery has stood its trial as successfully, except in the popular fancy, as he hoped. Vaccine is in all hands, vaccination is, with the aid of Governments, spreading continually. In this direc-



tion, Pasteur also labored with resolution, even with keenness; he introduced into practice the vaccines of chicken-cholera, anthrax, and glanders. Others have followed him, and the new doctrine of antitoxins is continually acquiring more numerous adherents. But it has not yet emerged from the conflict of opinions. Still less is the secret of immunity itself revealed. Even if everything points to the view that immunity is based on the condition of the cells and the juices of their parenchyma, and not on the serum or the humors—these being much more probably only the means of transport for the immunizing as for the infecting fluids—we must still become well accustomed to the thought that only the next century can bring perfect light and certainty on this point. The homeopathic notion that toxin and antitoxin are one and the same, seems so foreign to our biological ideas that very many experimental and practical proofs will be required before it can be admitted into the creed of the future. Before then we must at least have succeeded in finding a way of strengthening the cells in their fight with bacteria by means of immunity.

Let us, in conclusion, turn once more to the special cells which build up the body, and which arise from proliferation within the body. These exhibit numerous analogies with microbes. They also resemble independent living beings, or, as Brücke said, elemental organisms in the social structure of the body. They can be removed, transplanted, and grafted in a new situation. If they increase, and thus form a tumor, this can produce metastases by transplantation. But the course of these as such is always bound up with a certain number of living elements, is always cellular in character. It is not the flowing blood which makes a tumor or a cell; it is the mother-cells, from which all new formation originates.

From this consideration I have for decades drawn the conclusion that local activity of the cells, bound up as it is with certain matricial parts, dominates pathological laws, and must also determine the practice of physicians and surgeons. Cellular pathology demands above all local treatment. It is with great joy that I see this deduction ever becoming more widely generalized, be it with more or with less conscious knowledge. Hence follows in surgery the recommendation of early operation or destruction of the focus of disease.

But cells also, just as bacteria, exercise chemical influences. Apart from the destruction which they effect by absorption, they secrete chemical substances. These appear first as tissue-fluids, passing later into the circulation. Thus arises a change in the composition of the flowing fluids of the blood as well, in fact a dyscrasia. This is, as I have always explained, a secondary dyscrasia, quite distinct from the primary dyscrasias of the humoral pathologists by localization of which topical diseases, and particularly tumors, were supposed to arise. According to my view, each dyscrasia is determined by the taking in of products of tissue-secretion which may now be called metabolic products, or, according to the old dictum, recrementitious substances.

The tissue-juice and the excreted material, which is returned into the body, have, of late years, gained much esteem. The semen, which I myself have always described as the classical example of such a tissue juice, and exhibited as the type of secretion by tumors and organic cells, has provided materia medica with spermin, as has the thyroid juice with thyroïdin and thyroïodin. New substances, some resembling alkaloids, others albuminates, are ever being isolated from all possible organs, experimentally tested and technically worked up. So arose injection- or serum-therapeutics, on the results of which we are not yet in a position to pass a final judgment, though every one who is sufficiently unprejudiced must admit that they have in many cases been good. Experience will determine the value of these methods; you must learn by the aid of practice to deduce the lasting theoretical truths. But never forget that the source of all these substances is the cell-activity of living tissue, and that which is secreted thereby, that its therapeutical or pathological action on the individual organs or tissues can thus accomplish no aim beyond that of exercising a regulatory influence on cell-activity.

May the medical school of Charing Cross Hospital continue upon the newly-opened path with zeal and good fortune. But may its students at the same time never forget that neither the physician nor the man of science dares dispense with a cool head and a calm spirit, with practical observation and critical judgment.

## A CASE OF SPONTANEOUS GANGRENE OF ALL FOUR EXTREMITIES OF THE BODY, OF VERY ACUTE COURSE AND FATAL TERMINATION, WITHOUT DISCOVERABLE CAUSE.

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THE obscure origin, abrupt onset, multiple lesions, short duration, and fatal termination of the diseased conditions about to be described, make them of exceptional interest, and therefore deserving of careful attention.

C. R., aged 40, white, male, single, American, employed as a porter by the Adams Express Company, had always been a healthy man except that in the autumn of 1897 he was for a short time in the University Hospital suffering from some cardiac trouble. I have been unsuccessful in finding out the nature of this illness or in securing information regarding it. The present illness dated from December 25, 1897, when the patient was first seen at his lodgings, at about 5 p.m., by Resident Dr. J. A. McKenna, of the Medico-Chirurgical Hospital. At this time the patient was complaining of severe prostration. He was in bed, well bundled up with clothes. When an attempt was made to count the pulse, the hands of the patient were found to be surprisingly cold. The patient made no complaint, but upon investigation it was discovered that the skin of the hands showed numerous blebs filled with clear fluid. No explanation of the condition was secured. The man had been well and working chiefly in delivering poultry and Christmas-trees until the day before. The doctor thought of poison-ivy in connection with the Christmas-trees, and remembering that in cold-storage houses solutions of lead are used to aid the preservation of poultry, concluded that the lesions resulted from contact with one or the other of these substances. The patient, now that his attention was called to it, began to complain of extremely cold sensations in the hands and feet. His pulse at this time was small and fluttering.

At 7 p.m., December 26th, the patient was admitted to the hospital. He was prostrated and almost pulseless, 160 beats to the minute being counted. Whisky was administered and some improvement in condition was noted. He complained of one ankle; saying that he supposed he had sprained it in some way. The part was examined, but seemed normal. It was noted at this time that both feet were considerably swollen (edematous), bluish and very cold. The blebs upon the hands were opened and a palliative dressing applied. Clear, yellowish-serum escaped from the blebs. The hands were very cold and bluish in color. Shortly after admission to the hospital the patient became restless and delirious, and, as the night wore on, became violent, tearing the dressings from his hands. One of the finger-nails and some of the epidermis was torn off with the dressings and adhered to them. Subsequently he became quiet, turned over on his side and apparently went to sleep. Three hours afterward, the doctor happening to enter the ward to inquire about him, and learning that he was still quiet, went to the bedside to determine exactly what the condition was, found the patient dead.

The short time that the man had been in the hospital before death, made it impossible to inquire particularly into his history, and as he entered the hospital so late in the afternoon, and died the same night, it unfortunately happened that he was seen by none of the visiting staff. He was not examined physically, was by mistake sent to the surgical ward, and is entered by the resident physician upon the hospital records as a case of "poisoned hands." Eight hours after death I was called to make an autopsy.

AUTOPSY.—The body is that of a fairly-well-developed man of middle size, about 40 years of age. Both hands and both





feet are in a condition of moist gangrene. The disease affects the limbs symmetrically, the lesions embracing all the fingers and thumbs and extending up the dorsal surface to the third phalanges and up the palmar surfaces to the palms themselves. The right foot is involved to an extent including all of the toes, a small portion of the skin of the dorsum, and the plantar surface as far as the hollow of the foot. The left foot was less affected, the lesions being found most marked upon the great toe and the tips of the second and third toes. The ears, nose and other features were free of gangrene. The body was cold, well preserved, with pronounced rigor mortis. The usual incisions were made.

The heart was of enormous size and seemed to fill up the whole anterior part of the chest. It was relaxed and flabby, and was empty except for a few clots. The pericardium was normal in appearance and contained a relatively normal amount of fluid. The enormous size of the heart at once suggested valvular disease, but, curiously enough, the entire interior of the heart seemed free of disease. The walls of the organ were of normal relative thickness and seemed to be unchanged in structure. Minute examination of the valves showed the presence upon their leaflets of a few minute scattered patches of sclerotic change, insignificant and inconspicuous. No cause explaining the hypertrophy was found within the heart.

The right lung was intimately adherent to the thoracic wall by old adhesions. The left lung was free. Both lungs showed some hypostatic edema, but beyond it no pathologic changes.

The spleen was intimately adherent to the surrounding tissues and was enlarged to the size of the hand. Its capsule was thickened and presented a fibroid patch of almost cartilaginous consistency about the size of a quarter-dollar, somewhat stellate in appearance, suggestive of an old infarct. On section the scar was found not to extend beneath the capsule. The splenic substance was firm and fibrous, although congested. The appearances were easily accounted for by local inflammatory changes and congestion.

The kidneys were examined with particular interest as offering a possible explanation of the enlarged size of the heart. Each organ contained at least one anemic infarct about the size of a soup bean, and a few smaller ones. Except for the infarctions the organs appeared fairly normal. The capsule was unaltered in thickness, and could be removed without difficulty, but was probably a trifle more adherent than normal. A few congested patches appeared upon the surface.

The prostate gland showed a deep congestion of the left lobe with some interstitial hemorrhage.

The bladder, ureters and seminal vesicles were normal in appearance.

The stomach and intestines showed no signs of disease.

The liver was enlarged, nutmeg in appearance, probably from slight increase of connective tissue.

Brain and spinal cord showed no macroscopic lesions, but were reserved for microscopic study.

Feeling that the gangrenous changes might depend upon thrombosis or embolism, and bearing in mind that there were infarcts in the kidneys, the arterial trunks of both arms were dissected out to the palmar arches, but were found normal and empty. The nerves of the arms were likewise

examined, and of the median nerve fragments were saved for microscopic examination.

The thought that the condition might possibly be infectious in nature did not present itself during the autopsy, so that no cultures were made from the organs.

From the autopsy-notes it is evident that the lesion that caused the gangrene and subsequently the death of the patient is not a macroscopic one.

The microscopic study of the tissues revealed the following:—

1. *The Heart*.—Few of the cardiac-muscle fibers show cross-striations. The number and arrangement of the muscle-cells appear to bear a normal relation to the tissue as a whole. The nuclei are normal in number and appearance. Some of the cells contain vacuoles. The bloodvessels are nearly all distended with blood, and here and there one finds small interstitial hemorrhages. Around these hemorrhages the tissue seems unaltered in appearance, so that it seems proper to conclude that they occurred very shortly before death. There is no sign of toxic necrosis of the tissue.

The blood within the vessels as well as that which has escaped into the tissue is somewhat interesting because of a marked irregularity in the size of the erythrocytes, many of which are very small.

In thionine sections the transverse striations of the cells are rather more distinct. Brownish pigment-granules in the protoplasm are seen in the cells gathered in clusters at the poles of the nuclei. Neither in the blood within the vessels nor in the extravasated blood could the presence of any bacteria be determined, though industriously sought after.

2. *The Liver*.—The microscopic changes are of the greatest interest and divide themselves into those which are (a) topographic, (b) cellular.

(a) The central veins of the lobules are sometimes empty, sometimes full of blood. The capillaries in the immediate neighborhood of the central veins are usually empty, while those midway between the central veins and the periphery of the lobules are almost invariably full of blood-corpuscles in perfect preservation. The blood is not only contained within the capillaries in this intermediate zone of the lobule, but has extravasated and saturated the tissue. The result of this lesion is an interesting microscopical picture—especially in blue species—in which the ring of reddish-yellow blood-infiltration in the intermediate zone of the lobules contrasts strongly with the more normal tissue. Sometimes the interstitial hemorrhage begins at the central vein and extends outward nearly to the peripheral zone.

The peripheral zone shows fatty infiltration, with some degeneration (?) as well. There is very little increase of connective tissue beyond the normal, but in the fibrous tissue there is an abnormal number of nuclei, and a few leucocytes.

(b) The cellular changes consist in cloudy swelling of the liver-cells in the immediate neighborhood of the hemorrhagic area, and fatty infiltration with possible metamorphosis of the liver-cell.

As in the heart, careful study of sections failed to reveal



the presence of any bacteria in the tissue, in the blood, in the vessels, or in the extravasated blood in the tissues.

3. *The Spleen*.—The spleen is deeply congested, its pulp consisting of an almost equal number of lymphocytes and erythrocytes. The trabeculae and Malpighian corpuscles are unaltered in appearance.

No bacteria could be defined in the splenic substance.

4. *The Kidney*.—A mild degree of chronic interstitial change makes itself visible by the thickening of Bowman's capsules. Here and there an entirely destroyed glomerule is seen. There is much less blood in the kidneys than one might expect to find after studying the other organs. The capillaries of the subcapsular layer are fairly distended, with blood here and there about the convoluted tubules are conspicuous. The glomerules are, for the most part, without many contained erythrocytes in their capillaries. The intertubular arteries and veins are often full of blood. The epithelial cells of the kidney present every grade of parenchymatous degeneration, from the mildest simple cloudy swelling to the most complete destruction of the cell, the lesion not being at all evenly distributed, but scattered so that many fields of microscopic vision will appear quite normal, while neighboring fields show quite complete cellular dissolution. If any rule for the destruction of the cells could be made, it might be that the distal convoluted tubule, irregular and collecting tubules had suffered most. Probably the greatest destruction has occurred when there is capillary congestion. No fatty metamorphosis is present. Very few of the tubules contain casts. There is no catarrhal tendency about the lesion. The glomerules are quite normal in appearance when not altered by the chronic interstitial changes described above.

Specimens most carefully examined for the presence of bacteria failed to reveal the presence of any.

5. *Nervous System*.—Dr. William G. Spiller became interested in the case when I first reported it to the Pathological Society of Philadelphia, February 15, 1898, and kindly consented to study the nervous tissues which I sent him. From his letters reporting what studies he had made, I quote the following:—

"Portions of the median nerve, hardened in Müller's fluid, have been 'teased,' stained in a 1% solution of osmic acid and later on in acid fuchsin, and the nerve-fibers studied individually. Nothing pathologic was detected. The myelin remained unstained by the osmic acid, and the axis-cylinders appeared normal. Sections cut with the microtome and colored with Delafield's hematoxylin and acid fuchsin, present merely normal tissue."

"The cells of the spinal cord, when the method of Nissl is employed, appear normal; the chromophilic elements are well stained and have their normal form and position and the nuclei are centrally located. No hemorrhages or round-cell infiltrations are found within the cervical or lumbar enlargements."

The brain was studied by Dr. S. C. Peter and myself, and no important pathologic alteration observed. There was marked congestion of the vessels, but no interstitial hemorrhages. The chief interest and most obscure feature of the case is its etiology.

1. *Cardiac Weakness*.—I have been unable to find that gangrene of the extremities occurs from *simple weakness of the circulation*. This was, however, a pronounced feature of the case. The pulse was exceedingly rapid and very feeble. The hands and feet were cold and purplish. These conditions all seemed to occur together with the development of the gangrene, and do not seem to have preceded and led up to it.

2. *Arteriosclerosis* with calcification of the vessel-walls is a common cause of gangrene in old age, and very frequently leads to a symmetrical involvement of the lower extremities, and rarely to gangrene of the fingers. The patient under consideration was but 40 years of

age, was without diseased arteries, and was suddenly attacked by an acute moist gangrenous process contrasting markedly with the well known senile form of the disease.

3. *Frost-bite* may be followed by either moist or dry gangrene, usually the latter, and may affect all the extremities of the body together with the exposed features. Frost-bite, however, is productive of gangrene in one or the other of two ways; first, by causing a prolonged vasomotor contraction that causes the death of the part minus its blood; second, by contraction followed by paralytic dilatation of the bloodvessels, with death and freezing of the part containing its blood. To produce either condition very cold weather is required, and a rather prolonged exposure necessary. The weather preceding and during this man's illness was, however, quite moderate, and would scarcely have frozen the extremities of one exposed for hours in a drunken stupor. We learn that C. R. was a temperate man, regular in his habits, and had not been exposed to cold. The effects of the cold poultry that he is said to have handled might possibly have damaged the fingers, but could not possibly have operated upon his feet.

4. *Embolism* must be thought of especially, as there were abnormalities of the heart and kidneys. It is, however, difficult to understand how an embolic condition could simultaneously affect all four of the extremities. Furthermore, search for emboli in the arteries was fruitless and there were no diseased appearances or thrombi in the arteries. Graybill (*Virg. Med. Monthly*, 1881-2, viii, p. 355) has reported a case of spontaneous symmetrical gangrene occurring in a young child as a result of embolism.

5. *Raynaud's Disease*.—In the absence of other adequate explanations, it was this affection that suggested itself to me most strongly. There were, however, certain peculiarities which the case did not present in common with the vasomotor cases. The gangrene in Raynaud's disease is *dry gangrene* resulting from the cessation of arterial circulation in a part. It usually is paroxysmal and is very frequently the result of an unusually violent one of a series of frequently repeated attacks. It commonly affects the fingers of both hands, sometimes the toes of both feet, sometimes the fingers of one hand and the toes of the foot of the same side. A review of the literature failed to bring to light any cases of Raynaud's disease in which both hands and both feet were affected simultaneously.

Moist gangrene could only follow Raynaud's disease under conditions similar to those rare cases in which it follows frost-bite—*i. e.*, cases in which the vasoconstriction leading to gangrene by shutting off the blood-supply, was succeeded by a vaso-dilatation of paralytic (?) nature which allowed an unusual flow of blood through the part.

The case under consideration, however, had had no



paroxysms of local anesthesia or asphyxia, and suffered from an insidious form of moist gangrene in which while it is true that the extremities were very cold and pale, they were not extremely pale and bloodless.

That the case terminated fatally is not opposed to the diagnosis of Raynaud's disease, as numerous fatal cases of it are on record.

6. *Trophic disturbances*, caused by disease of the central and peripheral nervous systems, are not infrequently followed by gangrene and necrosis. These lesions, however, do not present themselves unexpectedly as the first signs of disease of the nervous system in healthy persons, but usually are changes that come on late in the course of well-marked affections.

It is scarcely possible that the symptoms presented by this patient form part of the symptomatology of a new disease of the nervous system, inasmuch as the studies of the spinal cord and nerves by Dr. Spiller, and of the brain by myself, show no changes of magnitude sufficient to explain the lesions.

The angio-neurotic gangrene of Billroth and others affects individuals in early life, but is an affection of prolonged duration requiring amputation. It is probably due to arterio-sclerotic changes.

7. *Diabetes* is not infrequently accompanied by the development of gangrene, which, however, usually is irregularly distributed, and sometimes occurs in local patches. The literature contains abundant illustration of this, but I was able to find but one case reported by Brisvert (*J. de Méd. de Bordeaux*, 1887-8, xvii, 134), in which the lesions affected extremities of the body symmetrically, and in this case there was thrombosis of the abdominal aorta and the iliac arteries to explain it. No examinations of the urine were made before the death of the patient, but shortly after death he was catheterized, and three independent observers failed to find either sugar or albumin in the urine.

8. *Albuminuria* is not infrequently associated with gangrene, the exact relationship of the two conditions to each other not being very clear. Cases are reported by Debove (*Bull. et mém. Soc. méd. de Hôp. de Paris*, 1880, 2 s., xvii, 78-82), Roque (*Thérap. Contemp.*, Par., 1882, ii, 689), in which the limbs were symmetrically affected. Gangrene sometimes follows edema, but usually only in connection with the external genital organs of the male.

9. *Toxemia—Saturnism* is rarely accompanied by gangrenous lesions. Sainton (*Trance méd. Paris*, 1891, vol. xxviii, p. 221) has reported a case of symmetrical gangrene of the extremities depending upon lead-poisoning.

No examinations of the urine for lead were made in this case. There is no history of lead colic, wrist-drop, or blue lines on the gums, and it is improbable that the man, not having by occupation been particularly predisposed to it, should have suffered from so severe a form of the intoxication.

*Ergotism* is a cause of gangrene which is rarely seen in this country. It usually occurs among the poor

agricultural classes of European countries, and makes its appearance after wet seasons, in which the rye is spoiled by "smut." It is more or less epidemic, and the cases occur in groups. It leads to a dry form of gangrene, which commonly affects the members symmetrically. The course of the disease is tedious. Only extremely bad cases are fatal. Ergotism seems to be out of the question in this case, as the man lived in this city, led the common life of citizens, ate wheat instead of rye bread, suffered from moist gangrene, and died with comparatively little invasion by the gangrenous process.

*Infection.*—Typhoid fever is, in rare instances, followed by gangrene, and one case is recorded by Richard (*Bull. et mém. Soc. de Hôp. de Paris*, 1880, 2 s., xvii, 106-110) in which such a lesion affected the extremities of the body symmetrically.

[In the discussion following the reading of the paper, the President, Dr. John Ashhurst, Jr., remarked that he had seen a case of multiple gangrene of the limbs and scrotum following typhoid fever.]

Before the days of good sanitation and antisepsis in surgery, the infectious gangrene called hospital gangrene was dreaded. Its appearance will be recalled by the older surgeons, and presents no similarities to the case under consideration.

*Traumatism*, one of the most common causes of moist gangrene, need scarcely be mentioned, as the patient had met with no accidental injuries.

Two similar cases are on record, brief accounts of which I think it well to give.

The first is reported by Thomas Camps in the *British Medico-Chirurgical Review*, July 1855, p. 196.

J. G., laborer, aged 25, 5 ft. 9 in. in height, well-formed, was reduced in vitality by an attack of double pneumonia in December, before the present interesting illness began. In April, 1854, while there were still some signs of incomplete resolution remaining in the chest, pain and numbness of the left leg and foot were observed. A small patch of eruption was next noticed on the calf of the leg, slightly raised above the skin, and not mingled with any vesicles. There was no heat of the surface, though the patient complained of a sense of burning accompanied by formication. There was nothing abnormal in the appearance of the limb to account for the constant and intense pain which continued day and night without being relieved by any form of opiate, though given in large doses.

After a few days the foot and lower part of the leg became cold, nearly void of feeling, and evidently in a state of approaching gangrene, which soon showed itself unequivocally. The parts became black and so shrivelled as to give the idea of nothing intervening between skin and bones. About the time sphacelus had taken place, the other leg and foot became affected in a precisely similar manner, and in succession, both hands, the ala of the right nostril and a small portion of the upper part of the helix of each ear. The mental powers became much enfeebled.

At the beginning of the trouble the urine had a specific gravity of 1.011, descending to 1.006 as the case progressed. The urine was pale in color and either neutral or feebly acid in reaction. It deposited little sediment. At first the urine contained albumin, but as the case progressed the albumin diminished. No sugar was present at any time. The eruption mentioned constituted an interesting feature of the case, beginning early and continuing throughout the course of the disease. It was abundant on the knees, shoul-

ders, elbows, and on the skin covering the lines of the tibia and ulna. The face had many spots upon it. They were present on the nose, the upper part of each ear, and on the penis. Indeed, no part of the body appeared to be entirely free from them. The eruption was attended by much itching. The spots were generally present in small patches, varying in form. They differed from petechiae in color, being of a redder tint, and were slightly elevated above the level of the skin. On fading, they left in some places merely a dark stain, in others, desquamation took place, or incrustations of a dark color were formed. On the nose and ears, sloughing sometimes took place. When the gangrenous tissue began to separate, an offensive odor developed. The bones became exposed and one after another of the bones of the legs were sawn through. By November 12th the condition of the patient was good. He had gained flesh and ate and slept well. There was no longer any pain. The pulse was natural, there were no abnormal sounds over the heart. The specific gravity of the urine had increased to 1.017; it was acid in reaction and showed a trace of albumin. The sores on the nose and ears had healed perfectly. The thumb and forefinger of the left hand had separated at the middle of the first phalanges and the stumps had cicatrized. The right thumb and forefinger had also separated at the same point. The remaining fingers all detached at the joints between the first and second phalanges, leaving the former completely denuded for their length. The legs have not healed, as the bones still project from the stumps.

May 24, 1855.—The patient, J. G., is now in perfect health and is fat and florid, all of the wounds having healed except the lower end of the tibia of the right leg, which is not yet detached, though its separation is proceeding.

In reviewing the details and course of this case, Camps discusses the possible relation of ergotism to the lesions. While not expressing himself positively in regard to it, Camps evidently inclines strongly towards ergot as the etiologic factor.

The second case occurred in Philadelphia, and is reported by Bernard Henry in the *Philadelphia Medical Examiner*, vol. xii, p. 129.

J. C., a widow, aged 42, a seamstress, with dark hair and eyes, was a native of Maryland. Her life had always been irregular and dissipated, and at times she had been very intemperate. She had been treated for syphilis at Blockley. She had 9 children and frequent abortions intentionally produced. In the summer preceding admission to the hospital she had had persistent diarrhea. On November 9th, after doing some washing, she felt a stinging sensation in the hands and feet which were unusually sensitive when scratched, and assumed a dusky red color which became more livid and intense up to the date of admission to the Episcopal Hospital, November 22, 1855. The case was thought to be one of purpura, to which it bore a strong resemblance. Upon admission to the hospital the hands and forearms for about one-third of their length were of a leaden hue, deepening towards the fingers, which were black, dry and shrivelled in appearance. The feet and lower third of the legs were in a similar state. The tip of the nose and the skin over both patellae were of a dusky color, as though brushed over with bronze paint. The pulse was 80, quick and strong, the intellect was acute. The extremities were icy to the touch and devoid of sensibility. Movement gave pain and the weight and warmth of the bedclothes could not be borne. The cartilages of the ears showed the beginning of a similar change. On November 24th no line of demarcation had formed; the gangrene had extended higher up. On November 26th vesications filled with a dark red, serous fluid have made their appearance. The urine is of a high color, has a reddish tinge, an alkaline reaction and contains mucus and purpurin. The specific gravity is 1.016. On December 3d the parts are quite black and dry, distinct lines of demarcation have been established. A slight odor is for the first time distinct. On December 20th the dry parts are like an Egyptian mummy. They are united only by bone and tendon. On December 26th the right hand was amputated. On December 28th the left hand was amputated. On

January 13th, for the last two days the patient has been sinking. On January 14th she was comatose and died.

An *autopsy* was held upon the body of this patient, but gave little important data. It is said that there was a condition of general bloodlessness. The venous system was full of dark, black, thick blood. There was a tendency to fatty degeneration of the heart, which was engorged. The vessels appeared to be sound up to the line of demarcation.

In the general considerations appended to the study of the case, Dr. Henry notes the resemblance that the case bears to ergotism, but regards it as scarcely possible that ergot is the etiologic factor, as the patient always was able to secure an abundance of good food.

The three cases present a single common lesion—the gangrene. They may, however, be closely related in etiology. When I reported my case to the Philadelphia Pathological Society, Jan. 27, 1898, Dr. W. G. Spiller remarked that “the short duration of the illness, the symmetrical involvement of the distal portion of all four limbs, the numerous hemorrhages in the liver, and possibly the round-cell infiltration, are suggestive of an acute infectious process.” At the time of making the autopsy, and indeed up to the time of Dr. Spiller’s remark, I had been looking for some kind of vascular or nervous condition that might account for the lesions. The microscopic changes in the organs I had attributed to secondary infections of the internal organs by bacteria from the gangrenous extremities. Much subsequent thought and careful study of the histologic changes present have, however, brought me to think with Dr. Spiller that we have to do with a case of profound toxemia, probably of microorganismal origin, and with disturbances of the internal organs evinced by the inflammatory and hemorrhagic lesions, and of the limbs, manifested by the gangrene. It is remarkable, though, that in a previously healthy man—or reasonably healthy man—such an infection and intoxication could occur, and lead to such extreme changes and death in so short a time. It is also interesting that such an infection could take place without any external accountable lesion.

I regret exceedingly that owing to the conditions under which the autopsy was made, no bacteriologic study of the case was made. It is, of course, a question whether it would have thrown any light upon the case, as a most careful study of the tissues fails to disclose the presence of any contained bacteria.

It will be remembered that Camps’ case followed a double pneumonia, and Henry’s a prolonged diarrhea, and that gangrene has been seen to follow typhoid, and it would not be erroneous to conjecture, now that we have come to realize that the pneumococcus is capable of exciting meningitis, otitis, endocarditis, pericarditis, ostitis, osteomyelitis, parotitis, etc., etc., and that typhoid bacillus and streptococcus present similar lesions, that the microorganisms had distinct etiologic significance in all three cases.

I have said that the lesions suggest a microorganismal intoxication. Other intoxications, such as *saturnism*,



present lesions of the internal organs similar to those of this case, and also occasionally are causes of gangrene. I remember seeing experimental lead-poisoning produced in guinea-pigs and rabbits in Heidelberg, by Stiglitz, characterized by interstitial hemorrhages very similar to those of this case of gangrene. It is, however, much more easy to eliminate lead than bacteria as etiologic factors, and the probabilities are that the case is one of rapid infection with subsequent profound intoxication, and that the circulating toxin is the cause of the internal hemorrhagic and external gangrenous lesions.

### A CASE OF ADIPOSIS DOLOROSA.<sup>1</sup>

By AUGUSTUS A. ESHNER, M.D.

Professor of Clinical Medicine in the Philadelphia Polyclinic. Physician to the Philadelphia Hospital, etc.

IN a paper read before the Philadelphia Neurological Society in 1891, Henry<sup>2</sup> reported the case of a married woman, 63 years old, in whom, at the age of 49, somewhat circumscribed, painful, fatty swellings appeared in various parts of the body. The patient was an immoderate drinker, and had had epileptiform convulsions frequently in infancy. Menstruation had begun at 11 and had ceased abruptly at 35. Sensibility was impaired in proportion to the deposition of fat. The case was described as one of *myxedematoid dystrophy*, and for the condition the designation *paratophy* was proposed. In a paper read before the American Neurological Association in 1888, Dercum<sup>3</sup> reported the case of a widow, 51 years old, in whom the arms began to enlarge at the age of 48 or 49, and were the seat of pain. Back, shoulders, arms, and sides of the chest became the seat of huge pendulous masses, firm yet elastic, in places finely lobulated and feeling like a bundle of worms, painful on movement and sensitive to pressure. Menstruation had begun at 15 and had ceased abruptly at 35. Microscopic examination of a bit of tissue removed from one of the swellings disclosed the presence of only fat and connective tissue. The case was described as one of *subcutaneous connective-tissue dystrophy* with symptoms resembling myxedema. In a subsequent communication Dercum<sup>4</sup> reports in greater detail both of the foregoing cases, together with a third, describing them as "three cases of a hitherto unclassified affection resembling in its grosser aspects obesity, but associated with special nervous symptoms," and proposing for them the name of *adiposis dolorosa*. The third of these cases occurred in a widow, 60 years old, who for many years had soft, yet firm and elastic, fat-like masses or swellings in various parts of the body that were painful to touch. Cutane-

ous sensibility was diminished and the patient was demented. Death resulted from gradual failure of vital force, and the thyroid gland was found to be enlarged, indurated and calcified. Death occurred also in the first of these cases, and the thyroid was found likewise indurated and calcareous, though small.

In the article on *adiposis dolorosa* in *A Textbook on Nervous Diseases by American Authors*,<sup>5</sup> Collins refers to six cases under the observation of Peterson and Loveland, and to one under his own observation. He states that all of the cases but one had occurred in women from 40 to 60 years of age; that in but one could a specific or alcoholic history be ruled out; and that in all a neuropathic predisposition was evident.

In a consideration of the treatment of myxedema, cretinism, exophthalmic goiter, obesity, etc., with thyroid extract, Ewald<sup>6</sup> refers to the case of a man, 47 years old, weighing 217 pounds, who presented a puffy appearance, with thick masses of fat about the nipples and the umbilicus and upon the neck, and pains resembling those of neuritis. Perspiration was scanty and the condition was suggestive of myxedema, though wanting in the characteristic features of this disorder.

Spiller<sup>7</sup> has reported three cases of *adiposis dolorosa*, all in women, two unmarried and aged 25 and 65 respectively, and the other married and 45 years old. In the first there were both diffuse enlargement and distinct painful swellings, with paroxysmal exacerbations. Menstruation was normal. In the second case the patient began to grow stout at 40, when menstruation ceased. For 13 years there had been pain in the lower extremities and for 2 years in the fatty tissue of the limbs and trunk, with paroxysmal exacerbations. The obesity had increased markedly since the advent of the pain. There were tenderness and pain on palpation, manipulation and pressure, and no anesthesia. The fatty accumulation was marked in the thighs, the calves, the abdomen, the nates, and the back and also in the arms, though less in the forearms, and absent from the feet and the hands. There was no special deposit of fat and no pain in the face or neck. The isthmus of the thyroid was exceedingly small. The third patient had been corpulent for 12 or 13 years, following the birth of her last child. Pain had been present for 4 years, recurring in paroxysms. Swellings appeared beneath the skin of the lower extremities, at first small, then larger, and finally diminishing in size. Sensibility was preserved and the face was not involved. Improvement followed massage and the administration of thyroid extract. A cross-section of muscle from one of these cases showed no appreciable deviation from the normal, except perhaps a slight enlargement of the nuclei.

To this small number of cases I am able to add a

<sup>1</sup> Read before the Section of Neurology of the American Medical Association at its Forty-ninth Annual Meeting, held at Denver, Colo., June 5, 1898.

<sup>2</sup> *Journal of Nervous and Mental Disease*, March 1891, p. 154.

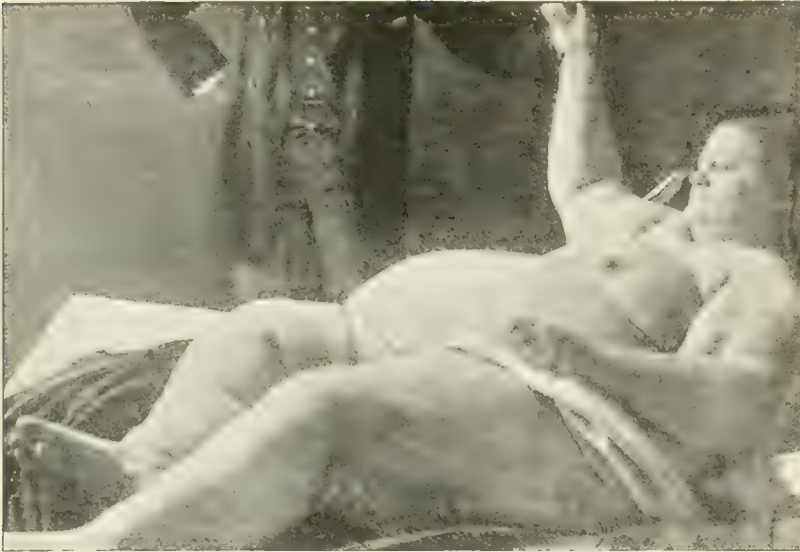
<sup>3</sup> *University Medical Magazine*, December, 1888, p. 149.

<sup>4</sup> *American Journal of the Medical Sciences*, 1892, p. 521.

<sup>5</sup> Edited by Dercum, Philadelphia, 1895, p. 898.

<sup>6</sup> *Berliner klinische Wochenschrift*, January 21, 1895, p. 38.

<sup>7</sup> *Medical News*, February 26, 1898, p. 268.



Adiposis dolorosa. Sinistro-lateral view.



Adiposis dolorosa. Dextro-lateral view.



Adiposis dolorosa. Sinistro-posterior view.

further one and also the notes of a case kindly placed at my disposal by Dr. Dercum.

M. G., a married white woman, 48 years old, was admitted to the medical department of the Philadelphia Hospital June 6, 1896, and shortly afterward the following facts were elicited: Her mother had been dropsical and had died at the age of 86. Her father and one brother had been killed in war. Two other and older brothers were alive and well. A sister also was living at the age of 60 years. Another sister had died in a dropsical state. The sister and one brother were said to be stout, but within ordinary limits. A maternal great-grandmother also had been unduly stout. The patient related that she had suffered from attacks of erysipelas of the lower extremities on four different occasions; the first at about the age of 30, the second 6 years later, the third at some forgotten time after this, and the fourth a year before coming under observation. She had borne five children, all delivered instrumentally. Of these, one had died during birth and another of diphtheria; of the remainder, one boy and one girl were spare, and a daughter of 28 was stout. Her husband had died of pneumonia 18 years previously. Menstruation had begun at the age of 13 years, and had been regular and painless until the age of 41, recurring thereafter with increasing frequency, and being attended with excessive hemorrhage. At the age of 35 the patient is said to have broken down from overwork and worry. At this time twitchings were observed, and a sense of such movements had persisted thereafter. After an interval of uncertain length the woman noticed enlargement of the abdomen. Then the lower extremities became involved, the increase in size extending gradually and progressively over the entire body, with the exception of the face and the hands and the feet. The patient had suffered a good deal from pains in the back, especially in the sacral and interscapular regions. The pain was intermittent, and had set in with the accumulation of fat. For more than two years there had been a more or less constant sensation of beating in the head, and for a year or more ringing in the ears. There was no vertigo, and auditory perception was good. The appetite was preserved; it had never been excessive, and the patient had no preference for, nor had she indulged in, special kinds of food. There was at times nausea, and occasionally vomiting, the ejected matters sometimes containing blood. For more than a year the patient had been helpless, being compelled to lie abed and unable to move about. She occupied two single beds in the hospital, and was scarcely able to help herself in any way.

On examination at the time of admission to the hospital heart and lungs were found to present no abnormality. The face was scarcely larger or fuller than that of a person of ordinary size. The circumference of the neck was 17 inches, of the bust 60 inches, of the waist 53 inches, of the abdomen 70 inches, of the arm above the elbow 21.5 inches. The temperature, taken for months at a time, adhered to the normal level; the respirations fluctuated between 18 and 32, averaging perhaps 24; the pulse ranged between 68 and 108, averaging about 84. The urine, examined repeatedly, displayed a specific gravity between 1019 and 1028, and, other than the presence of a small number of leukocytes, ex-



hibited no deviation from the normal. On examination on June 18, 1897, the hands were observed to be well nourished, but of ordinary size. The circumference of the forearms above the wrist was 7.25 inches, below the styloid processes 6.5 inches. At the elbow there were marked creases on the dorsal and palmar aspects. The circumference one inch below the flexure was on the right 13.75 inches, on the left 12.5 inches. There was only a small growth of hair in the axilla. The mid-humeral circumference on the right was 16.5 inches, on the left 16 inches. The upper extremity was strikingly conoidal in form, with the base at the shoulder. The fat of the neck was not markedly increased. The breasts were large and extensive, though flat, falling in huge apron-like folds. The right appeared to be larger than the left, and its pigmentation was the more pronounced. The mamillary areolæ were marked, and also the tubercles. The circumference of the trunk at the waist was 41 inches, at the level of the sacrum 59 inches. The distance from the olecranon process of the ulna to the styloid process was 10 inches, from the acromion to the olecranon 13.75 inches. The circumference at the middle of the thigh was 31 inches. The distance from the outer margin of the patella to the external malleolus was 16 inches and to the outer extremity of the inguinal fold 17 inches. The circumference at the middle of the leg was 17.5 inches. The right foot was 9.75 inches long, the left 10.25 inches. The surface of the skin was mottled, purplish and cyanotic on the right side of the body, on which the patient lay. The heart-sounds were quite clear and distinct. The tongue was broad, fissured and tremulous; the patient stated that it had always presented a similar appearance. The ears were not enlarged. The thyroid gland could not be felt. The hair was soft and unctuous. The skin, also, was soft, and perspiration was free. The masses of fat yielded a cord-like sensation to touch, and manipulation elicited tenderness. The patient had received varied treatment, without appreciable effect. For a time desiccated extract of thyroid gland was prescribed, 5 grains twice daily; but in a short while the patient declined to take the medicament, complaining among other things that she had been poisoned by some of the drugs that she had taken. Subsequently she developed pronounced delusions and it became necessary to remove her to the department for insane.

While it may be objected that the case is lacking in some of the symptoms of adiposis dolorosa, as laid down by Dercum, it will be conceded that it is unlike an ordinary case of obesity. The principal accumulations or deposits are nearest the trunk and they hang in conspicuous folds, while the degree of incapacitation for the simplest activity is extreme. Pain has not been a prominent symptom, and we have no knowledge of paroxysmal variations in the degree of enlargement, but the patient's memory was not reliable, and her statements were at times wanting in positiveness.

The case is in some respects not unlike the one reported by Laidlow<sup>8</sup> as an example of *elephantiasis*, occurring in a woman, 45 years old, who, in the performance of some laborious task at the age of 27, suffered an injury of the abdomen near the umbilicus. The cutaneous and the subcutaneous tissues of the affected parts became reddened, swollen and infiltrated. The acute symptoms soon subsided, leaving well-marked hypertrophy, which gradually diminished. Two years later the left leg became covered with scales and enlarged and the abdominal condition grew gradually worse. Seven years after this the woman fell from a ladder and wounded the right leg above the ankle with a rusty nail. Symptoms of lymphangitis developed, from which recovery ensued. Three months later the

left leg was wounded as the result of a fall and it became inflamed and increased in size. The enlargement extended upward, and in a short time the right leg also began to increase in size. The hyperplastic parts became the seat of cracks and fissures and indolent recurring ulcers. The illustrations accompanying the report show great enlargement of the legs, thighs and abdomen, with immense buttocks, full shoulders, while the face, feet and hands were relatively small.

As an instance of a further anomalous form of *obesity* may be mentioned a case reported by Adler,<sup>9</sup> occurring in a mulatto, 53 years old, with a syphilitic history, but with none of obesity in the family, who presented an enormous growth in the middle line at the back of the neck, two smaller bilateral masses symmetrically situated in the occipital region, another in the middle line below the chin forming an immense dewlap and extending up into the parotid regions, one in each groin absolutely symmetrical and projecting forward as well-rounded swellings. A more diffuse fatty deposit was present on the arms and forearms. There was one unilateral tumor over the left rectus muscle above the level of the umbilicus. The several growths were movable and free from pain, while the overlying skin was tense and unadherent.

I am indebted to Dr. Dercum for the following notes:

A married woman, 36 years old, in excellent health and free from physical abnormality, while standing in the aisle of a trolley-car, was thrown to the floor as the result of a collision with a heavy wagon, and at once became unconscious. She was sent home in a carriage, and was subsequently unable to move without assistance. Later she was able to sit up in a rolling-chair, and got about with the aid of crutches. A miscarriage took place 14 days after the accident. The patient suffered greatly from pain. When examined a year after the accident she could not stand without assistance, although she could walk with the aid of crutches. Superficial pressure over the spine in the lower dorsal, lower lumbar and sacral regions and also over the coccyx induced pain, and deep pressure over the muscles of the back, of the trunk, in the lower dorsal and lumbar regions on the left side, and in less degree on the right side, elicited tenderness. Similar tenderness was noted also on the left side of the chest. Transmitted shock caused pain referred to the lumbar region; flexion of the trunk, pain referred to the same region, and especially lateral flexion to the left. Attempts to extend the legs with the patient seated on a chair induced pain referred to the back of the legs and thighs. The knee-jerks were exaggerated. There was some analgesia of the left arm, left leg and left side of the trunk, but no inframammary or ovarian tenderness, and no limitation of the visual fields. Upon the left forearm there were found seven or eight small swellings, varying in size from a small marble to a walnut, soft to the touch and apparently made up of fatty tissue. These were exceedingly painful and tender on pressure. The patient was positive that they had made their appearance some six weeks after the accident, when she became aware of the presence of several slightly swollen and tender places upon the left forearm. These had increased in size and continued to be painful. The patient suffered from occipital headache, from a sense of constriction of the head, from vertigo, at times from ringing in the ears, and from backache relieved by the recumbent posture. She slept badly, having difficulty in falling asleep and being disturbed by frightful dreams. She felt worse in the morning on arising than at night on retiring. She suffered from atonic indigestion and chronic constipation. Palpitation of the heart was frequent, especially after unpleasant dreams. Micturition was increased

<sup>8</sup> *Canada Lancet*, September, 1896, p. 18.

<sup>9</sup> *Proc. Med. Soc. Phila.*, September, 1893, p. 729.

in frequency, particularly at night. Perspiration was induced by slight exertion. On examination, some nine months later, it was found that there had been some subsidence of the symptoms indicative of spinal strain. The painful masses upon the left forearm were still present and had undergone no appreciable change in size. There were now noticed in addition several large, diffuse swellings upon the lower portion of the back and in the sacral region. These were soft and painful and tender on pressure and like the others, although larger.

As defined by Dercum<sup>10</sup> adiposis dolorosa is a disorder characterized by irregular, sometimes symmetrical, deposits of fatty masses in various portions of the body, preceded by or attended with pain. It appears at about middle life or later, and the larger number of cases reported have occurred in females. In some there has been an alcoholic history, in others a syphilitic history; in still others rheumatism may have been an etiologic factor; further, traumatism may be a provocative agency. Nothing more definite, however, can be said of the etiology. The principal manifestation is the presence of masses of fatty tissue of variable size, sometimes exceedingly large, variously distributed upon the trunk and the extremities, and the seat of pain sometimes spontaneous, sometimes induced by pressure or manipulation. The affection may set in with pain of neuritic character, and the swellings may undergo increase of size in paroxysms attended with exacerbations of pain. The new fatty tissue has a boggy, soft, at times pultaceous and wormlike feel. Face, hands and feet are not involved. In some cases sensibility is impaired. The skin exhibits no gross change. Hemorrhages from mucous surfaces have been observed in some cases. The disease is essentially chronic, with a tendency to be progressive in course. The morbid anatomy consists, so far as is known, in an increase of fatty and connective tissue, with degenerative changes in nerves. The thyroid gland has been found indurated and calcareous. The disorder differs from other forms of obesity in the presence of pains and sometimes of impaired sensibility; and from myxedema in the freedom of face, hands and feet, and in the absence of the pronounced mental and trophic manifestations of this disease. In treatment, good results may be expected from administration of thyroid extract and from massage.

## THE TRENDELENBURG POSITION FOR PROLAPSE OF THE FUNIS.<sup>1</sup>

By R. ABRAHAMS, M.D.,

of New York City.

District Physician to Mt. Sinai Hospital.

A DYSTOCIA that lays to its credit from 40%-50% of infantile mortality merits respectful attention. Prolapse of the cord is an accident that even skill and experience would prefer to avoid. The percentage of

cases of this anomaly of labor, in which delivery was accomplished naturally, and with advantage to both mother and child, is extremely small. The majority need prompt, skilful and energetic interference. Ever since this abnormal condition was recognized as a menace to infantile life, accoucheurs devoted their utmost ingenuity to discovering a plan to correct it when found or prevent it when threatening.

It was but natural that the postural method of replacing the prolapsed cord should have suggested itself first to observers; for it must have been noted that the prolapse occurs in the human female only whose posture at and during labor is either the erect or the horizontal one, each of which favors the descent of the funis; therefore, a position that is not operated on by forces tending to a premature escape of the cord was the necessary remedy for the evil.

Now, while every observer appreciated the advantage of the postural method, not all recommended a uniform attitude for the woman in labor. For example, one observer directed that the woman be placed on one or the other side, according to the position of the cord; another observer directed that she be placed on the side corresponding to the position of the cord, at the same time raising the pelvis and if necessary assisting the reposition manually; still another observer "proposed returning the funis in head-presentations with the woman placed upon the knees"; and still another (Mainz, 1838) suggested and adopted the knee-elbow position. It is but fair to mention that one writer (Theobald, 1860) considered that "the most favorable condition for the return of the funis was to place the woman upon her head."

In 1858, Dr. T. Gaillard Thomas struck the key to the situation. In his "Essay on Prolapse of the Funis, with a New Method of Treatment," he drew the following conclusions both from theoretic and practical grounds:

"First, that the causes of the persistence of this accident (whatever may at first have produced it) reduce themselves to two, the slippery nature of the displaced part and the inclined plane offered it by the uterus by which to roll out of its cavity; and, second, that the only rational mode of treatment would be inverting this plane and thus turning to our advantage not only it, but the lubricity of the cord, which ordinarily constitutes the main barrier to our success."

This he found could easily be accomplished by placing the woman in the knee-chest position, which, founded on reason and practice, instantly gained favor with the profession, so that to-day this is practically the only method employed in the treatment of prolapse of the funis.

Before entering into the essential part of this paper, namely the description and recommendation of a new and more advantageous postural method of treating a prolapsed cord, it seems advisable to describe briefly the salient features of the positions—the knee-chest and Trendelenburg.

<sup>10</sup> Twentieth Century Practice, vol. xi, p. 554.

<sup>1</sup> Read before the New York County Medical Association, June 20, 1898.



"The knee-chest<sup>2</sup> position requires that the patient kneel near the edge of the table, and, with arms thrown back and head turned to one side, allow the chest to sink down on the table just in front of the knees. The thighs are flexed on the abdomen. The chest is lower than the pelvis."<sup>3</sup>

"The Trendelenburg position<sup>4</sup> is obtained by placing the patient on her back and raising the lower end of the table, thus elevating the pelvis and thighs, and allowing the legs to fall over the edge."

It will be observed that the desideratum in each position is the accomplishment of the inversion of the plane of the uterus, thereby making the force of gravity act toward the fundus instead of the os.

The accompanying illustrations show the striking differences between the old and the new methods and the advantages of the latter. Let us consider these in detail: The knee-chest position has the following disadvantages: (1) The posture is extremely unnatural and extremely repulsive to a woman's modesty; (2) it cannot long be endured by a non-laboring woman and

Taken from the American Text-Book of Gynecology.

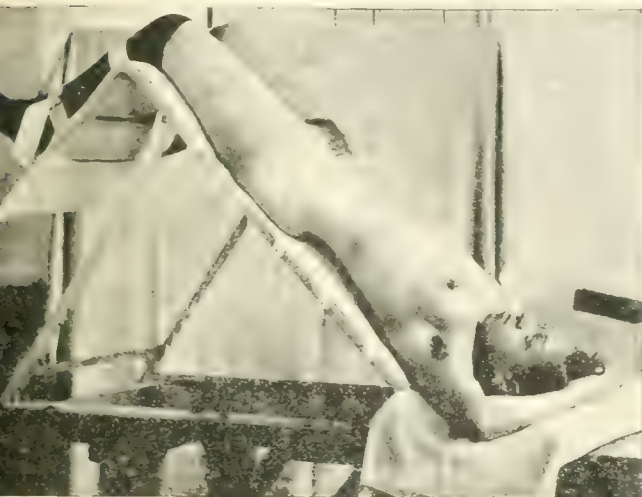


FIG. 1.—Krug's frame for Trendelenburg's position in use. Lateral view.

certainly much less by one in the throes of labor; (3) should rapid delivery by version be indicated, this posture introduces insurmountable difficulties; (4) the administration of an anesthetic in this position is not to be thought of, for reasons too obvious to need enumeration; (5) to maintain the reduced cord in place it is recommended that the woman be put in the latero-prone position—a procedure that is likely to reproduce the prolapse and necessarily a repetition of the knee-chest position.

The advantage of the knee-chest position is rather a negative one, namely: that up to the present time no better plan has been offered or suggested.

The Trendelenburg position, which is warmly recommended in this paper, has none of the drawbacks of the genu-pectoral position. It is by far more natural,

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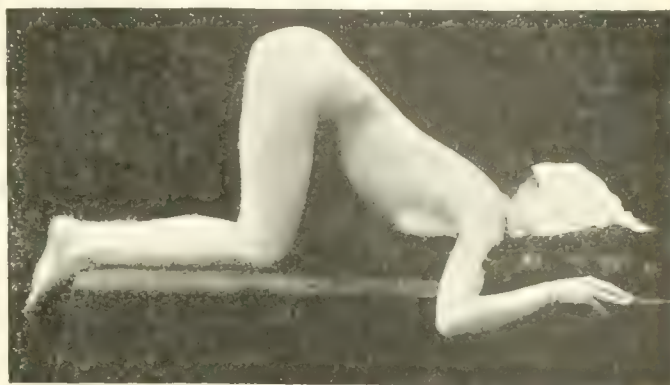


FIG. 2.—Knee chest Position.

for it is practically the horizontal position somewhat modified by an elevation of the pelvis; the woman's modesty is not shocked; the position can be maintained with comfort for quite a long time; version can be most admirably and most rapidly accomplished; an anesthetic can be given with ease and convenience; and, lastly, when the cord is once reduced, recurrence of prolapse can be prevented by lowering or reducing somewhat the position, if the patient finds the extreme Trendelenburg uncomfortable.

Believing that the advantages of this new posture are clear and convincing, I propose to submit a few guiding rules that I have deduced from my study and observation of this postural method of treating prolapsed funis.

I. The diagnosis is to be made in a hurry. I use the word "hurry" advisedly, as there is nothing and there can be nothing in the vagina of a woman in labor that has the anatomic and physiologic characteristics of a prolapsed cord, not even a loop of intestine, as was recently contended by a learned colleague.

II. Once the diagnosis is clearly established no time is to be lost in putting the woman in the Trendelen-

Taken from the American Text-Book of Obstetrics, with the kind permission of the publisher.



FIG. 3.—Improved Trendelenburg apparatus or external version by means of a chair laid on its face on the bed.

<sup>2</sup> American Text-Book of Gynecology, 1894.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

burg position. It is culpable negligence to waste precious moments in ascertaining, perhaps for statistical purposes, the exact length of the prolapsed portion of the cord, its pulsation and rate and the condition of the fetal heart. The obstetrician is confronted by a serious condition and he must act according to the best advice and in the shortest time possible.

III. Now that the woman is placed in the desired position, the clean, *lysolized* right or left hand is introduced into the vagina. The hand is preferable to the customary two fingers because the latter may not reach the receded cervix or os, while the former will. If the presenting part, be it breech or vertex, is not well engaged in the os the chances are that the hand will not find the cord in the vagina on account of its having gravitated to the fundus; in this event the hand is not to be withdrawn, but is to be kept in the vagina until the next pain, to make sure that the contraction of the uterus does not cause a recurrence of the prolapse. Should, however, the presenting part be so tightly wedged in the os as to afford no inlet for the cord, it should be pushed up and the cord will disappear with marvelous rapidity. The same precaution, of keeping the hand in the vagina until the next one or two pains, must be observed in this as well as in the supposed preceding instance.

IV. If the pains are strong and the chances to bottle up, as it were, the wayward cord in 10 or 15 minutes are good, the woman can be safely kept in the Trendelenburg posture. If, however, the reverse condition obtains the elevated pelvis should be reduced half the original height, in order to secure comfort for the woman and no return of the prolapse.

V. In case the prolapse shows a tendency to recur in spite of frequent repositions (and this is not likely), forceps should be applied or version practised. No time is to be wasted in attempting to plug the os with sponges or gauze or anything else.

VI. When prolapse of the cord is associated with an abnormal presentation, the cord is first to be restored and then the case is to be treated according to established methods, remembering always that the Trendelenburg position is an ideal one for version—especially external.

The next point for consideration is how to place the woman in the new posture?

In hospital-practice this difficulty offers no obstacle. Every well-equipped hospital is supplied with a table suitable for the Trendelenburg position. In private practice, and especially among the poor, the problem can be solved in one or two ways. An inverted chair previously covered with a pillow can be placed under the patient's pelvis; or, perhaps, a better method is to put an ironing board under the patient, while she retains her recumbent position, and bring her popliteal spaces to the edge of the board, then putting something, as a chair or washboard, under it. This plan

secures greater stability and steadiness of the woman's body.

So far as I know, only 4 cases of prolapse of the funis treated according to the new posture are on record. Three were reported by Dr. A. Brothers<sup>6</sup> and one by me.<sup>6</sup> These cases included 3 head-présentations and one transverse presentation. Mothers and babies did perfectly well. One or two of Dr. Brothers' cases presented unusual difficulties: maternal, fetal, and environmental. In a personal communication he has informed me that he has notes of 2 additional cases, both successfully treated by this new method.

To this list of cases I am in a position to add the history of another case, making, published and unpublished, a total of 7 successful cases. Considering the rarity (1-500) of the dystocia in question the number is quite a respectable one.

Mrs. L., a primipara, 35 years old, was, according to her statement, ten hours in labor when she sent for me. Upon examination the os was found three-quarters dilated, with the head and funis presenting. The membranes had not ruptured, and the pains were frequent and strong. The pulsation of the cord was quite feeble; its rate and the condition of the fetal heart I did not determine. The woman was immediately put on an ironing-board, with the lower end raised to a height of five feet, and a wash-board was placed beneath it for support. The husband and the nurse were told to stand on each side, close to the patient, to prevent her moving from side to side. On introducing my hand into the vagina the cord could no more be felt. At the next pain I ruptured the membrane; the water slowly escaped, and the cord did not come down with it. The next pain came in five minutes. The cervix not being completely dilated, and the head not being fully engaged, I decided to keep my hand in the vagina until a few more pains came on, which, it was hoped, would force the head to descend and block the os. The woman was kept in that position, with very little discomfort, for fifteen minutes. At the end of that time the head had made but little progress. I then decided to lessen the elevation under the pelvis half-way, and watch the patient. The pains were pretty strong; the quantity of water that came away with each pain was considerable; still the cord remained in the uterus, and the woman was delivered in two hours of a living child. The funis measured 26 inches.

Considering all its phases this case demonstrates beautifully the inestimable value of the Trendelenburg position for prolapse of the funis.

[Since the above paper was written another successful case of prolapse of the funis came under my observation. The woman, a secundipara, was attended by a midwife. The latter at her first examination found the os dilated to the size of a half-dollar and a small protruding bag of waters. The presentation not appearing clear, she decided to rupture the membranes in order "to give the examining finger a wider range." Much to the surprise of this unsophisticated midwife, the water washed down a good piece of the cord. At this juncture she wisely sent for help. When I came the cord was quite prolapsed, the whole vagina was almost filled with it. Its pulsations were rapid and feeble. Pains were frequent and severe; the head presented but was not fully engaged in the os. Placing a broad ironing-board under the woman's back, she was quickly put in the Trendelenburg position. During this maneuver the cord escaped through the vulva; the pulsation then was almost imperceptible. Grasping the funis I returned it into the vagina, and in a few, very few minutes, it was completely repositioned. The reposition, though being perfect, was not permanent, for every contraction of the uterus gave the hand in the vagina

<sup>5</sup> American Jour. of Obstetrics, etc., vol. xxxii, p. 839.

<sup>6</sup> American Jour. of Obstetrics, etc., vol. xxxiii, p. 97.



palpable evidence of a mild effort on the part of the cord to prolapse again. In spite of severe labor pains the head tardily descended. In that event version was considered the best procedure. Turning was accomplished; the cord remained in the uterus during the operation and delivery; the child was still born, but was resuscitated by a half-hour's employment of the good old Sylvester's method.]

## COLONIES FOR EPILEPTICS.

By FREDERICK PETERSON, M.D.,  
of New York.

President of the Board of Managers of Craig Colony for Epileptics.

THE establishment of this society should subserve a useful purpose. It will call attention to the needs of epileptics. It will stimulate every State in the Union to follow the example of New York, Ohio, Pennsylvania, New Jersey, California, and Massachusetts, in founding special institutions for this particular class of dependents. It will cause the various States to adopt a uniform system of care, viz., the colony-plan so well exemplified by Craig Colony in New York State, and Bielefeld in Germany. It will concentrate opportunities and material for study in such a way as to facilitate to physicians and pathologists the investigation of new methods of treatment and the investigation of the causes of the disease.

From the standpoint of medical science, the disease known as epilepsy, familiar to the profession for thousands of years, is the *opprobrium medicum*, in that, despite centuries of clinical and pathologic study and medicinal and surgical treatment, almost no advance has been made towards its amelioration.

From the standpoint of philanthropy, a stigma rests upon society for the absolute neglect of a most pitiable class of unfortunates, which up to five or six years ago had never received any attention whatever in this country.

From the standpoint of State economy, the interesting fact has developed that these patients with epilepsy have been relegated to asylums and almshouses, where they have remained perpetual burdens upon the treasury, whereas by the foundation of special agricultural and industrial colonies their labor may be so utilized as to produce the greater part of their subsistence.

Such are the facts which have inspired the organizers of this society.

It may be of interest to some of you who are not conversant with the medical, eleemosynary, and economic features of this malady, to have me briefly reiterate the data which have been the incentive in the establishment of such colonies for epileptics as are in existence to-day.

Besides the practical incurability and hopelessness of the disease, its victims have suffered untold sorrows in the way of negligence and ill-treatment at the hands

of the communities in which they live. It is a peculiarity of this disease that the seizures may be momentary or may last for a few minutes only, recurring sometimes frequently, sometimes daily, and sometimes months apart, thus robbing the sufferers of their consciousness and faculties for brief periods of time at long or short intervals. Between the attacks they may be as rational and as well qualified for all the vocations, duties, and social privileges of life as any other human being. These facts do not concern only a few members of the community. Epilepsy is a widespread disorder and it has been calculated that one person in 500 is thus afflicted. Thus there would be in the neighborhood of 130,000 such unfortunates in the United States alone, and over 12,000 in the State of New York. Even supposing this percentage to be exaggerated to a very great extent and that the actual ratio were one to 1,000, the number of epileptics would still be enormous and would constitute a large part of our defective classes.

Outside of the efforts, thus far comparatively futile, of physicians to alleviate their purely physical infirmities and to reduce the number and severity of the attacks, nothing has been done until late years to provide for their mental development and to meet the peculiar conditions of life which they are called upon to endure. Thus, no general hospital will receive such cases for treatment, because of the incurable and unpleasant nature of their malady. While much of the time thoroughly capable of acquiring an education, they are debarred for obvious reasons from the schools; the churches are closed to them; very few care to employ epileptics in shops, stores, or offices, or are willing to teach them trades. Few epileptics are at liberty to enjoy the companionship of their fellows, who are rather inclined to shun their unfortunate brethren. Thus every avenue for mental or moral development, for occupation, for association with the rest of mankind, is closed to them. They are even burdensome to their families. It is little wonder, then, that many of them grow up dull and ignorant, intellectually feeble, morally depraved, irritable in temper, with tendencies to retrogression and degeneration rather than advancement. A few of them become insane and are sent to insane asylums. Others not insane, but ill-adapted for existence under such miserable conditions, drift to the only homes offered to them, the almshouses. The almshouse and the asylum are the only refuge when abandoned by their friends. In the State of New York, for instance, where there are 12,000 epileptics, some 400 or more are in insane asylums, and some 600 in the county poorhouses. The rest of them are scattered throughout the State in their own families, among the rich and the poor, in ratio to the population and to the relative proportion of these classes. Many are so slightly affected that they are able in spite of their seizures to pursue some of the ordinary vocations of life. Thus, I know

\* Read before the First Meeting of the American National Society for the Study of Epilepsy and the Care and Treatment of Epileptics, New York, May 19, 1898.

personally of a doctor, clergyman, several bookkeepers, a bank-president, a stock-broker, several clerks, some dressmakers, masons, and a telegraph-operator, who are epileptics, and yet able to carry on useful pursuits, albeit under adverse conditions. To all of us are familiar certain well-known historical or literary characters in whom epilepsy failed to restrict the development of their genius, such as Cæsar, Napoleon, Molière, Petrarch, Dostojewsky, and others.

It would seem, therefore, from the above facts that, although there is such a thing as epileptic insanity, the proportion of insane epileptics to sane is very small—much less than 10%, taken at the utmost—and that this ratio may be reduced by affording these unfortunates such opportunities for mental and moral development as are enjoyed by other and more happily situated citizens; and not only may the percentage be reduced, but the comfort and prosperity of all epileptics be increased by proper provision on the part of the State or through private channels, such as institutions of a peculiar character adapted to their peculiar needs. A large public hospital is very far from meeting their requirements; for, as has already been shown, medicinal treatment is uncertain and unpromising. Insane asylums should receive but very few, and almshouses none at all. What is demanded is an institution on the community or village plan, where medical treatment (such as it is) may be given to every member, and where every sort of education, employment, and social privilege commensurate with his needs and conditions may be extended to every beneficiary.

The colony-system only can attain this object. A colony for epileptics is not an impracticable scheme proposed by visionaries. It is already an accomplished fact. The Bethel epileptic colony at Bielefeld, in the province of Westphalia, near Hanover, Germany, was founded by Pastor von Bodelschwingh, over 25 years ago. He purchased a small farm with one house, and with four epileptics as a beginning established a charity which for nobility of conception and success in its results has nowhere an equal. It seemed to its beneficent founder feasible to create a refuge where sufferers might be cured if curable, might have a home if recovery were impossible, might learn trades, and the great majority become educated, useful, and industrious citizens. From that small beginning there has been a gradual evolution of his idea, until now there are over 1,400 epileptics, resident in some 60 or more houses, scattered irregularly but picturesquely over a large farm. Every one who visits this unique colony is deeply impressed with the happiness, contentment, and prosperity everywhere apparent among the inhabitants of this little epileptic world. He sees that it is no longer an experiment, and the previously unanswered objections to such aggregations are by its success answered and silenced. At the time of my visit to Bielefeld, in 1886, there were but 825 epileptic pa-

tients. The employments were numerous and varied. A school provided instruction for some 150 pupils of both sexes. All branches were taught. The dairy and the farm and garden occupied the attention of the greatest number of the patients, especially as a large trade in vegetable and flower seeds was carried on.

Among the shops for epileptic workmen were those for cabinetmakers, painters, varnishers, printers, bookbinders, blacksmiths and foundrymen, tailors and shoemakers; and among the stores were a grocery, pharmacy, bookstore, and a seedstore. The carpenters aided in the building and furnishing of new houses. Plans and drawings for new buildings were made in the architects' room. Epileptics were employed in all the departments of industry relating to building. Books were printed and bound and sold here, especially works for moral and religious instruction. The illumination of mottoes for hospital-wards and school-rooms, and the coloring of picture-cards were features of the work performed; washing, cooking, knitting, sewing, and fancy work employed many. A bureau had been established for the collection and sale of museum objects, such as antiquities, articles of ethnographic and historic interest, autographs of distinguished people, coins, stamps, bronzes, gems, engravings, etc., and specimens from the animal, vegetable, and mineral kingdoms. For men alone there were over thirty different callings.

The houses presented great diversity of architecture and position. They were well separated, generally enclosed in individual gardens, surrounded by fences, hedges, and many trees, and altogether exhibited the homelikeness of a country village, with little or nothing to suggest the restraints or discomforts of large institutions. There was one small cottage set aside for such cases as should be mildly insane, but bad cases of actual insanity were sent to insane-asylums. Everything had been thought out carefully for the perfect evolution of this little social world; not only the multiplicity and details of occupations which would give each member of the community his choice of callings, but even the avocations, games, amusements, and entertainments that might tend to divert his mind from the contemplation of his misfortune. And since my visit the colony has continued to expand, to develop new and valuable features, and to confer its blessings upon large numbers of persons afflicted with this disease.

Taking Bielefeld as a model, several other epileptic colonies have been established in Germany, one in Zurich, in Switzerland, and one in Holland, one in England, and two in the United States. Most of these are not conducted by the State, but are under the jurisdiction of private or church charities. None of them are altogether self-supporting, but some of them approach very near to it.

It should be stated that before the founding of the Bethel colony at Bielefeld, a somewhat similar institu-



tion, though on a much smaller scale, was begun in France in the village called La Force, near Lyons. Over 40 years ago a noble clergyman named John Bost established this institution and it is in a flourishing state, doing a vast amount of good, and redounding to the credit of his creative genius.

It has been found in all of these colonies that no harm is done by bringing epileptics into contact with each other. They feel on an equality with their fellows in such a place, losing that sense of isolation and singularity which they cannot but observe in the ordinary world as separating them from the rest of mankind. They enjoy caring for each other and being kind and helpful to their fellow-sufferers. It has been noted, too, that the number of seizures almost always diminishes upon entering the new and hopeful and encouraging life begotten by the busy community.

Within two or three years interest has been awakened in other countries in the matter of provision for epileptics, notably so in America and England, where their peculiarly sad condition had neither been noted nor considered. In 1890 Ohio took steps toward the establishment of an institution for epileptics, a commission, consisting of Messrs. J. L. Vance, C. C. Waite, and one other, having been appointed by Governor Campbell, pursuant to an act of the Legislature, to select a site and prepare plans for the purpose. Of various sites examined, one at Gallipolis seemed best adapted for the project, and here a tract of one hundred acres was presented to the State by the citizens for the institution. To the writer, who was consulted upon the subject of site and plans, this seemed to be the best location offered; for, although an insufficient space for a large institution, there was plenty of land adjacent which could be subsequently added to the original tract. Contrary to the advice of the writer, the architect felt obliged, probably owing to the demand of the community of Gallipolis for an institution of striking proportions, to group the buildings on a symmetrical plan, such as is frequently carried out in the public establishments for the insane. The Ohio epileptic hospital is built on the pavilion plan, a large number of these being grouped about the center or administration building. It will, therefore, not meet in this important particular the requirements of a colony for epileptics, although in respect to provisions for school buildings, shops, and the like, an effort has been made to fit the institution for the particular kind of care needed by this class. In California, detached buildings are being erected upon the grounds of the California Home for Feeble-Minded in Sonoma County, with the view of accommodating the epileptics dependent upon the State for pleasant quarters.

Active measures are being carried out also in Massachusetts, Pennsylvania, and New Jersey for the purpose of securing State care and separate provision for the same class of unfortunates.

As regards the work that has been done by the State of New York, the following is a brief summary:

The Craig Colony for Epileptics at Sonyea, Livingston County, N. Y., was informally opened for patients February 1, 1896. Three or four years had been spent up to this time in selecting a site; in acquiring for the State this large tract of land from the Shakers; in preparing the old buildings on the place for the reception of patients, and in establishing sewer, water, lighting and heating systems. This colony stands to-day as a unique institution in this country—the one that best embodies all of the principles of the colonization system. It was fortunate that it was possible to begin the scheme on a scale proportionate to the large epileptic population of the State. Not even Bielefeld has so extensive a property, and there is probably no eleemosynary institution of any kind anywhere in the world with landed possessions so magnificent. The Craig Colony had in fact already been a colony for 50 years or more, for the sect of so-called "Shakers" selected, with their customary sagacity, nearly 1,900 acres in the garden-valley of the State (the Genesee Valley), and made it a remunerative property, with well-cultivated fields, fine orchards and pastures, and productive market-gardens. They constructed here numerous substantial buildings (30 or more), residences, barns, and shops, for they were not only thrifty agriculturists, but did a good business in broom-making, canning fruits and vegetables, and other industries. On the grounds are good quarries of building-stone, fine deposits of brick-clay, and acres of good timber, from which they obtained material for their houses. Two streams pass through it; one of them rushing swiftly through a picturesque gorge, and dividing the property into two nearly equal parts, ran the colony's saw-mill and flour-mill.

But the Shakers, being celibates, and failing to recruit their organization, as in past times, by proselytism and by the acquisition of orphan children, gradually diminished in numbers, and in 1892, at the time that the State was seeking a site for a colony for epileptics, the ten or twelve old Shakers left upon the place offered the entire tract, with all its buildings for the purpose, at a sum (\$115,000) about equal to the value of the improvements alone. The State purchased the property, and the little band of Shakers went away to join the mother-colony at Watervliet, N. Y. Oscar Craig, of Rochester, then President of the State Board of Charities, was one of the commissioners engaged in the selection of the site. He died soon afterward, and at the instance of Governor Flower the colony is known by his name.

Very soon after the managers took charge of the property, the Messrs. Olmstead, Olmstead & Eliot, of Brookline, Mass., were engaged as landscape artists, to prepare a general design of the grounds, in accordance with the organic law requiring the adoption of a gen-

eral design and the arrangement of the property on the village plan, to which all new and old buildings must conform. Such a plan takes two or three years to perfect, but the main features, such as the village-green, streets, lanes, paths, sites for shops, residences, chapel, dairy, and farm buildings, schools, and the like, have now been designed upon the best principles, in order to take advantage of the natural beauty of the land, its gorge, lake streams, hills, meadows, and woodlands, and at the same time to subserve as far as possible economy of administration and general utility. The details in the execution of such general design are to be worked out under proper guidance by the patients themselves.

It has been the aim of the management to provide out-of-door employment as far as possible for both men and women, feeling that great benefit in the treatment of the disease is derived from work in the sunshine and open air. Therefore, agriculture, horticulture, floriculture, and market-gardening form a large proportion of the labor of the inhabitants for at least six months of the year. The women gain great good from employment in raising small fruits, flowers, and vegetables.

The deposits of excellent clay are now being utilized by the patients for making brick to be used in the construction of new cottages and of the walks throughout the village lanes. The capacity of the brick-making plant is about 1,000,000 bricks per year. Eight male patients are at work at the brickyard.

The dietary for patients afflicted with epilepsy is simpler than that needed for other classes of patients, so that almost everything in the way of food-stuffs required by a large population can be produced from the land itself by the labor of the colonists.

The economy of the scheme has been already thoroughly demonstrated, as a reference to the last two annual reports of Craig Colony shows—over 50% of their maintenance has been earned by the labor of the patients themselves. The patients now number two hundred and sixty.

We have demonstrated the fact already referred to that the number of attacks in most patients diminishes after entering upon such colony life, and that the patients do not affect each other detrimentally, but that on the contrary each feels that he is on an equality with his associates and no longer isolated, for he is bound together with them by the ties of a common affliction and a common purpose. Out of the negligence, monotony, hopelessness, and often squalor of an almshouse or a wretched home, he comes into the brightness of this new existence. He gains fresh interests, and new hopes and ambitions rouse him from his long apathy. He is made to feel that he may follow the bent of his nature as regards education and occupation, and no longer be debarred from the opportunities for progress in mental development, for recreations and enjoyment, and for social intercourse, so abundantly offered his more fortunate brethren of the outer world.

In addition to the moral therapeutics thus outlined, it is the object of the Craig Colony to make every effort to treat each case of epilepsy entrusted to its charge in the best manner possible in accordance with the latest researches of science in this field, and to carry on original investigations, clinical, chemic, pathologic, and therapeutic, with the object constantly in view of discovering the causes of and best remedies for the malady. For this purpose chemico-physiologic and pathologic laboratories are in course of construction, and we have already at work upon our abundant material one of the best pathologic chemists and one of the best pathologists in this country, who have been appointed upon the consulting-staff of the institution.

### A CASE OF SCARLET FEVER WITH FREE HEMOGLOBIN IN THE RENAL EPITHELIUM.

By ALBERT WOLDERT, Ph.D., M.D.,

of Philadelphia.

Assistant Physician to the Out-Patient Department of Howard Hospital. Physician to the Out-Patient Department for Diseases of Children, St. Joseph's Hospital.

HEMOGLOBINURIA is a symptom occasionally encountered in several infectious diseases, such as yellow fever, scarlet fever, malarial fever, typhoid fever, and syphilis. It also occurs in cases of poisoning by certain drugs, as potassium chlorate and carbolic acid. In secondary anemia there occurs a *slow* disintegration of the red blood-cells (necrobiosis), manifested by crenation, by poikilocytosis, by changes in the staining properties of the red cells, and by other phenomena. These changes are supposed by Maragliano to be due to the toxic plasma. If the necrobiotic phenomena are brought about experimentally by certain poisons, as stated by Mya and Sanarelli, the susceptibility to infectious diseases is increased. In the case of hemoglobinuria, however, the process is usually more *rapid*. The toxin or poisonous drug at once affects the protoplasm of the cell, causing disintegration of the globule, and a rapid solution of the hemoglobin (hemocytolysis), which is afterward excreted by the kidneys. It may then be stated that the etiology of the condition is gradually being learned. The essential pathology, however, is most obscure. In this connection the following case of scarlet fever may be reported, as well as to indicate the importance of frequent examination of the urine in the course of this disease for the detection of the earlier symptoms of nephritis.

A girl, 8 years of age, became ill about May 26th, the onset being marked by pain in the epigastric region, and attended by nausea and vomiting. Severe pain was complained of in the region of the right lobe of the liver, and pain on deglutition. On the following day the mother examined the child's throat and found a whitish deposit on the right tonsil. On May 27th, a red rash developed on the extensor surfaces of both arms, and also on lower extremities below the knees, none on the chest or face. The face was congested and swollen, and the eyes liquid. At this time the mother thought the patient had high fever, as indicated by general

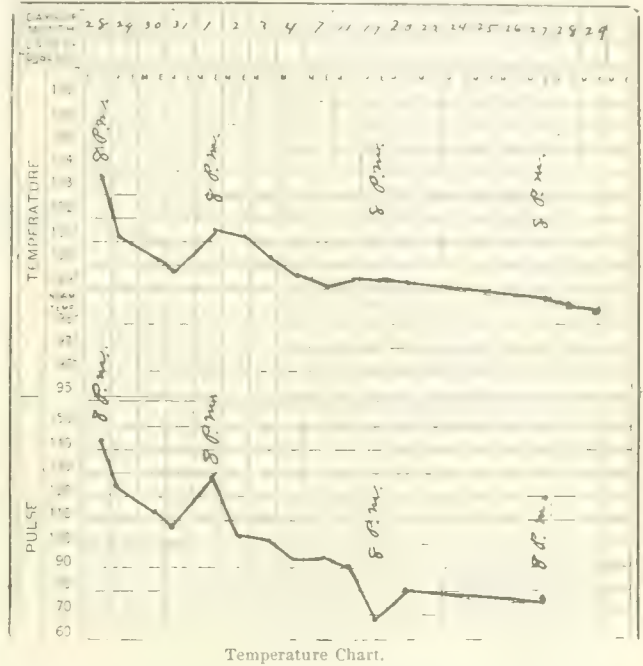


restlessness. When first seen, on May 28th, at 8 A.M., the arms, legs, and abdomen presented a scarlet hue. In certain areas the normal skin could be seen, being lighter in color and standing out prominently. In certain regions of the erythematous areas an eruption resembling sudamina made its appearance, projecting slightly above the superficial derm and yielding a sensation of roughness to the touch. The tongue was reddened, with enlarged papillae (strawberry appearance), and had a thick, whitish coat down its middle. Both tonsils were greatly congested and almost met in the vault of the pharynx. The spleen was not enlarged and not tender. The liver was normal in size and the pain had disappeared. The heart-sounds were somewhat altered, the two sounds at the apex being of about the same intensity. At the base the second sound was somewhat accentuated. The lungs appeared to be normal. The pulse was full and strong, 144 to the minute; the temperature 103.8°.

On May 28th the rash began to disappear from the lower extremities and the arms, but around the posterior surface of the elbows, the gluteal region, and the posterior surface of the thighs it was more distinctly elevated and larger than when first observed. The superficial skin had begun to desquamate in fine powder, lightish in color. In certain areas an itching sensation was complained of. At this time the kidneys became inactive and the urine began to be suppressed, there having been only a few (2 or 3) ounces passed within the previous 12 hours. Examination of the urine on the following day showed a specific gravity of 1022, with an absence of albumin, of sugar, of casts, and of blood. It was, however, loaded with ammonium urate. Fearing entire suppression of urine, the patient was given compound jalapowder (gr. xx) every 3 hours, and wrapped in blankets dipped in hot water. Immediately after being removed from the blankets the patient passed a tumblerful of urine. Hot blankets were used in this manner for several days subsequently, generally allowing the patient to remain in them from half an hour to an hour and a half. Free perspiration always ensued, and generally an increased amount of urine. Sweet spirit of nitre (3ss) also was given as a diuretic.

On June 1st the bright-red rash had begun to disappear, and gave place to a darker brown one, visible mostly around the elbows and the thighs. The urine had increased in quantity (18 or 20 ounces); its specific gravity was 1018, and it failed to respond to the test for albumin by Heller's contact-method. A week later the cuticle from the soles of the feet and the palms of the hands began to peel off in flakes. On June 11th a slight eruption like sudamina appeared around the forehead near the edge of the hair; and also an eruption of small dark-brownish macular spots about  $\frac{1}{8}$  inch in diameter covering this same area. Two days later a similar rash developed around the edge of the hair and on the back of the neck, in regions not previously affected. Slight swelling or puffiness was observed around the region of the jaws. Examination of the urine at this time showed it to be *laden with albumin*.

several tumblerfuls of urine lighter in color than on the previous day. On June 23d the urine was again examined and yielded the following results: Color, pale yellow; specific gravity, 1018; reaction slightly acid; a small amount of globulin; the indican not increased; albumin abundant. Microscopic examination disclosed the presence of a large number of red blood-corpuscles, a few leukocytes, a few large and small granular casts, fatty epithelial, and compound granule-cells. Two renal cells were observed in the same field, both containing free hemoglobin in small granules. One cell contained eight or nine, the other four granules. These granules were of a bright-red color and seemed to be loosely arranged within the cell.



On June 29th another series of eruptions of a bright-red color had developed upon the forehead, but the patient was gradually convalescing. Albumin was still present in the urine. July 6—Albumin is entirely gone, but there were a few granular and hyalin casts still present. The patient ultimately recovered.

My thanks are extended to Dr. Thomas Y. Yarrow, Jr., in whose private laboratory the specimen was examined.

## TWO CONGENITAL DEFORMITIES.

By H. G. NORTON, M.D.,  
of Trenton, N. J.

Visiting Physician to St. Francis, and Mercer Hospitals.

HAVING recently operated on two cases of congenital deformity, I have thought illustrations sufficiently interesting for publication.

The first, a girl of 20, came to me, having had within a few months an amputation at the upper third of her leg for a condition which Doctor Pumyea, the operator, describes as follows: "The foot was not amputated simply on account of deformity, but because of an ulcerated and neuralgic condition of her club-foot. There were no toes and the foot looked about as it does after Chopart's amputation. About 2 in. above the malleoli was a deep constriction; on the distal end of this constriction no



Back Microscope. Objective 3 MM. No. 30. Obj. Continental. 700 diameters.  
1. Red blood corpuscle. 2. Hyaline cast from proximal convoluted tubule. 3. Fatty epithelial cell. 4. Large granular cast. 5. Small granular cast. 6. Renal epithelial cell containing free hemoglobin. 7. Leukocyte.

On June 19th swelling of the face had increased, there was great pallor of the skin and the patient complained of headache and suffered from nausea and vomiting. The urine became slightly suppressed, and dark or smoky in color. On the following day the patient was given a calomel-purge and wrapped in hot blankets. She voided

pulsation could be detected, and that part of the limb was more atrophied than the rest. The plantar surface of her heel (due to pressure when she walked) was continually suppurating and ulcerating." This stump had failed to heal and had been suppurating for over a year. The cicatrix was opened, and owing to the suppurating condition of the stump the leg was amputated 2 in. higher up, but still below the knee, leaving an excellent stump for an artificial leg. The appearance of her fingers is shown in the X-ray picture; it is observed that the third finger is minus the distal phalangeal bone, and the first and second fingers are joined by a connecting bone. This was dissected out, leaving two short fingers on each hand.

The girl left the hospital before the stump was as firm as we would have liked, because a young man was waiting to marry what was left of her. I trust if she has children and any are deformed the fact will be reported.

The second case shows heredity plainly. The picture of a healthy baby, 3 months old, shows the entire absence of the middle finger and metacarpal bone of the right hand and some webbing of the third and fourth fingers. The feet are cleft as shown in the picture. The little toe of each foot is largely developed and there is an absence of the other toes except the big toe, which is crooked and elevated above the level of the sole of the foot; this has been brought down, and the skin and tissues between the toes united by sutures and firmly bandaged for a month. The hand has had



FIG. 2.—Congenital deformity of the hand and feet.

similar treatment. The child's deformity is not now very noticeable and he will probably be able to walk when old enough. This child's father has similar feet, which have never been operated on; but instead of the absent middle finger the metacarpo-phalangeal joint of each thumb is immovable and has been so since birth.

**Removal of a Male Breast for Carcinoma.**—J. E. Owens and D. N. Eisendrath (*Chicago Medical Recorder*, Sept., 1898) report the case of a man from whose breast was removed a tumor that on microscopic examination proved to be a scirrhus originating from the acini of the gland. The ratio of frequency of carcinoma of the breast in the male and female is said to be about 1 to 100. Traumatism seems to have had a direct influence in its development in about 50% of the reported cases.

**Congenital Occlusion of the Small Intestine.**—Wanitschek (*Prager med. Wochenschr.*, August 25, 1898) reports the case of a child that for four days after birth had passed no feces or flatus. Celiotomy was performed and the small intestine was found much distended, ending in a blind sac, absolutely without connection with the cecum; a strand of connective tissue, however, extended from the cecum to the umbilicus. The entire colon, from cecum to sigmoid flexure, was narrowed to the size of a goose-quill. Enterostomy was performed between the sac-like ending of the small intestine and the sigmoid flexure, but the child continued to vomit, became weaker and weaker, and died the same evening.



FIG. 1.—Congenital deformity of the fingers.



# The Philadelphia Medical Journal

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**"The Atlantic Medical Weekly,"** a weekly journal heretofore published by the *Atlantic Medical Publishing Company*, of 117 Broad Street, Providence, R. I., discontinued publication with the issue of October 1, 1898. The entire subscription list with the good-will of the editor, Dr. F. T. Rogers, and of the publishers, has been turned over to the *Philadelphia Medical Publishing Company*, and subscribers to the *Atlantic Medical Weekly* who have paid for any time beyond October 1, 1898, will receive the *PHILADELPHIA MEDICAL JOURNAL* as an equivalent of the *Weekly* for the unexpired term. Should any such subscribers to the *Weekly* be already subscribers to the *JOURNAL*, the time of the unexpired subscription to the *Weekly* will be added to that of the *JOURNAL*, and our serial will be sent without further charge until the expiration of the combined periods. The *JOURNAL* of October 8 has already been sent to the addresses furnished us by Dr. Rogers. If any errors have been made, or if the arrangement is not understood by the subscribers to the *Weekly*, we request letters of inquiry to be addressed to the *PHILADELPHIA MEDICAL JOURNAL*, 1420 Chestnut Street, Philadelphia.

**Pilonidal Sinus.**—The occurrence of a suppurating sinus containing hair and located in the coccygeal region is by no means very uncommon. In some cases this sinus becomes clogged and an abscess forms. That the real cause of the suppuration is often not recognized is shown by the fact that cases often come to our clinics in which the sinus has been opened and packed, in some instances several times, without removing the little tuft or coil of hair which gives rise to the trouble. Probably a slight congenital dimple in which perspiration and filth accumulate, and an abundant hairy growth exist in most cases as predisposing causes. Strange to say, this condition is not mentioned in most textbooks on surgery, or even in the large systems of surgery and special works on diseases of the rectum, and when mentioned the names applied are for the most part inappropriate. Coccygeal fistula is incorrect, for it does not discharge the secretion of an organ; dermoid cyst is likewise incorrect, for it is not a congenital affair and is said never to occur until after puberty when the hairy growth in these parts is well developed; the French name, posterior umbilicus, has no descriptive value. The late R. M. Hodges, of the Massachusetts General Hospital, Boston, suggested the name pilonidal

sinus, which has also been adopted by Kelsey, and its derivation from *pilus*, a hair, and *nidus*, nest, seems to make it the best descriptive name. The most essential point, however, is that the condition be recognized and the hair, including its roots, thoroughly removed.

**Some of Our City Magistrates.**—Two prominent physicians of this city recently had occasion to make out a certificate of insanity for a patient who had just been sent to an asylum. The law of the State required that the certificate be made out before the close of the day. The physicians went to the nearest magistrate, the hour being about noon. They were told at his office that he had just stepped into an adjoining saloon. As they started for the saloon, the magistrate was seen to emerge and board a passing car, whereupon they were told that he was going down town and would not return that day. They then went to the next nearest magistrate, and were told at his office that he also was in a conveniently near-by saloon; but when they reached this magisterial retreat, they found that the puisne judge had departed. Not a whit discouraged, but necessarily delayed for a few hours, the physicians went to another magistrate, whose office is not a mile from the City Hall; there they were told that this particular magistrate's office-hours were ended for the day, it being now three o'clock, and he had gone for a well-earned rest. They then sought his nearest brother-in-the-law, and succeeded in intercepting this, the fourth, magistrate just as he too was about to depart for the day. With cigar in mouth and hat on head the dispenser of justice and insanity-certificates paused long enough to put his seal on the paper, and thus display the majesty of the law.

These occurrences—or non-occurrences—are of sufficient frequency in this city to be a source of vexation to busy practitioners who are obliged to sign certificates of insanity. The truth is, the city of Philadelphia has too many magistrates, and consequently these officials have too little to do to make it worth their while to stay in their offices to do it. Whether they are in or out their salaries continue. No central power or authority regulates and controls their attention to their duties. As they are handsomely paid, their offices in most instances are sinecures. Hence it is satisfactory to note that the public has shown a tendency of late years to scrutinize closely the candidates

for these positions, and to demand for these offices a type of men who, if elected, will not leave a notice at the magisterial bench that the judge can be found in a neighboring saloon. This smacks too much of frontier manners to be popular in Philadelphia.

**The one fact the Whitewashing Committee must explain,** is the disproportionate incidence of deaths from disease during the late war as compared with that during the War of the Rebellion. In the war of 35 years ago there were: Killed, 46,874; died of wounds, 39,715; died of disease, 172,907. Secretary Alger's figures for the Spanish war are: Killed, 280; died of wounds, 65; died of disease, 2,565. If we reduce these figures to percentages based on the best estimates of the numbers of soldiers participating, and place the figures side by side, we find:

Causes of Death.	Civil War.	Spanish War.
Killed.....	18 1.10%	9 6.10%
Died of wounds.....	15 3.10%	2 3.10%
Died of disease.....	66 6.10%	88 1.10%

In passing we may mention the striking fact of the proof of progress in surgery in the past third of a century revealed in the comparison of the deaths from wounds: In the Civil War, 15.3%; in the Spanish, 2.3%. Whatever other conditions may be urged in explanation, the truth will be sufficiently honorable to our profession as to the saving of life resulting from the progress in surgical science.

But when we proceed to the next item our pride would get a fall were it not for the very evident fact that the greater number of deaths from disease—25% greater than in the Civil War—is readily explainable by other factors than those that are purely professional. Possibly, progress in medical science has not resulted in quite so certain a lessening of the death-rate from disease as that from wounds. Surgery has made more definite progress than internal medicine, so far, at least, as relates to the diseases affecting an army during a single short campaign. But there can be no possible question that the general mortality from disease has been greatly and indubitably lessened in the last 33 years. If so, of course, the percentage-mortality from disease in the Spanish War should be decidedly lower than in the War of the Rebellion. Instead of this it has been decidedly higher. To explain this should be the *raison d'être* of the Investigating Commission. This is the crux of the entire discussion. Hardly a glimpse of this seems so far to have entered the minds either of witnesses or examiners. With the mere statement of this unwhitewashable 25%, the complainant, the medical profession, "rests its case." Explain us that right thoroughly and without equivocation, Honorable Sirs, and perhaps we may not urge too pitilessly distressing questions as to the further 25% decrease of mortality which would even then remain, although that also should be explained before our pro-

fessional conscience is quite satisfied or the insult to medicine can be quite forgiven.

**The Operative Treatment of Retroflexion of the Uterus.**—A recent monograph, entitled *Further Experience with the Operation for Retroflexion of the Uterus*, by Mackenrodt of Berlin, the originator of vaginal fixation of the uterus, will be read with interest by those engaged in gynecologic work. As is well known, Mackenrodt's experience, like that of most other operators, has led him to discard his operation as it was originally performed. He states, however, that the results of his operation, both in his own experience and in that of others, have been for the most part satisfactory, and he has always held to the belief that, were it not for the difficulties in childbirth which have sometimes followed its performance, it would be the operation of choice for retroflexion. As a substitute for his original operation Mackenrodt has devised a procedure, the principal feature of which is the shortening of the broad ligament and uterosacral ligament through the vagina. To accomplish this a bell-shaped denudation of the anterior wall of the vagina is made, the narrow end of the denudation being located over the prominence indicating the urethra, whilst the base of the bell includes the portio vaginalis, extending laterally into the vault of the vagina so as to expose the lateral ligaments. A stitch is then taken through the ligament close to the lateral border of the denudation, the suture is passed in front of the portio vaginalis and a stitch taken through the ligament of the opposite side. On drawing the ends of the suture the portio is pushed back and the ligaments of both sides approach each other in the median line in front of it. Two or three such stitches only are needed. The portio is then pushed back with forceps, a strong catgut suture is passed through the anterior wall of the uterus and fastened in the anterior portion of the vaginal wound, and the vaginal wound closed in the median line. The results of this operation are said to have been most gratifying, particularly in cases in which there was a tendency to prolapse. Vaginal fixation was not originally received with as much enthusiasm in this country as in certain parts of Europe, many of our leading gynecologists having obtained sufficiently satisfactory results from Kelly's method of ventrofixation or from Alexander's operation to make a change seem unnecessary. However, the ultimate conclusions with regard to a new procedure by so clever a surgeon as Mackenrodt will be received with consideration when they are reached.

**Another Phase of Hospital-abuse.**—We had last week an example of a phase of hospital-abuse that convinced us of the truth that when institutions are changed from their legitimate social uses and the aims of their founders and supporters, there are no



strange and morbid ends which they may not serve. The term hospital-abuse has generally been used to indicate the excessive use of hospitals by patients able to pay, the license whereby the community in its craze is debauched by medical communists to the degradation both of the profession and the people. From one evil another, even its opposite, is quickly begotten, and we now find a condition existing whereby the most worthy and the most needy are excluded. A poor girl had been thrown out of work by purulent conjunctivitis, and having no home, her physician tried to secure admission for her to some hospital. The progress of the disease threatened quick destruction of vision, and her sad plight compelled the physician to help her to get a permit either to some of the institutions to which she had already applied or to others. Several hours were lost in learning that many of these "charitable" institutions had made a rule absolutely excluding cases of "infectious" disease. "Does pus from an eye fly spontaneously through the air to other eyes?" "Is gonorrhea of the eye more contagious than gonorrhea of the urethra?" "No; but it costs too much for segregation and special nurses." "Well, but what are hospitals for?" Blank answer. A few more hours were wasted in learning at other hospitals that every ward was full, and every cot occupied with sick soldiers. "Ah, you are preparing victorious statistics and unanswerable arguments to lay before the legislative appropriation committee when it comes to dividing the State treasury surplus? Have the local poor and afflicted citizens no rights?" Answer again blank. The indignant physician then applied to the Poor House, much to the shame of the patient, who thought it a "disgrace," and he was told no admission could be granted except upon the order of the Ward-Physician. But this man was absent from home. As a last resort a trip was made to the Central Office of the Bureau of Charities and Correction, to find that, being Saturday, the offices were closed, and of course would not be open until Monday morning. A carriage was now hired, and the patient driven to a hospital which, being under Catholic direction, could not receive any State appropriations, and there at last the sufferer was received. The greater part of a day and several dollars had been spent in behalf of one for whom, if for any, one would suppose the doors of these so-called charitable institutions would be opened especially wide. We beg every legislator to demand State-control as the condition of State-aid to such institutions; we beg every contributor to the funds and every dancer at the "Charity Balls" to ask, "Will my servant, if dying, be admitted to your wards, or if she is suffering from sore eyes or from some other not violently contagious disease?" And it is time that all of us should ask concerning the true objects of hospitals, for whose benefit they are carried on, and by what rules and customs they are governed.

"Printers' Ink" Naturally Unsatisfied.—The proprietors of *Ripans* are in a somewhat vexed condition of mind as to their "Medical Press Flirtation," and propound the following questions:

1. What is a pharmaceutical concern?
2. What is a legitimate P. C.?
3. Are there any illegitimate P. C.'s?
4. What is the principal difference between the illegitimate and the legitimate P. C.?
5. What is meant by medical ethics?
6. Do all medical men have and make use of the same sort of ethics?
7. If not, why not?

The *American Medical Journalist* gave the following answers:

1. Technically, a firm of chemists who manufacture pharmaceutical preparations for physicians' prescriptions.
2. A firm manufacturing pharmaceutical products solely for professional use, and confining its advertising to the medical press.
3. Many.
4. One appeals to the laity through the secular press, offering remedies for self-medication, while the other caters solely to the physician.
5. Prof. Wm. H. Thompson, of New York, answered this question by saying: "Follow the golden rule, 'whatsoever ye would that men should do unto you, do ye even so to them.'"
6. All regular medical men are governed by the same code of ethics.
7. An open question.

Whereupon *Printers' Ink*, quoting the foregoing, proceeds to answer itself in this way:

1. Answer is O. K.
2. There are none [*sic*] such.
3. The answer should be: There are none [*sic*] other.
4. There are none [*sic*] who do not cater to the laity more or less.
5. The answer to this should be: "God only knows." No two medical men were ever found who entertained opinions on the subject that would coincide. Dr. Thompson hit it off pretty well, although had he said, "I don't know," he would have been more honest and just as much to the point.
6. To this answer should be added: But none know [*sic*] what it is or where to find it.
7. The answer to this is: Because a considerable percentage of them have some degree of honesty.

The catechism-maker and self-answerer, though wonderfully well-pleased with his very peculiar grammatical rules, is evidently not quite at ease with himself and his "sort of ethics," and has asked us for our replies. We have gathered several dictionaries, grammars and yellow journals, to aid us in deciphering the hieroglyphics, syntax, slang and morbid psychology of the propounder, and to the best of our ability and conscience write:

1. "A pharmaceutical concern" is concern, *i. e.*, "solicitude, or a disturbed state of feeling," about pharmaceutical things.
2. "P. C." we supposed at first might mean *Pullman Car*, but after mature study conclude it can only signify *Pecuniary Cuss*. *Legitimate*, the dictionaries tell us, denotes born within the bonds of wedlock.
3. There are doubtless many.
4. All "P. C.'s" are essentially alike.
5. All medical men and journalists know perfectly well the definition of medical ethics, a few pretend

they do not; but the "P. C.'s," poor fellows, really do not know.

6. Yes; and all "P. C.'s" a different, but still one "sort" of ethics.

7. Because of the "P. C.'s."

**Chaplain McIntyre's Defense.**—During the recent conflict with Spain we referred in these columns to the possibility that neurasthenia might be an occasional result of the shock and stress of war, but we scarcely anticipated that the subject would assume medico-legal importance. It seems to have done so, however, in the case of Chaplain McIntyre of the battleship *Oregon*. The chaplain has recently been on trial by court-martial in Denver for having, in a public lecture, spoken in a most disparaging way of some of the naval heroes in the great fight off Santiago. It seems most inappropriate that an officer, whose vessel had taken such an heroic and even romantic part in the great struggle, should have struck a discordant note in the general pæan that has greeted the victorious men-of-war.

In his defense, however, at the recent trial, Mr. McIntyre, according to the newspaper reports, gave a graphic account of the nervous strain to which he had been subjected, and rested his whole case on the state of his nerves. His testimony was intended to establish a plea of irresponsibility for his utterances. He told the story of the *Oregon's* wonderful trip around Cape Horn, of the terrible extremes of heat and cold passed through, of the nervous strain caused by the constant outlook for the enemy, of the excitement of the blockade, and, finally, of the great battle of July 3d, followed by his nervous collapse. When he went to Denver on leave in a weakened mental and physical state, he was importuned to deliver a lecture on the battle for the benefit of a Young Men's Christian Association. This he very unwisely undertook to do, and acting from a good motive, but apparently against his better judgment, he accepted a task for which he could make no adequate preparation. As the day approached he became irritable and unstrung, and on the fatal day itself, with probably a natural naval predilection, he fortified himself with several doses of quinin and brandy. After reaching the church he took an additional dose of 18 grains of quinin and one-half an ounce of brandy, and then was required to wait in the crowded auditorium for an hour before he was called to speak. With whirling brain he at last stood before his audience and uttered words of which, he says, probably with absolute truth, he had no recollection the next morning.

This defense is interesting from both the moral and the scientific standpoints. In the first place, no one probably will deny that the chaplain had unwittingly put himself in a state in which his utterances were likely to be of such a kind that they could not be recollected the next morning. Many men have done this, and repented at leisure. His story is credible, and he

is entitled to a charitable judgment for having failed, in his nervous state, to accurately measure his doses of quinin and brandy. The physiologic action of 18 grains of quinin and one-half an ounce of brandy, preceded by other doses of unmentioned quantities during the afternoon, would be disastrous in the case of most men suffering with well-marked neurasthenia. This neurosis, as is well known, impairs the power of concentrating the attention, and especially invalidates the judgment and the memory. A man so suffering is not fit to appear before a public audience in order to speak of events that demand the nicest balance of the mental faculties for their proper presentation.

As we intimated in a former number, the conditions of a war such as the United States has just waged with Spain, are highly favorable for the development of the neuroses of exhaustion. The voyage of the *Oregon*, with its physical discomforts and mental strain, was especially well adapted to cause a nervous breakdown in a highly susceptible person like Chaplain McIntyre. His unfortunate appearance on the Denver platform should have been prevented by his friends; and the fact that it was not prevented, but rather encouraged, is only an evidence that the general public is still lamentably ignorant of the risks to which a profound neurasthenia can subject its victim. As a medico-legal case this one of Chaplain McIntyre is of especial interest.

**The Relation of Eye-strain to Digestional Affections** was alluded to in an editorial from the *Ophthalmic Record* quoted in our last week's issue. There comes this week to our review-table a volume from a German workshop which furnishes a striking proof of the position of the *Record's* adventurous editorial writer. It is entitled, *Die Störungen des Verdauungsapparates als Ursache und Folge anderer Krankheiten, für practische Ärzte*, by Dr. Hans Herz, of Breslau. We shall leave it to our reviewer to estimate the value and thoroughness of the book in all other respects, and especially as to the non-existent index, and confine ourselves to a few words concerning the tiny chapter at the end of the 500 pages concerning the eye. The book discusses in detail the results of diseases of the digestive system upon all other organs and functions of the body, and also the effects of disease elsewhere upon the digestive system. As regards the eye and the digestive system, the erudition, science, and literary quality of Dr. Herz are exemplified and exhausted in two short and astounding sentences which American oculists, striving to imitate European habits, should have engraved, framed, and hung in their offices as the finished product of consummate *deutsche Wissenschaft*:

"*Die Magenthätigkeit bleibt by Augenleiden intakt.*"

"*Die Darmfunktion leidet bei Augenleiden gar nicht.*"

After this *gar nicht*, we suppose we should preserve a discreet and modest silence, and advise all refractionists to give up practice. And yet we find it quite impossi-



ble to do so, and are constrained to say that, in our opinion, and also in that of many excellent physicians, eye-strain is one of the most profound and frequent causes of digestional and assimilative diseases. No single cause is more active in the production of the denutritional troubles of the young than the very one which Dr. Herz says exists *gar nicht*. There are many general physicians of the highest professional standing who believe in reflex ocular neuroses, and who act upon their belief, and who have published plain statements of the grounds of their belief. There are scores of reputable physicians who cure sick-headaches, anorexia, nausea, constipation, etc., every day by the relief of eye-strain, and who have borne public witness of the fact. Neither they nor their articles are even mentioned in the *Literaturverzeichnis* of our Teutonic colleague. A German bibliography that omits all mention of hundreds of articles on the subject treated is one worthy of noting. There is an old story of "a lady" who had forgotten to return a borrowed domestic utensil (as she would have said), and who met the fact and her conscience with three propositions of logic: "Your kettle was cracked when I borrowed it; I returned it promptly; I never had your old kettle." The *Ophthalmic Record* hints that not a few American oculists are also trying to match the lady's logic in studiously ignoring the problems of refraction and the facts of eye-strain in their stated meetings. But Herz has added the needed fourth link of the logical chain in boldly stating that there are and never have been any kettles in the world—*gar nicht*!

There is, to be sure, some excuse for this ludicrous dogmatism, but the excuse consists in the still more ludicrous fact that glares at one from every line of the two or three pages of Dr. Herz on *Das Auge*—the fact, namely, that the author has not the faintest knowledge of the fact of eye-strain. He is as blissfully ignorant of it as he is of the humming-birds of the planet Mars. Among *Augenleiden*, astigmatism, hyperopia, anisometropia, and exophoria have never even been heard of by him. No far-away echo has ever reached the ears of the cocksure scientist of the land of Græfe and Helmholtz. We commend this astounding and, to our minds, most serious fact to the worthy writer of the *Ophthalmic Record's* editorial. It is such an unanswerable and frightful fact, that we are in the mental condition expressed by the incomparable poet:—

"There was an Old Man who said, 'How  
Shall I flee from this horrible cow?  
I will sit on this stile, and continue to smile,  
Which may soften the heart of that cow.'"

**The University and the Community.**—In England until recently the conception of a university was molded in the minds of most people by the contemplation of Oxford and Cambridge. To these places three classes of young men flocked; those who had

distinguished themselves as schoolboys and had obtained places on the foundations of the colleges; those who desired to obtain the *cachet* of a university degree before entering upon a professional career; and those whose position and future expectations precluded them from any necessity to work, but who went to Oxford or Cambridge as schools of polite manners. Not all the men who worked attained to any high position as scholars, for the tests at neither ancient seat of learning were severe; and not all the leisured young gentlemen became conspicuous for their good breeding, for noble lineage is not always a guarantee of decent behavior; yet, on the whole, Oxford and Cambridge discharged their liabilities to their alumnuses satisfactorily. But a utilitarian spirit has lately been abroad, with the consequence that many parents began to consider that the education at the ancient universities was not worth having from a practical point of view to business men. It was well that lads intending to be schoolmasters should be taught the things which they would later have to teach, but every young man was not going to be a schoolmaster; doctors and lawyers could get more valuable training in centers where law courts and hospitals offered a field for practical work, which the numbers of those who did not desire to do any work whatever sensibly declined. Several local universities have lately been formed in England as the outcome of this feeling, where the curriculum is distinctly more of a practical nature, where social position is not considered to be necessary to the student, and where the expenses of education are much more moderate than at Oxford and Cambridge. Another feature is present in these more recent seats of learning. They desire, especially through their medical faculties, to be of service to the community in which they are placed, a desire that was never manifested by their older predecessors. Oxford and Cambridge were for the world, but the university colleges of the Victoria University are for Liverpool, Manchester, and Birmingham, as the new university colleges of Wales are for the Welsh. IT IS THROUGH THE SERVICES RENDERED BY THE MEDICAL SCHOOLS of the universities to the big cities in which they are placed that this understanding between the community and the teaching center has been fostered. For example, the community supports the hospital, the professors of medicine give their gratuitous services in the wards, and the students, sons of the community, become medical men in the community. The bacteriologic laboratory is destined to become a still closer link between the city and the university. As it becomes more and more evident that the work of the bacteriologic expert can be of the greatest value in testing the food of a city, in keeping a high standard of purity in its water-supply, and in guaranteeing it against epidemic disease, so the cities have become more openhanded in their treatment of the universities, and have supplied them with funds to carry on their labors to mutual advantage.

In the United States as in Germany this feeling of interdependence between the university and the community which it serves has long been present, and in Scotland something of the same sort has been the rule always; but in England and Wales manifestations of this kind are very recent. The subject has been made the text of two introductory addresses delivered during the first week in October to reassembling medical schools. In one case Professor Michael Foster, professor of physiology in Cambridge University, was the speaker, and the students of Mason University College, Birmingham, his audience; and in the other, Professor Robert Saundby, professor of medicine in Mason University College, was the speaker, and his audience the students of University College, Cardiff. In the eyes of practical educationists the knitting together of the interests of the university and the community will bear great fruit in the shape of perfected technical education, and it is decidedly creditable to the medical schools of England that the teachers in their department should be the first to recognize this clearly.

**The Too Rare Exception.**—We desire to commend warmly the modesty and the courage of the ophthalmic surgeon of one of Philadelphia's hospitals whose name did not appear in the reports of the recent operation performed by him upon a distinguished patient. No doubt he used the same influences to have his name suppressed in this connection as do those who succeed in securing publicity in like instances. All honor, therefore, to the man who has demonstrated that professional dignity and professional ethics can be maintained.

**Removal of Half of a Bicornate Uterus.**—Branfoot (*Indian Med. Gaz.*, July, 1898) reports the case of a married woman, 28 years old, who had had four children and no abortion. For eight months she had suffered from severe pain in the lower abdomen, shooting along the right thigh, while menstruation was scanty and a circumscribed swelling was found occupying the hypogastric, umbilical and right iliac regions. Examination through the vagina showed the uterus to be enlarged, with a rounded tumor to the front and right side. On opening the abdomen the tumor was found to be the right of a double uterus, with a dilated tube and a cystic ovary. There was atresia of the right cervix and the uterus and oviduct were found distended with thick blood; the ovary was cystic. The right half of the uterus, with the tube and ovary, was removed, and uninterrupted recovery followed.

**Continuous Irrigation of the Uterus vs. Hysterectomy.**—H. Manseau (*Montreal Med. Jour.*, July, 1898) gives detailed reports of four cases and mentions three others in which he practised continuous irrigation of the uterus for acute puerperal septic metritis. Curetage and intrauterine douches were first tried, but the condition of the patients did not improve, and the cases were regarded of such gravity that many surgeons would have looked upon hysterectomy as a last resort. Boiled water was used at about the rate of from 8 to 10 gallons an hour, and the irrigations were continued from 3 to 11 days. It was found necessary to keep up the irrigation until such a time as the uterine cavity had undergone repair, to be sure that improvement had become permanent. In every case recovery was complete, and all but two patients, who were lost sight of, were known to have become subsequently pregnant.

## American News and Notes.

**Dr. John B. Schwatka**, of Baltimore, Md., has been nominated by the Democratic Party, as a candidate for Congress.

**Johns Hopkins University.**—Dr. Simon Flexner, heretofore associate professor of pathology, has been appointed professor of pathologic anatomy.

**The Garfield Hospital, Washington, D. C.**—A building for minor contagious diseases is now being erected, at an estimated expense of \$33,000.

**Providence Hospital, Washington, D. C.**—Estimates have been invited for the erection of a pavilion for minor contagious diseases. The appropriation for the construction of the building amounts to \$25,000; for equipment, \$5,000; and for maintenance, \$2,000.

**Medical Department of Tulane University of Louisiana.**—In consequence of quarantine, the opening of the next session is postponed from October 20th to November 10th. The regular lectures will commence November 28th, and the session will come to a close May 3, 1899.

**The Western Surgical and Gynecological Association** will meet in eighth annual session at Omaha, Neb., December 28th and 29th. The local committee of arrangements is preparing actively for the entertainment and comfort of those who attend. Titles of papers should be sent to the secretary, Dr. George H. Simmons, Lincoln, Neb., before November 20th.

**The State Hospital for the Insane at Norristown, Pa.**—The overcrowded condition of the State Hospital for the Insane was again brought to the attention of the trustees at their annual meeting on October 7th. Resident Physician Richardson reported that over 300 male patients are required to sleep in the corridors, there being no room for them in the sleeping apartments.

**The Louisiana State Board of Health has organized as follows:** President, Dr. Edmond Souchon, of New Orleans; vice-president, Dr. J. C. Egan, Shreveport; secretary, Dr. G. Farrar Patton; medical inspector, Dr. C. L. Horton; shipping-inspector, Dr. S. G. Gill; quarantine-inspector at Port Eads, Dr. John N. Thomas; quarantine-inspector at Rigolets, Dr. J. E. Doussan, and quarantine-inspector at the Atchafalaya, Dr. J. H. Douglas.

**Re Drs. Benson and Mettler.**—We have received the following self-explanatory letter from Dr. John A. Benson, of Chicago: "On inquiring into the arrangements existing between the Honorable the Dean of our Faculty and Dr. L. Harrison Mettler, relating to the filling of my hours, this winter, in the College of Physicians and Surgeons, I find that I have unintentionally placed Dr. Mettler in a false light, and I, therefore, would ask you to right the matter. I find that Dr. Quine—the Dean—authorized Dr. Mettler to use the title appertaining to my Chair for this Session. This is not to affect, in any way, my position in the Faculty. As I have a most profound regard for Dr. Mettler personally, and deep respect for his abilities as a physician and teacher of medicine, I trust that this explanation on my part will act as an *amende honorable*. The announcement on page 585 of your esteemed JOURNAL, as it appeared, was to me of such a startling character that it drew from me my previous communication to you."



**The Michigan State Board of Health**, after an existence of 25 years, demonstrates its efficiency in a recent reference to the vital statistics of the State. During this period the mortality from scarlet fever in the State has been reduced 75%. Equal success has been had with diphtheria. Whooping-cough and measles have been reduced about one-half, and typhoid and tuberculosis have been materially restricted. Malarial fevers have been almost banished, in consequence largely of improvements in drainage.

**Smallpox in Pennsylvania.**—Seven cases of smallpox—all confined to one family—have developed in Vincent Township, a short distance from Spring City, Chester County. The disease was brought from Ponce, Porto Rico, by two sons of the family, members of Battery C, U. S. Volunteers, of Phoenixville. The premises are under strict quarantine and no spread of the disease is anticipated. A case of smallpox was also recently reported from Bradford County. The patient made a good recovery and has been released from quarantine.

**Physicians' Club of Chicago.**—At a regular meeting held October 3d, the subject of the relations of the medical press and the medical profession was discussed as follows: "The Medical Press and Scientific Progress," Dr. Sanger Brown; "Relation of the Medical Press to the Public and Government," Dr. Archibald Church; "Ethics of the Medical Press," Dr. Jas. G. Kiernan; "Compensation of Medical Authors," Dr. H. N. Moyer; "The 'Reading Notice,'" Dr. J. H. Hollister; "The Medical Press as a Critic of Medical Literature," Dr. J. Homer Coulter.

**Woman's Medical College of Baltimore, Md.**—Dr. Joseph T. Smith has been elected dean of the faculty, to succeed Dr. E. F. Cordell, resigned; Dr. Kemp Batchelor has been appointed professor of physiology, to succeed Dr. G. Milton Linthicum, resigned; Dr. Charles H. Rutledge has been appointed professor of obstetrics, to succeed Dr. T. A. Ashby, resigned; Dr. Louis Hamberger has been appointed professor of bacteriology, to succeed Dr. John Ruhräh, resigned; Mr. Ralph Robinson has been appointed professor of medical jurisprudence, vice Mr. John L. G. Lee, resigned.

**Obituary.**—DR. DANIEL B. CONRAD, Winchester, Va., September 20th, aged 68 years.—DR. RICHARD DINGEE, Newportville, Pa., October 5th, aged 70 years.—DR. JAMES L. ORD, of Washington, D. C., at Hagerstown, Md., October 4th, aged 75 years.—DR. CLAUDIUS H. MASTIN, Mobile, Ala., October 3d, aged 72 years.—DR. W. E. FOWLKES, Owensboro, Ky., September 25th, aged 50 years.—DR. JOHN R. CHAPPELL, Petersburg, Va., September 26th, aged 70 years.—DR. THOMAS R. CLEMENT, Osterville, Mass., September 24th, aged 75 years.—DR. THOMAS SNODGRASS, Crossville, Tenn., September 22d, aged 76 years.

**The Department of Health of Washington, D. C.**—According to the *Maryland Medical Journal*, Dr. Woodward, the District Health-Officer, has submitted to the Commissioners his estimate for appropriation, the sum being placed at \$160,540. He asks for an increase in the department force, consisting of a chief inspector and deputy health-officer, an engineer for the smallpox-hospital, a sanitary and food inspector to assist the chemist, and one who shall be also a veterinary surgeon. He also asks for \$25,000 for the enforcement of the act to prevent the spread of contagious diseases, \$5,000 for maintaining a disinfecting service, \$2,000 for the gratuitous vaccination of indigent persons, and \$5,000 for the establishment and maintenance of a bacteriologic laboratory.

**Virginia Medical Society.**—At the recent annual meeting, the following were elected officers: Dr. Jacob Micheaux, of Richmond, president; Dr. B. M. Atkinson, of Staunton, first vice-president; Dr. E. C. Levy, of Richmond, second vice-president; Dr. E. T. Brady, of Abingdon, third vice-president; Dr. L. Lankford, of Norfolk, orator; Dr. L. B. Edwards, of Richmond, recording secretary; Dr. J. F. Wynn, of Richmond, corresponding secretary; Dr. R. T. Styll, of Petersburg, treasurer; Dr. Hunter McGuire, of Richmond, chairman executive committee; Dr. W. D. Turner, of Ferguson's Wharf, chairman membership committee.

**Bargain-Counter Surgery.**—A respected correspondent, Dr. A. H. Cordier, of Kansas City, writes us as follows: Please accept my compliments and hearty endorsement of the sentiment expressed in your editorial October 1st on "Commissions to the General Physician by the Specialist for Reference-Cases." This practice is becoming only too prevalent, and is a very expensive one as regards human life. Especially is this true in abdominal surgery. As a rule the mortality is in proportion to the price paid for the case; in other words, the less the "bidder" knows about the case the higher his price and his mortality. "Bargain-Counter Surgery" is never worth the price paid for it.

**The yellow fever situation** in the South, more especially in Mississippi recently, is assuming grave proportions. The area of the fever has so enlarged that infection may be said to be general throughout the State named, as there is not a section that has not been visited. Three interstate railroads have practically suspended business, and several short lines are on the verge of a temporary shut-down, due to lack of trade. Twenty thousand or more people have hurriedly left the State and are now refugees in Northern cities, eagerly awaiting the approach of cold weather. The disease continues to increase steadily in Jackson, the State capital. Since September 27th there have been 44 cases, of which 24 were negroes. Only 5 deaths have been reported since the beginning.

**Precautions Against Yellow Fever.**—The Pennsylvania State Board of Health has issued a valuable and timely pamphlet (No. 5), entitled: "Precautions Against Yellow Fever." It considers in detail the following topics: The nature of the disease; the sources of infection and danger; the symptoms and diagnosis; the precautions to be taken in advance; emergency-hospitals; the precautions to be taken by the physician; the precautions to be taken by health-authorities; the precautions in the sick-room; the precautions in regard to burial; disinfection of premises and effects after recovery or death; standard disinfecting solutions recommended by the State Board of Health; the disinfection of discharges from the patient, clothing, towels, napkins, bedding, water-closets, urinals, sinks, cesspools, and the sick-chamber.

**The War Department Investigating Committee** has submitted quite an array of questions to the various bureaus of the Department. The Medical Bureau is asked to answer seventeen different interrogations. Among the most important of these is one asking, "What steps were taken between April 1st and August 31, 1898, for fully supplying an army of 250,000 men with all necessary surgeons, stewards, hospital-corps, ambulances, litters, surgical instruments, and medical supplies of all and every character?" Another asks, "How many hospitals were established at various camps; what were the arrangements for the care and comfort of the sick and wounded; how many sick were cared for at each camp

hospital and how many deaths occurred?" A third asks "How many hospital-ships were obtained; how were they equipped, how managed; what work did they perform, and how were the sick and wounded in the captured Spanish colonies supplied with food and medical attendance?" A fourth question asks how the surgeons employed in the field, camps and general hospitals were selected—were they required to pass any regular examination and have they proved efficient and faithful?

**Health Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending October 8, 1898.

## SMALLPOX—UNITED STATES.

		CASES. Reported present.	DEATHS.
ALABAMA:	Aug. 1-Sept. 29 . . .	50	
Cedarville . . . . .			
MICHIGAN:	Sept. 24-Oct. 1 . . .	5	
Detroit . . . . .			
MISSISSIPPI:	Sept. 28 . . . . .	3	
Conway . . . . .			

## SMALLPOX—FOREIGN.

BELGIUM:	Sept. 3-10 . . . . .	1	1
Antwerp . . . . .			
Ghent . . . . .	Sept. 10-17 . . . . .	1	1
ENGLAND:	Sept. 10-17 . . . . .	5	
Southampton . . . . .			
INDIA:	Aug. 20-27 . . . . .		1
Calcutta . . . . .	Aug. 27-Sept. 2 . . .		1
Madras . . . . .			
JAPAN:	Aug. 17-Sept. 11 . . .	53	16
Awamori Ken . . . . .			
RUSSIA:	Sept. 3-10 . . . . .	2	
Moscow . . . . .	Sept. 10-17 . . . . .	3	
Odessa . . . . .	Sept. 3-10 . . . . .	10	
Warsaw . . . . .			

## YELLOW FEVER—UNITED STATES.

LOUISIANA:	Oct. 6 . . . . .	1	
Bowie . . . . .	Oct. 6 . . . . .	1	1
Delogny . . . . .	Total to Oct. 6 . . .	375	7
Franklin . . . . .	Total to Oct. 6 . . .	100	11
Taylor . . . . .		79	4
Orwood . . . . .	" " . . . . .	2	
Waterford . . . . .	" " . . . . .	41	4
Jackson . . . . .	" " . . . . .	52	6
Oxford . . . . .	" " . . . . .	6	
Edwards . . . . .	" " . . . . .	10	
Water Valley . . . . .	" " . . . . .	12	4
Harriston . . . . .	" " . . . . .	1	
Fayette . . . . .	" " . . . . .	3	1
Madison . . . . .	" " . . . . .	1	1
Port Gibson . . . . .	" " . . . . .	1	
Woodville . . . . .	" " . . . . .	1	
Clinton . . . . .	" " . . . . .	3	
Starkville . . . . .	" " . . . . .	2	
Hermanville . . . . .			

## YELLOW FEVER—FOREIGN.

MEXICO:	Aug. 18-25 . . . . .	12	
Tampico . . . . .			

## CHOLERA.

INDIA:	Aug. 13-20 . . . . .	1	
Calcutta . . . . .	Aug. 20-27 . . . . .	4	
Madras . . . . .	Aug. 27-Sept. 2 . . .	63	
JAPAN:	Aug. 17-Sept. 11 . . .	7	4
Tokio Fu . . . . .	Aug. 17-Sept. 11 . . .	1	
Awamori Ken . . . . .	Aug. 17-Sept. 11 . . .	3	2
Fukushima Ken . . . . .	Aug. 17-Sept. 11 . . .	4	3
Kanagawa Ken . . . . .			

## PLAGUE.

INDIA:	Aug. 20-27 . . . . .	4	
Calcutta . . . . .			

**Litigation Due to Yellow Fever.**—An interesting suit, in view of the prevalence of yellow fever in New Orleans, was filed October 4th by the French Navigation Company, which owns the steamship *Britannia*. The vessel arrived some time ago at the mouth of the Mississippi River with 408 Italian immigrants. Believing the landing of these strangers in the city might provide fresh material for the

fever, and thus seriously endanger public health, the New Orleans Board of Health issued an order holding the ship at the mouth of the river. The company sues for relief, saying the ship has a clean bill of health, and that the Board of Health is acting by virtue of a State law that is unconstitutional, in view of the fact that Congress alone has the right to regulate foreign commerce. Damages are asked of the officers of the Board of Health.

**A Unique Monstrosity.**—Through the kindness of Dr. Allen Burdick, of Dorechester, Mass., we are able to present our readers with the photograph of a boy now on exhibition in the United States, who presents a remarkable teratologic peculiarity. The boy, Francisco Lentini, 13 years old, was born in Naples, Italy. The unique feature of the case is that the third leg is well developed and nourished, and the



muscular control is perfect, the movements being under the control of the will, and independent. The leg is freely movable at the hip, but there is partial ankylosis of the knee. The attachment to the pelvis is posteriorly on the right side, the normal position being that shown in the photograph. What is apparently a rudimentary foot is seen in front of and slightly below the knee.

**Syphilis and Divorce.**—There are two recent decisions on this subject that should be noted. In the case of Smith vs. Smith, the Supreme Judicial Court of Massachusetts held that when a wife ascertains, within a short time after the performance of the marriage ceremony, and before the coronation of the marriage, that her husband has syphilis



which has advanced to such a stage as to be probably incurable, whether he acquired it through unchastity or has become constitutionally affected with the disease from his birth, she is entitled, after refusing to consummate the marriage, to have it annulled. Few, if any, says the Court, would be bold enough to say that it was her duty, on discovery of the fraud, before consummation of the marriage, to give herself up as a sacrifice, and to become a party to the transmission of such a disease to her posterity. There are reasons why a fraud of this character, discovered before the consummation of the marriage, and at once made a ground for separation, should move the Court more strongly in favor of the wife than if the discovery had come later. And the Court takes particular pains to state that it does not intimate that the concealed existence of venereal disease in one of the parties to a marriage will ordinarily be a sufficient ground for a decree of nullity. In most cases, presumably, it significantly remarks, the disease is curable. The other decision referred to is one of the Supreme Court of Pennsylvania, rendered July 21, 1898, in the case of *McMahan vs. McMahan*. Here was the case of a young woman, whose innocence was not at all impeached, having been infected with syphilis by her lover (who subsequently became her husband) during the period of his courtship, probably by kissing her frequently, and after marriage having been kept constantly in a diseased condition from the same source, until she had passed into the secondary condition of the disease, and had approached on the tertiary stage thereof, having endured for upward of five years the constant presence of one of the vilest, most shocking, and dangerous diseases with which the human body can be afflicted. Is such a person legally bound to remain in such relation with her husband during the whole of her subsequent life, and has she no redress whatever, in the way of divorce? asks the Court. But it says that, in its opinion, to state this question is to answer it. It says that it does not see how it is possible to imagine a more direct and palpable case of cruelty to a wife by her husband than this, and that it comes within, not only the spirit, but the very letter of the Pennsylvania statute which allows divorce "when any husband shall have by cruel and barbarous treatment endangered his wife's life, or offered such indignities to her person as to render her condition intolerable and life burdensome, and thereby force her to withdraw from his house and family." It is of no consequence, continues this Court, that inoculation occurred before marriage. It is the continuation and constant presence of the disease after marriage, making her condition intolerable, and endangering her health and life, that entitles her to a divorce. —[*Jour. Amer. Med. Assoc.*]

**Tri-County Medical Association of Warren, Sussex, and Morris Counties, N. J.**—About 40 physicians met on Tuesday, October 11th, at Hackettstown, N. J., for the purpose of organizing a Tri-County Medical Society, of Warren, Sussex, and Morris Counties. Dr. John S. Cook, of Warren, was elected president; Dr. E. Morrison, of Sussex, first vice-president, and Dr. Levi Farrow, second vice-president; Dr. C. B. Smith, secretary, Dr. F. W. Flaggs, treasurer, Dr. Henriques, reporter. After adopting the by-laws, a paper was read by Dr. P. A. HARRIS, of Paterson, on "The Troubles of the Obstetrician," followed by another by Dr. H. A. HENRIQUES, of Morristown, on the "Diagnosis and Treatment of Appendicitis." Both papers were discussed by Drs. Ryerson, Johnson, Van Syckle, Foster, and Miller. The first annual meeting will be held at Washington, N. J., the second Tuesday in October, 1899. There were present at this inaugural meeting Drs. Chas. McIntyre, of

Easton, Pa.; W. B. Johnson, Paterson; Dr. Service, of Hunterdon, Dr. E. B. Evans, Superintendent of New Jersey State Hospital, of Morris Plains. The society promises to become a successful one.

**The moral standard of the medical schools of Denver, Colorado,** must be at a rather low ebb, if we may judge from the statements in the *Colorado Medical Journal*. It seems that competition is so rife that ". . . students will be taken for what fees they can pay, without regard to the full payment of the ridiculously low tuition-fee that each of the two schools now advertise." . . . "Why rush around and beg every nurse, every registered or graduated pharmacist, every street-car conductor, every midwife to enter the schools and graduate as physicians, to come into actual competition with men of more learning and better schools?" It is said that one of the two schools passed the following at a recent meeting of the faculty:

"Resolved, That it is the sense of this Faculty that every student entering this school be required to pay the full fees as advertised."

**New York State Medical Association.**—The following is the scientific program of the fifteenth annual meeting to be held in New York City, October 18th, 19th, and 20th:

Conservative Surgery in Crushing Injuries, J. G. Hunt; On the Teaching of Physiology and Hygiene in the Public Schools, Frank Overton; A New Method of Amputation at the Knee-Joint, Applicable to Cases of Senile Gangrene of the Foot, Stephen Smith; Dental Pathology in Its Relationship to General Health, Dwight L. Hubbard; Subnormal Temperature, Leroy J. Brooks; Urethral Stricture, John W. S. Gouley; Convalescence Shoe for Club-Foot Cases, S. E. Milliken; State-Examinations of Milk for Tuberculosis, Florence O. Donohue; The Treatment of Cases of Pulmonary Tuberculosis that Cannot go Away from Home, DeLancey Rochester; Treatment of Tuberculous Peritonitis, with Report of Cases, Zera J. Lusk; Some Observations of General Interest Regarding the Course and Management of Cataract, J. H. Woodward; The Differential Diagnosis and Treatment of the Commoner Forms of Insanity, J. J. Kindred; Genital Neuralgia and the Genito Reflex Pains, E. P. Hammond; Memoranda, H. D. Didama; A Case of Fistulous Opening Between the Ileum and Bladder: Operation: Cure: Remarks, H. O. Marcy; Tuberculosis of the Middle Ear, Seymour Oppenheimer; Lantern-Slide Exhibition Relating to Prostatic Disease, Samuel Alexander; Anthropologic Rambles in the Orient, Especially the Island of Java, Profusely Illustrated by Stereopticon Views, H. Ernest Schmid; True and False Medical and Other Charities, Wickes Washburn; Acute Frontal Sinusitis, Henry L. Swain; Some Thoughts on the Rational Treatment of Disease, Chauncey P. Biggs; Medicine without Drugs, Solomon Solis-Cohen; Drugs versus Cardiac Insufficiency, O. T. Osborn; A Case of Attempted Obliteration of the Deformity in Pott's Disease, Charles Alling Tuttle; Treatment of Fractured Patella by Open Operation, Charles Phelps; Notes on Neuralgic Affections of the Head, Gustavus Eliot; Discussion on Intestinal Obstruction, to be opened by Parker Syms; The Causes of Acute Intestinal Obstruction, with a Description of Their Mechanism, E. D. Ferguson; The Causes of Chronic Intestinal Obstruction, with a Description of Their Mechanism, George D. Stewart; Intestinal Obstruction Due to Impaction of Feces, Gallstones, Foreign Bodies, etc., J. W. S. Gouley; The Diagnosis and Indications for Treatment of Acute Intestinal Obstruction, J. D. Rushmore; The Diagnosis and Indications for Treatment of Chronic Intestinal Obstruction, Leroy J. Brooks; Intestinal Obstruction Due to Intussusception and Volvulus, John F. Erdmann; The Technic of Operative Treatment of Intestinal Obstruction, F. H. Wiggin; A Plea for the More Frequent Digital Exploration of the Uterine Cavity and Histologic Study of Uterine Scrapings as an Aid to the Diagnosis of Diseases of the Uterus, with the Report of Two Cases, William E. Swann; The Use of Catgut-sutures in Ventrofixation of the Uterus, Joseph E. Janvrin; The Pneumogastric Nerve in the Production of



Stomach-disease, Julius Pohlman; The Passing of Alcohol, J. M. Farrington; The Operative Cure of Inguinal Hernia in Men, E. D. Ferguson; Dermoid Cysts of the Ovary, Crawford E. Fritts; Eye-lesions in some Diseases of the Kidney, H. S. Oppenheimer; A Case of Extra-uterine Pregnancy Operated on at Full Term, Ely Van de Warker; What to do to be Saved, being the conclusion of the Inquiry into the Abuse of Medical Charity, Thomas J. Hillis; The Coccyx, J. E. Walker; Appendicitis from the Standpoint of the General Practitioner, Samuel E. Milliken; Insanity Following Surgical Operations, William D. Granger; Account of the Life and Services of Frank G. Seaman, M.D., Elias Lester; Technic in the Use of Saline Infusions, Thomas F. Reilly; Ancient and Modern Animal Products Used as Medicines, T. J. Acker; Senility, F. W. Higgins; Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the Year ending October 1, 1898, E. H. Squibb.

**Chicago Medical Society.**—At a meeting held October 5th, DR. H. M. THOMAS presented a case of **aneurysm** of the ascending arch of the aorta, in which there was enormous distention of the veins of the right side of the chest and abdomen, producing an exquisite caput medusæ. DR. GEO. W. WEBSTER, in discussing the differential diagnosis, stated that veins distended to this extent usually speak for tumor rather than aneurysm, and showed by means of a specimen that the fibrin in aneurysm can act as a slight tumor.

DR. I. A. ABT presented a case of **rickets** with skiagrams. The patient was 3 feet 5 inches tall. The epiphyses were very large and prominent; the humerus was short, measuring only 5 inches. The pelvis was tilted forward and there was extreme lumbar lordosis. The coccyx was deflected anteriorly and made a right angle with the rectum. A study of the skiagram showed the radius to be abnormal, the upper epiphysis small, the lower epiphysis of abnormal shape and poorly developed. The ulna was similarly deformed, the carpal bones were small, irregular and abnormal in shape and separated from one another by great spaces. The pisiform is rudimentary. The femur showed an absence of its normal contour. In place of the rounded inner tuberosity an acute angle was presented. At the lower end of the bone a dark shading occurred, indicative of loops of blood-vessels which were present in excess. The neck of the femur was more nearly at right angles than normal. The tibia and fibula were curved, slender, and irregular in shape. An examination of the skiagram of the pelvis showed it to be tilted forward. The acetabulum was shallow. The space between the pubic rami was greater than normal. Owing to the forward tilting of the pelvis and to the fact that the sacrum was directed horizontally backward only a small portion of the sacrum and a shadow of the coccyx was visible in the picture. The lumbar vertebræ seemed cancellous and were wedge-shaped. The intervertebral spaces were abnormal and large. The clavicle was grotesquely curved. The humerus was short and appeared twisted; its lower end was greatly developed and showed sharp edges.

DR. CARL BECK reported a case of **total blepharoplasty** in a young girl who had been exhibited to the Society last spring. The deformity was probably due to congenital syphilis. Dr. Beck reported also a case of correction of syphilitic ulceration of the nose by partial rhinoplasty; one of partial rhinoplasty for gangrene following severe diffuse facial erysipelas. He demonstrated a case of arthroplasty of the first joint of the index-finger for ankylosis. After resecting part of the joint Dr. Beck brought a part of the capsule from either side over to the opposite side, so as to prevent adhesions of a bony nature and thereby preserve the functional use of the joint. He finally spoke of specimens and experimental work in resection of the liver in which he used

bone-chips to sustain the suture after resection of the liver and to prevent the suture from cutting the liver. In the case of larger animals he included a strip of fasciæ for the same purpose.

DR. W. H. DAVENPORT reported a case of **artificial self-retaining maxillary arch and floating palate**.

DR. BECK exhibited a method of cutting the skin obliquely in the removal of keloids from the skin, with favorable results thus far.

DR. C. L. LOCKWOOD reported a case of **union of old fracture by percussion-irritation**.

DR. G. W. JOHNSON reported five cases of **congenita with acquired hernia**.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Leave for fifteen days is granted Lieutenant-Colonel JOHN VAN R. HOFF, chief surgeon, on account of sickness. Sept. 28.

Major LOUIS BRECHEMIN, surgeon, is relieved from duty at Chickamauga Park, and will report to the Surgeon-General of the Army for assignment to duty.

Major CLAYTON PARKHILL, chief surgeon, is honorably discharged, to take effect Sept. 30.

Major JOHN M. G. WOODBURY, chief surgeon, is detailed as a member of the board of officers appointed Sept. 7, to meet at the Army Building, New York City, to make regulations for the government of troops on transports.

Lieutenant-Colonel WILLIAM D. WOLVERTON, D. S. G., chief surgeon, Department of the Columbia, will proceed from Vancouver Barracks to Seattle, Wash., on official business pertaining to the location of a hospital to be constructed at that place.

Lieutenant-Colonel LOUIS M. MAUS, chief surgeon, Jacksonville, Fla., will report in person to the Surgeon-General of the Army on business pertaining to the Medical Department.

Major W. FITZHUGH CARTER, surgeon, is relieved from duty with the 4th Army Corps, and will report to Major-General Fitzhugh Lee, commanding the 7th Army Corps, Jacksonville, Fla., for duty.

Major CHARLES T. NEWKIRK, brigade surgeon, will proceed to his home and wait orders.

S. O. 214, Sept. 10, is amended so as to direct Major ADRIAN S. POLHEMUS, brigade surgeon, to proceed to Camp Poland, Knoxville, Tenn., for duty.

Leave granted Major PHILIP G. WALES, brigade surgeon, is extended one month on surgeon's certificate of disability.

Leave for two months on account of sickness is granted Captain GEORGE M. WELLS, asst. surgeon. Sept. 29.

First Lieutenant D. C. HOWARD is designated, temporarily, to examine volunteer soldiers for discharge without furloughs.

Major LOUIS BRECHEMIN, surgeon, will proceed to Ponce, Porto Rico for duty.

First Lieutenant POWELL C. FAUNTLEROY, asst. surgeon, Staunton, Va., having relinquished the unexpired portion of his sick-leave, will report at the Josiah Simpson U. S. General Hospital, Fort Monroe, for duty.

First Lieutenants JAMES M. KENNEDY and GUY C. M. GODFREY, asst. surgeons, will report Oct. 10 at the Army Medical Museum, this city, for examination as to their fitness for promotion.

The following named acting asst. surgeons will proceed to the places specified for duty: GEO. S. CHAINS to Jacksonville, Fla.; HYMAN FINKLESTONE to Camp Poland, Knoxville, Tenn.

Acting Asst. Surgeon M. BRANDENBURG is relieved from duty at camp at Ardmore, I. T., and will proceed to Fort McIntosh, Tex., for duty.

Colonel CHARLES R. GREENLEAF, A. S. G., chief surgeon, army in the field, will proceed to Jacksonville, Fla., and to such other places as may be necessary, for the purpose of inspecting the medical department of the regiments at that and other camps; and to instruct the regimental medical officers regarding the equipment of regimental hospitals, as directed in G. O. 151, Sept. 22, this office.

Major RUDOLPH G. EGBERT, surgeon, will report in person to the Surgeon-General of the Army for orders.

Major JUNIUS L. POWELL, surgeon, is relieved from duty at Camp Wikoff, and will proceed to Camp Meade, Pa.

Major WILLIAM C. BORDEN, brigade surgeon, is relieved from further duty at the U. S. General Hospital, Key West, and from duty at Camp Wikoff, and will proceed to New York City and report to the chief mustering officer there for duty.

Captain HENRY D. SNYDER, on duty at Fort Ethan Allen, will report to the chief mustering officer for the State of Vermont at Burlington, for duty pertaining to the muster-out of Vermont volunteers.

First Lieutenant ALBERT E. TRUBY, asst. surgeon, is relieved from duty at the U. S. General Hospital, Fort Myer, and will report to the commanding officer 8th Inf., at Huntsville, Ala., for duty; and Acting Asst. Surgeon JOSEPH A. TABOR will be relieved from duty with the 8th Inf. upon the arrival of Lieutenant TRUBY,



and will then proceed to his home, New Orleans, La., for annulment of his contract.

Acting Asst. Surgeon STEPHEN M. GONZALES will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon JOHN D. THOMAS is relieved from duty at Charleston, S. C., and will proceed to Jacksonville, Fla., for duty.

Major GEORGE E. BUSHNELL, chief surgeon, will proceed to Fauquier, White Sulphur Springs, near Warrenton, Va., for the purpose of inspecting certain property at that place.

Acting Asst. Surgeon WILLIAM M. TERRIBERRY will proceed to Jacksonville, Fla., for duty.

Lieutenant-Colonel VALERY HAVARD, chief surgeon, on duty in the Department of Santiago, will report in person to the Surgeon-General of the Army, on business pertaining to the Medical Department.

Major CALVIN DE WITT, surgeon, will repair to this city on official business connected with the Medical Department.

Major ROBERT J. GIBSON, surgeon, Fort Meade, will accompany the 8th Cavalry to Huntsville, Ala., and remain on duty with that regiment until further orders.

Par. 17, S. O. 214, Sept. 10, this office, is revoked, and Major WM. C. GORGAS, surgeon, will report in person to the Surgeon-General of the Army for orders.

Major HENRY S. KILBOURNE, surgeon, will rejoin his proper station, Madison Barracks.

Major IRA C. BROWN, brigade surgeon, will report in person to the Surgeon-General of the Army on official business connected with the Medical Department.

Major EDWARD C. CARTER, brigade surgeon, is relieved from duty at the Leiter U. S. General Hospital, Chickamauga, and will report in person to the Surgeon-General of the Army for instructions.

Major GEORGE W. CRILE, brigade surgeon, will proceed to Fort Sheridan for duty pertaining to the muster-out of the 1st Ill. Vol. Cav.

Major CALVIN H. ENGLISH, brigade surgeon, is honorably discharged. Oct. 3.

Major ELMER E. HEG, brigade surgeon, will proceed to Omaha, Neb., for duty pertaining to the muster-out of the 2d Neb. Vols.

Major MILO B. WARD, brigade surgeon, is honorably discharged. Oct. 3.

Captain GEORGE J. NEWGARDEN, asst. surgeon, is relieved from further duty at Fort Yates, and will proceed to Fort Monroe for duty in the Josiah Simpson General Hospital.

Leave for one month and fifteen days, from about Nov. 7, is granted Captain HENRY D. SNYDER, asst. surgeon. Oct. 3.

Leave for one month on surgeon's certificate of disability is granted Acting Asst. Surgeon PETER W. BECKMAN.

Acting Asst. Surgeon FRANK G. JONES will proceed to Anniston, Ala., for duty.

Acting Asst. Surgeon FREDERICK R. DOLSON is relieved from duty at Fort St. Philip, and will proceed to Jacksonville, Fla., and report to the commanding general 7th Army Corps for duty.

Leave on account of sickness, to include Oct. 20, is granted Acting Asst. Surgeon GEORGE I. MACLEOD. Oct. 3.

Acting Asst. Surgeon CHAUNCEY T. SCUDDER will proceed to Huntsville, Ala., for duty.

Acting Asst. Surgeon CHARLES S. STERN is relieved from duty at Chickamauga Park, and will proceed to New York City for transportation, on steamer sailing Oct. 5, for Ponce, Porto Rico, for duty.

Acting Asst. Surgeon CHARLES I. WOOLFORD will proceed to Anniston, Ala., for duty.

Major FRANCIS J. IVES, brigade surgeon, will repair to this city upon the expiration of his present leave, and report to the Surgeon-General of the Army.

Colonel WILLIAM H. FORWOOD will proceed to Fort Monroe on business connected with the Medical Department of the Army.

Leave for one month on surgeon's certificate of disability is granted Major JAMES M. JENNE, chief surgeon. Oct. 4.

Major JOHN E. WOODBRIDGE, brigade surgeon, is relieved from duty at the U. S. General Hospital, Fort Myer, and will proceed to Middletown for duty.

Acting Asst. Surgeon WILLIAM ALDEN will proceed from Portland, Me., to Middletown, Pa., for duty.

Acting Asst. Surgeon JAMES T. ARWINE is relieved from duty at Camp Wikoff, and will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon PEMBERTON LUNDY will proceed from Buffalo, N. Y., to Anniston, Ala., for duty.

Acting Asst. Surgeon JOSEPH A. TABOR will proceed to New Orleans, and report to the Surgeon-General of the Army.

Acting Asst. Surgeon JOHN A. TONNER will proceed from Jefferson Barracks to New York City, and report for annulment of his contract to Colonel CHARLES C. BYRNE, A. S. G.

First Lieutenant D. C. HOWARD, asst. surgeon, is designated, temporarily, to examine volunteer soldiers referred to him by the chief mustering officer, State of New York, for discharge without furloughs.

Lieutenant-Colonel BENJAMIN F. POPE, chief surgeon, will return to Columbus Barracks on the expiration of his present leave, and resume his duties.

Major LEONARD B. ALMY, chief surgeon, is honorably discharged. Oct. 5.

Leave granted Major CHARLES B. EWING, brigade surgeon, is extended one month on account of sickness. Oct. 5.

Acting Asst. Surgeons HENRY BAK and BAEN STREET, having com-

pleted the duty upon which they were ordered to Plattsburg Barracks, will return to their proper stations.

Leave granted Acting Asst. Surgeon FRANK W. JAY is extended one month on account of sickness. Oct. 5.

Leave granted Captain CHARLES F. KIEFFER, asst. surgeon, is extended one month on account of sickness. Oct. 5.

Captain GEORGE J. NEWGARDEN, asst. surgeon, is relieved from duty at the Josiah Simpson General Hospital, Fort Monroe, and will report at Fort Adams for duty.

Leave granted Captain ALLEN M. SMITH, asst. surgeon, is extended two months on surgeon's certificate of disability. Oct. 5.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon D. G. BEEBE, from Naval Hospital, Philadelphia, to the "Buffalo."

Asst. Surgeon D. H. MORGAN, from the "Franklin" to the "Celtic."

Surgeon F. W. F. WIEBER, from the "Miantonomah" to home and wait orders.

Asst. Surgeon G. L. ANGENY, to Naval Hospital, Boston.

Asst. Surgeon M. S. ELLIOTT, from the "Oregon" to the "Texas."

Asst. Surgeon M. H. HAAS, from the "Texas" to the "Oregon."

Asst. Surgeon R. E. EDES, from the "Celtic" to home.

Surgeon O. DIEHL, from the "Terror" to home and wait orders.

Surgeon J. D. GATEWOOD, from the "Puritan" to home and wait orders.

Asst. Surgeon F. B. HANCOCK, from the "Puritan" to the Navy Yard, Norfolk.

Surgeon N. M. FEREBEE, to Washington, Oct. 10, for examination for promotion; to home and wait orders.

Asst. Surgeon W. M. GARTON, to additional duty at Navy Hospital, Brooklyn.

Asst. Surgeon WM. BELL, to Naval Hospital, Philadelphia.

Passed Asst. Surgeon J. F. LEYS, from Navy Yard, Boston, to the "Essex."

Surgeon J. M. EDGAR, to the "Richmond."

Passed Asst. Surgeon S. G. EVANS, from the "Katahdin" to home.

The following are honorably discharged: Passed Asst. Surgeon N. H. PIERCE, Asst. Surgeon S. H. McKIM.

## Foreign News and Notes.

**The Sixth International Otological Congress** will be held in London from August 8 to 12, 1899, under the presidency of Dr. Urban Pritchard, professor of otology at King's College, London. The subject chosen for special discussion is: Indications for opening the mastoid in chronic suppurative inflammation of the middle ear.

**Women Physicians in Russia.**—According to the *Medical Press and Circular*, the Medical Congress of Russia, which recently met at Kiew, initiated the novelty of a "female section" (!) which was well attended by doctresses from other countries, who sympathized with their Russian disfranchised sisters, while they loudly denounced the conduct of the Russian Universities for their "virile selfishness."

**The British Sanitary Institute** held its seventeenth annual congress in Birmingham on September 27th, under the presidency of Sir Joseph Fayrer, who delivered an address entitled: The Progress of Preventive Medicine. A conference of medical officers of health was held in connection with the congress, under the presidency of Dr. J. C. McVail. A conference of municipal representatives was held under the presidency of Alderman Cook, chairman of the Health Committee of the Birmingham City Council. Dr. J. F. J. Sykes, medical officer of health of St. Pancras, read a paper on the Dwelling-Accommodation of the Working Classes in Large Cities, and Mr. E. Parkes, M.P. for Birmingham, read a paper upon the Municipal Management of Public Slaughter-houses. A conference of municipal engineers was presided over by Mr. T. de Courcy Meade, whose presidential address dealt with the By-laws concerned in the Construction of New Streets and Buildings. A con-

ference on Domestic Hygiene was presided over by Mrs. Beale, the Lady Mayoress of Birmingham, at which Miss Mary Sturge read a paper on the Claims of Childhood. In the evening of the opening day the Lord Mayor opened a Health Exhibition, which included all descriptions of sanitary appliances, and was illustrative of the advances that have been made during recent years in public health.

**Detection of a Bullet in the Subhyoid Region by Means of the X-Rays.**—At a recent meeting of the Académie de Médecine de Paris, Choiseul reported the case of an hysterical soldier, who had shot himself in the neck. Hemiplegia followed, with constant pain in the subhyoid region, the latter being increased by efforts at swallowing. Some weeks later, although a scar was plainly visible, no evidence of the location of the bullet could be detected. Two skiagrams, taken respectively from the left and the right side, revealed a dark, well-defined shadow situated at a point marked by a line joining the middle of the inferior border of the lower maxilla with the body of the hyoid bone, and about 1 cm. above the upper border of the latter. The foreign body was also evidently close to the skin. The bullet, which was readily removed on operation, weighed 3 grams. The after-progress of the case was uneventful, appropriate mental treatment entirely relieving the hysterical hemiplegia from which the patient had suffered from the time of the shooting.

**Milk-adulteration** is rife in England. A paper has just been published showing that during the past year milk was the subject of analysis in 18,896 cases, and in 1,967 cases or 10.4% the milk was condemned. When we say that this is the lowest percentage of adulteration that has ever been recorded we think the word "rife" is justified. In some instances the public have been defrauded by the sale as skim milk of milk from which practically all the fatty matter has been artificially separated, and in most instances simple dilution with water has increased the profit of the vender at the expense of the public. There is no form of adulteration which concerns the medical man so much as milk-adulteration, seeing that milk is the staple food of all infants, and of a large proportion of invalids. If the medical man believes that he is giving his patients nutritious food when he is only giving them a fluid from which 90% of the nutriment has been extracted, he may be led into error that will cost his patients their lives. It is probable that the English Society of Medical Officers of Health will make some representation to the Government in the matter.

**The London Water Companies.**—In view of the fact that for many consecutive weeks the East London Waterworks Company has been serving its clientele with a short supply, while charging them, it must be remembered, a full and high rate, the following figures taken from a paper shortly to be issued by Parliament are instructive. The paper comprises a year's accounts of all the companies, and under the head of the "East London Waterworks Company," it says:

"The capital expenditure is £3,012,378; increase, 3.09%. Income, £323,589; increase, 4.9%. Expenditure, £137,513; decrease, 7.8%. Net profit, £144,165; increase of 19.3%."

Here, then, we have a company which does not fulfil its contracts, which refuses to spend money in buying water from other companies, and at the same time declares an increase in income, a decrease in expenditure, and a large net profit. Undoubtedly the directors and managers of the company will explain that the failure in the supply has

been due to lack of storage, and that new storage must be provided out of funds to be created by economy. But the unfortunate East Londoner will find the argument a poor solution for his misery during the past summer.

**Living Bone-grafts.**—At a recent meeting of the Académie de Médecine de Paris, Berger read for Ricard a paper on living bone-grafts, reporting a case in which the loss of a portion of the cranium destroyed by osteosarcoma had been supplied by a graft taken from the ilium of a dog. Five years later the patient presented sarcomatous nodules throughout almost her entire body, with the exception of the original site of operation, where there had been no recurrence. That the graft had persisted was perceptible to touch. A second case, in a young woman with destruction of the bony structures of the nose, was also reported. On two occasions attempts had been made to restore the shape of the nose by the insertion of a metallic bridge, but the presence of the metal had on both occasions set up ulceration. Finally, the nose was split in the middle line, the skin separated from the mucous tissues, the fourth metatarsal bone from the patient's own foot introduced, and the flaps united over the bone. The graft caused no irritation. The bone was finally replaced by firm fibrous tissue, which, however, enabled the nose to retain to a certain extent its original shape; it was rather short and thick. It was considered that autoplasmic grafts have no advantage over those taken from animals—and the latter are to be preferred.

**Rice and Beriberi.**—Dr. C. L. van der Burg has published in *Janus* (July-August, 1898) a review of some recent Dutch literature on beriberi, including a report by Dr. A. G. Vorderman of the Dutch Colonial Medical Service of his special mission of inquiry in Java and Madura. Dr. Vorderman started with the theory, founded on an impression gathered from his general experience, that it would turn out that persons who fed on white rice were liable to suffer from beriberi, while those who ate red rice escaped. The main difference between white and red rice is stated to be that the latter retains the pericarp, which constitutes 4% of the weight of the grain. The general result of his statistical inquiry, which was directed to the prison-population, was that in those prisons in which the rice eaten retained its pericarp the ratio of beriberi was 0.09 per mille; in those in which the rice was deprived of its pericarp the ratio was 27.9 per mille, while in those in which both sorts were eaten the ratio was 2.4 per mille. An analysis of the statistics to ascertain whether the country in which the rice was grown had any effect on the rate of attack by beriberi showed that this factor had no influence. Dr. C. Eijkman has observed in Batavia an epidemic polyneuritis in fowls. The birds attacked were exclusively those fed on white rice, and they recovered when fed on red rice. Dr. Vorderman considers that this observation is of great interest in connection with his own researches as to the influence of decorticated rice in producing beriberi, and concludes that the pericarp contains some substance which has a therapeutic influence on beriberi, especially in its earliest stage. He believes that the true cause of the disease is a specific microbe, and that for the prevention or arrest of epidemics the most effective means are the disinfection, or, where this is possible, the destruction of buildings in which cases have occurred. Dr. E. van Dieren, of Amsterdam, who has given much time to the study of the literature of beriberi, believes that the records prove that it is due to poisoning by some substance that under certain circumstances is produced in rice. He is, indeed, a most ardent



advocate of this theory; for when confronted with the contrary opinion of so large a proportion of those medical men who have actual experience of the disease, he makes the astonishing response that this opinion is to be attributed to an imperfect judgment due to the fact that they have all been for some time rice-eaters, and are consequently already suffering from the first stage of the poisoning!—[*British Medical Journal*.]

### The Sanitary Progress and Institutions of Japan.

—According to the *Leest*, the Central Sanitary Bureau of the Japanese Ministry of the Interior has issued a report on the sanitary institutions of the Imperial Government of Japan. From this document it would appear that the unparalleled progress made by Japan in the adoption of western civilization includes all the leading phases of sanitary reform. The first attempt to centralize authority in sanitary matters was made in 1873, when a Medical Bureau was attached to the Educational Department. Two years later this was transferred to the Home Office and was named the "Sanitary Bureau." Since 1875 all matters dealing with public health have been relegated to the Ministry of the Interior. Then also chemical laboratories were opened for the analysis of foods, drugs, etc. The Central Sanitary Bureau is divided into three sections, the health-office, the epidemic-prevention office, and the medical office. The first deals with drainage, water-supply, food-supply, etc.; the second with quarantines and epidemics; and the third with the control of medical education, midwives, pharmacies, etc. In the belief that education should precede legislation, the Government began, in 1876, the publication of the *Sanitary Bureau Magazine*. Later the *Magazine for the Improvement of Sanitary and Medical Knowledge* was started by private enterprise. This, with the publication of sundry pamphlets and other magazine-articles, later induced the Government to discontinue its *Magazine* as no longer necessary. Needless to say, most of the sanitary knowledge thus acquired was imported from abroad. The European and American technical press was ransacked for data and information, and in the course of time a great number of Japanese were sent abroad to learn, observe, and report. The first investigator who received an official mission of this description was Dr. S. Nagayo, a professor in the Japanese Medical College, and he accompanied Prince Twakura, who was sent as Ambassador to Europe and the United States in 1871. Since then various Japanese delegates have often been welcomed at sanitary and medical congresses and exhibitions. Several Japanese medical men have studied at Professor Koch's laboratory in Berlin and in other European centers of scientific research. European men of science also have been employed in Japan. Laboratories under the control of the Home Office have been established at Tokyo, Osaka, and Yokohama, where chemical analyses are made for both the authorities and the public, and to which engineers are attached who undertake sanitary inspections. These laboratories have also their medical section, where drugs are tested and where some control is exercised over the sale of patent medicines. The importation into Japan by unscrupulous merchants of inferior and adulterated drugs led to the enactment of a law to the effect that all drugs landed in Japan must be taken to the State laboratories before they may be sold to the public. The first laboratory was established at Tokyo in 1874. Others were subsequently opened at Kyoto and Osaka.

During the civil war and in consequence of cholera-epidemics there was a greater demand for carbolic acid than could be supplied by foreign importations. The Government

consequently started a factory of its own, and as Japan is rich in materials, this manufacture of carbolic acid in time began to extend to other drugs, and a general medicine manufacturing department was attached to the Tokyo Hygienic Laboratories. Subsequently a botanical garden for medicinal plants was established, and all these institutions were naturally also of great use to the students of medicine. It was in 1884 that the Sanitary Museum was opened, and it contains not only a large library, but models of houses, sewers, drains, crematoria, waterworks, etc. In 1896 a serum-institute was set up at Tokyo, under Dr. Tomaye Takagi, where the diphtheria-antitoxin is produced. Two vaccine-farms—one at Tokyo and one at Osaka—were likewise organized, whence vaccine-lymph, taken from the calf, can be supplied throughout the country. The lymph is now supplied by the National Vaccine-Lymph Manufactory. In dealing with epidemic diseases the Government granted a subsidy for the creation of an "Institution for the Investigation of Infectious Diseases," and in 1885, Dr. S. Kitasato was sent to Europe to study these questions. It was on his return in 1892 that the institution was opened in the park of Shiba, Tokyo. In 1877, during the civil war, known as the Southwest War, there was a terrible cholera-epidemic, and then many regulations were made to cope with the disease. Now the "Epidemic-Prevention Board," which is a section of the Central Sanitary Bureau, deals with such matters, and has the right to sanction the creation of any number of temporary epidemic inspection-committees in all localities where their services are required. They help to carry out the law of March 30, 1897, which applies to cholera, dysentery, typhoid fever, smallpox, typhus fever, scarlet fever, diphtheria, and plague. Other diseases may be added to the list by a special order from the Home Minister, should occasion arise.

With regard to quarantine-regulations, ships arriving from ports declared to be infected by the Ministry of the Interior must proceed to one of the five ports where quarantine-hospitals, etc., have been provided—namely, Nagasaki, Shimonoseki, Kōbe, Yokohama, and Hakodati. Here they must display the yellow flag and await the arrival of the port sanitary authorities. Ships that have been five days at sea and are in a satisfactory condition are not detained after inspection. If there is disease on board, then the ship must be disinfected and the passengers and crew kept in quarantine for seven days in cases of plague or typhus fever and for five days in cases of cholera. Somewhat similar regulations are applied to railway-trains.

The local authorities have the right to isolate a part or the whole of a town or village. They can also forbid meetings, religious festivals, or theatrical performances when such gatherings may tend to spread an epidemic. They may stop any goods in transit that are likely to be infected, such as old rags, personal linen, etc., and these may be destroyed if necessary. In the same manner they can stop the sale or distribution of any food or drink that may be contaminated and they have the right to destroy the same. The local authority can also enforce general sanitary measures, such as the improvement of drains, the closing of wells, etc.; and to assist small local authorities the provincial authorities must bear a sixth of the expense entailed. If all such duties are not performed in the proper time the persons responsible are liable to be fined; and medical practitioners who do not notify cases of infectious disease within twelve hours are liable to a fine of from 5 to 50 yen (a yen being equal to about 85 cents). All householders and others who, by

bribery and other means, seek to avoid disinfection, etc., are to be fined at least 2 yen. Vaccination and revaccination were made compulsory in 1885. The first hospital for venereal diseases was established at Yokohama in 1867, and similar institutions were shortly afterward opened at Kōbe and Nagasaki. In these towns and elsewhere prostitutes are examined regularly once a week, and if found infected they are immediately removed to the hospital and their licenses are revoked.

## Philadelphia News and Notes.

**The German Hospital** despatched a hospital-train to Camp Meade on October 7th, and brought 62 ill soldiers to the hospital.

**Obituary.**—DR. WILLIAM PRATT READ, a graduate of the Medical Department of the University of Pennsylvania, class of 1871, October 10th, aged 51 years.

**An inaccurate New York contemporary** in the headlines of its "Philadelphia Letter" says: "Dr. Tyson chosen as Dr. Pepper's successor." In the body of the letter no mention whatever is made of the "fact that is not a fact."

**The Red Cross Society** despatched a hospital-train to Camp Meade on October 7th, and brought 72 ill soldiers to the city, of whom 50 were sent to the Pennsylvania Hospital, 12 to St. Joseph's Hospital, and 10 to the Germantown Hospital.

**The Public School-Children's Hospital Fund**, recently collected by donations of one cent from each child contributing, amounts to \$2,305. 5. The fund will shortly be distributed among the various hospitals in which soldiers were treated, in proportion to the number of soldiers treated.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending October 22d:

Tuesday, October 18—Section on Ophthalmology of the College of Physicians.

Wednesday, October 19—Philadelphia County Medical Society, Business Meeting.

Thursday, October 20—Section on Gynecology of the College of Physicians.

**Vital Statistics of Philadelphia** for the week ending October 8, 1898:

Total mortality..... 408  
Children under 5 years of age..... 137

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	.....	42
Marasmus.....	.....	31
Nephritis.....	.....	27
Diphtheria.....	122	26
Pneumonia.....	.....	20
Senility.....	.....	19
Inanition.....	.....	18
Apoplexy.....	.....	17
Heart-disease.....	.....	18
Gastro-enteritis.....	.....	16
Typhoid fever.....	162	14
Inflammation of the brain.....	.....	13
Casualties.....	.....	10
Scarlet fever.....	25	0

**Filtration of the Water-supply Recommended.**—Chief Trautwine, of the Bureau of Water, on October 6th, made a report to Director Thompson, of the Department of

Public Works, relative to the manner and estimated cost of filtering the water-supply of the city, in which he recommended that an appropriation of \$300,000 be made for the experimental restriction of waste and filtration plant in the Roxborough district before any money is expended for such purposes in any other section of the city. In transmitting the report Director Thompson expressed himself as being in favor of the city's owning and controlling its water-supply, of filtration, and of the restriction of waste.

**Philadelphia Obstetrical Society.**—At the regular meeting, held October 6th, DR. GEORGE ERETY SHOEMAKER reported a case of **cystic chorion**, and exhibited an interesting specimen illustrating the myxomatous or hydatidiform degeneration of the chorionic villi.

DR. WILMER KRUSEN read a paper on the **sequels of abdominal operations**, calling attention to the large number of patients who undergo such operations and are either unrelieved or suffer from the remote effects of the operations. The sequels briefly considered were: (1) Stitch-abscesses and sinuses; (2) ventral hernia; (3) adhesions; (4) prolapse of the bladder, rectum, and vagina; (5) pelvic abscesses, etc.; (6) fecal fistulæ; (7) enlargement and tenderness of the scar; (8) untoward symptoms after ventrofixation; (9) pain without demonstrable lesion; (10) psychic and nervous phenomena. The causation, symptoms, and treatment of these conditions were detailed, and a more conservative gynecologic surgery advocated.

DR. W. W. BABCOCK reported **three cases of adenocarcinoma of the uterus complicating fibroid tumors**, illustrating the frequency and possibility of benign tumors of the uterus predisposing by their presence and irritation to the development of malignant disease. DR. MONTGOMERY reported two cases that he had observed in which malignant disease had followed the use of electricity in the treatment of fibro-myomata.

DR. CHAS. P. NOBLE reported a case of **closure of a vesicovaginal fistula** resulting from vaginal hysterectomy for carcinoma of the uterus. The patient was a multipara, aged 62 years, who had been operated on several months previously. No opening was made in the bladder at the time of the operation, and the fistula was evidently produced by part of the bladder-wall being included in a clamp. At the time of Dr. Noble's operation the carcinoma had recurred and the fistulous opening was large enough to admit three fingers. The bladder was separated from the uterus and vagina, and the opening closed with a continuous catgut-suture reinforced with silkworm-gut sutures; a drainage-catheter was introduced into the bladder and allowed to remain for 5 weeks. The operation resulted successfully. The drainage-catheter was advocated in cases in which primary union does not occur.

**College of Physicians of Philadelphia.**—At a stated meeting held October 5th, DR. GWILYM B. DAVIS read a paper entitled: **Fractures of the internal condyle of the humerus and the correction of the resultant deformity by operative means.** He pointed out that the subject of these fractures has been obscured by the use of the words epicondyle and epitrochlea. As the word condyle has been generally used in describing fractures of the elbow, whether they have involved the joint or not, the meaning will be clear if they are described as intracapsular when they involve the capitellum or trochlea, and as extracapsular when the condyles only are involved. The condyles, capitellum, and trochlea each have a separate center



of ossification. Extracapsular fractures are rare, while intracapsular ones, particularly of the internal condyle, are common. It is the latter that are most likely to lead to angular deformity. It is to American surgeons, and particularly Oscar H. Allis, that is due most of the knowledge concerning this deformity, which he named gunstock-deformity. Abroad it is called cubitus-varus. To avoid its occurrence in walking cases an obtuse angular splint on the anterior surface of the arm is to be used, a pad placed over the internal condyle, with a short external splint reaching from the middle of the forearm to the upper end of the anterior splint. These are fastened firmly to the arm by broad bands of adhesive plaster. This firm fastening is absolutely essential to prevent rotation of the splints around the arm. The correction of this gunstock-deformity is not advised by standard authors. As there must be a certain amount of deformity and disability in these cases, Dr. Davis undertook correction by osteotomy in three patients, 11, 6, and 8 years of age respectively. Two were operated on two years ago, and the third recently. In the former division was effected with the electric drill, in the latter with a narrow osteotome. The wound healed promptly and left full motion in a straight position. The technic is as follows: An incision, one inch long, begins a third of an inch above the tip of the internal condyle, and extends upward. This is deepened by blunt dissection until the bone is reached. The brachial artery and median nerve lie to the outer side and the ulnar to the inner. The edges of the wound being held apart by blunt hooks, a narrow osteotome (or drill) is inserted and the bone is divided to the extent desired, but not entirely across. The remaining portion is fractured or bent, the wound closed with a single catgut-suture and a plaster-of-Paris bandage applied. The arm can be placed in the extended position, as the patient is to be kept in bed. This operation was done in the first case in October, 1896, and was believed to be original, but a search revealed a case by Tilanus (*Deutsche Zeitschrift für Chirurgie*, 1891-2, p. 296).

**College of Physicians of Philadelphia—Section on General Medicine.**—At a meeting held October 10th, DR. ABRAM JACOBI, of New York, delivered an address entitled **On Some Preventives**. He first took up the subject of the prevention of puerperal infection and of sepsis of the newly born, and said that the physician should be thoroughly versed in all that pertains to the conduct of a thoroughly aseptic labor, and should be conscientious in carrying it out to its minutest detail. He opposed attendance upon such cases by the general practitioner, recommending the obstetric specialist among the well-to-do classes, and the education and licensing of midwives to meet the needs of the poorer classes. He recommended fuller instruction in the subject of pediatrics in the medical colleges, even to the extent of advancing it to a full chair. He referred to the subject of infant feeding, dwelling especially upon the proper selection of foods, their proper preparation, and the amounts to be administered at each feeding. In order to prevent premature senility, the necessity was emphasized for careful consideration of the condition of the heart. One should always realize that it is one of the few organs of the body that never rests, and the one upon which life is most dependent. For a man advancing in years, exercise should be taken, but in moderation, and should be especially avoided after meals. Such persons should eat slowly; never to excess; their meals should be few in number; they should never force themselves to eat, and should miss a meal occasionally. Red meats should be taken in great

moderation. The individual temperament should be well studied, and its peculiarities catered to. The moderate eater will, all things considered, invariably outlive the full eater. Alcohol and tobacco are not well tolerated with increasing arteriosclerosis. If alcohol be taken at all, it should be in small quantity and well diluted with hot water. Water is less needed in advancing years, but should be taken to aid the functions of the kidneys and the liver, slowly and in small quantities. The physical laborer requires more sleep than the mental laborer. Excessive sleep, with heavy eating, promotes premature senility. The adoption of sensible, hygienic rules will tend to increase the length of life. One should ever be alive to the development of increased arterial pressure and protest against it by moderate exercises, carbonic-acid and mineral baths, hot baths, massage, and such other measures. As to drugs, the nitrites and iodids, with occasional purgatives and frequent diuretics, are of value. The tendency of the present day to underestimate the value of drugs, was dwelt upon, with the consequent lack of therapeutic knowledge. There exists in the profession and out of it too great a tendency to depend upon the power of so-called nature to cure disease. The custom of waiting for the development of bad symptoms before treatment is applied is an unfortunate one and leads to many fatalities. All cases should be treated with a view to preventing the occurrence of such symptoms.

**The Public Baths and Wash House**, at the corner of Gaskill and Leithgow Streets, Mr. W. L. Ross, the Superintendent, kindly informs us, has, since its day of opening, on April 21st, had nearly 19,000 bathers, showing that the establishment is appreciated by the thousands of people in this section of the city where so many are condemned to hopeless and helpless poverty. People of all the leading nationalities—Hebrews, Italians, Germans, Irish, Japanese and English—as well as Americans, black and white, are among the patrons, which has a tendency to break down race-prejudice. The patronage, however, is not confined to the poorer classes. In July there was the largest number of bathers, there being 4,945, an average of over 159 a day.

It is interesting to note that the patronage varies very remarkably with the temperature. On Friday and Saturday, July 1st and 2d, the temperature was 96° both days at one o'clock, with over 400 bathers each day. The largest number of bathers was on Saturday, July 30th, with the temperature at 90° at one o'clock, but much warmer and more oppressive later in the day, the number reaching 541. The smallest number during the month was 22 bathers on Wednesday, the 13th, with the temperature at 72°, the lowest during the month at one o'clock.

But people who have not been in the habit of bathing regularly are rapidly becoming educated to it since they have complete facilities for the small sum of 5 cents. The managers have been careful to establish absolute cleanliness, as well as courtesy and discipline. At first it was difficult to enforce the latter; for instance, the bath-room doors had locks which could be fastened from the inside so that the attendant could not unlock them, and some of the bolder bathers having combative and monopolistic tendencies, would lock themselves in, refusing to come out when their time had expired, giving our police officer occasion to punch through the wire screen over the top of the compartment with a broomstick until the otherwise invincible usurper became submissive. The difficulty was remedied by altering the locks. As a rule, the patrons are well behaved, as the establishment is conducted in a dignified manner.

A peculiar characteristic of the Hebrews, more especially the women, is their love of bathing in hot water, even in the warmest weather. They have been known in a few instances to bathe in water too hot for the attendant to hold her hand in, and insisted on having it so. When they come out of the water many of them look as red as though they had been painted. The wash-house has been fairly well patronized. It cannot be expected that people not in the habit of bathing will acquire the habit immediately, but the steady gain in regular patrons who come regardless of weather, shows that the people will improve in cleanliness as well as in general morals, if given an opportunity.

**Section on Otology and Laryngology — College of Physicians of Philadelphia.**—At the meeting held October 4th, DR. B. A. RANDALL presented a child 8 years of age, exhibiting **necrosis at the lower portion of the tympanum** (involving the annulus), and a number of flat polypi with pus discharging freely. Attention was directed to the existence of a hypotympanic space, corresponding to the epitympanic space or attic. The floor of the hypotympanic space is depressed and thus affords a favorable spot for the accumulation of discharges at least, while the subject is in an upright posture. The question of operation and the time of operative interference must be decided by the condition of the case; when carious portions can be found they should be removed, but when there is a possibility of a sequestrum being formed it is better to delay until separation occurs.

A case of **rhinolith** was reported and the specimen shown.

DR. E. L. VANSANT reported the case of a man, 30 years of age, injured by a kick over the right eye. The result was a **fracture of the frontal sinus** and considerable **emphysema of the eyelid**. The case is of interest on account of the rarity of localized emphysema of the eyelid and supraciliary region. DR. RANDALL said that he had seen several similar cases. He reported, by way of contrast, the case of a young woman, who had received a blow on the eye followed by much ecchymosis and swelling, with depression of the anterior interior portion of the orbit, but no emphysema. There had been considerable hemorrhage through the nasal chambers. There was crushing of the lower orbital border and impairment of sensation in the distribution of the second branch of the maxillary nerve.

DR. P. S. DONNELLAN reported a case of **chorea of the larynx**, in a boy 10 years of age, who had been troubled with cough for three weeks. The child was not neurotic, and had no bronchial disease. There was no discoverable source of reflex irritation, adenoids, enlarged glands at the base of the tongue, phimosis, worms, etc. The cough consisted in a series of twelve or thirteen sharp, dog-like barks occurring many times a minute, and it was not present at night. Under the use of Fowler's solution in rather large doses gradually diminished, the cough entirely disappeared in the course of several months. DR. GLEASON spoke of the case of a clergyman who had paralysis of the levator palati muscle following diphtheria, with impaired hearing due to paralysis of the stapedius or the tensor tympani. DR. GIBB said that in cases of laryngeal chorea the symptoms are confined to the muscles of the larynx, while in general chorea he had never known a case in which the laryngeal muscles were also involved.

Dr. Donnellan said that in his case there had been no paralysis of the muscles of the palate. He differentiated this condition of chorea of larynx from cases of spasmodic laryngitis and hysterical cough.

DR. EDWARD B. GLEASON read a paper on the **mechanical principles involved in the correction of deviation of the nasal septum**, and presented three cases showing the results of operation. L. A. WATSON approved of the method of operation, but he makes the incision just below the angle and pushes over the upper portion that must come in contact with the floor of the septum on the other side. There is redundancy, and it does not matter whether it is removed from one side or the other, the thickened condition of the septum permits of making a bevel. The object is to make the septum straight, and the redundancy may be removed at the time of the first operation, or be left for subsequent removal. DR. GIBB thought that both Dr. Gleason's and Dr. Watson's operations aim at the same object, to overcome the resiliency of the septum and remove the redundancy of the tissues. The older operations with simple incision and pin, did not fulfil this object. Neither operation, however, is applicable to all cases of deviation. The bone is generally involved and unless the deviation in the bone is corrected by some forcible measure (breaking up bone with Adams' forceps and putting pieces in position), the results desired are not attained. The redundancy may be removed first or by a secondary operation. Perhaps the latter, by carrying the incision higher up, does more to overcome the resiliency of the cartilage, and anything is a boon that enables the surgeon to do away with pins and retentive appliances after these operations. Dr. Watson referred to the vertical deviation that produces an angle and a thickening of tissues in the anterior part of the nose. To correct this, he simply cuts out the triangular projection and then uses a pin after the operation. DR. VANSANT said that the deformity is in nearly every case a deviation at or near some sutural juncture. Moreover, when the perpendicular plate of the ethmoid, the vomer, and the upper maxillary bone come together there is a special tendency to the formation of deformity. In cases of fracture extending into this region, exudation and thickening take place upon the convex side of the septum. Furthermore, traumatism may set up a perichondritis or a periostitis and local thickening. In operating, it is the posterior portion that causes the greatest difficulty in cutting through and straightening. The anterior portion is easily cut through with the knife or the saw, but the posterior portion will not easily yield and is likely to leave a spur from the vomer obstructing the nasal chamber. It is Dr. Vansant's custom to cut with a saw and then introduce the narrow blades of a pair of Adams' forceps and violently break the septum and overcome the deformity. The statement was objected to that pins are in common use among local physicians. Nor do they frequently introduce the finger for the purpose of restoring the septum to its proper place. As to the V-shaped incision, it was thought that any incision on a curved surface must be V-shaped necessarily. Dr. Gleason said that the two operations resemble each other in neither their object nor the plan of execution. Dr. Watson's object is to get rid of the redundancy and Dr. Gleason's operation utilizes the redundancy. This operation is simple and can be performed in two minutes under cocaine, and it is successful in 80% of the cases and even better results can be hoped for. The operation is performed in all cases, in some with better results than in others, but with a satisfactory result in all, if the incision is carried far enough back and high enough in front. Dr. Watson said that the statement is made that Asch's operation and his are the same, but that this statement could only be made in ignorance of what Dr. Asch's operation actually consists.



## The Latest Literature.

### British Medical Journal.

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1. The Mosquito and the Malaria Parasite. PATRICK MANSON. (*Illustrated.*)
2. Papers on Plague. W. J. SIMPSON, W. M. HAFFKINE, W. B. BANNERMAN, H. P. DIMMOCK, and ARNOTT.
3. Discussion on the Unclassified Fevers of the Tropics. A. CROMBIE, RICHARD BAKER, M. LOUIS HUGHES, DAVIDSON, ARNOTT, HAYMAN THORNHILL, and CAUSLAND.
4. Blackwater-Fever. L. WESTENRA SAMBON.
5. The Parasite of the Pernicious Malarial Fevers of British Guiana. GEORGE THIN. (*Illustrated.*)
6. Malarial Affections of the Eye. T. M. YARR.
7. Epidemic Cerebrospinal Fever in India. W. J. BUCHANAN.
8. On Beriberi Occurring in Temperate Climates. CONOLLY NORMAN.
9. Treatment of Acute Dysentery by Large Enemata. F. M. SANDWITH.
10. Filariæ and Filarial Disease in British Guiana. C. W. DANIELS.
11. Insanitary Environment the Cause of the Spread of Yellow Fever and of Bubonic Fever. TURNBULL.
12. Appearance of Pigmentation in Lymphocytes in Relation to the Diagnosis of Malaria. PATRICK MANSON.
13. Pellagra in Egypt. F. N. SANDWITH.
14. African Hemoglobinuric Fever, commonly called Blackwater-Fever. R. M. CONNOLLY.
15. Remarks on Yellow Fever in Jamaica. JASPER CARGILL.
16. Chronic Dysentery. ALFRED P. HILLIER.
17. Treatment of Enteric Fever by Carbolic Acid at the British General Hospital, Nowshera, Punjab. R. C. THACKER.
18. Nine Cases of Hepatic and Biliary Surgery. RUSHTON PARKER.
19. Ammonium Chlorid in the Treatment of Tropical Dysentery. WILLIAM STEWART.
20. The Epidemic Malarial Fever of Assam, or Kalaazar, Successfully Eradicated from Tea-garden Lines. CAPTAIN LEONARD ROGERS.
21. Remarks on the Death-rate of Dysentery and on Dysentery and Liver-abscess. W. J. BUCHANAN.
22. An Epidemic of Malaria on Board Ship, with a Record of Blood-examinations. D. C. REES.
23. The Effects of a Chill due to a Sudden Change in Temperature, amounting to 150° F. CHARLES D. MUSGROVE.
24. The Clinical Value of Enlargement of the Spleen. ROBERT TURNER.
25. Yaws in Mother and Infant. A. HERBERT HALLEN.
26. Severe Dysentery; Cardiac Failure; Hypodermic Injection of Artificial Serum: Recovery. HERBERT J. WALKER.
27. On Sawdust-bags as a Surgical Dressing. ERNEST F. NEVE.
28. Malformation of Kidney and Ureter. C. HAMILTON WHITEFORD.
29. Penetrating Wound of Abdomen, with Protrusion of Injured Intestine. GEORGE BIDIE.
30. Interesting Case of Shark-bite at Aden. J. LLOYD T. JONES.
31. A Case of Elephantiasis of the Vulva. WILLIAM RENNER. (*Illustrated.*)
32. Hysterical Aphasia Cured by the Administration of Chloroform. ERNEST F. NEVE.

1.—Manson believes that the **mosquito** is the liberating agent of the **malarial parasite**, and that the flagellated body is sucked into and developed in the mosquito's stomach, and that the flagella break free from the central sphere, as they are known to do in ordinary blood-slides, and by their locomotive power traverse the blood in the mosquito's stomach, penetrate the stomach-wall, enter some cell, and there begin the extra-corporeal life of the malarial parasite. He reviews the early observations of Ross on the malarial organism, the observations of MacCallum on halteridium, and Ross' recently published observations on bird-malaria in

Calcutta. To these he adds some more recent heretofore unpublished results of Ross' work on bird malaria. Ross has found in certain mosquitos, especially those in which the protruding proteosoma coccidia had ruptured, diffused through the body-cavity and also in the tissues of the insect, certain peculiar bodies that he terms germinal rods. To determine the origin of these he dissected the stomach of a mosquito in salt-solution, and, by applying pressure to the cover-glass, succeeded in rupturing the proteosoma coccidia, with the escape of myriads of these germinal rods, thus demonstrating that they are the progeny of the coccidia. Supposing that these rods became diffused throughout the body of the mosquito by entering its blood, he examined a droplet in blood mixed with salt-solution, and discovered therein innumerable germinal rods. In the study of their further disposition he accidentally discovered in the mosquito a peculiar gland connected apparently with the proboscis of the insect. The gland consisted of a number of plump, clearly defined cells, arranged along a branching duct. There were two such glands, one on either side of the insect's head, and in the cells of these glands, there were enormous numbers of the proteosoma germinal rods. A more minute study of these glands showed that the long ducts, uniting, terminated in a common trunk opening into the proboscis of the insect. Desiring to see if he had not discovered the method of communication of the proteosoma-disease by the mosquito, Ross secured some mosquitos that had fed on proteosoma-infected sparrows, and kept them for 5 or 6 days, until he knew the germinal rods had been formed, and were occupying its veneno-salivary glands. He then subjected sparrows in whose blood there existed no proteosoma to the sting of these insects. After some days he examined the sparrows' blood, and found innumerable proteosoma in the corpuscles. Manson believes that what holds good for proteosoma will hold good also for the plasmodium of malaria, on account of the great similarity of the parasites. A communication received from Dr. Ross just prior to the publication of this article reports that experiments on the communication of proteosoma to healthy birds indicate an incubation-period of from 5 to 9 days. The intensity of the infection so conveyed gradually increases during several days. Such artificial infections are much more severe than those acquired naturally. Ross has succeeded in communicating sparrow-proteosoma to the crow. He has found that the large non-sporulating form of proteosoma, that from which the flagellated body is developed, does not begin to appear in artificial infections until 3 or 4 days after the sporulating forms are observed.

2.—Simpson gives a brief historical sketch of the **plague**, and emphasizes the fact that diseases like it may exist in a milder form, but manifest themselves either in their more virulent type or in a local outbreak of considerable dimensions. He advises that in the beginnings of epidemics the disease should be searched for in its milder types, in the pneumonic forms, and in its imperfectly understood form among animals. He emphasizes the need for thorough investigation of all epidemic outbreaks, especially with a view of ascertaining the mode of entrance of the microbe into the human body, the medium or media by which it gains entrance, and its life-history outside the human body. He thinks that one of India's great needs is a sanitary service consisting of administrative, investigative, and scientific branches.

Haffkine and Bannerman report upon the value of Haffkine's prophylactic treatment, which was first tested on plague-stricken rats and later upon healthy men; after which it was employed in cases in plague-stricken districts. The result has been most gratifying in all instances, and in several places there has been a reduction of from 80 to 90% in the mortality. The treatment has been applied in plague-stricken districts in the cities, in the country-villages, in prisons, hospitals, and under conditions in which the conclusions reached are made reliable.

Dimmock treats of the measures taken to control the recent Bombay epidemic. The measures adopted to this end have failed in their principal object, namely, that of stamping out the disease. On the other hand, they have greatly diminished the mortality. The most effective preventive method was a system of eviction from badly infected quarters and the transfer of the evicts to a health-camp. By this means the epidemic was soon stayed, and but few cases occurred among



those removed. It is predicted that the disease will continue to recur at regular seasons in epidemic form for several years until it has permeated the whole population and induced immunity. Until overcrowding is prevented, the houses of the poor improved, the domestic habits of the people bettered, and the perfection of drainage, other general sanitary improvements will not succeed in keeping out the disease.

Childe treats at great length of the pathology of plague, taking up first the bubonic form, in which the glandular lesion is chiefly at the site of the bubo and there are but slight general lesions of the lymphatic glands throughout the body; next, the septicemic form, with involvement of nearly all the lymphatic glands; third, the pneumonic form, with the only marked evidences of the disease in the lungs—the lymphatic glands and other organs being scarcely at all affected. Reference is made also to a form in which the plague-pneumonia and plague-septicemia are combined. The microscopic pathology of the various forms of plague are described in great detail. The plague-bacillus is found in situ in sections of the various organs and lymphatic glands when stained with Löffler's methylene-blue or carbol-fuchsin. They cannot be demonstrated by Gram's method. In the glands of the bubo the bacilli could be seen in enormous numbers both among the cells of the gland-tissue and among the lymphatic vessels and the blood-corpuscles extravasated into the gland, as well as in the hemorrhage outside the gland. In cases of plague-septicemia they were similarly present in the large characteristic glands. In the kidney the bacilli could also be seen, especially among the blood-cells of the tubules into which hemorrhage had occurred. In the spleen they were also present, among the cells of the splenic tissue and in the hemorrhagic areas. They were present in the liver, especially in cases in which engorgement and hemorrhage were marked. The bacilli were present in the pneumonic areas of plague pneumonia, in profusion among the catarrhal epithelial cells and leukocytes that fill the alveoli and terminal bronchioles, as well as among the blood-corpuscles of the alveoli into which hemorrhages occurred. The morbid anatomy and the symptoms of plague-pneumonia and the mode of exit of the bacillus from the body are considered. The last is a result chiefly of the hemorrhages into the mucous surfaces, the bacilli being carried off, in consequence, by the urine from hemorrhages into the kidney; by vomiting, from hemorrhages into the stomach; by the bowels, from hemorrhages into the intestine; and by the sputum in the cases of plague pneumonia. The sputum probably plays an important role in disseminating the disease. The bacillus has never been found in the pus of a suppurating bubo, but it has been shown to be present in the blood for a certain time before death, so that it is possible for it to escape in the various secretions that contain blood. As to the mode of entrance, it is probable that lesions of the skin act as one of the avenues. No definite plague skin-lesions have been found, but in certain cases the bacillus has been shown to exist in a particular lesion of the skin, and in such cases the bubo was situated in the glands corresponding to the lesion. Childe reports four such cases. There was no evidence that the bacillus had entered through the stomach or intestines, but cases of cervical bubo might have resulted from infection through sores on the lips, tongue or tonsils. In cases of primary plague-pneumonia, while there is no confirmatory evidence, the bacillus was thought to have entered through the respiratory tract. Involution-forms of the plague-bacillus have been demonstrated in the human body.

**3.—Crombie** describes the following **unclassified fevers of India**: (1) The non-specific group. Crombie and Maynard have shown that fevers of a non-malarial continued type of varying duration occur often in Bengal in the spring and hot season. These are distinguished as climatic fevers, due chiefly to exertion in the heat and to sudden alterations of temperature. These fevers are of one, two, or more days' duration and of continued type. Ardent fever, siriasis, and heat-apoplexy are among this class, and are the result probably of a temporary paresis of the heat-regulators due to the conditions of high temperature and the humidity. Low fever, another of this class, is characterized by a persistent, low elevation of temperature of indefinite duration, without any specific symptoms. It is unaffected by medication, but yields quickly to change of climate. It is considered due to embarrassment of the heat centers. Among the unclassified

specific fevers are included urban continued fever, non-malarial remittent fever, double continued fever of Manson, and acute febrile icterus. Urban fever is a mild disorder lasting about 3 weeks, closely resembling typhoid, but without any of its specific symptoms. Non-malarial remittent fever is seen almost entirely among the natives under 30 years of age. It may begin insidiously like typhoid, but usually it is distinctly intermittent in the first few days. The malarial parasite is absent from the blood, and quinin in heroic doses is inefficient. After the first 3 days the fever becomes continued, with remissions of from 1.5° to 2.5° daily. The spleen is little altered, the liver enlarged and congested. The average duration is 6 weeks. Relapses rarely occur. The disease is thought to have nothing in common with typhoid fever, but it closely resembles Malta fever. The double continued fever, after an initial stage of pyrexia lasting from 10 to 14 days, is followed by a stage of apyrexia of from 3 to 7 days' duration, and this, in turn, by a period of 10 days of smart fever, and then convalescence begins. Acute febrile icterus has been encountered in India in epidemic form. Under the heading "fevers of compound origin" Crombie describes typho-malarial fever, kala-azar, a combination of the effects of the malignant form of malarial poisoning, together with the debilitating effects of ankylos-tomum duodenale, and third, hemoglobinuric fever, which he says is practically unknown in India.

**5.—Thin** reports a case of **pernicious malarial fever** in which he observed two bodies forming spores in the same red blood-corpuscle. The sporulating body of the pernicious Demerara fever, like that of the Italian and West African pernicious fevers, differs from that observed in tertian and quartan fevers, in both size and number of spores. The renal epithelium was found intact in the cases reported.

**6.—Yarr** contends that all **malarial lesions of the eye** originate in circulatory troubles and classifies them under the following heads: (1) Neuritis; (2) retinal hemorrhages; (3) retino-choroiditis; (4) effusions into the vitreous; describing each at length. He refers to certain obscure affections that have been noted, namely, sudden and persistent amaurosis, without visible fundus-change, periodic amaurosis, sudden amaurosis ending in atrophy, persistent central scotoma, and periodic blue vision.

**7.—Buchanan** reports three cases of **cerebrospinal fever**, in one of which slides from the purulent matter of the brain and spinal membranes, stained with a watery solution of gentian-violet, showed a diplococcus within the pus cells, answering in all particulars to that of the diplococcus intracellularis of Weischelbaum. In speaking of the manner in which the disease is transmitted, he suggests that as the diplococcus has been found in both the nose and the lungs it is not improbable that in those cases in which these organs are affected the disease may be spread through this medium.

**8.—Norman** takes up the **distribution of beriberi in the Tropics**, and calls especial attention to the remarkable ebb and flow of the prevalence of the disease, for which no plausible explanation has been given. He refers to the most recent epidemics in various countries, and dwells upon the fact that the disease has generally been observed along the coast-lands in the various countries; he refers also to its occurrence in cold and temperate climates; after which he describes three epidemics that occurred at the Richmond Asylum in Dublin. The diagnosis of the condition was always based upon the following combination of symptoms: edema of the shins without albuminuria, tachycardia and cardiac irregularity, pain in the legs, and anesthesia of the integuments of the legs. Reference is made to a frequent singular cardiac condition, which is called "unconformability of heart and pulse." While the heart was beating with a seemingly strong impulse, the pulse was very feeble. The area of cardiac dulness was usually increased, especially to the right, and this increase often occurred with extreme suddenness. Of the motor symptoms, the first and most impressive was loss of power in the peroneal muscles and the flexors of the foot. Actual wrist drop occurred in less than 1% of the cases. In one case there was unilateral paralysis of the third nerve; there was a tendency to contracture in the paralyzed lower extremities in half a dozen cases. Only two patients remained crippled from this condition. An interesting and well-marked condition was the extreme



relaxation of the joints, especially the knee and the ankle, in consequence, it was thought, in part of muscular wasting, and in part of a relaxed condition of the ligaments. As to sensibility, the first symptom of the disease was a sense of weariness in the calf-muscles. The most frequent spontaneous complaint was of painful formication. Cutaneous anesthesia was mixed with various paresthesiæ. A condition believed to be described before was noted, viz., the existence around each zone of hypoesthesia of a zone of marked hyperesthesia. The anesthesia in some cases was fugacious and variable. In a few cases anesthesia of the pharynx was tested for and discovered. Muscular atrophy occurred in a few cases in which no edema had been observed; usually it followed after edema had subsided. Edema was a constant condition, but very slight in some cases, and occasionally, perhaps, overlooked. In some cases pitting was readily produced, while in others there was a doughy myxedematous condition, with much swelling and little pitting. The edematous swelling shrank with change of posture more than is common with other forms of dropsy, and in some cases it disappeared with singular rapidity. Edema of the fundus oculi was found in some cases, and there was occasionally slight effusion into the joints. The course of the affection was extremely variable in different cases. In some no electric change was detected; in some it was slight, and in many it disappeared early in recovery. In cases in which atrophy was marked, the muscles yielded reactions of degeneration. Postmortem examination disclosed nothing distinctive in the brain or cord. The peripheral nerves exhibited parenchymatous degeneration, with a slight degree of interstitial uniform change. There was almost always some fatty change in the heart. The involved muscles of the extremities exhibited granular degeneration. The bacteriologic investigations yielded negative results. The mortality of the three epidemics was about 8.23%, decreasing progressively. The etiology of the epidemics remains obscure. There was no reason to believe that the disease was imported personally. The possibility is suggested that beriberi may for some reason be spreading, or may exist in hitherto unsuspected localities.

9.—Sandwith has had good results in the **treatment of acute dysentery with large enemata**. He employs a solution of copper sulphate, administering the enemata as early as possible in the case, and continuing them for two or three days after the subsidence of symptoms. He advises that this treatment should always be used in conjunction with other well-known methods of treatment. In the discussion of the paper, Osler objected to the treatment on account of the acute pain induced when the diseased bowel is filled with fluid, and on account of the succeeding exhaustion. Davidson and Crombie thought that cases of dysentery should be classified before any agreement could be arrived at with regard to treatment. Crombie recommended the use of ipecacuanha in the cases accompanied by pyrexia and pain on pressure over the colon, most frequent in the cecum and sigmoid flexure. Chloral should be administered if much ipecacuanha is given. Ewart, who compiled the statistics of the European and Native armies of India with a view of testing the result of treatment by enemata, was able to show a remarkable reduction of the death-rate under this treatment.

10.—Daniels believes in the **filarial origin of elephantiasis**. In support of this view he calls attention to the fact that the filaria nocturna and elephantiasis have the same geographic distribution. As to the question of racial incidence his investigations show that while some races are rarely attacked, in others elephantiasis is common, and that among the natives the women are more frequently attacked. In filarial disease the relative incidence varies in the same manner as the incidence of elephantiasis. This strengthens the view of the dependence of the one upon the other. The cause of difference in the racial incidence depends (1) on the presence of the infected primary hosts; (2) on suitable intermediate hosts; (3) on the water-supply, in connection with which storage in small receptacles is practised, allowing of the ready deposit and concentration of the intermediate hosts, with their embryonic contents. In reference to the pathology of the lymphatic obstruction evidence is adduced to show that the parent-worm can cause obstruction by exciting hemorrhage, or frequent attacks of lymphangitis, or that the embryos may be discharged into the lymph-stream while in their egg-capsules, in which case they would from

their size be stopped at the next lymphatic gland, and thus cause obstruction. As to the variety of forms of filarial disease in Guiana the regions of the body attacked are much the same as in other countries where elephantiasis is common.

11.—Turnbull gives details from the naval records, and from his own observation and research to show that **insanitary environment** is the cause of the spread of yellow fever and bubonic plague.

12.—Manson agrees with Metchnikoff that the lymphocytes are never phagocytic in malaria. He thinks that those holding the opposite view have been misled by the fact that normally there exists a lymphocytic pigmentation, which is therefore a physiologic and not a pathologic condition.

14.—Connolly describes the various types of **African hemoglobinuric or blackwater fever**, relates the morbid anatomy in detail, describes at length the three types, viz., the sthenic, insidious, pernicious, and reports three cases illustrating the several types.

15.—Cargill reports a case of **yellow fever** in which there was rapid incubation, decided infection, and much muscular exertion during the first few hours of the attack. A young Russian lady, passing through a Spanish town stopped at a lodging-house and slept in a room in which there had been a death from yellow fever. The bed had been aired, but the room had not been disinfected. Early the next morning she rode on horseback a distance of 13 miles. At the end of her journey she felt faint on getting off her horse and had to be placed on a sofa. She vomited; by evening black vomiting and retention of urine were present, soon followed by hemorrhage; and she died suddenly from heart-failure on the next day, soon after getting out of bed.

17.—Thacker has treated 79 cases of **enteric fever with carbolic acid**, with 11 deaths (13.9%). The favorable signs occurring during the administration of the acid were rapid cleaning of the tongue, disappearance of the characteristic enteric odor of the breath, a sustained remarkable lowering of the temperature with well-marked morning remissions in many cases, deodorization of the stools, moderate tympanites, diarrhea and delirium, and prompt convalescence with sound recovery.

18.—Parker reports 9 cases of **hepatic and biliary surgery**, including 3 of hepatic abscess, 4 of hydatid cysts, and 2 of gall-stones, with recovery in each instance. In one case of hepatic abscess there was entire absence of fever, despite the fact that the pus was fetid, and there was total absence of adhesions in either the peritoneal or the pleural cavity. The treatment of hydatid cysts by repeated puncture is questionable. In one of the cases under consideration recovery followed repeated aspirations, while in another case, although the fluid evacuated was clear and saline at the first two attempts at aspiration, on the next occasion it was turbid, and on the last purulent and fetid. In another case the patient's life was jeopardized owing to a universal peritonitis that could be attributed to nothing else than the puncture performed less than 24 hours before. It is a matter of record that cases submitted to mere puncture, single or repeated, proved fatal in by no means an insignificant proportion.

19.—Stewart found the **treatment of tropical dysentery with ammonium chlorid** of some value, more especially in cases in which the disease was dependent upon hepatic trouble, simple enlargement, hepatitis, etc.

20.—In order to check the spread of **epidemic malarial fever**, Rogers advises that, during the cold-weather months, when the fever is at a minimum, all the healthy people in any infected coolies' line or village should be removed to a new site, which need not necessarily be more than a few hundred yards from the old ones. In the instances in which this measure was carried out the results were marvelous, the disease being even entirely eradicated.

21.—To demonstrate that within recent years great reduction has taken place in the **mortality from dysentery in prisons**, Buchanan shows that in all the gaol-hospitals in the years 1896-97, among 7,626 patients but 3.8% died. Liver abscess has been extremely rare in the Bengal prisons, but one case having been noted in ten years. All cases dying were examined after death.

22.—Rees reports an **epidemic of malarial fever occurring on shipboard**, which probably originated through infected water taken on at Calcutta, or through the



inhalation of the air while lying at anchor in this port, the disease raging there at that time. He was enabled to fix the period of incubation at 14 days. Both the benign tertian and the estivo-autumnal or crescent-forming parasites were found, on examination of the blood, thus showing that the same infection gives rise to both of these forms, and that the incubation-period is the same for both.

**23.**—Mugrove reports a case in which a man suddenly emerged from a temperature of 150°, in which he had been working and sweating profusely, went into a refrigerating chamber with a temperature of 20° F., where he remained, in the same clothing, for a quarter of an hour. He had headache that night, was restless, and the following morning had a temperature of 104°, with rapid pulse and respirations, developed a chill, had some peritonitis, and his bowels were costive. In a day or two diarrhea set in. The urine was loaded with albumin. Signs quite suggestive of pulmonary consolidation, with some pleurisy, appeared. A to-and-fro friction-murmur was heard in the second and third left interspaces, but disappeared in a day or two, and was probably not pericardial. In the further progress of the case, there was a gradual subsidence of all the symptoms. By the fourth day the temperature and pulse were normal. The abdominal pain disappeared in 48 hours, and the diarrhea passed off in a couple of days. By the end of a week, the lungs had entirely cleared up, and the urine contained but a mere trace of albumin. Within ten days the patient resumed his duties. There were never any rheumatic symptoms.

**25.**—Hallen reports a case of **yaws** occurring in an infant during the first month of life, which is unusual. The condition probably existed at birth. The mother was discovered to have the same condition. She also had gonorrhea at the time of her confinement. The mother had had yaws in childhood, and the new infection was in consequence mild in type.

**26.**—Walker reports a case of **sudden heart-failure** occurring in the course of an attack of severe dysentery in which he injected subcutaneously a liter of salt-solution into the abdominal wall. The pulse quickly fell from 140 to 120 and became much stronger. The general improvement was marked. Twenty-four hours later a half-liter more was injected; the improvement further continued; and eventually the patient recovered.

**28.**—Whiteford reports a case in which the left kidney was represented by a small fibrous mass equal in size to half a chestnut. Passing from this mass the left ureter, very thin-walled and distended to double its normal size by a thin, turbid fluid, terminated in the highest part of the left seminal vesicle. There was no communication between the ureter and the bladder. There are two similar specimens in the museum of St. Bartholomew's Hospital.

**29.**—Bidie reports the case of a 15-year-old boy who sustained a **penetrating wound of the abdomen with protrusion of more than a foot of intestine** by being horned by a bull. Despite the serious nature of the injury there was total absence of shock, although the accident occurred six hours before the boy came under observation, and the patient was brought in a country-cart over 5 miles of very hard road.

**30.**—The necessity for **triple amputation** is of rare occurrence, but Jones reports the case of a man who was attacked by a shark while bathing, and was so mutilated that it was found necessary to amputate the right arm above the elbow, the left forearm, and the left thigh at its lower third. The patient survived the operation only three days.

**31.**—Renner records an interesting case of **elephantiasis of the vulva** in a woman, 29 years of age, who had never given birth to a child, and whose menstrual history had been regular. The duration of the disease had been 3 years, and the swelling had commenced in the right labium, which finally reached the size of an adult head. The left labium was only slightly enlarged. With the patient standing the tumor reached below the knees, and there was an ulcer in its posterior aspect. When removed the growth was found to weigh 6 pounds 10 ounces. No filaria were found in the blood.

**32.**—Neve reports a case of **aphasia** in a Hindu, aged 25, which was cured by the administration of chloroform. [Certainly the result was not due in this case to any therapeutic action of the chloroform as such, but it is an illustration of the curative influence of operation *per se*.]

## Lancet.

September 24, 1898. [Vol. ii, No. 13.]

1. The Differential Diagnosis of Abdominal Diseases in Children. GEORGE CARPENTER.
2. Gastric Tetany. E. F. TREVELYAN.
3. A Case of Tetanus treated with Tetanus Serum; Recovery. DAVID SIME.
4. Case of Tetany with Dilatation of the Stomach; Death. JOHN SOUTAR MCKENDRICK.
5. Some Notes on Malaria as Seen in Rhodesia. ARTHUR DUFFLEY OWEN.
6. Dissecting Aneurysm. JAMES B. COLEMAN.
7. A Case of Double Lobar Pneumonia Complicating Influenza during the Course of Acute Mania. G. J. CONFORD.
8. A Case of Temporo-Sphenoidal Abscess; Trephining; Recovery. HERBERT J. ROPER and H. LITTLEWOOD.
9. Three Cases of Myomata of the Uterus Complicating Pregnancy; Pan-Hysterectomy Performed in Two Cases and Subperitoneal Hysterectomy in the Third; Recovery in Each Case. FRED. BOWREMAN JESSETT.
10. A Protest Against the Present-Day Teaching of Applying the Blades of the Obstetric Forceps with Exclusive Reference to the Transverse Diameter of the Maternal Pelvis. J. M. MUNRO KERR.
11. Removal of the Transparent Lens from the Eye in High Degrees of Myopia. KENNETH SCOTT.
12. Some Experiences of an Australian Country General Practitioner. LEONARD W. BICKLE.
13. A Case of Glanders; Necropsy. (Under the care of Dr. Sharkey.)
14. A Case of Suppurative Periostitis of the Neck of the Femur with Acute Pyemia. (Under the care of Mr. Lediard.)

**1.**—Carpenter recommends particularly **rectal examination in the diagnosis of disease of the pelvis or abdomen in children**, stating that it is far too infrequently practised. He notes, among other matters, that the tumor of intussusception may often be felt, and causes a sensation like that yielded by the os uteri in advanced pregnancy, the finger being often blood-stained upon withdrawal. Tuberculous peritonitis may often be diagnosed *per rectum*, as may also abnormal conditions of the generative organs, which are likely to be overlooked otherwise. Carpenter has collected 35 cases of ovariectomy in children under 12 years of age. He describes the various kinds of tuberculous peritonitis, making 5 divisions: (1) Presenting the usual symptoms of *tabes mesenterica*; (2) in which there are hard, fixed masses lying under the abdominal wall, due to luxuriant growth of miliary tubercle, fever and ascites being but slight; (3) in which ascites is the most marked symptom; (4) pursuing the course of abdominal abscess, the abscess being found to be tuberculous, and (5) causing abdominal enlargement and tympanites, with disturbance of digestion, sometimes suggesting typhoid fever, at other times simply indigestion. It has been quite a common experience to find tubercles in the choroid during life on ophthalmoscopic examination.

**2.**—Trevelyan records two cases of **tetany** associated with **dilatation of the stomach**, and another case not so associated, so far as could be determined clinically. The first case was not one of typical tetany, but presented a tetanoid condition of the hands and arms resembling that typical of tetany. The patient's feet were also somewhat affected, and there was marked rigidity of the jaws. The symptoms came on directly after violent vomiting, and were not preceded by tingling or other premonitory symptoms. Death occurred, and carcinoma of the duodenum was found as the cause of the dilatation of the stomach. The kidneys were markedly cirrhotic. Although Trousseau's, Chvostek's, and Erb's symptoms were not present, the case is classed as one of tetany, on the basis of the belief that all tetanoid conditions occurring in association with dilatation of the stomach should be considered as of the same nature. The second case also was attended with dilatation of the stomach. The patient exhibited the position typical of tetany in the arms and legs, and died the day the symptoms came on, remaining conscious to the end. At the postmortem examination the dilatation was found to be probably due to



adhesions about the duodenum, but even this cause was not entirely evident. The kidneys were diseased in this case also. It is noted that tetany has been previously considered as due to renal disease, and it is noted also that a number of cases of its concurrence with duodenal ulcer have been recorded. The case that occurred without gastric dilatation was in a girl, 17 years of age, who assumed a typical position. The attacks were usually preceded by vomiting, and often diarrhea occurred. There had been repeated attacks for 6 years. The rarity of duodenal carcinoma is dwelt upon.

3.—Sime reports a case of **tetanus** in which the symptoms set in suddenly. With no history of recent injury and being in perfect health, a child was seized with acute pain in the left groin, followed soon after by signs of suppuration over the region of the trochanter. Within a few days evidence of acute pyemia manifested themselves. An incision, made over the great trochanter and extending down to the bone, was followed by the evacuation of a small quantity of pus containing numerous micrococci, mostly in the form of diplococci, but with some staphylococci. The child's condition grew worse and 10 cu. cm. of anti-streptococcic serum were injected. A sudden rise in temperature followed, and in a few hours death ensued. The postmortem appearances were those of general pyemic infection, evidently secondary to the small collection of pus around the periosteum of the neck of the femur. There was apparently no involvement of the hip joint itself. The pyemia was so sudden in development that it is questionable whether an earlier operation would have altered the result. With regard to the serum, the absence of streptococci from the pus evacuated seemed to contraindicate its use, but as the patient was rapidly getting worse it was deemed best to give it a trial.

4.—McKendrick records a case of tetany in a man 26 years old, in whom the attack began with tingling in the extremities and drowsiness, followed by cramps. The patient became very drowsy and vomited some blood. He had never previously had severe gastric symptoms, and the attacks had not been preceded by any special manifestations referable to the stomach. The man's condition was one of typical tetany, and the stomach was markedly dilated. The patient grew worse and died in the course of 5 days, the urine during this time being almost suppressed. After death the dilatation of the stomach was found to be due to cicatricial contraction at the pylorus. (There is no note in the paper as to the presence or absence of Trousseau's, Chvostek's, or Erb's symptom.)

5.—Dunley-Owen states that he has obtained **cultures of the malaria—"bacillus,"** and is curious to know whether others have substantiated this observation. [We suspect not.] He believes that "horse-sickness," a fatal disease that he has noted in Rhodesia, is due to the "malarial bacillus;" and that malaria is more common in men than in women, because the former drink more whisky. A clue as to the nature of the malaria-bacillus is afforded by a reference to it as of crescentic form. It is noted that the residents of Rhodesia are subject to attacks of dysenteric diarrhea that yield to quinin and to arsenic; and that they also frequently have leg-ulcers that will not get well with the usual remedies, but improve at once after the administration of iron, arsenic, and quinin, and the use of a dusting-powder of quinin.

6.—Coleman reports the case of a man, 65 years old, who was the subject of lead-poisoning. His symptoms began with sudden, violent pain of most horrible intensity in the lower part of the back and in the left hip. He walked across the room to a chair, but within 15 minutes complete paralysis of the legs appeared, and the left leg became anesthetic. There was persistent vomiting. On the following day he could walk a little and felt almost well, and the case was thought to be one of spinal meningeal hemorrhage. On the same day the man was found dead, five minutes after having seemed perfectly well. On postmortem examination the aorta was found extremely atheromatous in patches, with a rent through which blood had escaped into the right pleura. A **dissecting aneurysm** began at the level of the innominate artery and extended down as far as the left femoral artery, just below Poupart's ligament. In parts, the separation of the arterial tunics extended almost entirely around the aorta. There was some separation, also, of the layers of the walls of the left common iliac, external iliac, and femoral arteries. Microscopic examination showed that the dissection had occurred within the substance of the middle layer,

so that the outer wall of the aneurysm was composed of the adventitia and part of the media, and the inner wall of part of the media and of the intima. The paraplegia was due to the shutting off of the blood-supply to the lumbar cord.

7.—Conford reports a case of influenza noteworthy for the great gravity of the condition of the patient, which was partly due to the development of bilateral lobar pneumonia, and partly to her obstinacy in declining to take food, owing to her maniacal condition. She recovered from the pneumonia, but remained in a condition of persistent melancholia.

8.—Roper and Littlewood report a case of **temporo-sphenoidal abscess** in which the early symptoms pointed to suppurative mastoiditis. Later, however, the child's memory became defective, her condition being at first childish, then apathetic; and, finally, paralysis of the right arm and leg ensued. Under ether the mastoid process was exposed, and upon opening the antrum a free communication with the external auditory meatus was found, and some purulent material evacuated. The trephine was then applied over the petrous portion of the temporal bone, exposing the membranes, but nothing abnormal was found. This opening was enlarged in a backward direction until the membranes over the temporo-sphenoidal lobe were exposed, when, upon the introduction of a large trocar into the brain itself, offensive, yellowish-green pus was evacuated. After closure of the brain the child at once manifested signs of improvement, and gradually her mental condition returned to the normal and her motor-disturbances disappeared.

9.—Jesett reports three cases of **uterine myomata complicating pregnancy**. In two panhysterectomy was performed, and in the third subperitoneal hysterectomy. All three of the patients recovered. The tumors, as is usual under similar circumstances, had rapidly increased in size. This increase is usually more marked in the case of interstitial fibroids, with enormous thickening of the uterine tissue. As a result there is noted exaggeration of the symptoms of compression, especially in the degree of sacral and pelvic pain. The most common and by no means least serious complication is abortion.

10.—Kerr takes exception to the general teaching of the present day in England that so long as the blades of the forceps are applied transversely as regards the maternal pelvis it does not matter how they are disposed as regards the head of the child. He considers such teaching unwise and incorrect. Certain grasps of the head are better than others, and in each case there is one grasp better and safer for mother and child than all others. With flat pelvis it is of the highest importance that the fetal head be deliberately grasped.

11.—Scott states that **removal of the transparent lens for high degrees of myopia** is theoretically most excellent, but, on account of the inflammatory risks, is to be abstained from. Moreover, the operation is to be regarded from the patient's point of view.

13.—Sharkey reports an interesting case of **glanders** in a man aged 32. The case ran a chronic course, with fever resembling somewhat that of typhoid. The Widal reaction was not obtained, and the diazo-test did not yield characteristic results. The first symptom had been rheumatic pains in the abdomen and the right thigh and calf. An inflammatory condition developed in the right tibia, and was suspected to be syphilitic. Later a sore was observed on the arm. Both lesions improved somewhat under potassium iodid. There was much rigidity of the abdomen, but examination under an anesthetic revealed no abnormality. Pains developed in the eyes, knee, and ankle, and there was swelling on the right side of the face and temporal fossa. On the summit of this swelling a pustule was noticed and similar lesions appeared in other parts of the body. Some of these broke down and formed ulcers. Pustules, like those on the skin, formed also on the soft palate and nasal septum. Toward the end the patient became delirious. At the autopsy the maxillary and submaxillary lymph-glands were enlarged. There were a few shallow ulcers in the stomach. Studded over the lungs, and close beneath the pleura, were numerous grayish-white nodules the size of a split pea or a little larger; a few were soft and caseous, but most were hard. The spleen was large, but nothing abnormal was found in it. A culture taken before death from one of the pustules yielded a practically pure culture of *bacillus mallei*. Pus taken after death from an intramuscular abscess



yielded the same results. The case was evidently one of chronic glanders, and had lasted altogether from four to five months.

### New York Medical Journal.

October 8, 1898. [Vol. lxviii, No. 15.]

1. Paranoia. ROSS GEORGE LOOP.
2. Growth in Spondylitics. HENRY LING TAYLOR.
3. Medical Charities. CHARLES B. MEDING.
4. Submucous Operations on the Nasal Septum, with Attempts at Membrane-Grafting. THOMAS AMORY DE BLOS.
5. Early Diagnosis in Whooping-cough. HENRY LEWIS WAGNER.
6. The Causes of Cellular Division. A Review. ALBERT P. MATHEWS.
7. The State of the Vasomotors in Acute Lobar Pneumonia, and its Bearing on Treatment. R. VAN SANTVOORD.
8. Is the Continual Use of Strychnin Unwise? THOMAS J. MAYS.

1.—Loop recognizes two forms of **paranoia**, *Wahnsinn* and *Verrücktheit*. *Wahnsinn* develops rapidly. Delusions of depression alternate with states of exultation, and then systematized delusions of persecution appear. At first there may be some insomnia, but later the patient sleeps well and the health remains good. *Verrücktheit* is characterized by delusions of persecution and of grandeur. It usually develops in individuals with stigmata of degeneration, who have long been known as eccentric. Hallucinations may also occur. In either form the intellectual power rarely suffers, some of the patients having accomplished a considerable amount of valuable work. Loop believes that the prophylactic treatment is highly important; that is to say, the education of the child to regard life objectively rather than subjectively, encouraging outdoor sports, and perhaps distracting and altering the trend of his imagination by travel. He reports three cases; the first in a man, 32 years old, with distinct degenerative stigmata, very suspicious, yet believing himself in many ways the greatest of living men. The second was in a man, 38 years old, who believed his want of success was due to persecution, and who ultimately became violent. The third, in a man, 33 years old, who believed that he had been mesmerized.

2.—Taylor has made some interesting observations upon growth in **spondylitics**. The amount of dwarfing depends upon the age of invasion and the location, amount, severity, and duration of the morbid process, as well as the hygienic and surgical management of the case. Diseases of the cervical region are the least harmful, while those of the dorsal, especially the lower half, are the most so; diseases of the lumbar region occupy an intermediate position. An average annual growth of from one to one and a half inches, extending over a number of years, instead of a normal two inches and upward, is fairly satisfactory for patients under treatment, during or soon after the active stage of the disease. On the contrary, very slow or absent growth indicates progressive disease, or impaired vitality. In patients with this deformity, puberty is usually postponed, and childhood is correspondingly prolonged. Patients that have recovered or are recovering experience a marked acceleration of growth during the seventeenth, eighteenth, and nineteenth years. Careful measurements of height should be taken, as they form valuable information as to when mechanical support should be discontinued. It is asserted that the apparatus should not be removed during the growing age, unless the patient has exhibited a fair rate of growth for at least a year or two preceding; and should there be a decided retardation of growth the apparatus should be reapplied. Systematic records, including tracings of the spinal deformity, measurements of the standing and sitting heights, and estimation of the patient's weight, should be kept, for in this way only can any valuable knowledge as to the progress of the case be obtained.

3.—Meding does not believe that **medical charity** is abused as much as is commonly alleged. The two chief abuses are gratuitous treatment of patients who are able to pay, and the existence of institutions in which charity is but a means of profit. He believes that the only satisfactory solution will be evolved slowly, and he suggests that all

children should be treated free and that all adults be compelled to state their earnings.

4.—**Submucous operations on the nasal septum** are to be preferred, as they obviate the danger of making a perforation, heal much more quickly, and leave no resultant cicatrices of the membrane upon which crusts of dry mucus are likely to lodge.

6.—Little is known of the determining causes and limiting circumstances of **cellular division**; the chemic processes occurring during mitosis are also not understood. It appears as if the chromatin lost substance during the changes preparatory to mitosis. At the same time the percentage of phosphorus and, hence, of nucleic acid in the nucleus is increased. As regards the centrosome, it is probable that it is made up of albumin. Among the conditions influencing mitosis, oxygen is one of the most important; of the inciting causes, bacteria or bacterial proteins may be mentioned. Mathews refers to the subject of leukocytosis at considerable length. Whether this is relevant to his subject is somewhat doubtful. He himself admits that he is uncertain whether the increase of leukocytes is due to natural reproduction of these cells, or to migration into the blood of leukocytes from elsewhere. There are many interesting cases of cell-division in the animal and plant kingdoms, in which it seems probable that some distinct chemic substance set free in the egg by the action of the male cell causes neighboring cells to divide. In the case of bacteria, it is probable that the nucleins in their bodies are the source of the karyokinetic stimulus, but there are reasons for believing that other substances play a similar role, as, for example, phosphates and lecithin. Cells that divide frequently are rich in chromatin, and it is probable that the formation of the chromatic radicle is a general antecedent to cellular division. The manner in which the accumulation of the chromatic radicle leads to cellular divisions is not clear, but it is likely that a change in the condition of metabolism is brought about, resulting in the production of the substances forming the centrosome, and that the latter is the direct stimulus of karyokinesis.

7.—Santvoord has made sphygmographic studies of the **pulse** in a number of cases of **pneumonia**, and found the primary wave sharply pointed, and the dicrotic wave pronounced. Further, the sphygmometer of von Barsch showed the existence of a low state of tension. Two conditions cause an increased amount of work on the part of the heart, high arterial tension and low arterial tension; the first by increasing resistance, the second by failing to supply the heart with enough blood to pump into the circulation. Romberg has shown that with heart-failure occurring in the course of infectious diseases, there is relaxation of the peripheral circulation. The common conditions found after death are distention of the right side of the heart, with clots, and relaxation and emptiness of the left side. It seems, therefore, as if the work of the left side of the heart were diminished, while that of the right were increased. The remedy indicated is digitalis, which stimulates the heart and causes contraction of the peripheral circulation, and it is probable that in pneumonia, as in delirium tremens, the tolerance to this drug is greatly increased. Nitroglycerin seems to have no beneficial effect, and two tracings are given showing the similarity between the pulse under this drug and the pulse of pneumonia.

8.—Mays believes that **strychnin** may be administered with benefit in increasing doses up to, in some cases, as much as  $\frac{1}{2}$  gr. four times a day. He admits that the drug does rarely cause an irritant fever. In general, however, it has an antipyretic action. Its chief value lies in its power of stimulating the tissues.

### Medical Record.

October 8, 1898. [Vol. liv, No. 15.]

1. Contused Wounds of the Abdomen and their Surgical Treatment. JOHN T. ROGERS.
2. The Blood in Septic Diseases of the Abdomen and Pelvis. HERBERT MAXON KING.
3. The Serviceability of the Alexander Operation in Aseptic Adherent Retroversions of the Uterus, when Combined with Liberation of it and Resection and Suspension or Removal of Adnexa through the Dilated Internal Inguinal Ring. A. GOLDSPOHN.



4. Notes on the Therapeutic Uses of the Suprarenal Gland. W. H. BATES.
5. Myoclonus Multiplex Mitior. W. MOSER.
6. Diphtheria Complicated by Measles; Hyperpyrexia; Recovery. L. E. LA FÉTRA.
7. Phantom-Tumors in a Man. BENJAMIN K. HAYS.
8. Angina Ludovici Complicating an Acute Suppurative Otitis; Recovery. M. D. LEDERMAN.
9. A Curiosity in a Case of Locomotor Ataxia. FREEMAN F. WARD.
10. Some Interesting Eye-Cases. W. L. GRANT.
11. Skin-Grafting by Unusual Methods. FRANK OVERTON.
12. A Form of Amblyopia. NORBURN B. JENKINS.
13. A Note on Conservative Surgery of the Thumb. JOS. H. BALL.
14. A Case of Annular Scotomia. C. N. B. CAMAC.

1.—Contusions of the abdominal wall are often followed by results seemingly out of proportion to the nature of the injury. Owing to the extensive distribution of the sympathetic to the abdominal contents, such injuries are almost always attended with more or less shock. The symptoms are usually those associated with shock and septic peritonitis, if the latter has developed. In many cases the degree of shock does not begin to indicate the seriousness of the visceral injury. Without immediate surgical interference the prognosis is grave, the mortality of unoperated cases being variously estimated at from 96 to 99%. Such being the case early operation should be regarded as the most conservative treatment.

2.—King discusses the effect of septic intoxication on the blood. In the mildest form, the so-called fermentative fever or sapremia, the blood shows no departure from the normal, save slight leukocytosis. In the second form or degree, that due to the entrance of toxic products of pyogenic organisms but not to any extent of the organisms themselves, the reaction will vary accordingly as the disease is protracted or not. If death take place early, the blood may show no change whatever. In other cases the blood exhibits characteristic modifications. In the third form, designated as true septicemia, in which the microorganisms enter the blood, the rise in the number of leukocytes will follow if the infection is gradual or the organisms are of a less pathogenic variety. In septic intoxication due to obscure pus foci, a rapid and even extreme anemia develops. King gives the result of a blood-examination within the first 6 hours of a septic intoxication. The blood flowed easily from the finger or from the ear; a coagulum formed rather slowly, but contraction was practically normal; the serum presented no departure from the normal. On microscopic examination rouleaux were found to form normally; the hematoblasts were normal; fibrin-threads were fewer and more deliberate in formation; the erythrocytes were normal; the leukocytes were in excess; and phagocytic motility was more apparent than normal. In the stained specimen the leukocytes were found to be in the following relative proportions: Small lymphocytes, 11%, large lymphocytes, 5%, polymorphonuclear neutrophils, 78%; eosinophiles, 3%; large mononuclear or transitional forms, 3%. The erythrocytes numbered 4,500,000 to the cu. mm., the leukocytes 15,000; the hemoglobin estimation was 70%; the color-index 0.77. At another examination in the same case, which was one of pelvic abscess, made later, the serum was found more watery, the leukocytes more numerous and the red corpuscles reduced. If in the course of such a case of sepsis, the number of leukocytes falls suddenly, and without due cause, to normal or below, the change is of evil prognosis, indicating an overwhelming of the system with severe general infection. A sudden and radical rise in the number of leukocytes, on the other hand, indicates an extension of the suppurating process into previously uninvaded tissues, without general absorption of the infecting material. King has not found any evidence pointing to the existence of a characteristic blood-condition in association with sepsis arising from pelvic or abdominal causes, as distinct from that from disease in other parts of the body. A felon may produce leukocytosis alike in count and degree with that of septic peritonitis. Leukocytosis, which is practically always present with sepsis, is absent with intestinal obstruction (when not carcinomatous), cystitis, endometritis, tuberculosis (when uncomplicated), typhoid fever, and malaria. With true inflammatory conditions about the appendix, leukocytosis is always

present, while with catarrhal appendicitis leukocytosis is very slight or absent.

3.—Goldspohn advocates the performance of the **Alexander operation** in suitable cases, namely, of aseptic adherent retroversions of the uterus. He combines with it in such cases freeing of the uterus and suspension or removal of the adnexa through the dilated internal inguinal ring. He prefers this operation to ventrosuspension, because of the dangers that are likely to follow the latter operation. The Alexander operation, however, must not be chosen for actual descensus (prolapse) of the uterus of more than the first degree; or for cases of marked elongation of the sacro-uterine folds without descensus proper, or when the fundus lies retroverted and the cervix lies against the anterior vaginal wall down near the urethra.

4.—Bates advises administration of the **suprarenal gland** in the form of an aqueous extract freshly prepared. Ten grains of the dried gland, mixed with 2 drams of water and filtered, will form a 10% solution-filtrate. This aqueous extract is the most powerful astringent known. It has been of great value in treating inflammatory conditions of the eye. It has no effect upon the pupil, and no antiseptic or anesthetic qualities; its value is due purely to its astringent properties. For inflammation or congestion of the mucous membranes of the ear it is of great value, as well as for inflammatory conditions of the nasal passages, and it is especially valuable for inflammatory conditions of the nasal duct. It has been used to advantage for stricture of the urethra, for certain skin diseases, for pernicious anemia, for Addison's disease, for exophthalmic goiter, and as a tonic to the heart muscle. It is best administered by placing a few drops of the extract on the tongue. As a pure astringent in all inflammations, as a hemostatic, and as a tonic to all muscle-fibers, especially the heart, no therapeutic agent has been employed that can compare with the extract of the suprarenal gland.

5.—Moser defines and makes a brief reference to the etiology, symptomatology, diagnosis, prognosis, and treatment of **myoclonus multiplex mitior**.

6.—La Fétra reports a case of **nasal diphtheria** in which a **rash**, atypical in appearance and **suggesting measles**, appeared during the latter end of the disease. Injections of antitoxin had been given, which placed the true nature of the eruption in doubt. Measles was considered the more probable, owing to the presence of another case in the family, and to the fact that the morbillous spots of Koplik were discovered on the buccal mucous membrane. The rash became typical of measles on the second day. There were no catarrhal symptoms. During the development of the eruption the temperature rose as high as 107°. There was early and extensive swelling of the cervical lymph-nodes during the attack of diphtheria, and an early loosening of the membrane (two days) following the administration of the antitoxin. The membrane had disappeared completely on the fifth day.

7.—**Phantom-tumors** are uncommon in males. Hays reports the case of a melancholic, 40 years of age, who presented deep-seated nodular enlargement in both lumbar regions, which disappeared under the influence of chloroform.

8.—Lederman reports a case of **Angina Ludovici** or infectious cellulitis complicating acute suppurative inflammation of the middle ear. The infection was confined to the sublingual tissues, which became so swollen as to require immediate operative interference. The infection originated undoubtedly in the suppurative otitis, and was carried to the sublingual tissues through the medium of the cervical lymphatics. Once the diagnosis of Angina Ludovici is made, no time should be wasted in employing palliative measures, as the disease is so treacherous that delay may cost the patient's life.

9.—Ward reports a case of **locomotor ataxia**, in which, notwithstanding the fact that the patient was perfectly blind, he could stand with his feet close together with but little swaying. The moment he closed his eyes, however, he swayed violently, and would topple over if not supported. The question is asked: "Is the symptom of Romberg induced by shutting out the light, or by the actual closing of the eyelids?"

11.—Overton reports a case in which he used various methods of **skin-grafting** to cover a denuded surface on



the proximal phalanges. He employed the lining membrane from the shell of an egg, grafts of epithelium shaved from the patient's arm, and grafts obtained from an amputated foot.

**13.**—The importance of **conservative surgery for injuries of the thumb or index-finger** is well recognized. Ball reports the case of a man who sustained an injury through the discharge of a cartridge, the shaft of the first metacarpal bone of the thumb being carried away. At the request of the patient the thumb was not amputated. The action of the remaining muscles of the thumb deprived of their lever yielded but one result, shortening of the thumb on its axis, and there being no flexion, extension, abduction, or adduction. At the expiration of a year the tissues had so contracted that the articular heads of the bone were brought into contact and united, so that the patient soon regained all the normal functional movements of his thumb.

**14.**—Cases of **annular scotoma** following the administration of quinin are rare. Previous to the report of the present case by Camac the minimum dose of quinin found responsible for toxic symptoms was 15 grains. In this case, however, the patient had been taking for two days 6 grains, thrice daily, when the symptoms developed. The condition, while alarming to the patient, was neither of long duration nor followed by any serious disturbances of vision. The patient must have possessed a marked idiosyncrasy to quinin.

### Medical News.

October 8, 1898. [Vol. lxxiii, No. 15.]

1. Are Complete Castrates Capable of Procreation? F. R. STURGIS.
2. The Immediate and Remote Results of Seventy-one Alexander and Seventy-one Suspensio-uteri Operations. W. L. BURRAGE.
3. Yellow Fever and the Abuses of Quarantine in the South during the Epidemic of 1897. DILLON J. SPOTSWOOD.
4. The Efficiency of Glycerinated Vaccine-Virus as Used by the Vaccinating Corps of the New York Health-Department in Primary Vaccinations. F. S. FIELDER.
5. The Cornell University Medical College. J. G. SCHURMAN.

**1.**—The question as to the **ability of castrated individuals to procreate** is one of much medico-legal importance. Cases have been reported in which fecundation of the female has occurred after coitus with a male who has been completely castrated, but the reliability of such reports is questionable. The most conspicuous instance has been related by Princeteau; the patient, a young man who had had both testicles removed for tuberculous disease, frequently practised coitus and had ejaculations of a fluid containing spermatozoa. Experiments conducted upon animals prove beyond doubt that normal spermatozoa are found in the seminal vesicles for various lengths of time, the period varying in different animals, and being six days for the dog, seven days for cats, and fourteen days for guinea pigs. Pursuing the analogy in man it may be contended that a complete castrate may be capable of procreation, provided the coitus occur within seven days after castration.

**2.**—Burrage believes that the **Alexander operation** is preferable to the **suspensio-uteri operation**, because it seeks to support the uterus by its natural ligaments. The Alexander operation is indicated for retroversion, retroflexion, and retroposition without ovarian disease. For retroposition, with tight uterosacral ligaments, posterior colpotomy may be performed with advantage, for the purpose of dividing the tight ligaments, together with the Alexander operation. For ovarian prolapse, especially if the ovarian ligaments are long, the Alexander operation cannot be depended on to raise the ovaries into a normal position. One round ligament is not sufficient to maintain the uterus in place. Edebohl's operation, although requiring a longer time for its performance than the operation at the external ring, is preferable, because by it the round ligament, being uncovered in the entire length of the inguinal canal, is less liable to be broken; also, because it does away with the need of anteverting the uterus bimanually in the course of the operation; and, finally, because of the secure manner in which the ligament is anchored and the inguinal canal closed, making subsequent hernia impossible. Although the

Alexander operation leaves two scars on the abdomen, they are so situated as to be covered by the pubic hair, and are subsequently less of a disfigurement than is one scar in the median line. The suspensio-uteri operation is indicated for retroversion, retroflexion, and retroposition with ovarian or tubal disease, whether inflammatory affections or prolapse. The best method of effecting the suspension is by means of absorbable ligatures passed through the anterior and upper portions of the fundus uteri and through the parietal peritoneum and transversalis fascia only. Thus, an elastic band is created between the parietes and the uterus, which maintains the latter in place and does not interfere with the enlargement of the anterior fundus during subsequent pregnancy. Suspensio-uteri leaves but one weak spot in the abdominal parietes predisposing to hernia, instead of two, as does the Alexander operation. In the great majority of cases, neither operation is the cause of complications in subsequent pregnancy. Whatever complications do occur are not of a serious nature. In all cases of doubtful diagnosis in which the condition of the ovaries and tubes cannot be determined accurately, the suspensio-uteri is to be preferred to the Alexander operation.

**3.**—Spotswood calls attention to the frequent inconsistencies between the action of the local, State and national quarantine boards during the **yellow-fever epidemic of 1897**, causing great hardships to travelers, and in many cases, on account of the absurdity of the regulations, having little influence upon the spread of the epidemic. He instances the fumigation of a barrel of carbolic acid that had been sent into one of the infected towns from another. He concludes with a brief description of the disease, stating that, in private practice, the mortality is less than 10%, that there is no certain method of diagnosis, and that the clinical course is not as typical as is usually stated, the initial fever often lasting 5 or 6, instead of 3 days. In regard to treatment, he urges attention to the comfort of the patient, the administration of alkalies, and stimulation by brandy, or, if necessary, by strychnin and nitroglycerin. He reports 3 cases with serious symptoms, in all of which recovery ensued.

**4.**—Fielder gives the statistics of 20,804 cases of **vaccination**, of which 384 failed. Analyzing the failures, it was found that 241 were due to the use of lymph from two calves, and in 15 cases the patients were so old that it may well be doubted whether they had not been vaccinated previously. As far as could be ascertained, the two calves yielding the poor lymph presented no abnormality. All the virus is prepared by trituration with glycerin in the proportion of 1 to 3 or 4, and usually lasts 6 months.

**5.**—In an address, delivered at the opening of the **Cornell Medical College**, Schurman urged the importance of thorough training in the scientific branches preliminary to the study of disease proper, and also the desirability of all medical students having a previous academic training.

### Boston Medical and Surgical Journal.

October 6, 1898. [Vol. cxxxix, No. 14.]

1. Choice of Methods in Hysterectomy. ERNEST W. CUSHING.
2. The Educational Treatment of Neurasthenia and Certain Hysterical States. MORTON PRINCE.
3. The Physiological Effects of Compressed Air. FREDERIC T. LEWIS.
4. Formaldehyd-Gas as a Disinfectant. DAVID D. BROUGH.
5. A Case of Tetanus, Treated with Large Doses of the Antitetanic Serum; Recovery. S. J. MIXTER.

**1.**—Cushing states that the extraperitoneal treatment of the stump with pins and the serre-nœud or elastic constrictor is practically to be classed with the abandoned methods. The method of treating the stump intraperitoneally, by dilating and cauterizing the cervical canal and draining it with gauze, has now been generally given up. Better union is obtained by not cauterizing the canal. Cushing objects to the combined method of performing **hysterectomy**, that is, through the vagina and through the abdominal incision. He contends that the rule with all finished hysterectomy, either abdominal or vaginal, should be to close the wounds entirely, unless there is a positive indication for drainage or pressure-packing. As to the relative advantages of the abdominal and vaginal methods of operating he is firmly in favor of the former.



2.—Owing to certain drawbacks, ill-consequences, and difficulties connected with the carrying out of the Weir Mitchell rest-cure in the **treatment of neurasthenia and certain hysterical states**, Prince has adopted a plan that he calls the "educational treatment." This consists in (1) instruction of the patient in the nature of the symptoms of the disease; (2) the counteraction of fixed ideas, apprehension, and erroneous beliefs, the correction of faulty habits of temperament and habit; (3) the suppression of individual symptoms by electricity, suggestion, and other therapeutic agents; (4) the observance of rules for daily conduct; (5) the improvement of nutrition, moderate rest, in extreme cases isolation from previous surroundings only.

3.—Lewis reviews the work of various writers on the **physiologic effects of compressed air**, and shows that the time of inspiration is decreased, that of expiration increased, and that of a complete respiratory movement increased by the use of compressed air. The lung capacity is altered by increased pressure. More air passes through the lungs in a single respiration than is normal; for not only would an equal volume of compressed air contain more air, but the volume is found to be increased. As to the absorption of gases by the blood under pressure, it has been found that there is an increase in the absorption of oxygen and nitrogen. The results as to the absorption of carbon-dioxide have varied, some observers finding it increased, others diminished. The liberation of these gases by decompression is supposed by many to be the primary cause of accidents. In studying the effect upon the circulation, it has been found that the pulse-rate varies, and the equilibrium in the blood-pressure is upset by compression. The blood is driven from the surface; it goes to the brain, causing paralysis, or to the deep-seated viscera, causing fatal congestion. Decompression would seem to relieve these conditions, but it has been suggested that the sudden expansion of the viscera drives out to the cord and brain the blood stored in their vessels; hence the results of the sudden relief from pressure. Lewis is inclined to believe that liberation of gases by decompression is more likely accountable for caisson-accidents.

4.—Brough concludes that **formaldehyd is the best practical surface-disinfectant known**. For a dwelling-house disinfectant it is unsurpassed. It is easy of application and does no injury to goods. It is not ideal, its use being limited to surface-disinfection. Its penetrative powers under ordinary conditions are so slight as to be almost valueless. Good results are best obtained by using a large body of gas and having the room as tightly sealed as possible. The length of exposure and the increase of temperature are secondary to the amount used. Under these conditions disinfection may be regarded as complete after the use of formaldehyd.

5.—Mixer reports a case of **acute tetanus** of aggravated type, **treated with antitoxic serum** prepared by the State Board of Massachusetts. The patient received 3,400 cu. cm. in all, a daily average of 285 cu. cm. This case is believed to be the first in the United States in which 500 units, the amount advised by Baring, were at one dose injected directly into the blood-stream. The recovery of the patient is attributed not only to the use of the serum, but to the large doses in which it was administered. It is maintained that the best way to administer the serum is by intravenous infusion, as hypodermic injection is slow and painful, and as according to the physiologists there is danger of thrombosis and embolism.

#### Journal of the American Medical Association.

October 8, 1898. [Vol. xxxi, No. 15.]

1. The Uses of Remedies in Diseases of the Heart and Bloodvessels. T. LAUDER BRUNTON.
2. The Use of Morphin in Bright's Disease. SIDNEY RINGER.
3. The Place of Hydrochloric Acid in the Treatment of Diseases of the Stomach. BOARDMAN REED.
4. Recent Therapeutic Application of the Valerianates of Creosote and Guaiacol. J. W. WAINWRIGHT.
5. The General Principles of Alkaloidal Medication. W. C. ABBOTT.
6. How Far Does a Scientific Therapy Depend Upon the Materia Medica in the Cure of Disease? ELMER LEE.

7. The Regeneration of Pharmacy a Vital Necessity of Scientific Medicine. OSCAR OLDBERG.
8. Present Status of Serum-Therapy. GEO. W. COX.
9. Some Sources of Failure in Treating Lacrimal Obstructions. LEARTUS CONNOR.
10. Treatment of Chronic Suppurative Dacryocystitis. A. E. PRINCE.
11. The Use of Large Probes in Stenosis of the Lacrimal Duct. MELVILLE BARK.
12. The Value of Large Probes in the Treatment of Lacrimal Stricture. H. O. REIK.
13. Report of Two Cases of Acute Glaucoma. H. BERT ELLIS.
14. A Case of Hereditary Glaucoma. HERBERT HARLAN.
15. The Field of Binocular Fixation, or the Home of the Guiding Sensation of the Retina. G. C. SAVAGE.
16. Dynamics of the Extrinsic Ocular Muscles. FLAVEL B. TIFFANY.
17. Recent Experience With Advancement of the Recti Muscles. C. H. BEARD.
18. Additional Notes on Employment of Absorbable Sutures in the Operation of Looping the Tendons of Ocular Muscles. JOHN O. McREYNOLDS.
19. A Story of Chickamauga. Part II. R. STANSBURY SUTTON.
20. Colpoperineorrhaphy and the Structures Involved. (Continued.) BYRON ROBINSON.

1.—A number of cases of **disease of the heart** show that considerable valvular disease may have little effect in shortening life or producing serious symptoms. The case is, however, quite different with regard to the muscular walls of the heart, for any weakness in them not only enfeebles the circulation at once, but will secondarily produce valvular incompetence. By enfeeblement of the cardiac muscle the valves are not able to close the auricular and ventricular openings, and regurgitation takes place. Weakness of the heart is not an absolute, but only a relative term, and however strong the heart itself may be, the limit of its power may be reached. In order to perform any great feat or physical exertion, training is necessary, and if training be the method of bringing the healthy heart up to the mark required for excessive work the same method ought to be successful in bringing the heart enfeebled by disease up to the healthy standard. It is believed that of all remedies for remedying cardiac weakness none is so good as training, but this must be adapted to the condition of the heart. With feeble, fatty hearts it must be slight, and if moderate movements give rise to cardiac distress absolute rest must be insisted upon. In thus lessening the heart's work, however, the circulation through the stomach, liver, intestines, kidneys and muscles at the same time diminished, and there results a tendency to interfere with the elaboration of healthy blood, which is required for the efficient nourishment of the heart. Here massage comes in, and when this is applied skilfully, it not only increases the circulation through the various organs of the body, but while doing so it gives the heart rather less than more to do. When the patient is left to himself the heart has to drive the blood onward through the whole circulation, but when the masseur is at work he moves the venous blood along the veins, the lymph along the lymph-spaces and lymphatics, so that his hand is really a kind of accessory venous and lymphatic heart. Between this time, when absolute rest and massage are the chief remedies and the condition in ordinary health, is a long period that must be filled by gradually increasing movements. These must be slow, gentle, and gradually increasing against resistance, that they shall not cause the patient any distress, but only call upon the heart for such work, day by day, as it is well able to do. Before the patient has reached the stage when he is able to take exercise, however, a system of treatment by baths, after the method of Schott of Naubheim, may be followed. The effect of the baths is to stimulate the skin and increase the flow of blood through it, while at the same time a reflex-influence is exerted upon the heart through the vagus, by which the pulse is slowed, the result produced being similar to that produced by the masseur; in both cases the bed through which the blood has to flow becomes wider, and the resistance to the action of the heart is consequently diminished. In addition to these means, various drugs may be used; e.g., the active principles of digitalis, strophanthus, erythrophleum, convallaria, adonis vernalis, antiar, tan-



ghinia, hellebore black and green, oleander-squill, manganja, carraval, vao, and cactus, but among these the most important are digitalis and strophanthus. These drugs not only slow the heart, but they increase the energy with which it contracts. The energy may be still further increased by combination with strychnin or nux vomica, for while they appear to act chiefly on the muscular fiber, strychnin exerts its stimulating action on the motor ganglia of the heart. Oertel's system of making the patient walk farther and farther over paths of gradually increasing steepness may then come into use, but always with careful supervision. The use of cholagogues, purgatives, and alteratives, may also be highly beneficial. Potassium iodid in large doses is especially recommended in cases in which atheroma exists.

2.—Ringer expresses dissent from the opinion commonly held that **opium** is not to be given with **albuminuria or nephritis** and the opinions of several eminent English and American physicians are referred to in support of this view. The use of morphin hypodermically for the headache, sleeplessness and shortness of breath of uremia and for uremic asthma is highly commended, although it is without value for the shortness of breath due to abundant serous effusion.

3.—Reed states that the results following the administration of **hydrochloric acid**, usually in combination with pepsin, have led him to assign to it **in the therapeutics of all diseases of the stomach** characterized by hypopepsia (except carcinoma and atrophy), a place second only to diet and mechanical treatment. The dilute acid is usually administered at first in doses of 5 drops after meals, gradually increased to 10 or exceptionally 20 drops. In cases of complete or nearly complete anacidity the sipping of the diluted acid is begun immediately after the meal, but in other cases not till the meal has been over for half an hour. In this way the amylaceous portions of the food are exposed sufficiently to the action of the saliva. With the acid is usually combined a moderate amount of pepsin glycerole. It is believed that these remedies exert a real curative influence, acting to some extent as a stimulant to the gastric secretory cells. Several cases in which marked improvement followed this method of treatment are reported.

4.—The value of **guaiacol valerianate** in the treatment of **pulmonary tuberculosis** is believed to be undoubted, and several authorities are quoted in support of this view. The use of this remedy in the treatment of various conditions of the nose and throat, and in the conservative treatment of tuberculosis of the bones and joints, is also mentioned.

6.—Lee urges that the physician should exercise **original, independent thought in prescribing**, instead of using indiscriminately every sort of chemical that is placed before him, and thus placing himself in competition with druggists and nostrum-venders.

7.—Oldberg urges medical men, in the interest of the public welfare, to declare for **compulsory pharmaceutical education**, and for the divorcement of legitimate pharmacy from the commercial drug-business.

9.—See this JOURNAL, Vol. II, p. 99.

11. " " " " "

12. " " " " "

13. " " " " "

14.—Harlan reports a case of **glaucoma** in a girl 17 years old and another in a girl-cousin of about the same age in which the family-history leaves little doubt that the affection has been transmitted in a direct line for five generations, the age of onset being about the same in all cases. Iridectomy was performed in both cases with excellent results.

17.—Beard relates that he has had experience in several hundred cases of **advancement of the tendons of the recti muscles**, in only one of which did the operation occasion him any uneasiness. He gives a table of 214 cases.

18.—McReynolds advocates the use of **absorbable sutures** for shortening the tendons of the ocular muscles, and describes his technic in operating. The advantages of this method of operation over tenotomy consist in the accuracy with which adjustment can be effected, the freedom from danger of over-correction, and the fact that the process is one for making shorter the weaker muscle and not making weaker the shorter muscle.

19.—Sutton tells of the conditions found in **camp-life at Chickamauga**, and among other suggestions he recommends that inoculation for typhoid fever be tried on all

troops going to Cuba, excepting in cases in which the soldier has had the disease within a few years.

20.—Robinson draws a number of conclusions with regard to **flap-splitting perineorrhaphy**, and details many points with regard to technic and after-treatment, affirming his belief that the operation is one of the most certain and effective of all operations on the perineum.

### Berliner klinische Wochenschrift.

August 22, 1898. [35. Jahrg., No. 34.]

1. The Operative Treatment of the Hemorrhage in Cases of Subcutaneous Lacerations of the Kidney. NASSE.
2. Typhoid Bacilli in the Mucous Membrane of the Larynx. SCHULZ.
3. A Case of Osteosarcoma of the Tibia Cured by Resection. KAREWSKI.
4. A Case of Antipyrin-intoxication. IMMERWAHR.
5. Hypurgia and its Therapeutic Application. MARTIN MENDELSON.

1.—Nasse reports the case of a boy, 8 years old, who fell, striking his back against a sharp corner. He immediately passed urine containing bright red blood and complained of severe pain in the right side. The hematuria continued and the child was brought to the clinic on the fifth day after the injury because of anemia. Dulness and resistance were found extending from the twelfth rib to the crest of the ilium. On the thirteenth day the boy was unable to empty his bladder, although it was tensely distended and only a few drops of pure blood were obtained by passing a silver catheter. In the belief that the bladder was filled with clotted blood, an operation was decided upon. The viscus was first emptied by applying suction through a large silver catheter, and then the region of the kidney was exposed by an oblique incision from the eleventh rib downward and forward. When the transversalis fascia was divided a tense fluctuating tumor, the size of a child's head, was found, from which urine, fluid and clotted blood were emptied on incision. The cavity was packed with gauze, and as the kidney appeared injured beyond the possibility of repair **nephrectomy** was performed. The patient left the operating-room very anemic and collapsed, but he survived the shock and left the hospital, cured, five weeks after the operation. The cases in which operative treatment has been reported in literature are briefly detailed, but it is remarked that the number of cases in which operative interference has been undertaken for the arrest of hemorrhage in cases of injury of the kidney is exceedingly small. In discussing the indications for operation in such cases, Nasse states that when severe hemorrhage occurs at once after an injury, as evidenced by bloody urine, acute anemia, and the signs of fluid in the abdominal cavity, celiotomy and nephrectomy should be resorted to immediately. The same is true in the event of severe secondary hemorrhage, for under these circumstances the hemorrhage is most often due to the rupture of large vessels or traumatic aneurysms. It is much more difficult to decide what to do when the bleeding is less copious. Recovery often follows, but operation has frequently been deferred until too late. The only possible rule is not to let the patient bleed too long and lose too much strength before operating. As regards the choice of the method of operation, much will depend on the conditions found. In case of a gaping wound of the kidney, ligation of the vessels and suture are advised in the less severe cases; when the injury is greater the tampon may be used and suture undertaken later. If there is no external evidence of injury, the kidney should be incised, the clotted blood removed and the cavity tamponed. Injury to a main branch of the renal artery or very extensive laceration and contusion of the kidney-substance seem to indicate nephrectomy. The extra peritoneal incision from the eleventh rib obliquely downward and forward to the junction of the outer and middle thirds of Poupart's ligament affords a large amount of room and seems most generally applicable. Lumbar incision would answer in many less severe cases and celiotomy seems indicated only in case of intraperitoneal hemorrhage.

2.—Schulz reports the case of a woman dying of **typhoid fever** with positive Widal reaction. The lesions found after death were characteristic. In addition, there was present on the laryngeal side of the epiglottis a number of hyperemic



circumscribed areas that microscopically consisted of collections of lymph-cells. No microorganisms were found in these lesions, but in the connective tissue between them and the cartilage there were numerous groups of staphylococci and short, thick, rod-shaped microorganisms. Small portions were cut out, washed thoroughly in sterilized water, and then inoculated into culture-tubes. Staphylococci, streptococci, and bacilli grew; the last giving all the culture-reactions of the typhoid bacillus and agglutinating with typhoid serum.

3.—A woman, 26 years old, caught her foot in ascending some steps, and suffered an injury on the inner side of the right knee. Under treatment with cold fomentations and rest in bed, the pain and swelling disappeared, but some lameness remained. About three months later, the patient was delivered of a child, and had fever following. On getting about, considerable difficulty was experienced in using the right leg. Examination showed the member to be flexed, the muscles atrophic, and a tumor, the size of a fist, on the inner side of the knee. The tumor was not movable, was painful on pressure, and not easily delimited from the surrounding tissues. The joint was freely movable; the glands were not swollen; there was no sign of inflammation; and aspiration showed the mass to be solid. The entire inner condyle of the tibia was removed, together with the growth, with the aid of curet and chisel. Microscopic examination showed the tumor to be a **giant-cell sarcoma**. The patient recovered, with a movable but painful knee, which she was able to use by means of apparatus and there was no return of the growth after a year and 4 months. Whilst amputation is indicated in all cases of myelosarcoma, Mikulicz has reported a series of cases of giant-cell sarcoma in which cure followed resection; but Karewski believes that even resection may be avoided and that giant-cell sarcoma may be cured, as in the case reported, by simply removing the diseased tissue.

4.—Immerwahr reports the case of a woman with a history of syphilis, followed three years later by a relapse. One year after this she had an attack of headache, and took 0.5 gm. of antipyrin, which caused an abundant eruption of blisters on the mucous membranes of the buccal cavity. These became filled with blood and were excessively painful. Mild local treatment caused their disappearance. There was no swelling of the glands, but a small patch of erythema, resembling urticaria, was found on the wrist.

5.—Mendelsohn believes that the care of the sick includes three different groups of procedures: (1) those arrangements that provide for the material comfort of the patient, such as are used in warfare, in epidemics among the poor, and in general hospitals and similar institutions; (2) all those procedures that have to do with the comfort and welfare of the individual patient; and to this he adds (3) hypurgia. This word is taken from Hippocrates, and corresponds very closely to the Latin word *subsidium*, that is the supporting or sustaining methods. It consists in the application of all those minute factors that are ordinarily disregarded, but, nevertheless, aid the patient; and, in combination, form a powerful therapeutic agency. Thus, the action of the bowels may be promoted by liquids, massage, and similar agencies; diuresis is favored by increasing the watery constituents of the blood and procuring regular evacuation of the bladder. The article is to be concluded.)

August 29, 1898. [35. Jahrg., No. 35.]

1. Achylia Gastrica. D. GERHARDT.
2. Concerning Fish-bones as Foreign Bodies in the Intestine, and the Digestion of Bone. KUND FABER.
3. Concerning External Urethrotomy. REINHARDT.
4. Hernia of an Ovary with Torsion of Pedicle in a Child. H. MAAS.
5. Concerning Hypurgia and its Therapeutic Results. MARTIN MENDELSON.

1.—Gerhardt reports the case of a woman, 54 years of age, suffering from progressive pernicious anemia. The gastric contents removed after a meal were of alkaline or slightly acid reaction and consisted of unchanged food. Neither ferments nor hydrochloric acid could be found. Immediately after death the stomach was filled with alcohol in order to preserve the mucous membrane. The glands were found well preserved. The only pathologic alteration being a slight

proliferation of the connective tissue. It follows that in this case the anemia was certainly not the result of atrophy of the glandular apparatus of the stomach. In a number of cases of carcinoma of the stomach, achylia was present, and only late in the disease were there any symptoms of motor insufficiency or lactic acid fermentation. In a case of colloid carcinoma of the stomach, lactic acid only appeared in the contents a few weeks before death, and up to this time the motor activity of the stomach was excellent. In the case of a man, 32 years of age, who had suffered for three years from diarrhea and discomfort in the region of the stomach, the gastric contents were alkaline or slightly acid, and contained no ferments either digestive or curdling, and no hydrochloric acid. Milk was unaltered at the end of half an hour. Nevertheless, the motor functions were well performed, a test-meal being emptied into the intestines in three-quarters of an hour. The feces were apparently normal, except for the presence of masses of mucus. It appeared that both the pancreas and the liver were normal, as fat and muscle-fibers could not be detected in the feces. Investigation showed that absolutely no secretion came from the stomach-wall. On introduction of sugar in solution it was found that a slight amount of absorption took place. That the absence of hydrochloric acid did not permit the occurrence of putrefaction of the intestinal contents was shown by the absence of an increase in the ethereal sulphates. Pepsin was entirely absent from the urine. Digestive leukocytosis occurred regularly. The digestive disturbances produced by total achylia are exceedingly slight, the one therapeutic indication being the selection of a diet to promote the evacuation of the gastric contents within a moderate time.

2.—Faber reports the case of a peasant, 59 years of age, who for three years had suffered from chronic diarrhea. All the organs were normal, and there were no symptoms, excepting a slight feeling of exhaustion and depression. The feces were quite liquid, brown, and did not contain blood, mucus or solid masses. Finally, a number of pieces of bone, from 2 to 3 cm. in length, were discovered, apparently the ribs and fins of fish, and similar fragments were found on rectal exploration. These were gradually evacuated, and finally a large mass of various sized splinters; after this rapid recovery ensued. A similar condition was observed also in a hemiplegic man of 82. At autopsy a number of splinters were found in the rectum. In the intestine of a woman suffering from pulmonary tuberculosis a large mass of bony fragments was found, above which were numerous extensive tuberculous ulcers. All of these patients were somewhat stupid, and more or less accustomed to a fish-diet. The interesting question is, Why did not such small fragments dissolve in the acid gastric juice? In the first case, examination showed a diminution in the secretory activity of the stomach. In order to determine how frequently bones occur in the feces, 12 patients were examined, all of whom had practically achylia. In 11 of these the results were positive. Of 14 cases with normal or excessive activity, the results were negative in 12. In the thirteenth, in an hysterical woman with bad teeth, they were positive, and in the fourteenth, in a young man with mental depression, they were also positive, but without discoverable cause. It thus appears that in normal individuals all bones that may be swallowed are dissolved in the stomach. When, however, these once pass the pylorus, they remain undissolved. Even under these circumstances they do no damage unless aggregated into clumps. Faber mentions a case in which such masses caused ulceration of the intestine, with partial stricture and local peritonitis. The results of this condition are chiefly the production of a more or less chronic diarrhea, as occurred in the case of a boy, 13 years of age, in whom this symptom only disappeared after evacuation of some fragments of bone. On examination of the gastric contents there was found almost complete abolition of secretory activity. Faber enters upon a study of comparative physiology in order to discover the reason why free hydrochloric acid is secreted by the stomach. He believes that in some of the lower animals, particularly those of prey with slow digestion, such as snakes, the general purpose of the hydrochloric acid is to dissolve bones. This is probably also the case in all the carnivora. Among the invertebrates, the only ones that secrete free acid are apparently snails, crabs, and lobsters; the object being to dissolve the calcareous shells of their food. The ferments,



on the other hand, trypsin and pepsin, are found even in unicellular organisms, and apparently act in a neutral or alkaline medium.

**3.—In the operative treatment of urethral stricture,** König includes in the technic of external urethrotomy the excision of all cicatricial tissue. At times as much as 3 or 4 cm. have been excised. If possible the divided ends of the urethra should be united with fine catgut or silk sutures; not in its entire circumference, however, the floor of the urethra being allowed to remain patulous. In König's experience in cases in which it is impossible to approximate the cut urethral surfaces the interspace is eventually filled in by regeneration of tissue analogous to that in the urethra. This has been found to take place despite the fact that the urine is evacuated through the fistula. The precaution is taken, after each urination, to carefully cleanse the parts. At the expiration of three weeks the fistula is usually closed.

**4.—Maas reports a case of hernia of the ovary with torsion of its pedicle** occurring in a little girl, 10 months old. The condition was accompanied by all of the symptoms of hernia, including nausea and vomiting, with cramps and localized swelling and tumor. The child was relieved by operation, which consisted in extirpation of the ovary after ligation of its pedicle, and closure of the hernial sac.

**5.—Mendelsohn continues his discussion of the various therapeutic actions of hypurgia.** This, to translate his own words, consists in "the intelligent application of all those apparently slight and insignificant healing factors that therapeutic methods must disregard for the reason that they act permanently and uninterruptedly upon the invalid, and must necessarily so act upon him, but which, nevertheless, by the summation of their effects exert no insignificant reaction upon the invalid." These factors apparently act in all possible ways. Among the therapeutic effects mentioned in the present section of the paper is diaphoresis, obtained by such a small interference as an alteration of humidity of the air beneath the bed-clothes. The factors referred to may act as expectorants, *e. g.*, by filling the air with moisture or turpentine-vapor; as tonics, for if the work of the heart is reduced, the action of the heart will undergo a corresponding stimulation. They may stimulate the stomach, *e. g.*, by the taking of suitable food, and the regulation of the hours of feeding. They have a narcotic effect, *e. g.*, when sleep is promoted by reducing external irritation. Their action may be spoken of as anesthetic, in so far as the removal of the cause of pain stills the pain; and they are aphrodisiacs, antipyretics, stiptics, and finally antiseptics, or, better, aseptics, for cleanliness belongs to this form of treatment. Mendelsohn finally calls attention to the fact that a collection of many of the hypurgic agents is at present on exhibition in the Charité Hospital at Berlin.

September 5, 1898. [35. Jahrg., No. 36.]

1. Experiments in Metabolism with Albuminous Substances Containing Proteids and Free from Phosphorus. F. RÖHMANN.
2. The Possibility of Overfeeding with Albumin. BORNSTEIN.
3. The Control of Uterine Hemorrhage by the Local Application of Steam. A. DÜHRSSSEN.
4. A Peculiar Case of Staphylococcus-Infection. H. WOHLGEMUTH.

**1.—Röhmman discusses the question whether all proteid bodies are equivalent for the purposes of nutrition.** Taking up the study of the phosphorus-metabolism, he finds that it makes a vast difference whether phosphorus is introduced as an integral constituent of the proteid, as, for example, casein, or in the form of phosphatic salts. In the former case considerable phosphorus is retained in the system; when, on the other hand, a phosphorus-free proteid, such as myosin, and phosphatic salts are given, retention of the phosphorus does not occur. It appears, then, that phosphorus free and phosphorus-containing proteids are not equivalent in metabolism. The latter do not favor alone retention of phosphorus in the system, but also a greater retention of nitrogen.

**2.—Bornstein has made an interesting series of experiments on himself to determine the effect of proteid over-feeding.** After getting himself into nitrogen-equilibrium, on a diet consisting of lean meat, zwieback, butter, sugar,

chocolate, apple-sauce, coffee, cream, and water, he added to the diet daily 50 gm. of casein-sodium (nutrose). He found that nearly the entire nitrogen in the nutrose was utilized and excreted in the urine, showing that it had participated in the proteid metabolism. Moreover, a little of the nitrogen was retained, with a consequent increase of body-weight. The conclusions from this experiment are as follows: (1) An increase of the proteid constituent of the organism by over-feeding with albumin possible within certain limits; (2) this increase of the proteid constituent is to be sought in cases in which it is necessary to render a weak and partly incapable organism stronger, healthier and more capable; (3) the overfeeding should be primarily for the benefit of the albumins, and should avail itself of the most pleasant and the most readily assimilable substances, and for this purpose casein-sodium (nutrose) is recommended.

**3.—Dührssen reports his experiences with the vaporization-method of controlling uterine hemorrhage,** as originally suggested by Sneguireff. He claims that the method is free from danger, notwithstanding various reports to the contrary, such as of the obliteration of the uterine cavity. He also contends that in cases of small interstitial myomas, the method is not only palliative, but even in many instances it results in a radical cure of the condition.

**4.—Wohlgemuth reports an interesting case of staphylococcus-infection,** in a man 56 years old. Some six years previously the patient was operated on for hemorrhoids, and he subsequently suffered from retention of urine, necessitating catheterization. Violent urethritis and cystitis followed, later on epididymitis, abscesses in various parts of the body, paraplegia, and other evidences of infection. The disease continued undiagnosed for five years, when a culture from the pus of an abscess was made, and staphylococcus albus found in pure culture. The case might be called one of chronic pyemia, or better chronic metastatic multiplex staphylococcosis. The patient later developed a pressure-myelitis, with complete paraplegia, paralysis of bladder and rectum, and decubitus. In this condition he has remained for seven months.

### Deutsche medicinische Wochenschrift.

August 25, 1898. [24. Jahrg., No. 34.]

1. The Preservation of the Tendon-Reflexes, with Complete Transverse Lesions of the Spinal Cord. P. FÜRBRINGER.
2. Concerning the Antitoxic Properties of Gall from Tetanized Animals. VINCENZI.
3. Scrofulosis of the Eyes in its Relation to Sex and Age. EMIL GUTTMANN.
4. The Evil Secondary Effects of Drugs. MAX LINDE.
5. The Latest Views with Regard to Inflammation. O. LUBARSCH.

**1.—Fürbringer combats the teaching of Bastian and Brun that the patellar reflex is always abolished after total transverse lesion of the spinal cord in its upper part,** and calls attention to a case published by himself seventeen years ago, in which, after fracture of the spine and total paraplegia, the tendon-reflexes were first abolished, but in the course of three days reappeared. The patient died at the end of the third day, and the autopsy showed a comminuted fracture of the fourth and fifth dorsal vertebrae, and in the region of the upper, complete disintegration of the spinal cord for a distance of 1 cm. Fürbringer is not certain that a microscopic examination was made, but the clinical symptoms were unquestionably those of a total transverse lesion.

**2.—Vincenzi has tested the antitoxic properties of the bile of three guinea-pigs that had been given injections of large doses of tetanus-toxin,** and of three that had been injected with smaller doses, and therefore had lived a longer time, and finally one, that had been given repeated injections of minute doses of the toxin. In all cases the result was absolutely negative.

**3.—Although science has but little use for the term scrofula or scrofulosis,** the word cannot be entirely dropped from clinical nomenclature. The typical scrofulous patient is generally young, often a child with poor nutrition, has a sallow skin, swollen lymphatic glands, eczema of the face and head, inflammation of the mucous membrane of



the nose and ear, persistent inflammation of the eyes with photophobia. Guttman has analyzed the material of Magnus' clinic in Breslau, and finds that the majority of the patients are under 15 years of age, and that two-thirds are girls, one-third boys.

4.—Linde reports a case of irritation of the conjunctiva in the person of an apothecary who was engaged in preparing a fly-blister, using a solution of cantharides in alcohol, and a case of inflammation with partial destruction of the corneal epithelium in a patient suffering from psoriasis who had been treated with chrysarobin.

5.—The determination of the part taken by wandering cells in reorganization is a difficult problem. In the first place it is difficult to distinguish histiogenic and hematogenic wandering cells. Morphologically and even physiologically the two are practically identical. There is also a practical identity between leukocytes and young fixed tissue-cells. All of these circumstances render a proper solution of the question difficult, but Lubarsch concludes from his studies (1) that granulation-tissue and fibrous tissue in the organization-process are chiefly furnished by fixed connective-tissue cells, histiogenic wandering cells, and endothelium; (2) that whether hematogenic wandering cells participate in the process is neither proved nor disproved; (3) that this latter question has, in many ways, lost its significance.

September 1, 1898. [24. Jahrg., No. 35.]

1. Brain-Complications of Otitis Media. WALDVOGEL.
2. Experimental Production of Tuberculous Endocarditis. MICHAELIS and BLUM.
3. The Clinical Application of Lehmann's Iodometric Sugar-Estimation. BENJAMIN.
4. The Latest Views in Regard to Inflammation. (*Conclusion.*) C. LUBARSCH.
5. Opinion in a Case of Accident. SCHOLZ.
6. Complete External Ophthalmoplegia with Paralysis of the Facial Nerve. v. FRAGSTEIN and KEMPNER.

1.—Waldvogel reports four cases of **otitis media**, in which he suspected the occurrence of a **serous meningitis**. The first patient, a boy 3½ years of age, was seized suddenly with high fever and signs of severe bronchitis. Four days later he became somnolent, and had vomiting and convulsions. After another day, a diagnosis of purulent inflammation of the middle-ear was made. The drum was perforated, with improvement in all of the symptoms. The second patient, a boy 4 years old, convalescing from an attack of measles, was seized suddenly with high fever, followed in the course of a few days by somnolence. A few days later spontaneous inflammation of the drum occurred, with evacuation of pus from the middle-ear and improvement of symptoms. These cases presented mild cerebral symptoms in the course of middle-ear disease that did not disappear at once after evacuation of the pus. Thus, in the first case, aphasia persisted for eight days. The third patient presented, on the fifth day of an acute febrile disease, distinct signs of meningitis, and although operation was performed upon both ears, the symptoms failed to disappear. Recovery occurred ultimately in the course of months. During the course of the disease the patient had facial paralysis and blindness of the left eye, and persistent vomiting for almost four weeks. As all of the symptoms ultimately disappeared, it is believed that in this case there must have been a serous infiltration of the membranes, that was absorbed without destruction of tissue. The fourth patient had symptoms of disease in the left ear complicated by high fever, narrow pupils, and convulsive twitching of the muscles supplied by the left facial nerve. After dry puncture of the drum-membrane, the symptoms improved for two weeks; but then the meningitis reappeared. There were signs of pressure within the cranium and constant vomiting. The latter symptom ceased toward the close of life, and the child appeared to be hungry. Death occurred at the end of ten weeks. At the autopsy meningitis was found, with granular ependymitis, acute hydrocephalus, and edema of the brain. Both ears were seriously diseased, and the case represents a persistent serous exudate caused by suppuration in the tympanum.

2.—Michaelis and Blum have **lacerated the aortic valves** of animals through the carotid artery and then injected an **emulsion of tubercle-bacilli into an ear vein**. In the course of from three to six weeks the animals

died. Autopsy showed the presence of diffuse tuberculosis and upon the injured aortic valves numerous delicate verrucose deposits were found. These contained tubercle-bacilli, and in one case one of the vegetations had the appearance of a typical tubercle. Attention is called to the fact that it is most difficult to stain the tubercle-bacilli in the sections, and almost impossible to cultivate them. It is concluded that the tubercle-bacillus may of itself cause verrucose endocarditis.

3.—Benjamin has tested Lehmann's method for the determination of the **quantity of sugar in the urine**. This consists of mixing a definite quantity of Fehling's solution with a measured quantity of urine. The mixture is then boiled and passed through a fine filter. The filtrate is diluted and a definite quantity acidulated with sulphuric acid. Potassium iodid is then added, and the amount of free iodine is determined by titration with a 0.1 normal solution of sodium hyposulphite. The reaction is complete when the brown color of the solution disappears. Benjamin first experimented with solutions of copper sulphate, analyzing them by the titration method and by gravimetric analysis, and found that the results were almost the same. Then known solutions of sugar were tested and again the results were identical. Finally, a number of specimens of diabetic urine were subjected to double analysis, with differences never equaling 2 mg. in 5 cu. cm. It is, therefore, concluded that Lehmann's method, which is very rapid, is thoroughly practical for clinical purposes.

4.—After a critical consideration of the various definitions that have hitherto been suggested for **inflammation**, Lubarsch concludes that in the inflammatory process different factors are combined that are not always of the same relative value. A definition of inflammation then is only possible, if accepted as conventional and for purely practical purposes. The great difficulty is to distinguish the boundary-line between inflammatory processes and organization, for regeneration, organization and inflammatory changes pass gradually, one into the other. Regeneration means the replacement of material that has been destroyed by a substance that is equivalent, physically and morphologically. Organization is the expulsion or encapsulation of dead tissue or foreign bodies, and those processes that lead to cicatrization. Inflammation, finally, is the combination of the alteration of tissue with pathologic fluids, cell-exudates, and proliferation of the cells, in so far as this forms an independent disease-process. Inflammation is divided into three forms: (1) degenerative—that is, with predominance of the cell-changes; (2) exudative and infiltrative, with predominance of the fluid and cell-exudates; (3) proliferative, with predominance of the multiplication of the cells. The question as to whether cirrhosis of the kidney is inflammatory in nature, or not, is regarded as entirely unnecessary; some forms being so, according to this definition, and others not. An extensive collection of the literature is appended to the article.

5.—Scholz publishes the certificate that he gave as an expert in the case of a man whose ankle was caught in the mainsheet on ship-board, and who was violently thrown to the deck and had his ankle considerably bruised. For 66 days, during the remainder of the voyage, and for 24 days longer in the hospital, the man was unable to perform any work. It was noticed after that that varicose veins were seen more distinctly in the injured leg than in the other. The patient complained of neuralgic pains in the leg, lost energy, and emaciated considerably. The emaciation was progressive and death took place 3½ years after the injury, apparently from exhaustion, without distinct disease of any organ. Scholz concludes that death was due directly to the injury, which must have caused severe concussion of the central nervous system, and subsequently a **traumatic neurosis**. The family of the patient was, therefore, given an annuity.

6.—Von Fragstein and Kempner report the case of a man examined when 47 years old, who, at the age of 15, developed paralysis of both eyes, without obvious cause. There was bilateral ptosis. Both eyes were prominent, and neither could be moved. The patient had a shallow ulcer in the lower part of the right cornea. Sensation was unimpaired. The pupils were normal; vision was somewhat reduced. The eye-grounds presented no abnormality. The muscles supplied by the upper branch of the right facial nerve were also completely paralyzed. All the other muscles of the face and the special senses were intact. The conditions are believed to be probably due to degeneration of the nucleus of the



third nerve, with involvement also of the adjacent nucleus of the upper branch of the facial, which, it is assumed, is situated in the position assigned to it by Mendel. No history of syphilis, either hereditary or acquired, could be elicited. It is concluded that the pathologic nature of the process was a primary nuclear degeneration or sclerosis. The prognosis is, of course, unfavorable.

### Münchener medicinische Wochenschrift.

August 30, 1898. [45. Jahrg., No. 35.]

1. Heat-resisting Bactericidal Leukocytic Substances. SCHATTENFROH.
2. A Contribution to the Pathology of Epidemic Cerebrospinal Meningitis. MAYER.
3. The Parasyphilitic Symptoms of Congenital Lues in Early Childhood. KATZENSTEIN.
4. A Case of Spontaneous Hemorrhage from the Iris and Ciliary Body in the Anterior Chamber in a Case of Leukemia. SORGER.
5. Demonstration of a Case of "Intermittent" Reflex Pupillary Immobility with Tabes Dorsalis. TREUPEL.
6. Migrain and Its Treatment. FRIESER.

1.—Schattenfroh energetically combats the assertion of Bail and Löwit that **leukocytes** rubbed with glass powder liberate **bactericidal substances** that are not destroyed by boiling for 5 minutes. He believes that this material is due entirely to the liberation of fluoric acid and its salts from the glass powder, for he has found that when ordinary culture-media are thus rubbed up colonies do not develop with the same luxuriance as upon culture-media not so treated. Moreover, if the cells are rubbed with quartz-sand instead of glass powder the mechanical effect should be exactly the same, but as a matter of fact no bactericidal substances are liberated. Regarding Ball's further assertion that material can be obtained from the plasma of an exudate by precipitation with acetic acid, and then dissolving the precipitate in an alkaline medium, Schattenfroh believes that the bactericidal activity is due entirely to the excess of alkali, at any rate, the colon-bacillus would not grow in such alkaline media. If, however, such a medium be warmed for some time it is probable that alkali-albumins are formed, and it becomes more nearly neutral, so that cultures will again develop upon it.

2.—Mayer gives a brief review of the literature of **epidemic cerebrospinal meningitis**, from which it appears that the meningococcus behaves differently for different observers upon the ordinary culture-media, although in general it can be said to lose its vitality quite readily. It is not at all certain that the organism is really not a variety of the pneumonia. The pathologic anatomy of the disease includes more or less bronchitis and hyperemia of the lungs, with occasional areas of pneumococcal infiltration; ecchymoses in the endocardium and pericardium, with slight alteration of the heart-muscle; a small spleen, often with a wrinkled capsule. The liver is hyperemic and darker in color. The urine often contains albumin and casts; and the kidneys are intensely hyperemic and there is parenchymatous degeneration of the cortex. Sometimes swelling of the solitary follicles of the intestine and of Peyer's patches has been observed. Mayer reports the case of a soldier who was seized with severe headache and vomiting, and a day later became suddenly unconscious. He was restless and the pupils were dilated, but reacted well. The extremities were contracted and the urine contained albumin and blood-cells. Four days later the man became jaundiced, suffered severe pain in the limbs, and the liver was found enlarged and tender. On the ninth day there was distinct retraction of the head. A day later there was expectoration of a considerable quantity of yellowish-white sputum, and death took place on the tenth day. On post-mortem examination the sulci of the brain were found filled with greenish-yellow masses; the pia was opaque and infiltrated, and the vessels injected. The brain was edematous; and signs were present of a severe bronchitis and hypostatic pneumonia. The liver was greatly enlarged, reddish brown in color and firm in consistency. The spleen was not enlarged. The kidneys were in a stage of acute inflammation. Cultures from the pus showed a growth consisting of an encapsulated diplococcus that stained poorly by Gram's method. Other specimens formed

more opaque white colonies composed of tetrads that lost their vitality upon ordinary agar in about 8 days. The tetrads grew upon glycerin-agar and formed chains or clumps, and lost their vitality in about 3 months. The diplococci caused severe illness, while in white mice the tetrads had no effect. Histologic examination of the tissues showed round-cell infiltration of the membranes and of the brain, perivascular round-cell infiltration of the pia and the gray substance. In all sections, numerous encapsulated diplococci were found that stained by Gram's method. In the lungs also encapsulated diplococci were found in the fibrinous or cellular exudate that filled the alveoli. Evidences of commencing pneumonic inflammation were present. In the heart-muscle groups of round diplococci were found that stained by Nicolle's method. The liver exhibited pronounced cellular infiltration in the connective tissue. The spleen showed an increase in the mononuclear leukocytes and a number of staphylococci. The kidneys also exhibited signs of inflammation, and here and there groups of round diplococci were found. It thus appears that in this case two distinct varieties of cocci were found in the tissues: One, the pneumococcus, which was partially responsible for the meningitis, had caused a beginning secondary degeneration of the lungs; the other variety consisting of small, round microorganisms often grouped in fours and found chiefly in the white blood-corpuscles. The meningococcus seems to have caused the primary infection, and the pneumococcus to have acted only secondarily. An extensive list of references is appended to the article, from which, however, is omitted the name of Councilmann, who has done so much work in the pathology of this disease.

3.—Katzenstein discusses the manifestations of **hereditary syphilis in childhood**. A distinct history is often absent, for the parents are likely to deny infection; or they may have had the disease in such a slight form that it did not attract their attention; or, finally, Katzenstein believes that syphilis may be transmitted to the third generation. In support of this view he mentions the case of a child whose grandmother had died of progressive paralysis, whose father and aunt had developed tabes in early life, and which itself exhibited distinct parasyphilitic symptoms that were cured by calomel. The most characteristic indication is the high mortality among the children in the family, and the histories of four families in which the diagnosis was based on this manifestation alone are cited. Among the curious parasyphilitic symptoms are rashes that resemble the exanthems, measles and scarlet fever. The commoner symptoms are anemia, which may be very profound and is characterized by a diminution in the size and alteration in the form of the red blood-corpuscles, and the presence of a considerable degree of leukocytosis; enlargement of the liver and spleen, occasionally associated with ascites; enlargement of the abdomen; chronic intestinal catarrh; and chronic nasal catarrh. The nervous system seems to escape almost entirely. Eclampsia is rare, but Katzenstein mentions a case in which it occurred. Many of the children born are of underweight, and hereditary syphilis is the commonest cause of dwarfism. Katzenstein is of the opinion that it is also a common cause of rachitis, and he is not certain that it may not produce hydrocephalus and spina bifida. The treatment consists in the administration of minute doses of calomel and potassium iodid. The prophylaxis consists in the administration to the mother before labor of potassium iodid in doses as large as can be borne. It is believed that careful treatment of the disease in this stage will prevent the development of its tertiary manifestations.

4.—Sorgor reports a case of **leukemia** that was complicated by **hemorrhage into the anterior chamber of the right eye**. Other methods of absorbing the blood having failed, an incision was made through the cornea, and the anterior chamber was drained with some difficulty. It was then seen that the bloodvessels of the ciliary body and iris were tortuous and many of them bled freely, necessitating subsequent evacuation. The bleeding finally stopped but the patient died in the course of a few months.

5.—Treupel reports the case of a man suffering from **tabes dorsalis**, who, when examined in 1896, had the characteristic signs of the disease, with the exception that the pupils reacted both to light and in accommodation. Four months later the symptoms were still more pronounced, and the pupils failed to react either to light or in accommo-



dation. This condition continued for nearly a year, when it was found that the pupils reacted well to light and continued so to react for the remainder of the period during which the patient was under observation. The case, therefore, illustrates improvement in the pupillary symptoms, while the general symptoms grew worse.

6.—Frieser has treated 29 cases of **migrain**, and has become greatly dissatisfied with the drugs at present in common use. He believes that the disease has always more or less of an hereditary basis, and he reports 3 cases in which this hereditary tendency had persisted for two or more generations. Occasionally it appears to be reflex; the result either of irritation in the sexual organs or of chronic inflammation of the cavities of the head. Modern methods of education are criticised severely, the belief being expressed that they are frequently the cause of nervous disease by forcing too rapidly the intellectual development of the child. A case is referred to in which attacks of migraine followed an injury to the head; and another, in which they occurred subsequent to profound psychic disturbance. The symptoms of the disease are described briefly, and in treatment careful attention to diet is advised, particularly abstinence from stimulants, such as tea and coffee, and the administration of menthol valerianate, a drug that is regarded as almost a specific. If the patient is anemic iron should be administered. As analgesics benzaceticin and trophenin may be given in doses of 0.5 gm., the menthol being taken during the intervals. Relapses are not uncommon.

September 6, 1898. [45. Jahrg., No. 36.]

1. Diet in Cases of Hyperacidity. SÖRENSEN and METZGER.
2. Gonorrhea in Childhood. CNOFF.
3. The Pathology of the Lingual Duct. KILLIAN.
4. A Case of Uncomplicated Paralysis of the Serratus Magnus following Influenza. (Illustrated.) V. RAD.
5. A Case of Acute Diabetes Mellitus. BÖHM.
6. The Possibility of Deception in Examinations of the Nose for Permeability to Air, as well as its Bearing Upon Intranasal Procedures. BRUCK.

1.—It has been the custom in the past to recommend on theoretic considerations rather than on physiologic experimentation, the carbohydrates in cases of subacidity, the proteids in cases of superacidity of the stomach. Sørensen and Metzger made a number of studies in Riegel's clinic, using three forms of diet, namely, mixed albumins, and carbohydrates, so selected as to have approximately the same caloric value. With a mixed diet free HCl appeared in from half an hour to two and a half hours after the meal and reached its maximum in from half an hour to three hours later. With the carbohydrate diet the appearance of free HCl occurred relatively early and the acidity reached its maximum rapidly. When the diet was albuminous, free HCl was found in from an hour to two hours, reaching its maximum in four hours. In the fifth hour the stomach was generally empty. On estimating the acidity it was found that the albuminous diet did not produce in the hyperacid stomach a more marked secretion of HCl and that the amount of free acid found was about the same as when a carbohydrate diet was given. There is, therefore, no reason to prefer one diet to the other; but albuminous food has certain advantages, *e. g.* its smaller volume, its greater power to combine with the acid, and its more prompt passage on by the stomach. Furthermore, albuminous food is well borne by hyperacid stomachs. Man can, however, not live on albumins alone. In general, then, neither an exclusive albuminous nor an exclusive carbohydrate diet can be employed. The carbohydrates must be given in large quantities and on that ground act more persistently as irritants to the stomach. They are, furthermore, retained longer, even naturally, than other foods. A mixed diet, with the addition of fats, is best for superacidity. Attention should also be paid to the method of preparing the food and its subdivision, to the former habits of the patients.

2.—**Gonorrhea in childhood** is twice as common below as above the age of six years, and girls are much more frequently infected than boys. In only 1% of cases observed by Cnoff was the disease attributable to immorality. Scarlet fever seems to act as a potent predisposing cause in hospitals.

3.—Killian reports five cases of **persistent lingual duct**. This duct starts from the foramen cœcum of the

tongue and runs backward for a variable distance, sometimes as far as the hyoid bone. It is lined with ciliated epithelium, and has in its wall numerous acinous glands. Occasionally the duct gives off lateral branches, and at times its posterior extremity contains thyroid-gland follicles. The duct is the remains of the thyroglossal canal. Its persistence may cause various paresthetic phenomena at the back of the tongue, and, perhaps, predisposes to obscure phlegmonous inflammations at the root of that organ. In the case reported, Killian was led to suspect the condition by finding little accumulations of mucus at the back of the tongue, where the foramen cœcum should have been. On compression he could evacuate a little more mucus, and then, by probing, he discovered the canal.

5.—Böhm reports the case of a youth of 17, who had not felt well for two or three weeks. He was tired, weak, thirsty, passed urine in excessive quantities, and suffered from headache and vertigo. Four days later he died in **diabetic coma**. At the autopsy the dura was found adherent to the skull, and there was internal hydrocephalus, and hypertrophy and dilatation of the heart, large white kidney, and atrophy of the pancreas.

6.—Bruck believes that in determining the **permeability of the nose** the use of the nasal speculum may lead to erroneous conclusions, because it disturbs the natural relations of the organ. In such an investigation the natural conditions should be preserved as much as possible.

September 13, 1898. [45. Jahrg., No. 37.]

1. A Contribution to the Surgery of the Stomach. GARRÉ.
2. The Function of the Posterior Columns of the Spinal Cord. BICKEL.
3. The Influence of Concussion of the Thorax on the Vessels of the Pleura and Lungs. REINEBOTH.
4. Value of Bicycles After Amputations and Resections. BÖTTICHER.
5. Experiments upon the Sedative and Hypnotic Action of Some Drugs. FUCHS and KOCH.
6. The Prophylaxis and Treatment of Rheumatism. REINHARD.
7. The Etiology of Rheumatism. RABL.

1.—Garré publishes his personal experience in 55 cases of **diseases of the stomach requiring operative interference**. The mortality in cases of carcinoma of the stomach, on account of which 25 operations were performed, was 36%. This compares favorably with the figures of Czerny, 25%, of Doyen, 41.4%, and of Roux, 30%. In 9 cases of gastric ulcer or its complications requiring operation there was no death. The operations performed included resection of the pylorus, gastro-enterostomy, pyloroplasty and gastroplasty. In performing gastro-enterostomy the method of Wölfler was selected, and in no instance was the Murphy button used; the method of Heineke-Mikulicz was selected for the cases of pyloroplasty. From these statistics the outlook for the surgery of the stomach is bright. In cases of malignant disease, while eventually the patient succumbs from metastasis, or from the original growth, their condition in the meantime is so greatly improved as to encourage, rather than to discourage, operative intervention.

2.—Bickel removed the posterior columns of the spinal cord from a dog for a distance of 1 cm., and then studied the resulting disturbances. He found, first, that pain-conduction was in nowise interfered with; nor was the conduction of heat-sensation. The conduction of the sensation produced by cold was, however, greatly diminished; there was also ataxia of the posterior limbs, and the touch-sense was, as well as could be determined, greatly diminished. A diminution in muscular strength was not noticeable, and the reflexes were not abolished. The atactic symptoms soon disappeared, while the conduction of cold, tactile-sense and pressure-sense were not restored. The ataxia was believed to be due to impairment of the deep or muscular sense, for diminution of the tactile sense alone is not sufficient to produce marked ataxia. The dog's condition in the early days after the operation was comparable to that of a tabetic patient. In both cases disturbances of coordination predominated. As far as the dog is concerned, the view of Schiff is adopted, that the posterior columns conduct tactile, muscular, and cold sensations. The fibers conveying these are connected in the brain with the



optic thalamus and the cerebellum. From the thalamus a cortical reflex arc passes to the central convolutions, thence along the pyramidal tracts to the cells of the anterior horns. Along the pathway just described, the muscle-sense is conveyed, at least, in part, and the same is probably true in man also. With regard to tactile sensation, it has been asserted, on clinical grounds, that conduction is not connected solely with the posterior columns, but that it may partly be conveyed along the anterolateral tract, through which pass crossed fibers. That there is a crossed sensory conduction seems to be demonstrated in Brown-Sequard palsy. C. D. Marshall, however, has found that in cats and monkeys hemisection of the cord is followed by loss of tactile and cold sense on the corresponding side, while on the opposite side these sensations are preserved. It would thus appear that the central pathway for the tactile sense is not definitely determined. There is, however, a direct pathway that runs along the posterior columns. The same is true of the conduction of cold sensations.

3.—Having noticed that when the pleura is exposed and struck with a sound, it became filled with a network of injected vessels, Reineboth undertook a number of experiments in order to test the **effects of concussion upon the bloodvessels of the lung**. It was found that the lung may be either slightly or not at all involved. If a window is made in the pleura and the pleximeter is placed upon it and struck with a percussion-hammer, the lung assumes a dusky-blue color and the bloodvessels become injected, both appearances lasting for from 15 to 45 seconds. If the pleximeter is laid in the immediate vicinity of the opening, the lung presents a temporary dusky color, but no other change occurs. If the pleximeter is laid over the other lung and the blow is struck, no change occurs. If an animal, while under the influence of an anesthetic, receives a number of vigorous blows upon the thorax, preferably through a pleximeter, and it is then killed, it will be found that the lung beneath the injured area is cyanotic, and there may be a bluish spot on the opposite site. If the injury is prolonged and severe, the whole lung may be of a blue color, and upon section appear intensely red; the lung of the other side being of a pinkish color. These appearances are probably due to reflex paralysis of the vessel-walls, giving rise to the collection or retention of blood in the lungs. They are usually associated with sudden diminution of the blood-pressure. These experiments indicate that in cases with a tendency to hemoptysis, injury to the thorax, although it may not cause direct laceration of the vessels, may predispose to hemorrhage by paralyzing these.

5.—Fuchs and Koch have experimented with various substances more or less closely related to phenacetin and chloral hydrate, in order to test their **sedative and hypnotic powers**. P—acetamidophenoxyacetamid has about the same antipyretic action as antipyrin, and not quite as much as phenacetin. It appears to cause a greater degree of exhaustion in animals suffering from artificial fever. In order to increase the sedative action, this substance was triturated with chloral, giving rise to P—acetamidophenoxyacetamid-chloral. This forms an amorphous, white, heavy powder, only soluble in cold water and easily broken up by boiling in alcohol and water. A rabbit to which 1 gm. was given fell into deep sleep in the course of 40 minutes, with a reduction of the temperature from 39.9° to 35° C. in an hour and a half. The animal appeared perfectly well after being awakened. Similar effects were observed in animals suffering from artificial fever. When injected with B—tetrahydronaphtylamin, it was observed that the animals exhibited a moderate rise of temperature. When B—T. was injected alone, it caused a preliminary state of great excitement and rise of temperature. When malarin was injected in association with B—T. there was no hypnotic effect. The animal was restless and apparently suffered as much as a control that received B—T. alone. Chloral acted not only better than malarin, but better than sulphonal, trional, and other similar hypnotics. In combination with amylene hydrate, it formed a colorless oily liquid with the odor of camphor. This appeared less toxic than chloral, and equally hypnotic, producing no bad effect. Upon the vascular system it did not produce the lowering of blood-pressure that occurs when chloral alone is used. Amylene chloral also acted favorably if the animal had been previously injected with trional. It is believed that amylene chloral is first broken up in the alkaline blood, giving rise to

the gradual liberation of chloral. Its hypnotic effect is certainly equal if not better than that of other hypnotics, and it appears to exert a less injurious influence.

6.—Reinhard is strongly of the opinion that **rheumatism** is an infectious disease, secondary to some injury to the mucous membranes; particularly those of the mouth, which permit the entrance of the infectious agent. He reports two cases of acute rheumatism of the muscles of the neck occurring shortly after an attack of gingivitis. The prophylactic treatment consists, therefore, in careful cleansing of the mouth at frequent intervals. The case is reported of a man, 32 years of age, who for 10 years suffered from acute articular rheumatism that finally caused a lesion of the heart and involved the small joints of the fingers and feet. After the removal of two hypertrophied tonsils and careful attention to the throat, no further attack occurred. It is, of course, much more difficult to show the relation between chronic rheumatism and throat-affections than between acute rheumatism and throat-affections. Nevertheless, in certain cases this relation seems to exist. A woman, 54 years of age, who had chronic catarrhal pharyngitis, suffered almost continually from pains in the neck, back, and lumbar region. Treatment had been absolutely without effect, but as soon as the chronic pharyngitis was cured, all the symptoms disappeared.

7.—Rabl ridicules the idea that the poison of rheumatism enters the system through solution of continuity in the mucous membranes. He believes that rheumatic pains and fevers are due to interference with the secretory activity of the skin. In the region of Australia, where he practices, there is but little water, and the climate and mode of life seem to prevent the development of tuberculosis. Other forms of inflammation of the mucous membranes are apparently rare, but rheumatism is exceedingly common. This fact is ascribed in part to the circumstance, that organs in a state of high functional activity, such as the skin, in this hot, dry climate, are much more liable to derangement than those upon which less exacting demands are made; and that, therefore, in this region the functions of the skin are very likely to be disturbed. Rabl reports his own case, in which he received a bruise of the knee, which was followed by exposure to cold wind. A few days afterward he experienced severe dull pain in the injured knee and hip, which was relieved by several hot baths.

#### Wiener klinische Wochenschrift.

August 25, 1898. [11. Jahrg., No. 34.]

1. Two Cases of Traumatic Tetanus, one of which was Treated with Brain-emulsion, the other with Injections of Tetanus-Antitoxin. ANTON KROKIEWICZ.
2. Concerning the Coloring-matter and the Iron contained in the Blood. S. JELLINEK.

1.—Krokiewicz reports two cases of **tetanus**. The first occurred in a peasant, 46 years of age, who injured herself on the finger with a hatchet. Two weeks later spasms commenced in the muscles of the face and throat, and the woman suffered from insomnia. One week later she was found to be suffering from longer or shorter cramp-like contractions of the muscles of the mouth, throat and back. Swallowing was impossible. The temperature was slightly elevated. In view of the fact that numerous observers have recently definitely proved the anti-tetanic effect of emulsions of the central nervous system, the patient was injected with 5 cu. cm. of an emulsion of calves' brain. That evening the temperature was somewhat higher. On the following day there was some improvement in the trismus. Three days later the tetanic convulsions were somewhat better, but still severe, and two injections of the emulsion were made, each of 10 cu. cm. That evening the patient was better. On the following day the sites of both injections were swollen and painful but the cramps had improved, so that she could open her mouth. From this time there was progressive improvement in all the symptoms. The temperature fell; the patient slept well at night, and in the course of 10 days complete recovery had ensued. The swellings at the sites of the two last injections developed into abscesses, which were opened, but they apparently contained no microorganisms. During the treatment, aside from occasional stimulants, no drug was employed. The second patient, a man 50



years of age, had bruised his finger with a stone. Seven days later cramps commenced in the muscles of the throat and back. Twelve days after the injury he was unable to swallow. On the seventeenth day, 50 cu. cm. of antitoxin, of a strength of 1 to 10,000, were injected beneath the skin. On the following day the tetanic cramps were more frequent and intense, and 30 cu. cm. of antitoxin were injected. On the next day there was some improvement. From this time the patient continued to improve, and, finally, in a little over a month, was discharged. During this period an injection apparently caused the subsidence of a temporary increase in the symptoms. Of these two cases the second was much the milder. The immediate results of the two forms of treatment were marked. After receiving the emulsion of brain the patient felt better, her mind became clearer, and the attacks diminished in intensity. After receiving the injection of antitoxin the patient became more listless; there was fever, and the attacks were temporarily more intense.

2.—Jellinek continues his article upon the comparative amounts of iron and hemoglobin in the blood in various diseases. He first reports eight cases of various, apparently secondary, anemias, in all of which the hemoglobinometer gave results much higher than those given by the ferrometer. This is in part to be ascribed to the icterus that occurred in some of the cases, the bile-pigments rendering the blood darker. The combined method of examining the blood incidentally was found to be a very accurate test for the course of the icterus. In four cases of severe icterus the amount of iron remained constant. In two cases of leukocytosis, the ferrometer gave low readings, corresponding to the condition found in leukemia by chemic analysis. In several cases of diabetes, the amount of iron in the blood steadily diminished, although the hemoglobinometer gave higher readings. In a case of malaria, the amount of iron remained constant before and after the chill, although again Fleischl's instrument was variable. Jellinek believes that he has shown that the examination of the blood by a single method is insufficient, and that Jolles' ferrometer for estimating the iron is adapted to clinical purposes.

September 1, 1898. [11. Jahrg., No. 35.]

1. Reflections upon the Possibility of a Prophylactic Treatment of Epilepsy by the Hygienic Cultivation of the Nerve-fiber Systems. MAX BREITUNG.
2. Contributions to the Discussion of Urethral Calculi. FRITZ PENDL.
3. The Treatment of Tuberculosis of the Lungs by Creosote Carbonate and Ammonium Sulph-ichthyolate. HUGO GOLDMAN.

1.—In a curiously rambling article, Breitung argues that epilepsy is one of the most fatal diseases of civilized nations, undermining in various forms their health and intelligence. He believes that mere muscular exercise is in itself of little benefit, but that the exercise of the various systems in the central nerve-organs, in other words, an increase in the facility of coordination by exercise, is of great value; perhaps by increasing the number of what he calls appendices (probably the gemmules of the protoplasmic processes of the ganglion-cells). He compares the brain of an epileptic with the surface of a pond upon which the throwing of a stone will create a general commotion, whereas the brain of a normal person is more like a sandy waste in which the falling stone produces no disturbance beyond the point of impact. Children with the epileptic type of brain, if this has been manifested by infantile convulsions, migraine or some other indication of irritability, should be exercised under the direction of the physician, in order, so far as possible, to control the tendency and strengthen the nervous system. That inhibitory action may be efficient is clearly shown by the effect of certain manipulations during the aura, for example, compressing the limb or administering salt to the patient. Undue irritation, however, may in many cases provoke the attack. Breitung concludes with a brief résumé of what he considers the necessary treatment, which consists essentially of bath and air hygiene and systematic cultivation of volitional muscular activity.

2.—Only a comparatively small number of cases of urethral calculi, in the strict interpretation of the term, have been reported, and to this number Pendl adds the report

of two. In one instance the stone was situated about 5 inches from the meatus, and lay in an abscess-cavity surrounded by cicatricial tissue. The etiology in this case is purely conjectural, as the patient had never before passed any calculi. The location of the stone in the pendulous urethra may be accounted for by the presence of a stricture at that point. The composition of the calculus, of urates and phosphates, leads to the belief that its formation was due to the ammoniacal condition of the residual urine resulting from the obstruction offered by the stricture to complete evacuation of the bladder. In the second case, in addition to the urethral calculus which was situated in the membranous portion there were vesical calculi. The location and etiology in this case require no discussion. The calculus was removed with such ease from the bladder by suprapubic cystotomy that this method should recommend itself in similar cases.

3.—In the treatment of pulmonary tuberculosis Goldman employs the following formula: Creosote carbonate and ammonium sulphichthyolate, of each 15 gm.; glycerin, 30 gm.; peppermint-water, 10 gm. This combination appears, in doses of from 10 to 30 drops 3 times a day, to be readily taken by patients, particularly in wine. In cases of advanced tuberculosis, with cavity formation, no remedy is of avail. Goldman, who has observed a number of cases of pulmonary disease among the peasants in an agricultural and mining district, reports, however, several early cases in which the results were excellent. In one of these, in a woman, 27 years of age, there was dulness on percussion with enfeebled and indefinite breath-sounds and mucous rales at the right apex posteriorly, and numerous tubercle-bacilli were found in the sputum. Nevertheless, the patient was entirely cured in about 8 months. Another patient, with a bad family-history, had dulness at the left apex and almost bronchial breathing. The expectoration was profuse and numerous tubercle-bacilli were found. In the course of 5 months the patient appeared perfectly well, and careful examination failed to reveal any lesion. Another patient also improved so that he was able to resume his work in a mill. Naturally, if the patient is in favorable circumstances and able to obtain sufficient food and to stop work the chances of recovery are very much better.

#### Centralblatt für Gynäkologie.

August 27, 1898. [22. Jahrg., No. 34.]

1. Two Cases of Fibromyoma of the Large Intestine. RIEDINGER.
2. A Case of Puerperal Infection in which the Typhoid Bacillus was Found in the Lochia. J. WHITRIDGE WILLIAMS.
3. A Positive Case of Probing the Fallopian Tubes. F. C. FLOECKINGER.

1.—Riedinger reports two cases of fibromyoma of the large intestine. In addition he refers to the cases reported by Lode Pfannenstiel, Westermarck, Senn, and Berg. Of his own cases, one occurred in a woman aged 38 years, who had given birth to six children, the last 2½ years before. For three weeks she had experienced severe pain in the abdomen resembling labor-pains. On examination the abdominal wall was found greatly distended by three tumors. One of these was as large as a fetal head, elastic, and hard. Beneath this was a broader tumor, and another of resisting contour. The third tumor was discovered after the distended bladder had been catheterized. A diagnosis was made of penetrating rupture of the uterus and a bony tumor of the pelvis. The woman was, in addition, well advanced in pregnancy. Celiotomy revealed the abdominal cavity distended with fetid gas, and under the abdominal wall lay the buttock of a fetus weighing 3500 grams. The tumors were found attached to the large intestine. The second patient, 24 years old, and married, had menstruated regularly since her eighteenth year, and had given birth to three children, the last ten weeks before. In the eighth month of the last pregnancy, a hard swelling was discovered under the diaphragm. Examination made after this labor revealed a tumor twice the size of a man's head, hard and smooth, and mainly in the left half of the abdomen. A diagnosis was made of a solid tumor of the kidney, but celiotomy revealed a fibroid tumor attached to the mesocolon of the splenic flexure and the descending colon.



2.—Williams reports a case of **puerperal infection** in which the **typhoid bacillus** was present in the lochia. This, so far as he knows, is a unique case, none like it being recorded in the literature. The patient was 24 years old, and was admitted to the hospital 5 days after the birth of her child. The labor had been normal and had been conducted by a midwife. Manifestations of puerperal fever developed, and examination of the blood failed to disclose the presence of the plasmodium of malaria. Under proper antiseptic precautions and treatment and the use of Marmorek's serum the patient made a good recovery.

3.—Floekinger reports a positive case **catheterization of the oviduct**, the patient being a young woman 17 years of age, who had been married for two years. She was of feeble constitution, and seven months before her visit to the clinic she had aborted at the third month. The treatment consisted in dilatation of the cervix and curetment followed by uterine tamponade with iodoform-gauze. Before introducing the gauze, Floekinger passed the uterine sound, which entered to such a depth that he feared it had perforated the uterine wall. Instead, however, he found that it had entered the orifice of the oviduct and passed for some distance through the lumen of that tube.

September 3, 1898. [22. Jahrg., No. 35.]

1. Operation for Prolapse and their Results in Sweden. F. WESTERMARK.

2. Reply to Dr. Hohl. M. FLESCH.

1.—Westermarck reviews the work done by the Swedish gynecologists in the cure of **uterine prolapse** and presents the following conclusions: (1) In Sweden the methods that can be employed with advantage in the treatment of uterine prolapse are numerous; (2) the direct result of the operations is good; (3) the remote results of all the operations that are tabulated for the cure of genital prolapse are known in 283 of 596 cases, that is, in 47.5%. Of these recurrences are noted in 52 cases, or 18.7%. The results are unknown in 310 cases, or 52%. From these statistics it is claimed that one has substantial grounds for maintaining that the result, immediate and remote, in the majority of the cases operated upon has been more than satisfactory, that it has been absolutely good.

September 10, 1898. [22. Jahrg., No. 36.]

1. A Simple Method of Aseptic Tamponade of the Puerperal Uterus. DR. SCHWARZENBACH.

2. Reply. DR. HOHL.

1.—Schwarzenbach describes a simple method of **aseptic tamponade of the puerperal uterus**, which is supposed to be an improvement on Dührssen's method. It consists in the use of a metallic, funnel-shaped vaginal speculum, 10 cm. long, with the diameter of the external orifice 29 cm. and that of the inner orifice 16 cm. This is introduced into the vagina, which is first rendered as aseptic as possible by means of suitable agents. The cervix, which is made to protrude through the smaller orifice of the funnel, is grasped with a volsellum-forceps, cleansed thoroughly, and then dragged down, while a strip of iodoform-gauze is carried up through the canal into the uterine fundus. By this procedure no part of the gauze can come in contact with the vagina or external genital organ, as the outer orifice of the speculum overrides the vulvar tissue and prevents soiling with urine or feces. After the gauze is thoroughly introduced, and the excess is cut off, the speculum is withdrawn, and the aseptic tamponade has been accomplished.

## Selected formulas.

### For Neurasthenia:

Sodium bromid ..... 1 ounce.  
Solution of potassium arsenite..... 1.5 fluidounces.  
Extract of ergot..... 1 dram.  
Camphorated tincture of opium..... 1 fluidounce.  
Water to make..... 4 fluidounces.

Mix.—One teaspoonful in water after meals.

—POTT.

### For Pruritus of the Genitals:

Menthol ..... 4 parts.  
Alcohol ..... 30 parts.  
Distilled water..... 60 parts.  
Dilute acetic acid.....150 parts.

Mix.—To be applied locally.

—CUMSTON.

Carbolic acid..... 5 parts.  
Hydrated potassium ..... 2 parts.  
Linseed oil.....30 parts.  
Oil of bergamot.....a sufficiency.

Mix.—To be applied locally, particularly at bedtime.

—New York Polyclinic.

### For Erysipelas:

Carbolic acid }  
Tincture of iodine } of each..... 1 ounce.  
Rectified spirit }  
Oil of turpentine..... 2 ounces.  
Glycerin..... 3 ounces.

Mix.—The site of the disease is to be painted with this mixture every two hours, and then covered with antiseptic gauze.

—La Presse Médicale.

Ichthyol. ....10 drams.  
Petrolatum ..... 5 drams.  
Lanolin.....15 drams.

Mix.—To be applied locally.

—NABUGNOW.

### For the Cough of Tuberculous Patients:

Fluid extract of hydrastis canadensis—20 to 30 minims four times daily—will be found a most effective remedy.

—SÄNGER.

### For Gastric Hyperacidity:

Sodium sulphate..... 1 ounce.  
Potassium sulphate..... 1.5 drams.  
Sodium chlorid ..... 1 ounce.  
Sodium carbonate..... 6 drams.  
Sodium borate..... 2.5 drams.

Mix.—Half a teaspoonful in half a glassful of water before breakfast and two hours before the two other meals.

—WOLFF.

### For Catarrh of the Upper Air-Passages:

Menthol..... 4 parts.  
Eucalyptol..... 2.5 parts.  
Turpinol..... 2 parts.  
Essence of pine..... 1 part.

Mix.—A few drops are to be poured into a bottle and the latter heated over an alcohol lamp. The bottle will be immediately filled with balsamic vapors which the patient is to inhale.

—KAFEMANN.

### For Acute Gastric Catarrh:

Subnitrate of bismuth.....10 grains.  
Potassium bromid.....15–20 grains.  
Dilute hydrocyanic acid ..... 5 minims.  
Spirits of chloroform.....10 minims.  
Mucilage of acacia..... 2 fluidrams.  
Water..... to make 1 fluidounce.

Mix.—To be taken every three hours.

—Practical Medicine.

### For Chronic Intestinal Indigestion in Children After Dentition:

Fluid extract of spigelia..... 2 fluidrams.  
Extract of senna..... 2 drams.  
(Or fluid extract of cascara.... 1 fluidram).  
Tincture of nux vomica..... 1 fluidram.  
Compound tincture of cinchona... 4 fluidrams.  
Compound sirup of sarsaparilla... 2 fluidrams.

Dose.—One teaspoonful three times a day.

If an intercurrent infectious disease has aggravated the symptoms, 2 grains of potassium iodid may be added to each dose; or, if sleep is disturbed or enuresis troublesome, from 3 to 5 grains of bromid may be added in the same manner. If prolapse of the lower bowel occurs, from 3 to 5 drops of the fluid extract of hydrastis may similarly be added.

—DESSAU (Medical News).



# Original Articles.

## TYPHOID FEVER IN INFANCY AND CHILDHOOD.<sup>1</sup>

By J. P. CROZER GRIFFITH, M.D.,

of Philadelphia.

Clinical Professor of Diseases of Children, in the University of Pennsylvania.

THE kind invitation given me to lecture before you that brings me here necessitated first of all the choice of a subject. My mind naturally turned to that of typhoid fever as it occurs in infancy and childhood, since we in Philadelphia have, unfortunately, peculiar opportunities for seeing a great deal of this disease. I have been led, too, to choose this topic because so much has been written about it, on the one hand maintaining and on the other denying the frequency of the disease at this period of life, and because my own conviction and experience are so decidedly in favor of the view that it is anything but uncommon. I want, therefore, to discuss with you typhoid fever as it occurs in early life and to give the details of some cases.

We cannot, of course, go over the whole subject of typhoid fever as it occurs at all periods of life. Yet a somewhat systematic review of the matter will not be amiss.

First, as to *etiology*. As is now well known, the active direct cause of the disease is a germ—the typhoid bacillus of Eberth. Just how this gains entrance to the system is not known in every case. It is certain that in the vast majority of instances it enters through the digestive tract. Oftenest the germs are conveyed by food and water. A large number of reports of milk-epidemics have been published, and it would seem that infected milk is probably the cause of many cases of the disease in children. That more children are not attacked is probably due to the common practice of cooking the milk in some manner. It is likely also that the germs may be transmitted by the wind, as Buchholz<sup>2</sup> maintained, as well as in other ways, and that they may sometimes be carried from the sick to the well without any direct contamination of the food or drink.

Then there are other factors to be classed among predisposing causes and which demand some consideration here. There is certainly evidence that severe chilling of the body, the depressing influence of fright, and the like, may favor the development of typhoid fever if the germs are already present. Henoch<sup>3</sup> relates some interesting instances of this sort. Indeed, there is every reason to believe that a system debilitated from any cause is more liable to permit the germs to develop than one in good condition. The fact, too, that relapses seem often to depend upon some indiscretion in diet, or at

least to start with it, would indicate that a disturbance of the normal condition of the digestive tract renders the bowel more liable to permit of the passage of germs through its wall.

On this occasion, however, the most important etiologic factor to be considered is that of *age*. Fifty years ago the occurrence of typhoid fever in children was entirely ignored by nearly all writers. Now it is admitted that the disease does occur, and even frequently, in children, but it is still claimed by many that under the age of 5 years it is uncommon, and under 2 years decidedly so. By way of illustration I may give you some quotations that bear upon this. Thus DeGassicourt<sup>4</sup> found among 276 cases in children only 3 as young as 2 years; Vogel<sup>5</sup> only 4 in the first year of life among 1,017 collected cases in children; and Morse<sup>6</sup> no patient as young as 2 years among 284 cases occurring under the age of 15 years. Holt<sup>7</sup> says he has never seen a case in a child under 2 years of age. Bouchut<sup>8</sup> denies that typhoid fever occurs in the newborn. Berg,<sup>9</sup> in analyzing 1,626 cases occurring in Curschmann's clinic, found only 5 in children as young as 2 years of age. Filatow<sup>10</sup> found no cases in children as young as 2 years among 106 cases in children up to 13 years. He contends that children under 2 years are very rarely attacked by the disease, and those under one year almost never. Your teacher, Professor Northrup,<sup>11</sup> found no case showing the lesions of typhoid fever in over 2,000 autopsies upon children mostly under 2 years of age.

Yet, in spite of these statistics, which would seem to indicate the rarity of typhoid fever in early life, an increasingly large number of cases are reported as occurring in the first two years of life. Some statistical observations even indicate that the number may be greater than I have suggested. Thus, Montmoullin<sup>12</sup> reports 15 cases in children under 2 years of age among 295 cases in children under 15 years. In the Stamford epidemic, according to Schavoir,<sup>13</sup> an unusually large number of children were attacked; 68 under 5 years and 72 from 5 to 10 years, among a total of 406 cases at all periods of life; this prevalence in children being probably due to the fact that the disease was caused by infected milk. Perhaps the youngest case on record, excluding cases of fetal typhoid, is that reported by Gerhardt,<sup>14</sup> in a child of 3 weeks born of a typhoid mother and kept in the same room with her. In this case there was an abundant eruption and the spleen was enlarged. A case in a child of 4½ months,

<sup>1</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>2</sup> *Lehrb. der Kinderkr.*, 10. Aufl., 152.

<sup>3</sup> *Boston Med. and Surg. Jour.*, Feb. 17, 1896, p. 205.

<sup>4</sup> *Diseases of Infancy and Childhood*, p. 140.

<sup>5</sup> *Maladies des Nourrissons*, 8. Ed., p. 160.

<sup>6</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>7</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>8</sup> *Arch. of Pediat.*, 1895, p. 918.

<sup>9</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>10</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>11</sup> *Trans. Am. Med. Assn.*, 1897, p. 511.

<sup>1</sup> Clinical Lecture delivered in a lecture at Bellevue Hospital Medical College, New York.

<sup>2</sup> *Zentralblatt f. H. u. A.*, 1893, No. 1.

<sup>3</sup> *Vierteljahrsschrift f. Kinderkr.*, 8. Aufl., 762.

which exhibited characteristic lesions, is reported by Ogle;<sup>15</sup> and Taylor<sup>16</sup> describes 2 cases in children of 8 and 5 months respectively, the former case having rose-spots and occurring in a house-epidemic. Noyes<sup>17</sup> reports 2 cases, each in a child of 11 months, occurring in the Montclair epidemic. Barthez and Sannée<sup>18</sup> found in 1,113 cases in children from 2 to 15 years old, 90 occurring between the age of 2 and 4 years; and Gerhardt<sup>19</sup> quotes from older literature a number of cases occurring in the early months of life, some of which, however, are open to considerable question.

I might go on enumerating cases, but these are sufficient to show how frequently instances of the disease in infants are reported. Indeed, I am more and more convinced that typhoid fever in infants is far more common than we have any idea of, and that our failure to recognize it is partly due to the fact that we have not sought for it at this early age, and partly is because the symptoms are at that time not so characteristic. Your former teacher, Prof. J. Lewis Smith expressed essentially this view in one of his latest medical contributions,<sup>20</sup> and the tone of Hensch's writings is in accord therewith.

I may relate the following case that occurred in my experience, and which I believe to have been an instance of typhoid fever in a child only 3 months old:

CASE I.—William H., 3 months old, seen first on February 27, 1897. He had been fed on condensed milk, and had been vomiting frequently for six weeks, but had had no diarrhea. He had been restless, and had had a troublesome, hard, dry cough.

Examination showed a somewhat emaciated baby, with evidences of beginning rachitis, and with the abdomen slightly distended. The heart-sounds were normal. There was possibly some impairment of percussion-resonance, with slightly increased vocal-resonance, at the apex of the left lung behind, but the signs were very inconclusive. Up to March 5th the child continued in much the same condition, with the temperature not above 100°, and with one or two soft, yellow stools a day. The frequent cough persisted. Nothing further was found in the lungs. On March 5th the temperature rose and continued elevated from that time, sometimes reaching 105°. The bowels became looser, and the stools curdy and green, occasionally containing mucus, and numbering usually from two to four, but sometimes five or six, in the 24 hours. By March 10th the hacking cough had disappeared. The food now consisted of albumen-water and beef-juice; even weak percentages of milk-proteids seeming not to be digested. The case was supposed to be one of enterocolitis of slight degree. From March 10th the child continued in a weak, stupid condition, hardly taking any nourishment, and on March 13th he died. The postmortem examination showed the spleen to be unusually large, soft, and dark, and the mesenteric glands enlarged. Throughout the ileum, and especially in its lower portion, Peyer's patches were thickened, reddened, and somewhat depressed, suggesting much the resolution and superficial ulceration after a typhoid infiltration. Microscopic examination showed infiltration and ulceration. There was none of the widespread, small follicular ulceration that is commonly seen with enterocolitis. The lungs showed nothing abnormal. On account of the suspicious appearance of the intestinal lesions, and of the spleen and mesenteric glands, specimens of the blood were sent to Dr. A. W. Peck-

ham, at the Laboratory of Hygiene of the University of Pennsylvania, who reported a characteristic Widal reaction.

Believing, as I do, that such lesions, though not absolute proof, are at least strong evidence of the presence of typhoid fever, and that the presence of the Widal reaction, when the method is properly carried out, is nearly conclusive, in the light of the fact that there was nothing else discoverable in this case to account for the increasing asthenia and the continued high temperature, I am forced to the conclusion that I had to do here with a case of typhoid fever.

I have the records of two other cases occurring in the Children's Hospital during the service of Dr. F. A. Packard, which came under my care during convalescence. Their notes, in brief, read as follows:

CASE II.—Esther S., 19 months old, was admitted October 7, 1897. She was said to have been ill for two weeks with diarrhea, slight cough, and loss of appetite. Examination showed the spleen to be much enlarged, and numerous typical typhoid spots present over the abdomen. The child continued in good condition, with a temperature ranging usually from 102° to 104° F., and with from one to four soft or watery stools a day. The blood yielded a characteristic serum-reaction. The temperature fell suddenly on the 12th, but it promptly rose again, apparently in consequence of a slight complicating broncho-pneumonia. By October 21st, convalescence was practically established.

CASE III.—Harry B., 19 months old, was admitted October 12, 1897. The bowels were said to have been loose and green for two weeks, and there had been cough, fever, and loss of appetite and weight. Examination showed a sickly-looking child, with an herpetic eruption about the angle of the mouth, numerous typical typhoid spots on the chest and abdomen, and a much-enlarged spleen. The lungs exhibited evidence of slight pneumonic change. The blood yielded the typhoid reaction, and the urine responded to the diazo-test. The time of the cessation of the disease could not be determined, as the child developed a complicating diphtheria in a short time, from which he finally recovered. The temperature during both diseases ranged from 100° to 102°.

I have quite recently seen another instance of typhoid fever in a child of 14 months, which I shall not take time to detail.

Here is a case in a still younger child:

CASE IV.—William G., 7 months old, was taken ill on June 20th with vomiting and diarrhea, the latter continuing until he was first seen two days later. The child was found to be weak, thin, lying very still, with the eyes expressionless and often rolling, and the pulse weak and rapid. Diarrhea continued, with high fever. On June 25th, the abdomen was found distended and the seat of a few characteristic rose-spots, while a number of typical spots were present on the back. The spleen was not perceptibly enlarged. In the days following, the temperature remained elevated to 103° or 105°, except when reduced by hydrotherapeutic measures, although gradually falling to normal by July 4. Crops of typical spots kept appearing and disappearing. There were also very numerous furuncles. Diarrhea of moderate degree persisted until June 27th. However, in spite of the disappearance of typhoid symptoms, the child finally died, apparently from inability to recover from the weakness caused by the disease and by the pustular inflammation.

Yet, while maintaining that typhoid fever is more frequent in infancy and early childhood than has been ordinarily supposed, there is no reasonable doubt that it is decidedly less frequent than in later life. There may be various causes for this. It has been contended that children are less susceptible to the disease. This may be true, but it seems more likely that, at least in

<sup>15</sup> *Lancet*, 1892, Jan. 2, p. 21.

<sup>16</sup> *Id.*, *ibid.*, July 18, 1896.

<sup>17</sup> *Med. Record*, 1894, Nov. p. 1.

<sup>18</sup> *Les Mal. de l'Enf.*, 3e éd., in. p. 333.

<sup>19</sup> *Ann. de K. K.*, B. u.

<sup>20</sup> *M. N.*, 1898, LXX, 691.



the case of infants, the comparative freedom depends upon the fact that there is less exposure to infection. The feeding of a baby on breast-milk, or upon cow's milk that has been rendered sterile by heat, accounts for this.

Not only are infants not spared by typhoid fever, but the disease may even attack the fetus. This would be expected, since it has been found that other infectious diseases, such as pertussis, variola, rubeola, and malaria, have been contracted before birth. Even before the discovery of the Eberth bacillus there had been reported about 10 cases of congenital typhoid fever, many of them almost certainly genuine; and since the discovery a number more have been recorded in which the bacillus was found in the blood and the organs of the fetus born of a typhoid mother. In some of these doubt arises because the observations were made at a time when the bacillus coli and the bacillus typhosus were not well differentiated, but in 10 instances there seems good reason to think that the presence of the germs was undoubted.<sup>21</sup>

The Widal reaction has been obtained with the blood of a child at the eighth month, born of a typhoid mother, as reported by Chambrelent and Saint Philippe,<sup>22</sup> and last spring I had the opportunity of observing and publishing a similar case.<sup>23</sup> Other cases have been reported in which no such reaction was to be obtained, and in one case that I recently saw in the service of Dr. Wm. Pepper in the Hospital of the University of Pennsylvania, a child born at term of a typhoid mother failed to yield the typhoid reaction. Conclusions cannot be drawn as yet, in the present state of our knowledge; but the failure of the reaction in some cases and its presence in others, together with the presence of bacilli in the tissues in some cases and its probable absence in others, points rather to the production of the agglutinating principle in the fetus itself only when the germs are present there, than to its passage through the placenta. If this is correct it would seem to mean that a newborn child with the Widal reaction must have had typhoid fever while still in the body of the mother. It is only right to say that the studies of Grünbaum<sup>24</sup> do not support this view. Yet, as he admits, the dilutions of serum that he employed were not high enough.

**Symptoms.**—The principal features of typhoid fever, as usually seen in children—but of course with numerous exceptions—are an indefinite and uncharacteristic onset, a much greater mildness of the attack, a

distinct tendency to a shorter course, and a disposition for nervous symptoms to overbalance intestinal manifestations. We may take these symptoms up somewhat more in detail.

It happens oftener than in adults that the disease begins suddenly, and that in the course of only a few days the attack is in full swing, and even that the characteristic spots may be present. This is particularly prone to be true of young children. Yet more commonly the onset is so slow and so insidious that this, with the mildness of the attack, renders it impossible to decide just when the child was taken ill. Such children continue to walk about, with loss of appetite, possibly headache, and some slight malaise; until, after some days of observation, with watching of the temperature, the physician is forced to the conclusion that he is dealing with typhoid fever, and not with a disturbance of digestion merely. The child is now put to bed, not because it feels too sick to be up, but because it is made to go. Often, of course, the child is much more ill than this, and is quite unable to stay out of bed longer.

The respiration shows nothing unusual. It is accelerated, of course, in proportion to the degree of fever. Epistaxis is probably not as common as in adults. Frequently there are coarse rales in the chest, and cough is a common symptom. The pulse, as in adults, is not infrequently slower than the normal temperature-pulse ratio calls for. This is especially true during convalescence. I recall the case of a boy of 12 years, whose pulse toward the end of pyrexia was full and strong, although it numbered only 50 in the minute.

The temperature, when typical, is as in adults, but it tends to vary from this greatly. It may rise suddenly, as I have stated. Often it runs a most irregular course, especially in infants. During the acme of the disease the temperature often remains high, with but little variation between the morning and the evening elevation. The remittent type, so characteristic of the last portion of typhoid fever in adults, is liable to be absent or greatly curtailed in children. According to Morse's statistics<sup>25</sup> the remittent character is absent in about half of the cases. The temperature may even fall almost by crisis. After reaching normal it may be temporarily elevated again by entirely insignificant causes. Abortive types of the disease are common in children, the fever lasting sometimes not more than a week. The total average duration is certainly shorter in children than in adults. Roughly speaking, it averages from 14 to 20 days; sometimes in severe cases it is decidedly longer. Wolberg<sup>26</sup> found the average duration of pyrexia 14 days in 28 cases in children under 5 years of age, and 17 days in 249 cases in children from 5 to 12 years of age.

The abbreviated notes of the following case in a boy of 13 years illustrate an average short and mild course of the disease, as it is often seen, although the child was

<sup>21</sup> Ernst: *Z. f. Bakt. u. Imm.*, 1890, viii, 2, 188; Janiszewski: *Monch. med. Wochenschr.*, 1893, 795; Hildebrandt: *Therap. d. Med.*, 1889, 889; Freund and Levy: *Ber. d. k. Ges. d. Wiss. zu Berlin*, 1895, 539; Widal: Reported by Galitz: *Philad. Press*, 1890; Frass and Reichenow: *Archiv. f. Kinderh.*, 1892, 282; Lieberth: *Arch. f. Kinderh.*, 1889, 101; Legry: *Etude sur le fœtus dans la fièvre typhoïde*, *Paris, p. 1890*; Dark: *Monch. med. Wochenschr.*, 1896, No. 16, 842; Giallino: *Arch. f. Kinderh.*, 1890, 819.

<sup>22</sup> *Ann. de M. d. B. Soc. de M.*, March 15, 1890, p. 502.

<sup>23</sup> *M. L. News*, May 15, 1897.

<sup>24</sup> *Monch. med. Wochenschr.*, Berl. 30, 1897, 331.

<sup>25</sup> *L. J.*

<sup>26</sup> *Jahrb. f. Kinderh.*, 1887, xxvii, 28.

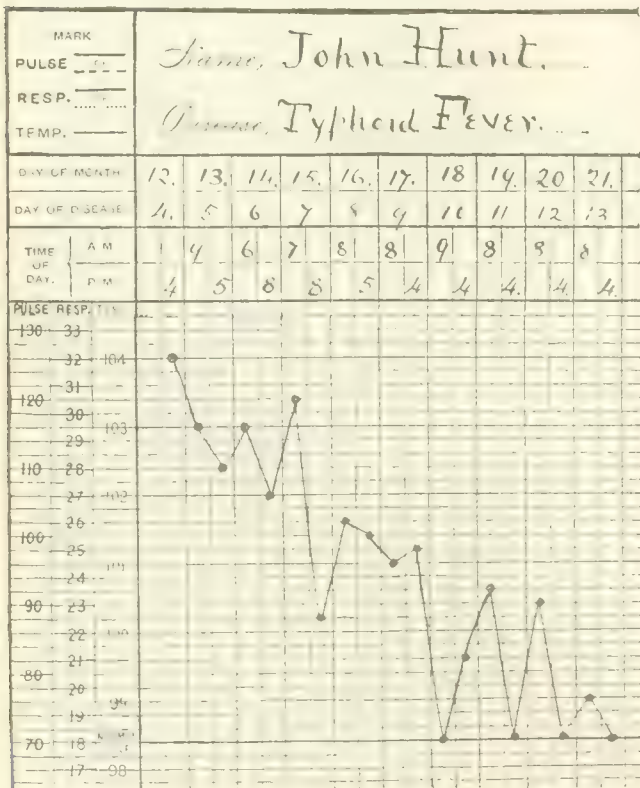
somewhat beyond the age at which typhoid fever in children best shows its characteristics.

CASE V.—Jackson D., 13 years old, complained of headache on November 19, 1897. This continued more or less until the 23d, when he appeared to have decided fever, and the temperature taken on this date ranged from 102° to 103°. I saw him for the first time on November 26th. His condition was excellent, his spirits lively, and his only complaint that of moderate headache, especially in the afternoon. He slept well, had absolutely no apathy, and did not want to stay in bed. The spleen was found enlarged on palpation. No typhoid spots could be found. The blood taken on this date yielded the typhoid reaction. By November 28th even the headache had almost disappeared. There had been no cough. By December 7th the temperature was constantly normal, and even before this for some days it exhibited only a slight evening rise, which was very possibly due to slight excitement in the afternoon, the result of playing checkers or of reading to himself.

If we date the prodromal symptoms from November 19th and the onset of the attack from November 23d, when the first evidence of fever appeared, the attack lasted only 14 days and was almost unattended by symptoms.

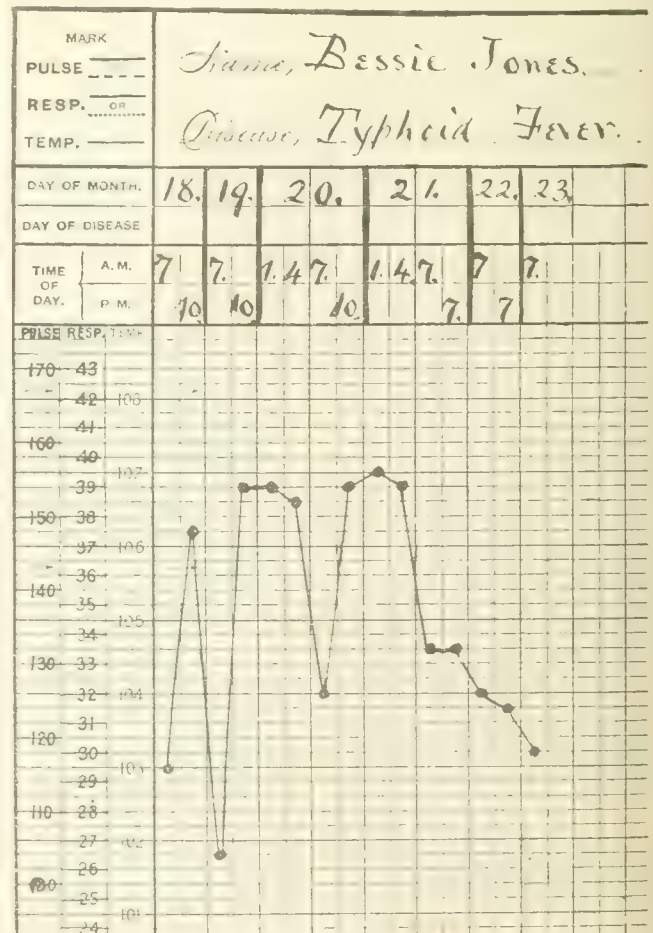
Here is the case of a still younger patient under my care, illustrating the short course of the fever. The history of the family-epidemic, of which he made one case, has already been reported by Dr. O'Malley.<sup>27</sup>

CASE VI.—John H., 6 years old, had exhibited for a few days a gradually ascending zigzag rise of temperature, and was admitted to St. Agnes' Hospital on November 12, 1896. There were, during the attack, diarrhea, epistaxis, headache, abdominal tenderness, tympanites, rose-spots and enlargement of the spleen. The temperature, as the chart which I exhibit shows, reached normal by the thirteenth day of the disease.



Except in quite young children, in whom the elevation is likely to reach a somewhat lower degree, the height of the temperature of typhoid fever does not vary materially from that seen in adults. It has seemed to me, however, that children generally bear high temperature much better. The notes of the following case, with a portion of the temperature-chart, illustrate this point:

CASE VII.—Bessie J., 10 years old, was said to have been ill for several weeks without medical attendance, and the history of her ailment was not to be obtained with clearness. When first seen, on December 23, 1896, she was complaining of slight pain in the abdomen, and had a scanty secretion of urine. Her face had a heavy and rather dull expression; her tongue was heavily coated; the temperature was 104.6°; and there were rose-spots on the abdomen. The child passed through an attack of typhoid fever of moderate severity, the temperature reaching normal by January 5, 1897. It continued afebrile until January 17th, when a relapse began. This was in many respects more severe than the original attack, the abdomen being at times so tympanitic that peritonitis was suspected. The relapse was also characterized by hyperpyrexia, the temperature on one occasion reaching 107° F., and for over two days being much of the time above 106°. (See chart.) The mind, however, remained entirely clear, the nervous system apparently in perfectly normal condition, and the child bright and cheerful. After 12 or 13 days from the onset of the relapse the temperature began gradually to fall, and the normal was reached by February 4th, after 16 days of fever.



Although, as I have stated, the nervous symptoms of typhoid fever in children are prone to overbalance the



intestinal symptoms, yet in the great majority of cases they are insignificant. Headache is quite common, especially at the outset; but even then it is likely to be slight and to disappear soon, and many children remain throughout the entire attack in the best of spirits, and evidently do not feel at all ill. There is not infrequently slight delirium, especially at night, or sometimes screaming in young children. In severe cases delirium may become very pronounced. A decided degree of apathy is sometimes noted. In young children I have seen this constitute one of the most important diagnostic symptoms. But the extreme apathy, the subsultus, the stupor, the coma vigil and coma, which are so common in adults, are rarely seen in children.

There is a form of nervous disturbance oftener present in children than in adults, viz., a condition resembling meningitis very closely. This I have myself seen but rarely. The following case illustrates a tendency to this condition. The child exhibited, too, a development of the roseola to an enormous and unusual extent.

CASE VIII.—Annie M., 5 years old, was attacked by typhoid fever, which was ushered in by sore throat and fever, pains in the limbs, slight vomiting, and epistaxis. She was first seen, October 3, 1894, on the seventh day of the disease. Her temperature was then over 104° F., and the spleen was found enlarged on palpation. Typical typhoid spots covered the abdomen in such numbers as to resemble measles at first glance. One particularly large spot, over half an inch in diameter, was noted on the leg. The temperature continued elevated in spite of tub-bathing, and nervous symptoms became marked, the child being delirious and extremely restless. On October 4th a large crop of labial herpes developed. By October 6th nervous symptoms were profound, the child being generally delirious, unconscious, tossing and throwing herself about the bed, and sometimes assuming the position of opisthotonos. At other times hebetude prevailed. There had been no diarrhea, with the exception of two loose movements upon October 3d. There was some tenderness and gurgling in the right iliac fossa. Typical rose-spots covered the back, abdomen, chest, arms, and legs in surprising numbers. From this date the case ran a more regular course; the nervous symptoms suggesting meningitis were less pronounced, the temperature was lower, and the spots still covered nearly the entire body. There was slight cough, and later some mucous rales in the chest. By October 13th the profuse eruption of spots had nearly disappeared. By October 16th the spleen was still enlarged and was tender. The child made a good recovery.

As the notes of this case state, the child had labial herpes, which is rare in typhoid fever. I have seen it only a couple of times, and in both instances in children.

With regard to the typhoid roseola, the claim is often made that it is much less likely to occur in children than in adults, and that it is not so well developed in the former. In my own experience, however, it appears to be just as frequently present as in later life. I have never seen as great a development of it as in the case just detailed. In the 671 cases of typhoid fever in children collected by Morse,<sup>28</sup> roseola was found in 406, or 60%. The number of cases in which the rash is present at some time during the attack, but is overlooked, certainly increases considerably the actual per-

centage over those that statistics give. Baginski<sup>29</sup> thinks the eruption seldom absent, and the spots were absent in only 19 of Henoch's<sup>30</sup> 381 cases. The occurrence of a desquamation in infants with typhoid fever has been reported in a number of instances by Weill<sup>31</sup> and others.

Enlargement of the spleen is always present, although not always discoverable. Statistics indicate that it can be detected in about 80% or 90% of all cases in children.

Other symptoms we must run over hurriedly. Drying of the tongue is much less common than in adults. Vomiting is a frequent initial symptom. This is the experience of many observers and my own also. Even later in the attack vomiting is more common than in adults. Very obstinate uncontrollable vomiting is reported by Moussous<sup>32</sup> in 2 cases, lasting in one instance 8 and in the other 10 days, almost without intermission, yet followed by recovery. I have seen one case, running a course rather mild than severe, develop at last uncontrollable vomiting lasting for days and ending in death.

The condition of the bowels is variable and appears to bear no relation to the severity of the disease. Constipation is frequent, although what proportion of cases suffer from it rather than from diarrhea is disputed. Among my own cases diarrhea has been a symptom of little prominence. On the whole, however, statistics would indicate that the one condition is about as frequent as the other. Certainly severe diarrhea is not of common occurrence. One important characteristic of the evacuations from the bowels is to be noted here, viz., the rarity of intestinal hemorrhage in children with typhoid fever. This is a matter upon which all writers are agreed. In 553 cases of the disease in children, collected by Morse,<sup>33</sup> only 9, or 1.6%, exhibited hemorrhage. When it does occur it is generally but slight. It is particularly rare in children under 10 years old. The following case of hemorrhage in a child 9 years of age is, therefore, of interest, although it cannot be said that the loss of blood was so much the direct cause of death as was the profound toxic condition of the child.

CASE IX.—Bessie P., colored, 9 years of age, was admitted to the Children's Hospital, December 22, 1897. She had commenced to complain on December 15th, and by the 18th was suffering with headache, pain in the abdomen, restless sleep, and slight diarrhea. By December 20th slight delirium began, as was indicated by the following case. Bessie P. showed a well-developed girl, without roseola. There was tenderness in the right iliac fossa, the spleen was found slightly enlarged on percussion, and delirium and restlessness were present. The temperature was 103.8°. The blood taken upon this date yielded a positive Widal reaction. The urine contained a small amount of albumin, but no casts. The case ran an ordinary course until December 29th, the temperature ranging from 98° or 99° in the morning to 101° or 102° in the

evening, and there being one or two soft or loose stools daily. On the evening of December 29th the girl rather suddenly became weak, the hands were cold, and there was no pulse at the wrist. The temperature was but 94°. Under stimulation she revived, but again sank, and died at 1 15 A.M., on December 30th. No blood was found in two stools passed during this period, but after death some fecal matter and a considerable amount of blood passed from the anus. The autopsy showed extensive infiltration of Peyer's patches and of the solitary follicles of the ileum, becoming more intense in the neighborhood of the cecum. There was no deep ulceration. There was a hemorrhagic condition of the mucous membrane of the large and of the lower part of the small intestine, with some effused blood upon the surface.

The case of Leila B., presently to be described, is another instance of intestinal hemorrhage in childhood.

The rarity of hemorrhage in children doubtless is due to the slight development of the intestinal lesions, to which I shall have occasion to refer again. Upon the same condition depends the infrequency of intestinal perforation. Just how common this is is uncertain, as statistics vary, although all agree that it is exceedingly unusual. Henoch saw it in but 1 of his 381 cases; Morse not at all in his 284 cases; Holt<sup>34</sup> found it recorded but 12 times in 1,028 collected cases; and as but 8 of these were fatal, there may be some doubt about the diagnosis of the other 4. Rennert<sup>35</sup> and Schulz<sup>36</sup> give, however, somewhat larger percentages. On account of this rarity, therefore, the following details of an instance of perforation may be of interest:

CASE X.—Leila B., 10 years old, was first seen on February 26, 1897. She had been taken ill 5 days before with pain in the legs, arms, and abdomen. There had also been headache, loss of appetite, constipation, coated tongue, and on two occasions nose-bleed. Examination showed a child with an expression of average intelligence, but of fatigue. The tongue was coated, with the edges and tip red; the pulse was strong and of normal tension. There were a few rose-spots on the abdomen and some gurgling on pressure, with slight tenderness. The spleen could not be felt, and appeared not enlarged on percussion. The child passed through an ordinary course of typhoid fever for the first two weeks of observation. Only to be noted was the constant clearness of intellect, with the exception of slight confusion of mind at times toward the end of this period. There were also slight dizziness and some pain in the ears, developing about March 10th, the latter dependent upon congestion and slight bulging of the drum-heads, and relieved by hot douching. The temperature ranged from 103° to 105°, but was reduced sufficiently by tubbing, which was employed regularly throughout the attack, and was well borne. The stools were soft and yellow, or sometimes loose and brown, and not numbering more than one or two a day. Everything progressed favorably until the evening of March 15th, when rather severe pain developed in the right iliac region, yet without signs of serious trouble. An ice-bag was applied. About 1 A.M., on March 16th, slight hemorrhage from the bowel occurred, and this was repeated at 4 A.M. Later in the morning the child still complained of abdominal pain. The abdomen was slightly distended, resistant, and tender on pressure. The pulse had lost in force, the face had a somewhat anxious expression, and peritonitis was suspected. There was, however, no evidence of collapse. About 1 P.M. vomiting commenced, the child rejecting all food swallowed. The abdomen became more distended, pain increased, and on percussion the liver-dulness was found nearly obliterated. There was still no evidence whatever of collapse. Perforation was suspected, but in spite of the evidence for it, the negative evidence was strongly against it, and the diagnosis was uncertain.

The vomiting continued throughout the rest of the day until about 10.30 P.M., and the distention of the abdomen increased still further. The mind remained clear, and the temperature fell slightly, but was still nearly 102° at 4 A.M. The child died at 7 A.M., on March 17th, without exhibiting any of the ordinary symptoms of collapse. On postmortem examination a perforation was found in the ileum about 15 inches above the ileo-cecal valve; and very extensive and deep ulceration of Peyer's patches elsewhere. Feces and gas were, of course, free in the peritoneal cavity.

This child had reached an age when the characteristics of typhoid fever as seen in childhood begin to become less evident, and when the possibility of perforation can be readily entertained. The accident, however, may take place even in infancy, as is shown by a case reported by Schofield<sup>37</sup> occurring in a baby 21 months old, although it is possible that this case was not an instance of typhoid fever.

We can merely touch upon the subject of *diagnosis*. When the ordinary symptoms of the disease are present we are, of course, in no doubt. Usually, however, we do not have in children such a well-marked group to depend upon, and we must sometimes reason by exclusion chiefly, especially in infants. A continuous elevation of temperature without any local lesions to account for it, and without the demonstrable presence of any other disease, awakens a strong suspicion that typhoid fever is present. Of course there occur in children cases of "simple continued fever," as it was formerly often called for want of a better name—cases in which fever lasting from one to three weeks develops without discoverable cause. I am confident, however, that many cases that have been described as fever of this sort were really instances of typhoid fever.

In the diagnosis we must carefully exclude the existence of meningitis. Time will help us greatly in this matter, for typhoid fever rarely if ever goes on to the production of the symptoms of the later stages of meningitis. Enterocolitis has its own characteristic symptoms, which will finally make the diagnosis clear in nearly every case. Malaria can be recognized by an examination of the blood. Influenza, when not of the nervous type, may cause some trouble in diagnosis; but, as a rule, it has distinctly characteristic symptoms. Especially in infants we must keep in mind the possibility of a continued fever depending upon a toxemic state produced by obstinately disordered digestion. In all these conditions, however, careful watching, as time passes, will help us to a true decision. Of course, there will be many mistakes; but it is manifestly wrong to exclude the possibility of the presence of typhoid fever in young children or infants because we may fail to find roseola or enlargement of the spleen, inasmuch as we follow no such absolute rule in adults.

The occurrence of the diazo-reaction in the urine is of some value. The Widal reaction with the blood is, in the opinion shared by nearly all observers, a most valuable proof, and the discovery of the typhoid bacilli

<sup>34</sup> *Disease in Infancy and Childhood*, p. 1013.

<sup>35</sup> *ibid.*, 1881, 1063.

<sup>36</sup> *Handb. Spec. Path. Bact.*, 1889, 1.

<sup>37</sup> *Brit. Med. J.*, 1884, p. 830.



in the excretions, by the Elsner or other method, is an absolute proof.

Often the occurrence of other cases in the household is a great aid to diagnosis. The following case is an instance of what I believe to have been undoubtedly typhoid fever, in a child of less than 2 years of age, in which this family-history contributed greatly to the formation of a diagnosis.

CASE XI.—Henry D. was seen in consultation with Dr. J. A. Patterson, of Salem, N. J., on December 24, 1895. A few weeks before the child was taken ill his mother suffered from a continued fever lasting three weeks. The nature of this attack was not entirely clear at first, chiefly because typhoid fever is rare in Salem, and there seemed no way in which she could have acquired it. About December 7th, the child, being then a little less than 2 years old, was attacked by vomiting, diarrhea, and fever. From this date he had fever constantly. His bowel movements were rusty and always more frequent than normal, varying in number from one to five or six daily, yet without evidence of enterocolitis. There was some cough, which was rather loose and not especially painful. The child was often irritable, but without cerebral symptoms. At times he was bright and disposed to play with toys, but for the most part he was listless and indifferent, and his strength had been failing decidedly for some days before I saw him. When examined he was found pale and looking ill. His tongue was slightly coated and moist. Respiration was easy and not unusually rapid. The pulse was rapid, but fairly strong. On examination of the chest no dulness was found on percussion, and no rales, but there were slightly increased vocal resonance and slight bronchial expiration over a small area at the right apex in front, and similar but less marked and almost undiscoverable alterations at the angle of the left scapula. The abdomen was decidedly distended, but not tender. The spleen could not be felt. The feet were a little swollen. The distention of the abdomen had been noticed only for the last two or three days.

From this time and for several days the symptoms suggestive of typhoid fever became more marked, although no rose-spots or enlarged spleen could be found at any time. The cough remained about the same; the loose movements persisted, and tympany was present. The treatment con-

sisted in cool baths, digitalis, strychnin, and brandy. By December 29th, the general condition was decidedly better, and from this time convalescence was steady, though slow, and accompanied by restlessness and delirium. By January 13th the child still needed to be propped in bed. His pulse was quite slow during the apyretic period. The record of pulse and temperature which I show you is only partially complete. The temperature from December 15th to December 18th is probably incorrect.

The diagnosis in this case presented many difficulties. Yet the fact that the mother had just passed through a fever that was almost certainly typhoid made the presence of this disease in the child altogether likely. Still further in favor of it were the distended abdomen, loose stools, apathy, continued fever without sufficient cause in explanation, and, to some extent, the slow pulse during convalescence. The patches of pneumonia were so small as to be even questionable, and, in any case, produced no characteristic symptoms, and did not suffice to account for the condition.

The *pathologic anatomy* of typhoid fever in children has certain distinct characteristics. The mesenteric glands are nearly always much swollen. According to Marfan,<sup>38</sup> this swelling is very pronounced in children. There is, as a rule, much less tendency than in adults to the production of ulcers in the intestine. The process is rather a hyperplastic one, the solitary and agminated glands assuming a reddish or pinkish color, and projecting somewhat toward the lumen of the gut. It is probably owing in part to this lesser degree of intestinal involvement that the disease is prone to run a shorter course in children, and the temperature to drop more rapidly. Yet some degree of ulceration is not infrequent. This is, however, usually superficial. It must be borne in mind that many diarrheal affections in children, and especially in infancy, are prone to exhibit after death swelling and ulceration of the agminated and solitary glands, and that the diagnosis of typhoid fever cannot be based upon these findings alone. Sometimes the ulceration of typhoid fever in children is very extensive. In one instance under my observation a girl, about 8 years old, exhibited as great a degree of ulceration as I have ever seen in this disease in the adult. I show you here a portion of the intestine from a little boy, 6 years old, recently under my observation. The history of the case is briefly as follows:

CASE XII.—Herbert B., 6 years old, began to cough on January 1, 1898, and seemed ill. On the 3d he had fever and diarrhea. On the 4th vomiting occurred and diarrhea continued. He slept a great deal and complained of feeling tired. He was kept in bed most of the time, but on the 6th he walked with his parents to see a physician. On the 8th delirium set in. The boy was first seen by me on this date. On examination no nervous symptoms were noted. The tongue was coated, but clean at the tip and edges; the face was flushed. No typhoid roseola was visible, and enlargement of the spleen could not be discovered. The abdomen was slightly distended. There were some not very conclusive physical signs of consolidation of the upper part of the right lung. The temperature was 106.2°. Tub-bathing was ordered, but was replaced the following day by sponging, as the bathing had

DATE.	TEMPERATURE.		PULSE.	
	A.M.	P.M.	A.M.	P.M.
December 9 . . . . .		101.8°		
" 10 . . . . .	100.4°	100.6°		
" 11 . . . . .	100.8	102.2°		
" 12 . . . . .	99.8	101.8°		
" 13 . . . . .	99.6	100.4°		
" 14 . . . . .	100.6°	102°		
" 15 . . . . .	103°	104°		
" 16 . . . . .	101.8°	102.2°		
" 17 . . . . .	101°	100.8°		
" 18 . . . . .	100.8°	101.4°		
" 19 . . . . .	104.2°	104.8°		
" 20 . . . . .	103.4°	104°		
" 21 . . . . .	103°	103.6°		
" 22 . . . . .	103°	104°	120	
" 23 . . . . .	102.4°	103.4°		130
" 24 . . . . .	104°	104°	144	
" 25 . . . . .	103.4°	104°		
" 26 . . . . .	103.4°	104.4°		144
" 27 . . . . .	103.6°	103°	141	128
" 28 . . . . .	102.8°	102.6°		120
" 29 . . . . .	100°	103°		125
" 30 . . . . .	99°	101.6°		112
" 31 . . . . .	98.2°	100°	120	120
January 1 . . . . .	98.8°	98.8°	120	108
" 2 . . . . .	98.6°	98°		96
" 3 . . . . .	98°	97.4°		72
" 4 . . . . .	97.6°	97.6°		76
" 5 . . . . .	97.8°	96.4°		60
" 6 . . . . .	98°	98.6°		60
" 7 . . . . .	98°	98.2°		
" 8 . . . . .	98.6°	98.6°		60
" 9 . . . . .	98.4°	98.4°	84	
" 10 . . . . .	99°	98.4°	80	
" 11 . . . . .	98.8°		72	

<sup>38</sup> *Frontières des Maladies de l'Enfance*, Grancher, i, 321.

not been borne at all well, producing depression of strength, alarming weakness of pulse, and cyanosis, with but little effect on the temperature. The child was quite delirious at times, and at other times apathetic and somnolent. The suspicious pulmonary signs had largely disappeared. On January 12th the blood was found to yield the Widal reaction. The condition of the child had changed but little. Diarrhea had been present from the first, the stools being watery, green or yellow, and generally passed without the patient's control. The temperature had continued from 101° to 105°, being reduced from 1° to 3° by sponging, but rapidly ascending again. Delirium was frequent, the tongue dry, the spleen enlarged. No typhoid spots had been found. On January 15th the child had a weak pulse, and somewhat irregular respiration, which was also accelerated to a slight extent. Weakness was greater, the color not so good, and the mental condition more stuporous. The elevation of temperature and the diarrhea were unchanged. On January 16th the child was somnolent, lying for the greater part of the time with the eyes half closed, the tongue dry, the abdomen tympanitic, the respiration more labored and often sighing, and the color bad. No typhoid spots had been found. There was decided impairment of percussion-resonance over the lower part of the left lung, but no bronchial respiration. Upon the next day weakness had much increased, and death took place upon January 18th.

The autopsy showed the upper lobe of the right lung and the lower part of the left lung airless, edematous, and intensely congested, without well-defined pneumonic consolidation. The spleen was large, red, and soft. The mesenteric glands were unusually large, pale reddish in color, and exhibiting well-marked medullary infiltration. Just above the cardiac end of the esophagus was a much-congested area, 1½ inches in length, with the mucous membrane unbroken. The mucous membrane of the stomach was in the condition of hemorrhagic gastritis. That of the duodenum and jejunum exhibited numerous enlarged follicles, and in some places apparently superficial ulceration. In the upper portion of the ileum the glandular element was but slightly inflamed, but in the lower half the ulceration was very widely spread, affecting all the Peyer's patches and very numerous solitary follicles. In the last 2 inches of the ileum the inflammation was of a hemorrhagic nature. There was slight involvement of the lymph-follicles of the colon, some of which were ulcerated.

This case, as also the two illustrating perforation and hemorrhage respectively, shows the degree of intestinal involvement and ulceration that may sometimes take place in children. As already stated, this is the exception and not the rule. The following instance typifies better the condition of the intestine that one may rather expect in childhood.

CASE XIII.—Marie S., 2 years and 4 months old, was taken ill December 18, 1897. She was one of a family-epidemic of typhoid fever, the brother of 3½ years and the mother being also affected. She was admitted to the University Hospital on December 24th with fever and with diarrhea that had been present from the onset. On examination the child was found to be in a somnolent condition and looking very ill, with some cyanosis and with a rapid, weak pulse and too frequent respiration. The spleen could be felt. No typhoid spots could be found. While under observation the child grew constantly worse, was stuporous most of the time, and was so weak that careful examination of her lungs was not made until January 26th, although her appearance indicated the probable presence of pneumonia. Examination upon this date showed pneumonic consolidation of the left lung. Diarrhea persisted, and the temperature remained constantly elevated between 103° and 105°, except when reduced by sponging. Death took place on January 28th.

The autopsy showed consolidation of the greater part of the left lung. The spleen was much enlarged and dark red in color. The mesenteric glands were greatly swollen. Peyer's patches were enlarged, but with the edges not elevated except in one large patch at the end of the ileum, and only here was there even the slightest sign of ulceration

visible. The mucous membrane of the ileum was quite normal, except for a few small follicular ulcers.

The slight degree of intestinal involvement characteristic of children is even better exemplified in the fetus. It is an interesting fact that there is not a single instance of fetal typhoid fever reported in which the intestine has shown any typhoid lesion. On the other hand, in adult life it is of the rarest occurrence that intestinal lesions have not been found. In a recent paper Nicholls and Keenan<sup>39</sup> were able to find but 9 such instances in medical literature.

*Relapse* would appear to be about as frequent in childhood as in adult life. I have seen it on several occasions. The case of Bessie J., already detailed, is an illustration of it.

Of *complications* and *sequels* may be mentioned otitis, which is more common in childhood than in adult life, and nephritis, which is probably much less common than in adults, although small amounts of albumin in the urine are not rarely found. Chorea follows not infrequently. It is generally agreed that aphasia is a much more frequent sequel than in adults. Usually it is only temporary. Hensch found complete aphasia in 20 of his 381 cases, and partial aphasia in a number more. On the other hand, temporary post-typhoid insanity, quite often seen in adults, appears to be decidedly uncommon in childhood. Adams<sup>40</sup> reports 4 cases, and instances are occasionally published in medical literature. I have recently had under my care the following interesting instance of this sequel:

CASE XIV.—Edward C., 8 years old, always of good health previously, was admitted to the Children's Hospital, December 27, 1897. Upon December 18th the child did not feel well and had some fever. He went to bed on the following day, continued feverish, and on December 21st vomited and had diarrhea and cough. On December 23d he became delirious, and continued until December 25th very delirious and hard to keep in bed, only at times recognizing his friends. On December 26th vomiting occurred several times, diarrhea had continued, cough was troublesome, and there was very little sleep. No nose-bleed had occurred. On examination made for the first time on December 27th the child was found drowsy; the spleen enlarged on percussion, but not on palpation; a few rose-spots were present, and numerous rales in the lungs. Up to January 1, 1898, the child was restless and very delirious. There was tenderness in both iliac fossae. The abdomen was scaphoid and cough was troublesome. On January 3d the urine was diminished in amount and contained some blood-cells; the tongue was dry. Examination of the chest yielded no physical signs, except for the presence of rales.

Up to January 7th the child had continued extremely delirious, calling out loudly a great part of the time, persisting in sitting up in bed and trying to get out of it. He had been very noisy and slept badly. The tongue was moist; the strength very fair. The bowels had been natural or constipated. On January 13th the spleen could be felt at the costal margin. There was no abdominal tenderness. Almost maniacal delirium had continued to this date. Often the child took nourishment only when forced to do so. The strength and general condition had remained good. The temperature had ranged between 103° and 105°, except when reduced by the tub-bath, which acted well and was well borne. By January 1st the temperature had fallen to 102° and continued very close to this figure until January 5th, when it began to fall.

<sup>39</sup> *Montreal Med. Journ.*, 1898, p. 9.

<sup>40</sup> *Transac. Amer. Ped. Soc.*, 1896; *Amer. Journ. Obstet.*, xxxi, p. 175.



It reached 98° by January 8th (the 23d day of the disease), then rose slightly, but again reached normal by January 12th and remained so.

By January 15th, although the temperature had continued normal, the noisy delirium was unabated. The boy constantly shrieked out his requests, which were sometimes unintelligible. He did not appear to recognize anyone, was excessively irritable, and grew angry very frequently. Even by night his noisiness was great. Up to January 20th he had been continuously noisy, clamoring for food, which he would not take when brought to him. The condition no longer appeared to be one of delirium so much as one of insanity. The boy caused so much disturbance that he had to be kept in a special room much of the time. His condition remained unchanged until January 27th, when he seemed decidedly quieter.

On January 28th, 16 days after apyrexia had commenced, the nurse at my request wrote out notes of the child's conduct and appearance during the past two days. They read as follows: "The child thinks he has lost money, is continually counting his pennies, and is always calling for more, accusing the other children of having taken his. He has a cross and melancholic expression; is exceedingly hungry, and thinks he sees different sorts of food being brought to him. He always fights when disturbed for any cause. When given an enema he thinks the syringe is a snake. He uses bad language at times. He holds conversations with himself, often taking both sides, and putting and answering questions. He thinks people are calling him; that the other children are hitting him. He seems to understand everything that is said to him, and will answer a question connectedly; but if asked more than once he becomes very impatient and screams out his answer. He often imagines that someone is asking him questions, and he answers them, although no one is near. He had a box of ice-cream for dinner, and after eating the contents, imagined a man was taking it away from him, and screamed for someone to stop him. He thinks everyone he sees is his mother. He is constantly filled with the idea that someone is abusing him, and he is always threatening to tell his father of the acts of the nurses and the children. He keeps his lips in motion at times, as though talking to himself. He called for a piece of bread, and when given it, pointed at the door and said that a lady had struck him in the face. At times he is very quiet, and his expression is at all times peculiarly sad. Sometimes he complains of being tired. He will cry and scream for perhaps an hour if a wish is not gratified immediately, and nothing will quiet him."

By January 29th the child had become distinctly quieter, and had been laughing and talking at times with some of the other children, although still exhibiting evidences of mental derangement much of the time. The temperature rose somewhat on January 27th and continued irregularly elevated until February 8th. The mental condition had meanwhile been steadily, though slowly, improving, as had the general strength. The face had lost the sad expression. The boy was no longer the thoroughly "bad" and uncontrolled child of former days, but had become quiet, pleasant, and tractable. Although talking little, he had, on February 8th, quite a conversation with the other boys, and seemed now for the first time to be entirely rational. On February 11th his condition was good. There had been no more fever. His mind appeared perfectly normal and he seemed like other children in disposition. The urine during the attack contained some leukocytes at times, but no albumin. The Widal test with the blood, made on January 28th, yielded a positive reaction.

The *prognosis* of typhoid fever in children is, on the whole, good—much better, I think, than statistics would indicate, since so many of the milder cases are probably never recognized. In the 192 children under 15 years in the Stamford epidemic, as reported by Schavoir,<sup>41</sup> only 2 died, a mortality of but 1%. This, however seems exceptionally low. Of 137 cases occurring in the Children's Hospital of Philadelphia during the last

10 years death resulted in 3—a mortality of but 3.66%. In the 3,396 adult cases of the Boston City Hospital, as reported by Morse,<sup>42</sup> the mortality was 13.5%, while in the 284 cases in children under 15 years the mortality was but 6%. In 2,623 cases in children, collected by Holt,<sup>43</sup> the mortality was 5.4%. As this writer truly remarks, these figures, being taken chiefly from hospital-statistics, do not represent the milder cases; so that the mortality-percentage of all cases in children should certainly be less.

The rate of mortality seems to increase with the age, children under 5 years being less likely to die than those above it.

*Treatment* need occupy but little of our attention, as there is little to be said that does not apply equally well to adult life. Medicinal treatment is purely symptomatic, as in adults, and is less often needed. Rest in bed is, of course, required, no matter how much the child wishes to be up. A milk-diet is to be preferred. No purgatives should be given to overcome constipation, enemata being employed in place of them. With regard to the use of the bath, careful judgment is to be employed in giving it to children. Some do not bear the plunge at all well. This is particularly true of younger children. Certainly there is, as a rule, for no period of childhood the need to use water at as low a temperature as in the case of adults. At the Children's Hospital of Philadelphia it is our custom to employ the graduated bath, placing the child in the tub with the water at a temperature of 95° and cooling it down to 85°, or occasionally, with older children, to less than this. In nearly all cases this is quite as effectual as the cool bath, and much less likely to cause excitement from fright. Very frequently, indeed, sponging answers every purpose. Even a tepid bath may sometimes answer well. It must be remembered that many children bear elevated body-temperature remarkably well, as one of the cases detailed (VII) illustrates, and that the disease in childhood is likely to run a shorter course. We can, therefore, often afford to let the fever alone. If it is true of adults it is still truer of children that hydrotherapy is not to be used as an unalterable plan of treatment, no matter what its effect, and merely because the temperature has reached a certain figure. If it is used according to any such method, it is capable, particularly in children, of doing often far more harm than good.

**The Cinematograph at the French Faculty of Medicine.**—M. Tuffier, professor of the faculty of medicine in Paris, and surgeon to the hospitals, has been using the cinematograph after the manner of Dr. Doyen, to show the various phases of a surgical operation at his lectures. The photographs were all taken from the cases of M. Tuffier at the Pitié and the practical school of the faculty, and the results were excellent.

<sup>41</sup> *Loc. cit.*

<sup>43</sup> *Loc. cit.*, p. 1015.

<sup>42</sup> *Loc. cit.*

## PROVISION FOR THE INSANE IN HOSPITALS SPECIALLY CONSTRUCTED FOR THE INSANE.

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IN October, 1844, Miss Dix, distinguished for her philanthropic labors in other States, came to Pennsylvania on her mission of mercy and good will to the insane and the criminal. She spent several months in examining the condition of the insane in the poor-houses in different parts of the Commonwealth, and the result was the presentation to the Legislature of a memorial in favor of better provision for the care of the insane. This showed such a sad and distressing condition of the insane in the poor-houses, that the Legislature decided to make provision for the insane by the erection of a hospital for their accommodation. The personal and persuasive appeals of Miss Dix to the members had great influence in inducing them to make the necessary appropriation. It must be recollected that at that time the finances of Pennsylvania were in a far worse condition than they have been since, very near to the repudiation of the interest on the debt of the Commonwealth. By the energy, activity and philanthropy of one of the members, afterward Governor and U. S. Senator, Hon. William Bigler, a bill was passed making a small appropriation for the commencement of a hospital for the insane. The hospital erected by that and subsequent appropriations of the Legislature was the Pennsylvania State Lunatic Hospital at Harrisburg, opened for the reception of patients on October 1, 1851.

Early in the fifties, the managers of the Western Pennsylvania Hospital at Pittsburg found it necessary to open their wards for the treatment of the insane, and in a short time they were so crowded that they deemed it proper to arrange for the erection of a separate building.

The cornerstone of the Western Pennsylvania Hospital for the Insane, located at Dixmont, and so called in honor of Miss Dix, who gave much time and attention to the matter, was laid in 1856, and by successive appropriations by the Legislature was ready for the reception of patients in a few years.

The Medical Society of the State of Pennsylvania is entitled to the credit of initiating the movement for the erection of the State Hospital for the Insane at Danville, in 1868, and the State Hospital for the Insane at Warren in 1873. The State Hospital for the Insane at Norristown was commenced after the passage of a bill prepared by the Board of Charities in 1876, a bill initiated by the Medical Society of the State of Pennsylvania having been laid aside by the committee to pass that prepared by the Board of Charities. A memorial on the care of insane criminals was prepared at the suggestion of members of this society, but nothing was done, though a bill was introduced to put up on the

foundations already laid for the hospital at Danville, rooms for fifty insane criminals. That raised such a bitter opposition that nothing was done.

A committee of seven was appointed in 1873, by joint resolution of the Legislature, to inquire into the condition of insane criminals in the penal institutions of this Commonwealth. After careful examination of the different insane criminals, a report was prepared, and in accordance with the provision of the resolution, a bill was presented making an appropriation for the erection of a building for that class of the insane. That bill was presented at two successive sessions of the Legislature, but on both occasions the Chairman of the Ways and Means Committee of the House of Representatives never allowed the bill to be discussed by the committee, so that no appropriation could be made.

In 1884 the Committee on Lunacy decided to transfer all the insane in the different county poor-houses to the hospitals for the insane in the respective districts. In 1889 an act was passed giving authority to the Board of Charities to transfer back to the poor-houses certain classes of the insane in the hospitals. Very few have been thus transferred. In 1891, the act establishing the Asylum for the Chronic Insane was passed, and the building was located at Wernersville. The object was expressly stated in the following sections of the act:

"SEC. 7: The Commissioners, upon acquiring the necessary land, shall, as soon as temporary quarters can be provided, transfer twenty able-bodied, harmless, chronic insane, from each of the Hospitals for the Insane, to the premises and farm provided for said Asylum, to engage in farm-work, grading, macadamizing, excavating for buildings and such other employment as may be required for the reception, care and provision of the subsequent occupants.

"SEC. 14: Said Trustees shall cause to be employed, skilful foremen and forewomen, to secure the safe and economical employment of the largest number of the Asylum, for the purpose of enabling said inmates to contribute, to the extent of their ability, to the cost of their maintenance."

Such is a succinct statement of the progress of provision for the insane up to this date. Bills for the establishment of a hospital for the insane of the central counties of this Commonwealth were presented to the Legislatures of 1893, 1895, and 1897, but never came out of the Committee on Appropriations, to which they were referred. Only in 1897, after the burning of the State Capitol, was any explanation given of the unconcern and indifference manifested for the care of the insane.

It will be seen that up to 1891, the uniform policy of the Commonwealth was to provide hospitals for all classes of the insane; but the policy initiated in 1891 is now to be supplanted by an entirely different policy, taking the care of the insane from the Commonwealth and placing it in the hands of the Directors of the Poor of the different counties, who are expected to erect buildings on the grounds attached to the poor-houses, for their accommodation. The Act of 1897 reads as follows:



"That any county, municipality, borough or township of this Commonwealth, which now has or may hereafter supply, erect and equip a suitable institution for the maintenance, care and treatment of its indigent insane, upon plans and specifications approved in writing by the Board of Public Charities, shall receive from the State Treasury the sum of \$1.50 per week, for every indigent insane person of such county, municipality, borough or township so maintained, who has been legally adjudged to be insane and committed to such institution, or who may be transferred from a State Hospital for the Insane, to such local institution."

That is going backward more than 50 years. Notice, —it is not the chronic insane alone, but all classes, recent and chronic, that are to be thus provided for. No man in the least familiar with the management of the County Poor-Houses, with the regular change of the Directors of the Poor every three years, will admit that either the acute or chronic cases can or will receive proper treatment, such as they should have, in medical attendance, provision for their care in their periods of excitement, or in any stage of their disorder, when the allowance for that care is only \$1.50 a week. The fault is not in the men who have charge of the management, but in the frequent change of management. It was once very plainly and clearly stated by a Director of the Poor: "Just as a man becomes fairly acquainted with his duties, he is dropped off by the principle of rotation in office, and another takes his place and goes through the same course. How can a man fairly do his duty under such circumstances? When he is really qualified, then he must step out." Directors of the Poor say plainly that they cannot give the insane the proper care and treatment at the rate charged to them in the State Hospitals. The State of New York tried that experiment after the erection of the State Hospital for the Chronic Insane, at Willard, N. Y., by the authority given by the Board of Public Charities to the Supervisors of the Poor in the counties to erect buildings on the grounds of their Poor Farms for the accommodation of the insane. An investigation made by the Charities Aid Association revealed such a condition of the insane in those county houses, that in 1890 the Legislature passed an act placing all the insane under State care, and remanding all the insane of every class (except insane criminals, for whom a special hospital was provided) to the Hospitals for the Insane, and placing all the hospitals under the direction and authority of a Commission of Lunacy.

"Commissioner Brown, of the Commission in Lunacy, reports that for the year ending September 30, 1896, the last year for which the results have been compiled, the ordinary expense for each patient was \$186.68, or \$3.58 a week. This sum includes all cost of maintenance of the hospitals; medical attendance, salaries of officers and nurses, board, clothing, light, fuel, cost of conveying from home to hospital, renewal of furniture and all expenses other than for building or extraordinary repairs. Medical services and officers' salaries amount to 22 cents a week, or \$11.44 a year; wages of attendants, nurses and general employes, to \$1.23 a week, or \$63.96 a year.

"These figures Commissioner Brown is apparently justified in regarding as evidence of economy and good management. Medical service in the hospitals is of a special order, and the patients require a great deal of such service, both for body and

mind, as many of them are physical as well as mental invalids. As there are only 106 medical officers in the hospitals, or an average of one to each 187 patients, the outlay for physicians is certainly reasonable. A nurse is employed for every 8 or 9 persons, and since physical restraint, strapping to chairs and solitary confinement have been abolished, the number of attendants could not be reduced. The good effect of this manner of treatment has been so marked as to make the thought of any retrogression not one to be entertained. The sheriffs in this State draw from \$2.75 to \$4 a week for board of prisoners. The hospital figure of \$1.20 for board and something more is therefore to be regarded as low. The same may be said of the clothing item. Under the old county system it is estimated that from \$50,000 to \$75,000 a year was spent for transportation, mileage and fees being charged by officers who took patients to hospitals. Last year only \$18,000 was expended for this service. It is natural to expect the average cost of maintenance in the hospitals to be larger than in some other institutions, because the patients are for the most part unable to work; but the efficiency of the State authorities is apparent from the decrease in average cost from \$216 in 1893, the year before expenditures were allowed in advance by the Commission, to the present average of \$186.68.

"State care has also increased the number of cures. In the Monroe County Asylum in 1890, the proportion of recoveries was only 10½%. As a State Hospital the next year the institution cured 18%; in 1892, 17%; in 1893, 18%; in 1894, 25%; in 1895, 15%; in 1896, 23%, and in 1897, 18%. Other hospitals likewise show more cures, and this means not only a gain for humanity, but an actual relief to the taxpayers. As the average life of an insane person is 12 years after commitment, the transformation of all the hospitals into places of successful treatment, so that about 1,500 patients are discharged annually as entirely cured or much improved, means a large saving to the State. The item for care of the insane looks large in the State budget, but when it is remembered that for the most part it is only the consolidation in a lump of items which the same people formerly taxed themselves for in the counties, and that is spent more wisely and with better results than ever before, no taxpayer will begrudge the \$1.10 he pays on his \$1,000-assessment."

The assessment of one mill on all the taxable property of the State of New York has yielded all the money needed for the construction and maintenance of the different hospitals for the insane in the State of New York under State care.<sup>1</sup>

Why could not Pennsylvania adopt such a law?

The result of that course of action is given in the words of the Chairman of that Commission, a man thoroughly earnest in his work.

"As a result of the complete operation of this system for the past number of years, of the 21,000 insane in custody in the State of New York, there is not one in a county asylum, a poor-house, a jail or a penitentiary, unless temporarily apprehended for commitment to a State Hospital. There is no doubt in my mind that with the experience up to this time in the State care of the insane, it is nearly the unanimous opinion of the tax-paying members of the Commonwealth, that the State of New York's experiment in humanity is a success, and that it pays to be scientifically humane."

It has been intimated that the State of New York would probably abandon their plan of State care, but this is extremely improbable when it is known to work with such great satisfaction as the extract quoted indicates.

In their last annual report, the Massachusetts Board of Lunacy and Charity recommends, "that all pauper

<sup>1</sup> The people of the State of New York represented in Senate and Assembly, do enact as follows: "There shall be imposed for the fiscal year beginning on the first day of October 1898, a tax of 1 mill on each dollar of real and personal property of the State," for the support of the insane.

insane persons now in city or town almshouses, or boarded in families by the Overseers of the Poor, be transferred as rapidly as circumstances will permit to the State institutions for the care of the insane, and to the care, custody and control of the Commonwealth."

Attention was called in the message of the Chief Executive of this Commonwealth in 1897, to an entirely different plan for the care of the chronic insane. This plan is best given in extracts from a paper by a member of the Board of Control of the State of Wisconsin:

"For each person cared for in our State Hospitals, the county to which he belongs pays \$1.50 and his clothing bill to the State. For each inmate of a county asylum, the State pays the county \$1.50. It will thus be seen that a county caring for its own insane, really gets \$3.25 a week on what it saves and what it receives. \$3.25 a week is about as low as most State institutions in the country are able to care for their chronic insane. Very few, counting salaries, clothing, subsistence, fuel, and repairs, are as low even as this. The average weekly cost of keeping the insane in the county asylums, counting everything, is about \$1.75, which makes an average gain of \$1.50 a week for each inmate. Out of this gain, the counties that have had asylums ten or twelve years have paid for their entire permanent investment in land, buildings, improvements and repairs. In other words the people have paid no more than they otherwise would have had to pay for the care of these insane in State institutions, yet have been able to save enough in 12 years to pay for their entire investment in handsome buildings, large farms, barns and the like."

"How is it that this can be done for \$1.75 per week or less?"

"In the State Hospitals, the cost per patient for wages and salaries is from \$75 to \$100 per year, while in the county asylums, with no expensive corps of officers, the average cost is about \$26.50 per capita. In the State Hospitals for subsistence the expense is about \$65, while in the county asylums, the inmates being nearly all employed in some productive work, raising to a great extent the food consumed, the expense is but a trifle over \$27 a year for each inmate."

Now it is clearly obvious from these extracts that all that is contemplated or attempted in this plan, is the bodily care of the chronic insane, and not on a very clearly defined idea of true hygienic treatment. If the supply of provisions outside of what may be raised in the way of vegetables, the cost of coal or of natural gas, if they are so fortunate as to have it, wages of attendants in the proportion usually considered necessary, be taken into account, it passes the comprehension of a Pennsylvanian, who has given careful attention to the subject, how they can give proper care and treatment to their chronic insane, and also buy farms and build handsome buildings from money saved out of \$3.25 a week. A resident of Wisconsin, in a position to know the facts, used the term "shocking."

"The so-called 'Wisconsin system' will not be a complete success until facilities are provided for the proper and safe care of the more noisy, violent and dangerous classes of the chronic insane; one of these cases in a county asylum will disturb the sleep of all other inmates and in many other ways add difficulties of management."

"As a general proposition, supported by growing

sentiment, the State does itself an injustice when it farms out to any private party or corporation any atom of its function for the punishment of the criminal, or the reformation of the incorrigible."<sup>2</sup>

And it might strictly and truly be added, the care of the insane.

It seems incredible that for a disorder of the mind, provision should be made for the body alone. It is true the body needs proper care and treatment, but the mental and moral powers also need as much and often more care than the physical, and in every well regulated hospital for the insane there must be provided, to insure the greatest degree of success, diversions to draw the mind from its morbid state, to more healthy action, amusements to aid in the same direction, occupation in some way or of some kind for those who are able to work, and who cannot by reason of sex or some disability engage in out-door work.

The tendency of all these systems of care of the chronic insane is to depress. Because a man who has been a reputable citizen, and has paid his taxes and thus assisted in the maintenance (and a large proportion of those in the State hospitals of Pennsylvania are of this class), has become unfortunate and his mind disordered, he must be crowded down and made to feel that he is not what he has always endeavored to prove himself—a man. No one will deny the fact that when a man is in trouble or distress he greatly needs to be cheered and encouraged in every reasonable way, to enable him to regain his proper healthy action of mind and body. The hope of better things is a vast lever to lift a man up and help him toward a better condition; but to take away that hope and make him feel that no man cares to help him, and raise him up and do him good, is putting him in a condition to impress more deeply the idea that the whole world is against him. Such a procedure is in direct violation of the great command, "Whatsoever ye would that men should do to you, do ye even so to them." It has been held for many long years that the insane are the wards of the Commonwealth, and it is the duty of the guardian to do the best he can for his ward, and to that the law holds him strictly. Has the Commonwealth as the guardian of the insane any right in law or the dictates of humanity, which should govern every man and the community as the aggregate of the men within its borders, the legal right to transfer the care of the insane to other parties who are not bound by the same force of law? If the Commonwealth has the right contrary to its own law in regard to individuals, to transfer that right, then the system may have a shadow of right; but if it has not that right of transfer legally and constitutionally, then the whole system sought to be established is a violation of the principles of justice, humanity, and philanthropy.

<sup>2</sup> Report of the State Board of Control for the two years ending September 30, 1896.

<sup>3</sup> Report of the State Board of Control for the two years ending September 30, 1896.



## DEATH HALF AN HOUR AFTER CHLOROFORM-ANESTHESIA IN A CASE OF ANEURYSM OF THE INNOMINATE ARTERY AND AORTA.

By D. H. GALLOWAY, M.D.,

of Chicago.

Professor of Minor Surgery and Anesthetics, Illinois Medical College.

**SYNOPSIS.**—*Fibroid tumor of the uterus; chloroform-anesthesia for five minutes; dyspnea and tachycardia; arrest of anesthetic and abandonment of the operation; apparent recovery from the anesthetic for 20 minutes; sudden dyspnea and death; postmortem discovery of an aneurysm of the innominate artery and aorta.*

The patient was a colored woman, 40 years old, married, has had two children, by occupation a cook. Menstruation began at 16 years of age and has been regular ever since, except when pregnant; at no time has it been profuse; weight at time of death was 175 lbs. She had been in the best of health until two years ago, when she had the grip; since that time she has been ailing. She began to lose flesh rather rapidly a few months ago, and then discovered that she had a tumor. She was admitted to the hospital of the American Medical Missionary College about the middle of May, on account of a troublesome asthmatic cough and the abdominal tumor. I saw her a few days later, when she said that the cough was better, and she was anxious to have the tumor removed. I made an examination and diagnosed a fibroid uterus. Examination of the chest revealed abundance of mucous rales over the upper part of both lungs. Temperature was 102° F. I decided that she could not take an anesthetic at that time and advised the postponement of the operation, and treatment of the bronchitis. She was given a stimulating expectorant of ammonium chlorid, gr. v, in sirup, four times a day, a hot tub-bath once a week, a sponge-bath and foot-bath every day, and hot fomentations to the chest and back for half an hour twice a day. About two weeks later her temperature was normal, she coughed but little and seemed in every way so much better that we decided to operate. The operation was set for 11 A.M., June 3d, and at that hour she was brought into the operating-room and the administration of chloroform begun by one of the students. The anesthetic was administered by dropping it on a few thicknesses of gauze placed over the nose and mouth. I watched the process, and the anesthetic was given very slowly. In five minutes about 4 cc. or 5 cc. had been given, and the patient appeared to be profoundly anesthetized and the breathing was rapidly becoming labored and sounded as if there were some mechanical obstruction which nearly closed the trachea; at the same time the heart became rapid and weak. The anesthetic was instantly discontinued and we decided that it would not be safe to operate. The heart's action immediately began to improve, and in a few minutes seemed normal, the breathing improved, but was still somewhat difficult. Leaving this patient in the hands of the anesthetizer, we turned our attention to other patients. In about 20 or 30 minutes the anesthetizer suddenly exclaimed that the patient was breathing badly, and on going to her I found respiration very labored, sounding as if the larynx was almost entirely closed. The heart was weak, and she was failing rapidly. We at once lowered the head and elevated the legs, administered hypodermics of nitroglycerin and ether, instituted artificial respiration, dilated the sphincter ani, made rhythmic traction on the tongue, and raised the epiglottis. Notwithstanding all our efforts the heart continued to grow weaker and respiration more shallow until in 15 minutes the heart ceased to beat altogether. We persevered for 20 minutes longer and then gave it up.

The patient died at 12 o'clock, and at 5 o'clock we made an examination of the body. Rigor mortis had set in. The uterus, which weighed 3½ lbs., was removed, there was an interstitial fibroid in the cervix, a submucous fibroid of the fundus, and on the peritoneal side of the uterus there were three fibroids, each about 2 in. in diameter, with short pedicles, about ¼ in. in diameter. The appendix was bound

down by old adhesions and the lumen obliterated. The right kidney was somewhat larger than normal, the capsule adherent. The colon was telescoped for 6 or 8 in., but readily separated on manipulation. On opening the chest we found the mediastinal connective tissue and fat emphysematous, both pleural cavities obliterated except a space as large as the hand in the right axillary line, and both lungs adherent over their entire surfaces with the exception mentioned. The lungs were normal except a small area on each side of the median line and just below the clavicle, where there was some consolidation, so that pieces cut from this area sunk in water. This area did not exceed 2 or 3 in. in diameter in each lung. The pericardium contained 2 or 3 oz. of an amber-colored fluid. The heart was not enlarged or dilated, and the valves were sound; the heart and large arteries were filled with white fibrinous clots. In the median line behind the clavicle could be felt a firm mass, which, on being dissected out, proved to be an aneurysm of the innominate artery involving also the arch of the aorta. It pressed upon the trachea behind and on the aorta below. The sack had a capacity of about 4 oz. and was nearly filled with layers of fibrin, like layers of an onion.

The statement is often made that the danger from chloroform is passed if pulse and respiration are good for five minutes after the chloroform is discontinued. This statement is based on the supposition that death from chloroform is caused by an excessive quantity in the blood, and that the amount for a lethal dose is a very definite quantity for each individual, and when this point is reached paralysis of the respiratory and heart-centers is instantaneous. If such is the correct explanation of death from chloroform, the above statement must hold good, for every exhalation after the administration of the chloroform is discontinued must lessen the quantity of the drug in the blood of the patient, and if he does not die when the quantity is at the maximum he certainly would not be expected to succumb after a portion of this had been eliminated.

In the case I have reported the patient breathed for 30 or 40 minutes after the discontinuance of the chloroform, and at the time of death a large part of the drug must have been eliminated. There was no shock of operation that could be held responsible for the result, and death was by no means instantaneous. When the patient was brought into the room there were no indications of impending death, therefore we must conclude that the chloroform was, to say the least, "the last straw that broke the camel's back."

It is unscientific to excuse ourselves for such an occurrence by saying that it was an accident that could not have been foreseen and for which no one was responsible. If nature is loaded to the danger line it is our business to discover that fact before we add to the burden. If we are unable to do so it means one of two things: either that the individual responsible is not competent to do the work undertaken, or that medical science has not yet solved this problem. If it is the first, then the man should not be allowed to undertake the work if it is possible to get a more competent man to do it. In the second case we must await the advance of knowledge before such accidents can be eliminated. If, in the great steel works of the country, a machine breaks under a strain it was intended to stand, the



broken parts are carefully examined for the cause; if no flaw can be seen with the eye, its structure is examined by aid of the microscope and reagents. If the cause is still undiscovered, holes are bored into the steel and the borings are submitted to a complete chemical analysis and its composition compared with the composition of similar pieces of steel which have been equal to the strain. When the cause of the accident is discovered it must be avoided in all material which is to be used for this purpose in the future.

The human body is infinitely more complex than a piece of steel, yet if the circumstances and conditions surrounding every case of death from anesthetics could be brought together and compared I have no doubt much light would be thrown on the obscure causes of death, and many observations might clear up some of them altogether. Yet such cases are usually covered up by the surgeons interested, and one well-known surgeon said to me that he "would not dare to publish his cases of death from anesthetics. I might as well quit the practice of medicine." This feeling is entirely wrong; no man is required to know the things which are unknown. The members of our profession are expected to relieve suffering and prolong life in so far as it lies in their power to do so; and with the best directed efforts it must sometimes happen that they will increase the one and shorten the other, so that they and their patients must take some risk, and when the chances go against them after the best human judgment has been used, the doctor should not be held blamable by himself nor others for the adverse result.

Observations made under such trying circumstances are likely to be very incomplete, yet such observations as are made should be matter of permanent record, and when these become sufficiently numerous they will surely lead to some useful discovery which will be to the advantage of the whole profession and to our patients as well.

The last word has not yet been said in the controversy regarding the relative safety of chloroform and ether. Chloroform has some advantages over ether, yet statistics as they now stand are certainly very much in favor of ether. The scientific physician who favors the one or the other should never be an advocate who is determined to win his case right or wrong; but while holding to and acting on an opinion he believes to be justified by the facts at his command, he must never oppose the admission of new facts for fear they will overthrow his position. The facts with regard to chloroform and ether are not yet all in, and more facts must be gathered together before the question can be definitely and permanently settled.

**The Medical Club of Philadelphia** will tender a reception to Dr. William L. Rodman, formerly of Louisville, Ky., and now professor of the principles of surgery in the Medico-Chirurgical College, at the Hotel Bellevue, on October 19, 1898.

## COEXISTING APPENDICITIS AND ADNEXAL DISEASE; APPENDIX ADHERENT TO DISTENDED OVIDUCT.

By THOS. LEIDY RHOADS, M.D.,

of Philadelphia.

MRS. S., 24 years old, had passed through the usual diseases of childhood, was subject to tonsillitis when a girl, and whenever she got damp feet or was exposed to severe cold, complained of pain in the lower zone of the abdomen; otherwise her health was robust. Menstruation set in at the age of 13, without pain, and there was always a free flow until within two years. When 17 years of age the patient had typhoid fever which lasted seven weeks, leaving as a sequel ulceration of the rectum, one of the ulcers burrowing through into the vagina and establishing a rectovaginal fistula, which still exists. When the patient becomes constive, fecal matter discharges through the fistulous opening into the vagina, but by the occasional use of laxatives and the daily employment of vaginal douches no discomfort is experienced from the condition. Mrs. S. was married when 21 years of age, and a year later had a miscarriage at the fourth month of gestation, suffering, however, no serious after-effect other than a profuse leukorrhea. One year subsequent to the miscarriage she was confined to bed for seven weeks with what her physician termed a hematoma of the pelvis. For some months prior to the appearance of the hematoma the menstrual flow had decreased in quantity at each succeeding month, no pain being associated with the scant flow, but while confined to bed with the hematoma, she had intense pain in the lower part of the abdomen and pelvis, suffered from anorexia and was very weak. It took several months to recuperate from this illness, since which time the menses have become even more lessened, and are preceded and followed for two weeks by an offensive, thick, purulent vaginal discharge and continuous dull pain in the pelvis and back.

The present attack began with severe pulmonary congestion and cough brought on by exposure in damp weather, while wearing thin-soled shoes. Medical aid was summoned December 17, 1897, on the third day of the illness. The patient complained, in addition to the chest-symptoms, of great pain in the abdomen, and the whole abdominal area was tender on slight pressure, particularly in the periumbilical and epigastric regions. Vomiting of undigested food and bile had occurred since the onset of the attack, especially shortly after taking food. The temperature was 100° F., the pulse was 110, full and strong. There was marked tympanitis, which spread from the right iliac fossa, constant cough, and greenish-yellow expectoration. The bowels were open daily. The case was not considered urgent and immediate vaginal examination was avoided in order not to increase the existing inflammation. An ice-bag, with proper protection, was applied to the abdomen, the bag being shifted in its position every half-hour, and calomel was administered in fractional doses until several copious evacuations resulted. An expectorant mixture was also given and a diet of koumys and liquid beef-extracts maintained. On the following day the vomiting was controlled and the evacuations were kept free with magnesia. In the course of three days the general abdominal pain subsided and the tenderness finally centered in the right inguinal region, where by pressure directly over the site of McBurney's point sharp pain was elicited, causing the patient to flex the right thigh. The same pain was caused by pressure on the left abdominal parietes and directed to the opposite side. This pain was sharp and lancinating and distinct from the dead heavy pelvic pain that had been present continuously during the past year and which was worse at the menstrual periods. The right rectus muscle appeared somewhat more rigid than its fellow, but of this there was no certainty. A vaginal examination was now made and the finger readily discovered a tumor at the level of the vaginal fornix to the right of the uterus. The tumor was excessively tender to the pressure of the finger in the vagina and from displacement of the uterus laterally. The mass was too low down for the usual site of an appendiceal lesion, although there could be no doubt as to the existence likewise of inflammation of the appendix, from the recent sudden inflammatory symptoms. A diagnosis of either a hydrosalpinx or a pyosalpinx, with appendicitis, was made, and as the temperature, tenderness, and tumor persisted after



six days of treatment, operation was decided upon and the patient was sent to St. Joseph's Hospital on December 23.

The abdomen and pubes were shaved and disinfected, the vagina cleansed, the intestinal tract emptied and operation performed on the same day.

It was decided not to make the ordinary appendicectomy-incision, on account of a desire to avoid two incisions, and the greater ease with which a diseased oviduct can be manipulated through a median abdominal wound, which likewise, by free retraction, permits of access to the vicinity of the appendix proper. An incision, 4 inches in length, was made in the median line; the wound was well opened, and the adjacent peritoneal contents shut off with hot aseptic pads directed toward the right iliac fossa. The appendix was sought for and after a while found lying in a direction downward and inward, and attached for two-thirds of its free length to the greatly distended right oviduct. The duct itself was likewise found to have numerous adhesions to neighboring pelvic tissues. The patient was placed in the Trendelenburg posture and the appendix dissected loose, the adhesions separating readily, showing that the inflammatory process had been recent. The parts when separated left oozing surfaces on both the appendix and tube. The mesentery was transfixed with an aneurysm-needle carrying a loop of silk, one half of which was tied round the base of

back, and she voided urine three times during the first night and at regular intervals subsequently, so that the use of the catheter was unnecessary from the start. All the stitches were removed on the tenth day. A stitch-abscess that resulted from too much tension at one point required some extra attention. The patient left the hospital at the end of four weeks, and six months after operation was in excellent health, as evidenced by gain in weight and daily rides on horseback.

Examination of the parts removed, by Dr. R. C. Rosenberger, Demonstrator in Bacteriology at Jefferson Medical College, revealed the following:

"The drops of fluid from the tube contained a large number of pus-cells, with a large quantity of fibrin, and few micrococci.

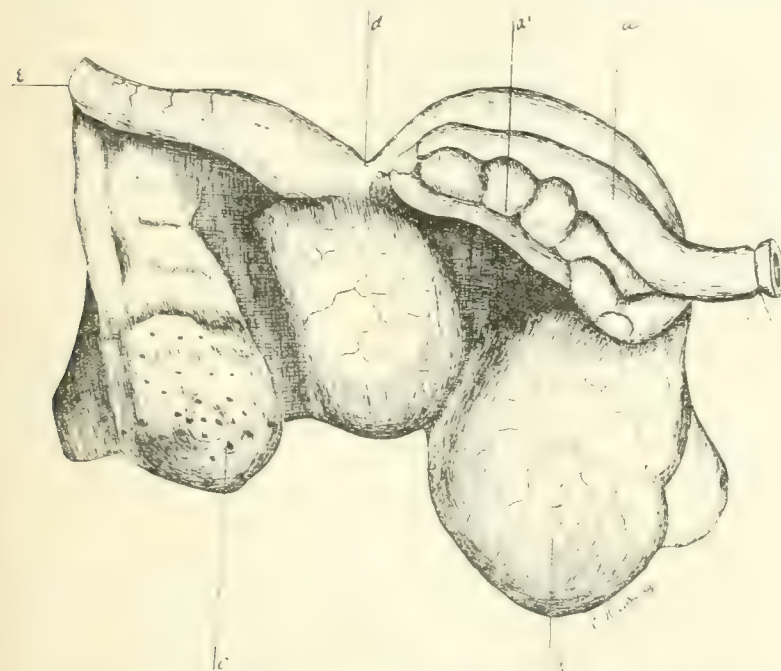
"The drops of fluid from the appendix contained quite a large number of red corpuscles and a few leukocytes, but no bacteria. There was no change in the lumen of the appendix, or in the mucous layers. In the deeper layers the bloodvessels were thickened, with some round-cell infiltration."

The case is instructive principally from a diagnostic and a pathologic standpoint. The coexistence of ap-

pendicitis and adnexal disease has been set forth in various articles that have appeared during the past few years, particularly in the able paper by Fowler,<sup>1</sup> who describes several cases of suppurating disease of the tubes and ovaries associated with appendiceal infection, both in the acute and the chronic stage. In the cases in which the lesion existed primarily in the adnexa, Fowler attributes the appendiceal inflammation to the infection carried to the organ through the medium of the lymphatic channels that pass along the fold of peritoneum extending from the ovary to the appendix and which is known as the appendiculo-ovarian ligament of Clado. This may have been the mode of infection in the case here described, but from the gross appearance of the specimen—the inflammation on the peritoneal surface of the appendix on the side adherent to the tube being much more marked than on the free surface—and from the path-

ologist's report, I would infer that the appendiceal inflammation was purely the result of extension by contiguity, the peristaltic movements of the organ bringing it in contact with a surface in a state of violent inflammation, which had been rekindled to activity by exposure.

The total absence of changes in the mucous membrane of the appendix would at once exclude a diagnosis of the catarrhal variety of the disease, a condition that was thought to exist before the operation. That the inflammation would have extended more deeply, and finally have invaded the entire organ by successive attacks, is extremely probable, as it is appreciated from the knowledge at hand of this structure, that when the appendix is once anchored to a chronically inflamed area, future attacks of inflammation of the organ are



ADHESIONS BETWEEN APPENDIX AND OVIDUCT.

a.—Appendix. a'.—Meso-appendix.  
b.—Distended suppurating oviduct.  
c.—Ovary.

d.—Constriction in duct.  
e.—Uterine extremity of duct.

the appendix, the other half round the mesentery, the ends cut short and the appendix and its mesentery amputated just beyond the ligature. Pure carbolic acid was applied to the mucous membrane of the stump and the whole was invaginated.

The distended oviduct, after being separated from its adhesions, some of which were firm and organized, was removed, with the right ovary, by the usual method of transfexion with silk, and excision.

The left oviduct was somewhat enlarged, but was not considered sufficiently diseased to demand removal, and there were no adhesions on this side.

The pelvic peritoneum was sponged dry with gauze, but was not irrigated, as its toilet had not been soiled. The abdominal wound was closed with a single row of silkworm-gut sutures, without drainage. The operation occupied thirty minutes.

The subsequent history was uneventful. The patient was slightly shocked after the operation, but responded quickly to external heat. Six hours afterward she was carefully turned on her side, on account of unbearable pain in the

<sup>1</sup> Brooklyn Med. Jour., April, 1897.

inevitable, the tendency being for each subsequent attack to be correspondingly more grave than its predecessors. The later rapid appendiceal infection that results under such circumstances is due not alone to the close proximity of the infective agent, but also to the ease with which circulatory disturbances cause inflammatory conditions in the appendix. The vermiform appendix, being a vestigial organ, possessing no function save a limited peristalsis, is endowed with but slight powers of resistance, and when it is anchored by adhesions not only is this peristaltic action lost, but its power to cope with germ-invasion is likewise still more lessened. Accordingly, when the bowel contains virulent pathogenic microbes, these, or their products, or small masses of fecal matter in which they are incorporated, may easily find ingress into the lumen of the non-resisting organ, with resulting fulminant attacks of inflammation. The wisdom of removing the adherent appendix then becomes manifest.

The adhesions of the appendix to neighboring inflammatory structures cannot, of course, be foretold prior to operation, much less the adhesions to any particular one of the abdominal or pelvic viscera. This fact can only be demonstrated after the abdomen has been opened and the parts have been inspected. Guided, however, by experience such as Fowler's, we should be able, in the majority of cases at least, to determine beforehand the existence or non-existence of appendiceal inflammation when an infection is in progress in the nearby pelvic structures.

In reaching the diagnosis of both conditions in the case reported no one point was regarded as absolutely essential, but all the symptoms and signs were studied and weighed together. The indubitable signs of appendicitis were present from the start—the sudden onset; the early vomiting of the contents of the stomach, especially after the ingestion of food; the epigastric and periumbilical pain, later becoming localized in the right iliac region; the point of tenderness in the region designated by McBurney; the tympanites radiating from the right iliac fossa; together with the temperature and the character of the pulse, left no doubt as to the existence of the lesion. Of equal importance with these symptoms, however, and preceding them for several years, were the dull heavy aching pains in the pelvis, the increasing menstrual disturbances, the purulent vaginal discharge, and the history of the hematoma—all suggesting adnexal disease, to which was added the definite knowledge obtained by vaginal examination and the discovery of a tumor in the right vaginal fornix, connected with the uterus, and too low down in the pelvis for the usual location of a recent appendiceal exudate.

A careful inquiry into the element of pain, and the separation of the two distinct characters of this symptom, were of some aid in reaching a diagnosis. The heavy, dull, distressing pain in the pelvis, existing in

a continuous manner for several years, contrasted sharply with the sudden, acute, lancinating abdominal pain that appeared at the onset and continued during the recent attack, distinct from the former, and finally centered in the right iliac region, with the point of tenderness at the outer edge of the right rectus muscle opposite the anterior superior spine of the ilium. An eminent surgeon has said that "the pain in both appendicitis and adnexal disease may be acute and radiating, or dull and localized," but we must not lose sight of the fact that *usually* (and those symptoms that are more often found present in like conditions are after all the guides upon which we depend in formulating a diagnosis) the pain of appendicitis is of the acute, sharp and radiating variety, while the dull, aching, localized pain is characteristic of disease of the appendages.

As to the cause of the pronounced appendiceal pain in this case I feel safe in saying that the inflammation of the appendix *per se* was too mild to be considered the generating factor, and I am disposed to ascribe the pain to the inflammatory adhesions that early in the attack formed between the appendix and the distended duct. The organ thus irritated was excited to increased peristalsis, but being anchored, produced the well-known symptoms of appendiceal colic, a condition that is usually the forerunner of more serious trouble.

#### SOME COMMON CONDITIONS OF THE NOSE AND NASO-PHARYNX DEMANDING OPERATIVE INTERFERENCE.<sup>1</sup>

By W. L. GRANT, M.D.,

of Fargo, North Dakota.

AFFECTING this region and demanding operative treatment is a group of diseases the prominent symptom of which is obstructed nasal respiration and mouth-breathing. It includes adenoids of the pharyngeal vault, foreign bodies and rhinoliths, polypi, hypertrophy of the nasal mucous membrane and turbinates, exostosis, ecchondroma, and deflection of the septum.

Adenoid vegetations are observed in those children of a lymphatic temperament who may best be described by the one term "mouth-breathers." In younger children there is persistent nasal discharge, frequently accompanied by inability to blow the nose. They catch cold easily—in fact, most cases of repeated head-colds in children are due to the presence of these growths. The child tosses about during the earlier part of the night, sinking into a dull, heavy sleep toward morning. Snoring is especially marked during the early morning hours, but even by day the breathing may be loud and "rasping." In some cases, however, the breathing during the day is but little impaired. Morning-headaches

<sup>1</sup> Read before the North Dakota Medical Society, at Jamestown, May 25, 1898.



and general ill-feeling are common occurrences. The voice is thick, as though the child were talking with its mouth full, or it may be husky owing to an accompanying laryngitis, itself the result of the adenoids. The enlarged tonsils, which so often accompany the condition, add to this symptom. There may be frequent recurrent attacks of earache and deafness. The child gets out of breath easily and is often listless. The face frequently has a flat, vacant, or even semi-idiotic appearance. The mouth is almost habitually open, the chest often contracted, the throat slightly congested, and the pharyngeal muscles relaxed, while a frothy muco-purulent secretion is seen dripping from the naso-pharynx. In many young children the saliva and mucus is at times during sleep sucked back and forth between the parted lips until the mouth is covered with foam. In older children the nasal discharge is a less marked symptom. Many cases of night-terrors and spasmodic croup are due to the presence of adenoids, as well as some cases of chorea and convulsions.

The majority of cases come to the physician's notice during the sixth year, but I have operated at six months where the trouble dated from the sixth week of life. Many of them come to the physician with perhaps copious nasal discharge, barking cough, and it may be slight deafness and occasional twinges of pain in the ear, and a history of catching cold easily. The case is treated as an ordinary cold, the little patient improves, and the treatment is given the credit for it. It may be the tonsils are removed if they are enlarged. But in spite of treatment the condition recurs until finally an otorrhea makes its appearance. Then the ear is douched and powdered until the discharge disappears or the parents become discouraged and give up treatment. The ultimate result may be marked deafness, with or without an occasional or continuous otorrhea. Instead of this unhappy chain of events it may be the child fails to develop physically, remaining undersized and anemic. Then tonics, iron, quinin, hypophosphites are prescribed, while the one tonic he requires, air, is denied him, not by the physician but by the obstruction in the air-tract. He is in much the condition of the sailor with

"Water, water everywhere, and not a drop to drink."

Here, then, something more of an examination is demanded than has been made. We should examine the throats of our croupy patients, the restless sleepers, the backward-appearing children who are not really backward, and we will frequently be rewarded by finding here the cause of the trouble. Upon palpation of the naso-pharynx with the index-finger it is found encroached upon, above and behind, by a more or less friable growth, the palpating finger usually bringing away a little blood. A second or third examination may be required to determine the question definitely.

Such cases may be greatly improved both in health

and appearance by a simple operation practically devoid of danger. True, the growths begin to atrophy about the age of puberty, and if the symptoms have been mild they may pass away entirely. But while we wait, what irreparable havoc is too often wrought—havoc which might have been prevented by timely interference!

Their removal is simple, and may most easily be accomplished by means of a Gottstein curet under chloroform-anesthesia. When enlarged tonsils are present these should first be removed, as the blood from the pharyngeal vault will make it difficult to seize the tonsil properly afterward. If done early there is no operation in surgery yielding more satisfactory results. In cases of long standing, where marked deafness has developed, this symptom may persist or be but slightly improved, and the voice may from habit retain its "wooden" character. Frequently adenoids are accompanied by one or more of the conditions about to be described as affecting the nose. In such cases, especially if tampons are needed in the after-treatment, I prefer operating upon the adenoids first, as I have seen really disastrous results on account of acute suppurative otitis caused by the tampon pressing too closely upon the gland, thus inducing extra swelling. True, this may happen from too severe tamponade without the presence of adenoids, but these latter constitute an added danger and as such should be removed as a preliminary. No after-treatment is required.

Nasal conditions requiring operative measures can only be diagnosed by an examination with a good light and under cocain-anesthesia. I generally use a 4% solution for this as well as for operative purposes.

The symptoms of all these conditions are so much alike, and two or more of them are so frequently associated, that for brevity I shall consider them together. The breathing is more or less impaired, amounting at times to complete obstruction of nasal respiration. On closing one nostril it is difficult or impossible to force a full stream of air through the opposite one. This condition frequently alternates with comparatively free breathing and also between the two sides. There is an increased amount of secretion, at times thin and watery, at others thick and viscid or drying in the nose as scales. There are frequent attempts to clear the throat. There may be frontal headache or pain in the eyes. At times there are severe neuralgic pains, particularly when an exostosis is present. The general health may be unimpaired, especially early in the trouble, but later the stomach is frequently deranged and the bowels constipated. Deafness in varying degrees may be present and is accompanied or preceded by snapping sounds in the affected ear. Hay fever and asthma are not uncommon results.

In the case of deflection, exostosis, rhinoliths, or foreign bodies, the trouble may be confined to one side, but with the exception of foreign bodies these condi-

tions are rarely seen alone, as exostosis and hypertrophic rhinitis seem to be interdependent, and, to a certain extent, deflection and rhinitis. The same is true of polypoid growths. Deflection of long standing is nearly always accompanied by exostosis. Foreign bodies small and solid may for a long time produce no noticeable symptoms, while if absorbent, as peas or beans, the symptoms may develop in a short time and much pain be produced. With rhinoliths the trouble develops more slowly. In both the secretion is apt in time to become sanguinolent. Sometimes polypi become separated and are expelled by violent attempts at blowing the nose.

In rhinitis the mucous and submucous tissues are involved, the latter especially being increased in volume and density. An intumescent rhinitis, marked by excessive bagginess of the mucous membrane, especially over the turbinated bodies, finally becomes a well-marked hypertrophic rhinitis, dense and resisting to the probe and almost completely closing the nasal cavity, the turbinates, it may be, coming in contact with the septum. Outgrowths from the septum usually affect the lower portion, and may be of such a size as to press themselves firmly into the turbinate opposite. A marked deflection may occlude both nostrils, the pitch of the septum to the right at one point being counterbalanced by a corresponding pitch to the left at another. Polypi are most frequently seen growing from the middle turbinate or middle fossa, and a probe may be passed to either side of them. They are generally easily movable, but one may see the whole lower edge of the middle turbinate a mass of polypoid degeneration. They are likely to be of a lighter color than the mucous membrane about them, and lack the density of the hypertrophied turbinates.

For the removal of a foreign body from the nose of a small child, in case it cannot be expelled by attempts at blowing the nose, it is best to administer an anesthetic. The body may then be removed through the anterior nares by forceps, snare, or hook; or if this is found impracticable, it may be pushed into the naso-pharynx and extracted through the mouth. Rhinoliths may be removed in the same manner; if large, being first broken up with forceps.

For removing exostosis I employ the saw and chisel. I find a saw with a good-sized handle, joined at an angle of about  $110^\circ$ , the easiest to work with. It must be kept sharp, for whether of cartilage or bone, the outgrowth is exceedingly hard to cut. I set the saw, by means of the screw which holds it in the handle, at a slight angle inclined toward the septum. This in a measure overcomes its tendency to "run." When cut through, the scissors are used to sever any membrane still holding it. The chisel I use when the saw is impracticable owing to the position of the spur.

Polypi are best removed by the cold wire snare, the base being afterward cauterized to prevent recurrence.

Where a great many are present only as many should be removed at a sitting as can readily be got hold of without tiring the patient.

Should the turbinates be inordinately enlarged the most prominent part may be cut away with the snare or a heavy pair of scissors. The treatment I find most satisfactory is cauterization either with acids or the galvano-cautery. Mono-chlor-acetic or chromic acid may be used, a small quantity being fused on the end of a probe and held for a few seconds in contact with the surface to be cauterized. Care must be exercised, especially if chromic acid is used, not to smear too large a surface. By this means there are few turbinates which cannot be satisfactorily reduced in size. The cautery may be used once a week on alternate sides, thus allowing healing to take place before a new application is made. The patient is able to go about his usual work without interference from the treatment, as he need visit the surgeon but once or twice a week.

The turbinated bodies have a very useful place in the human economy, giving a greater vascular surface, and thus warming the air before its admission to the delicate air-cells of the lungs. In all operations upon them this must be taken into account, and as much of it as possible preserved. Even with the cautery too much may be destroyed, and a dry, scaly condition, somewhat similar in its results to atrophic rhinitis, left behind, when verily the last state of that man is worse than the first. What must we say then regarding removal of the turbinates? The conditions which demand it are exceedingly rare. As anything like a routine measure it cannot be too severely condemned. It must be left as a *dernier resort*, and the oftener and more fully other measures are brought to bear upon the treatment of these cases, the less often will it be even thought of, much less practised.

In the case of foreign bodies there is seldom any after-treatment required. If the membrane has been much bruised, an ointment of iodol, 3 grains to 1 dram, may be applied twice daily by means of a cotton-wrapped probe, or a simple antiseptic spray may be used. With rhinoliths the attendant rhinitis must have appropriate treatment, and here a spray of bichlorid 1-1000 serves a very useful purpose. Any cleansing spray may be used. After the removal of an exostosis, the cavity must be packed with gauze sufficiently tight to prevent hemorrhage. In this much harm may be done. The packing should be introduced just far enough to well cover the sawn surface. If crowded back into the naso-pharynx, as it sometimes is, otitis may result with consequent deafness. The packing is removed in 24 hours, and the cavity repacked if necessary. Before introducing the tampon I blow into the nose a small quantity of some antiseptic dusting powder, as aristol, 1 part; boric acid, 1 part; sugar of milk, 2 parts. After packing is removed, I give for home-use a spray of menthol 5 grains, or oil of cloves 3 min-



ims to the ounce of albolene. The surgeon should see to it, by occasional examinations, that no adhesions are allowed to form. After using the snare or cautery a loose plug of cotton may be worn in the nostril for 12 hours, but the nose should not be packed after either the acid or galvano-cautery. I give a spray, something as above, for home-use. When there is much tenacious secretion the douche may be used with advantage in the morning, with any warm alkaline solution, the patient being particularly instructed in its use on account of the danger of fluids entering the Eustachian tubes from the naso-pharynx and setting up an otitis.

## MEDICO-LEGAL VALUE OF THE X-RAY.

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THIS paper is intended simply as an inquiry into and an answer to the question as to the propriety of the introduction as evidence of information gained by the use of the X-ray regarding pathologic or normal conditions in the human anatomy, and especially concerning the propriety of exhibiting skiagrams to juries. Is this information the truth, the whole truth, and nothing but the truth, as is so strenuously insisted upon from witnesses? In other words, does the X-ray give us absolute and positive information of pathologic conditions? For if it does not give such information it is not perfect evidence. I shall try to show that the nature of the X-ray precludes the skiagram or fluoroscopic image from being absolutely perfect evidence.

The function of the X-ray is only a subordinate division of, or an auxiliary to, the physical examination by visual inspection considered as a whole; in its penetrative power the X-ray is superior to ordinary light as an aid to inspection; but by direct visual inspection of a body situated favorably for such view we gain much more complete information than is given by the X-ray of a body situated unfavorably for direct inspection; and the X-ray is at a further disadvantage, as compared with ordinary light, in that it cannot act directly upon the retina, but must serve itself by means of intermediate processes, recording itself upon the sensitive plate or the fluorescent screen; the image thus formed being translated for appreciation by the retina by means of chemicals or fluorescent light. By the X-ray we are shown only the shadow-profile of a substance which is not situated favorably for direct inspection. It cannot be expected to give indication of the color, texture, thickness, weight, or chemical nature of an investigated substance, as would be demanded of perfect evidence; it cannot be expected to give full information of the shape, even, of a hidden body. The one chief thing shown by the X-ray is the opacity or transparency to these rays of the investigated substance; by means of

certain manipulations the location of such a substance may also be made out. It will thus be seen how very limited is the province of the X-ray.

Taking up, now, the two means by which the findings of the X ray are made known to the mind, the fluoroscopic screen and the sensitive plate, we ask of the shadows seen in the fluoroscope and the records on the skiagram, are they absolutely accurate representations of the conditions as they actually exist? The answer is, No; never. The fluoroscopic and skiagraphic images are never absolutely accurate representations of the conditions present, even within the limited function of the X-ray. We note first that the shadow is always larger than the object, because the X-rays in all our tubes are divergent instead of parallel, hence, an object intercepting these rays during their divergence must, according to well-known optical laws, cast a shadow larger than itself. And if any part of the object is at a greater or less distance from the screen or plate than another part, there will be distortion, according to these same laws.

There are other factors which influence the formation of the shadow-outline of the object studied, among them being the relative distances between the tube, object or parts of object and screen, and also the relative angles existing between these. If the tube is very close to the object and the latter is near the plate the image will be much enlarged and distorted; if the object is far from the plate and near to the tube the image will also be much enlarged and distorted, and quite indistinct as to outline. By varying the factors of relative distances and angles, a normal part may be made to give the appearance of great deformity; as in an experiment reported at the April Congress of the German Society of Surgery. From a normal pelvis, skiagrams were made showing many varieties of deformity, simply by altering the relative positions of tube, pelvis and plate for the different pictures. Dr. Edw. A. Tracey<sup>1</sup> gives some instances along this same line in his article on the Fallacies of X-ray Pictures.

Returning to the statement that the effect of the X-ray upon the plate or screen in the examination of a body depends upon the opacity or transparency of that body to the X-ray, let us consider that point. I have said that the X-ray gives no positive information of the thickness of the substance examined; if we are looking at a hard and apparently bony substance, and see that parts of it appear lighter in color than others, we can only attribute it to one of several possible conditions; the light spots may be thinned portions of a density the same as that of the rest of the object; or they may be thicker and of less density than other parts; this might in some instances be obviated by viewing from different positions. But even this might fail in a body composed of bone and cartilage or bone and fibrous tissue, for the X-ray does not give evidence of the com-

<sup>1</sup> *J. Surg., Gynec. & Obstet.*, Nov., 1897.

position of an object seen. Suppose we are looking at the head of a metacarpal bone; a dark spot is seen where no spot should be; to what is it due? It may be a piece of a bullet, a fragment of glass, or an exostosis; we simply know that there is an abnormal substance there. Suppose there is a gap in one side of the shaft; has a piece of bone been chipped out and not replaced; has there been destruction by syphilitic or tubercular disease; has there been a comminuted fracture followed by absorption of a fragment, or is there a patch of fibrous growth in the fracture line? We only know that bone is not shown at that point. In the German Surgical Congress above referred to two cases were reported which by skiagraphy had been diagnosed as coxitis, but were shown by postmortem to have been a separation of the epiphyseal head.

In fractures of bone, so transparent is the callus that the X-ray penetrates it easily; and a fracture of many days' or even weeks' standing, and with clinically normal callous formation, may give the appearance of a fresh injury or a failure of repair which may lead to an incorrect diagnosis of reparative failure, as in cases reported by Dr. G. W. Craig in the *New York Medical Journal* of May 7, 1898.

An impacted fracture, if there is no angular deformity, and an ordinary fracture in which good apposition has been obtained, will often show nothing abnormal. An ankylosis due to fibrous adhesions will appear on the skiagram as a normal joint; here, although the picture is not a true one as showing exact conditions, yet it demonstrates that the ankylosis is not bony; suppose, however, that the picture was accepted as true and a diagnosis of hysterical joint was made? It might prove very awkward for the surgeon.

All these sources of error go to prove that the results of the various methods of X-ray examination do not give absolutely correct information as to the conditions present. The divergence of the rays puts it beyond their power to give a true picture by the production of profile shadow-images on the screen or sensitive plate. The accuracy of the image is also very apt to be made uncertain by a mal-adjustment of one or more of the many other factors which have been mentioned. For these reasons I hold that the skiagram and the fluoroscopic image should not be presented to a jury as being in themselves full evidence concerning a pathologic condition. Their proper introduction in evidence is through the hands of experts who have made a full physical examination, and the result of study by the X-ray should be taken in conjunction with the findings by other methods of examination.

If the skiagram is to be placed in the hands of the jury for inspection at all, it must be accompanied by the results of other methods of examination, together with the expert opinion based upon all these examinations, and the skiagram must be distinctly understood to be only a part of the examination.

It were better that the jury should not see the skiagram at all; the jurymen are very likely to give too great weight to the indications shown by it, thus overbalancing the remainder of the medico-legal evidence. There is really no more reason why a jury should be allowed to see the skiagram than that there should be exhibited to them the clinical thermometer, stethoscope, measuring tape, and chemical apparatus, etc., used in cases which become subjects of judicial investigation.

### TUMOR OF THE DURA MATER.

By J. P. ARNOLD, M.D.,  
of Philadelphia.

THERE is usually so much difficulty in the location of intracranial growths that it seems wise that individual cases should be reported so as to add as much as possible to our knowledge of the condition. Cases which are observed carefully and afterward come to the autopsy-table afford us means of learning much that is definite. The case here reported was under observation for 7 months. During that time it was seen by several men of deserved reputation in neurology, and their opinions as to the location of the tumor differed. It was located in the cerebrum, in the frontal lobe, and in the region of the fissure of Rolando.

The patient was a male, aged 43 years. He had always been a healthy, robust man. There was no history nor were there any physical signs of syphilis. For the past two years he had complained of pain and stiffness in the right arm. At 4 A.M., July 20, 1896, while in bed, he had what his wife described as a "stroke." He was unconscious for one hour. He went to work at 7 A.M., but had to stop at noon. All the remainder of the day he complained of severe pain in the frontal region. The next day the headache was less severe, and he resumed work. A week later he had another attack, and was again unconscious an hour. This was also followed by headache. After this time he was able to work but three days in a week, because he felt "done out." After the first attack he had slowness of speech. One month later he began to lose power in the right arm. For the past nine months he has suffered constantly with severe pain in the left frontal region, at times blinding him. His memory and general mental capacity have much deteriorated. On admission to the hospital, on February 23, 1897, his temperature was normal, pulse 84, and respirations 24. The expression of the face was dull and apathetic. The right pupil was larger than the left; both reacted well to light and distance. The angle of the mouth drooped on the right side. Percussion over the left side of the head caused marked flinching and a spasm of the flexors of the right forearm. There was some rigidity of the right arm and leg. The knee-jerks were increased on both sides, but more markedly on the right side, with an attempt at clonus in the right leg. The elbow-jerks were increased, especially on the right side. The station was good; the gait was hemiplegic. The grasp was enfeebled on the right side and the hand went into "lock-spasm" upon grasping. There was partial paralysis of the right side of the face and the tongue was protruded to the right. Tactile sensation was much impaired over the right arm. Ophthalmoscopic examination revealed an optic neuritis with marked swelling of the discs, more advanced in the left eye. While in the hospital there were occasional attacks of unconsciousness lasting from 24 to 36 hours. He complained continually of headache. The paralysis of the right side and the aphasia increased progressively. Vision in the left eye was completely lost. Frequent examinations of the urine gave negative results, except on one occasion, when there was



a trace of albumin present. The temperature remained normal or a little below the normal line until three weeks before death, which occurred on September 22, 1897, when it rose and remained between 100° and 102.5° until death. With the rise of temperature, signs of consolidation appeared over both lungs.

The autopsy revealed a septic pneumonia with probably a tubercular basis; and the following condition in the cranial cavity: There was a growth originating from the falx cerebri on the left side. It had pushed aside the brain-tissue of the left hemisphere in such a manner as to exert considerable pressure on centers of the face, arm, and leg of this half of the brain. The growth was encapsulated, and neither infiltrated the brain-substance nor was it adherent to it. It was ovoidal in shape, about the size of a small egg and measured 6x4 cm. Its consistence was moderately soft and it presented the physical characteristics of a sarcoma. On further examination it proved to be a small spindle-celled sarcoma.

The history of this case seems to be that of gradually increasing pressure on the motor areas of the left hemisphere, involving first that of the arm; then the face-area, including the speech-center; and finally, the centers controlling the leg. It is interesting to note that in the loss of power in the right arm, the extensors were affected earlier and to a greater degree than the flexors. At the time that there was quite marked paresis of the extensors, there seemed to be a condition of irritability of the flexor centers, as shown by the inability to unclasp the hand after grasping.

The growth proved to be of such location and character as to have promised a successful result from operative measures. An operation would probably have been performed had it not been for the diversity of opinion as to the location of the tumor.

## GANGRENOUS DERMATITIS COMPLICATING TYPHOID FEVER.

By B. FRANKLIN STAHL, M.D.,

of Philadelphia.

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THE typhoid fever contracted in camp by a large number of the soldiers who are being treated in our hospitals seems to be of virulent type, and its complications and sequels are especially numerous. There is one complication to which I desire to call attention, that is, gangrenous dermatitis. This condition has developed in three among a large number of cases of typhoid fever under my care at St. Agnes' Hospital. Inasmuch as I shall make a more detailed report, with photographs of two of these, at a later period, a brief outline of them at this time will suffice.

The disease was associated with furunculosis, which was very extensive in one instance; while in another it was not sufficient to constitute a complicating factor. In all of the cases the fever had been high, the temperature reaching 104° and over for a period of a week or more, notwithstanding the fact that tub-baths were given every three hours. The complication appeared at a time when the temperature had fallen and conva-

lescence was regarded as established. Its development was marked by redness of the skin, followed by vesicles containing cloudy serum, and varying in size from that of a pea to that of silver dollar. These never became entirely filled with serum, and they soon ruptured and desquamated, leaving a raw, injected surface. They sometimes became confluent. When the process was extensive the lesion was superficial, but when local, as on the cheek, forehead and forearm, there was a loss of the deep layers of the skin, and in some places ecchymotic bases surrounded by a zone of grayish, necrotic tissue. The rapidity of development was most pronounced, four areas of necrosis appearing on the anterior surface of the trunk, each about the size of a silver dollar, in one patient, during a night. In another case a patch extended across the front of the neck, covering an area about 3 inches by 1 inch, and the skin in this instance seemed to melt away in a few hours.

The lesions were most extensive on the back in one of the cases. In another the face, head and forearm suffered deeper and more extensive destruction of tissue. The scrotum and the ear were likewise involved in one case, and in no instance were the legs the seat of the disease. There was no gangrenous odor associated with the sores.

Two of the patients have died, and it seemed that they would have recovered had this condition not developed.

The last patient in whom it appeared is living, and many of the involved areas have healed, while new ones have almost constantly developed. At one period in the disease in this man's case three-fourths of the skin of his back and sides showed the presence of gangrene.

The disorder seems to have been the determining factor in causing death in two of the three cases in which it appeared, and it has greatly imperiled the life of the patient now suffering from it.

## A NOTE ON THE TREATMENT AND CLINICAL PATHOLOGY OF ASTHMA.

By SOLOMON SOLIS-COHEN, M.D.,

of Philadelphia.

Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine in the Jefferson Medical College; Physician to the Philadelphia Hospital, etc.

ASTHMA—paroxysmal dyspnea, with wheezing and "music in the chest"—is not a disease *per se*, but a symptom attendant upon many morbid conditions. Setting aside those cases in which there exist organic lesions of the heart, or definite pathologic conditions affecting the lungs (emphysema or chronic bronchitis) the majority of the remaining cases may be divided into two groups characterized by the condition of the bloodvessels. In the one case there is contraction of the vessels, and antispasmodic or relaxing remedies,

such as the nitrites or the nauseants (ipecac, lobelia), do good. In the other case there is relaxation of the vessels, and the nitrites and the nauseants may increase the patient's distress. In both groups of cases there may often be coincident albuminuria. In the cases with contraction of vessels, there is more likely to be an actual nephritis; and the asthma may in some instances be merely one of the phenomena of renal failure—a toxemic manifestation, allied to other forms of uremia. In the cases associated with vasomotor paresis the albuminuria is more likely to be transient and casts are less frequently found. In both sets of cases increase of albuminuria and increase of dyspnea are usually coincident.

It is important to recognize the existence of organic disease of the kidney as the basal cause of recurrent asthmatic paroxysms, and to direct treatment accordingly. Hence careful and persistent study of the urine is necessary, not only during the paroxysms but also in the period of quiescence. I have made no exact observation as to the urotoxic coefficient, or as to the quantitative excretion of urea in these relations, but it seems desirable that such study should be undertaken. Sodium nitrite or nitroglycerin persistently administered, together with the use of potassium iodid, gold and sodium chlorid, and such other treatment, hygienic and medicinal, as may be indicated from time to time, will usually give relief in the group of cases under consideration.

This note, however, is designed to call attention more particularly to that group of cases in which asthmatic symptoms coexist with other manifestations of vasomotor ataxia; a relationship so well-marked that several exclusive theories of asthma have been built upon it; the mistake of each being its exclusiveness. Thus, in some instances the patient is a subject of urticaria, and the dietetic indiscretion that might have caused an outbreak of hives will be followed instead by an asthmatic paroxysm. In other cases asthma is one of the phenomena of hay-fever. In others there is a tendency to profuse perspiration; and in these there may be likewise excessive watery expectoration. Sometimes there is polyuria. Sometimes moderate enlargement of the thyroid gland with undue tendency to cardiac palpitation on slight exertion, may be observed. Some patients are extremely susceptible to slight changes in temperature. Whatever the association of symptoms may be, it is evident that there is an undue relaxation of the vascular symptom generally, with a tendency to the production of circumscribed edema, and analogy points to a similar condition of the vessels of the bronchial mucous membrane, causing an irregular swelling with narrowing of the caliber of the air-tubes. Even though the dyspneic symptoms seem spasmodic in such cases, the usual remedies for spasmodic asthma may not only fail but often do harm. Sometimes dry cupping of the surface of the chest may

cause sufficient diversion of the general blood-current to restore equilibrium, and in rare instances very small doses of the nitrites seem to act similarly; but as a rule these measures are without good result. Amyl nitrite inhaled during a paroxysm may even increase the distress, or an attack may be provoked by its use during quiescence. In such cases relief is often given by agents that heighten blood-pressure, of which digitalis, picrotoxin, strychnin, and atropin are among the best. An agent that has a decided narcotic influence in small doses, while at the same time raising blood-pressure, is hyoscin hydrobromate; and this is specially useful. A combination of morphin, strychnin, and atropin, or morphin, strychnin, and hyoscin, or even all four of these agents at once, in doses suited to the special case and attack, may be given hypodermically, and not only relieve the immediate paroxysm but apparently cut short the attack. An average dose is morphin sulphate  $\frac{1}{6}$  gr., hyoscin hydrobromate  $\frac{1}{200}$  gr., atropin sulphate  $\frac{1}{200}$  gr., strychnin sulphate  $\frac{1}{30}$  gr. In some cases hyoscin and strychnin act better without the other drugs.

Pursuing my clinical studies of the action of suprarenal substance in raising and regulating blood-pressure, I have used it in a number of cases of this variety of asthma with gratifying results. It is apparently powerless to relieve an acute paroxysm; at least in any dose that I have cared to give; but given in the intervals, and persisted in, it seems to diminish the tendency to recurrence; and to render the paroxysms, when they do recur, more amenable to other measures. Albuminuria has in one case disappeared entirely; the urine having been normal to all ordinary tests for more than a year. This patient took on alternate days  $\frac{1}{30}$  grain of picrotoxin three times daily, and 15 drops of Morgan's glycerin extract of suprarenal gland, three times daily. Preparations of ergot and of hydrastis are useful adjuvants in cases attended with leaking of the vessels.

Many interesting reflections are suggested by the occurrence of similar symptoms from different causes, and their relief accordingly by opposing treatment. To these may be added such suggestions as follow the recognition of the equal usefulness of one measure in both types of cases—the inhalation of compressed air. This, however, acts purely mechanically, and the pressure is exerted in the one instance like that of a bandage upon relaxed vessels; in the other upon spasmodically-contracted muscle-fibers. In the one instance it supports weakness; in the other, it opposes force to force.

Thus, in cases of the former type, its good influence is established much more slowly than in the spasmodic cases, but is more persistent. In addition, general tonic treatment, aided by massage and hydrotherapy, seems to be necessary to keep patients of the vasomotor-paretic type in good condition, and thus prevent recurrence of dyspnea. They are often lithemic, and this condition also requires appropriate management.



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**Compulsory Notification of Venereal Disease in Prussia.**—To Americans, who resent strenuously any invasion of what they are fond of designating their "personal liberty," the information will come with something of a shock that the police authorities of Berlin have notified the physicians of that city that all cases of venereal disease must be reported in connection with which secrecy might be followed by harmful results to the patient or the community. Only a short time ago a proposition to make compulsory notification of cases of tuberculosis was rejected in Philadelphia; and a regulation to the same effect in New York is probably not a little honored in the breach; in spite of the pregnant fact demonstrated by modern hygiene that the most certain way of suppressing any transmissible disease, or of restricting its ravages, is to know its sources and to destroy or prevent the conveyance of its infectious cause.

**Suggestions to Writers, No. 12. Avoid Long Titles to Articles.**—In the program of the meeting of a learned American medical society, held A.D. 1898, the title of one paper was made up of 40 or 50 words, and another required 20 or 30 words. For the sake of mere pity of librarians and catalogers, this sort of thing should not be encouraged nor allowed. There are other and sufficient reasons, but that one alone should suffice. Those who indulge themselves in this manner should improve by turning their interminable descriptive headings into Latin—of which nine-tenths of their readers know little or nothing. A good title is short; its object is to classify and to catch the student's eye. The longer it is, the less is it likely to do so, thus defeating the author's first object. The classification must be general, and not replace the detail and description, which properly belong to the text.

**Cannot Chicago and Illinois Stop This?**—From the *Medical Brief* we copy the following advertisement:

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Is it not an astounding fact that a journal calling itself *medical* will accept such an advertisement, and that a people thinking itself civilized will permit the fact!

As we go to press we notice, this time in a non-medical journal, the advertisement of another institution—also, be it noted, in Chicago—which we likewise give a free advertisement by quoting:

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Space moments sufficient. Diplomas given. Suggestion, Hydropathy and Osteopathy. \$2 to \$10 daily at home or traveling. Either sex. Particulars free. Address,

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**One Thousand Dollars Wanted.**—We call especial attention to Dr. Spivak's article, upon another page, as it sets forth with clearness the deplorable state of medical libraries in our country. There are being annually wasted many thousand volumes of medical books and periodicals because no machinery exists for taking these (library-duplicates; deceased physicians' libraries, etc., etc.), from those who do not want them, and sending them to libraries which need them badly. To establish this LIBRARY EXCHANGE and carry it on for a year, there is needed \$1,000 to pay a few necessary expenses. Medical libraries are poor, even the best of them, and cannot at present subscribe this amount. *The Association of Medical Librarians* has offered to supervise the establishment and to carry on the Exchange for one year without expense, except that required to pay for clerical help, and other incidental items, for which the \$1,000 mentioned will be sufficient. The association asks if some person or persons will not supply it with this sum, and thus inaugurate a work of profound importance to medicine. We have received many letters saying, "We have thousands of volumes of duplicates to present to libraries needing them, if you can effect the transfer." Are there not ten physicians in the United States who will contribute \$100 each towards this most praiseworthy design? The treasurer of the association is Dr. William Browning, 54 Leffert's Place, Brooklyn, N. Y.

**Matches Free From White Phosphorus.**—An important problem that has long engaged the attention of chemists and manufacturers seems recently to have been solved by two Frenchmen, Sevine and Cahen.

The danger of bone-necrosis from the use of white phosphorus in the making of matches, and the unsuitableness of red phosphorus, as well as its explosiveness when combined with potassium chlorate, made it desirable to obtain some substitute free from these disadvantages. Such a substance seems to have been found in a mixture of phosphorus sesquichlorid and potassium chlorate. The former substance, in addition to its stability and its resistance to atmospheric influences, ignites at a temperature not a great deal above that required for white phosphorus, and it contains little latent heat; besides mixing readily with potassium chlorate. It has a special odor, does not evolve fumes at ordinary temperatures, and is nonphosphorescent, and practically nontoxic. It is said that the matches made from the mixture will ignite when rubbed on any surface. A German and an Englishman have also invented matches free from white phosphorus. The composition of the paste made by the former is not published, while that made by the latter is said to contain potassium chlorate, whitening, plaster-of-Paris, ground glass, glue and amorphous phosphorus. The German match can be ignited by rubbing on any dry surface and it does not evolve unpleasant fumes; while the English match must be rubbed upon a rough surface.

**Blackmailing the Manufacturer.**—The poor medical editor is at last to have his innings! He has long had experiences with the authors of the concealed reading-notice under a thousand disguises, and with the multiform methods of tempting him from the path of journalistic virtue. Profitable advertisements for example have been almost daily offered him on condition that "proper articles commendatory of the preparation are to be published from time to time," and although this clause in the contract may have been deleted, he finds occasionally that a disgusted advertiser will cancel his contract if such reading-notices are refused. Now here comes our respected correspondent (see correspondence columns) showing that not all medical editors are above the blackmailing business themselves. He has sent us the original letter from the editor quoted, as a guarantee of good faith. In doing so he shows us what, in some cases, may be the long-desired explanation of the fact of so many medical journals, and the reason for some of the advertising in them. And this recalls another odd fact that has often been a cause of wonderment: advertisers are said generally to give, and journals are said usually to demand, a price for space dependent upon circulation, at least upon the number of names on the subscription-list of the journal. We distinctly deny the most distant allusion whatever to any particular journal, in saying that to a good business mind two other things should be rated higher than the mere number of subscribers: 1. The kind of subscribers; 2. How they have been

obtained? It is said many journals keep on their subscription-books thousands of non-paying "subscribers." Certainly also many tons of so-called medical journals are dumped into the post-offices every week addressed to Drs. Thomas, Richard, and Henry, or their wastebaskets. But are not 1,000 genuine and intelligent subscribers more valuable to a shrewd advertiser than 25,000 chosen at random from Polk's Directory, or carried on the books without orders or money-remitances?

**The American Red Cross and Newspaper Medicine.**—Some time ago we called the attention of the profession to Clara Barton's public puffing of *Electro-poise*. In a daily paper of last week we also find a tremendous flaming advertisement headed:

CLARA BARTON.

HER GRAND ENDORSEMENT OF DR. GREENE'S NERVURA, ETC., ETC., ETC.

No suffering person certainly can hesitate for an instant to immediately secure and use this grandest of medicine. Dr. Greene's Nervura, when the President of the greatest benevolent order on earth gives personal assurance of the great value and wonderful health-giving powers possessed by Dr. Greene's Nervura blood and nerve remedy.

Clara Barton says:

"We have tried Dr. Greene's Nervura blood and nerve remedy and although the remedy has been in our hands but a short time, we judge that the remedy has all of the merits which are claimed for it. We shall still continue its use, with the expectation that we shall be able to indorse it still more highly."

CLARA BARTON,

President of the American National Red Cross, Washington, D. C."

It should be noticed that the advertisement reads, "We have tried," "We shall continue its use," "We shall be able to indorse it, etc.," and is officially signed. We beg to ask the members of the profession who are in the service of the Red Cross, and those who are not its officials, but who are its supporters, as well as all intelligent citizens who aid the organization, what they think of such testimonials, and what of the trustworthiness and the intellect, if not the morality, of those who write them.

**Poisoning from Headache Powders.**—In the *Boston Medical and Surgical Journal* for October 13th, R. W. Greenleaf reports the case of a woman, 48 years of age, who came into the Boston Dispensary for treatment in a dangerously weakened condition, extremely cyanosed and with a weak pulse. Careful physical examination failed to reveal a sufficient cause for her condition, and she denied having taken any medicine. Rest, recumbency, warmth, and stimulants gradually restored the patient, and she finally confessed to having taken headache-powders during the previous night. The powders were warranted as "A positive cure for Sick and Nervous Headache," and were sold under a trade-name, with no conditions as to their dangerous properties. Each powder was found to contain three grains of acetanilid and two grains of phenacetin be-



sides a little caffein, and she had taken five of them. That these cases are common is so well known as to hardly need mention; "headache-cures" are conspicuously exposed for sale at almost every soda-fountain and drug store, and that the doses are not always small is shown by a case reported by Squibbs in the *British Medical Journal* for October 1st, in which dangerous symptoms similar to those in Greenleaf's case followed the taking of a single powder. This is only one of the almost endless number of conditions for which drugs and nostrums are sold indiscriminately for the palliation of symptoms, by druggists and others wholly unqualified to judge of the real needs of a case. Danger to life is not the only grave evil in this connection, for there are unquestionably many cases in which the proper treatment of diseases is in this way postponed beyond the stage in which cure is possible: the eye-strain which is perhaps responsible for the majority of these headaches is left untreated until various nervous disorders are so permanently established as to be beyond help; a malignant brain-tumor is allowed to grow until operation is powerless to save the patient; or a case of cerebral syphilis is treated by headache-powders until extensive damage is done, and the same holds good of dozens of other symptoms which are daily treated by palliative nostrums. Has the time not come when physicians should bestir themselves to put a stop to this traffic? We believe that the same kind of energy which has succeeded in establishing State Examining Boards and thus in shutting out quacks from most of the States of our Union, would do much to bring about this end. A law similar to that of Germany, which requires that the formula of all patent medicines shall be printed plainly on packages containing them, would be at least of some value.

#### **The Operation for Appendicitis "in the Interval."**

—To many the numerous and long-continued discussions over appendicitis may have seemed tiresome and fruitless, but we believe that it has by no means been unavailing, and that despite all this apparent chaos, the profession is generally approaching an agreement with regard to certain highly important propositions. We cannot but remark the growing favor with which surgeons are coming to regard the operation in the interval following acute attacks of appendicitis. In a recent highly important paper by Richardson and Brewster, which appeared in the *Boston Medical and Surgical Journal*, 750 cases were reported, including 150 consecutive cases in which operation was performed in the period of health following one or more attacks of appendicitis without a single death. The appendix was found and removed in all cases, although not always without considerable difficulty, and McBurney's incision was used in the majority of cases. As would be expected, Richardson and Brewster are thoroughly convinced as to the value of the operation, and state that,

"From a feeling of strong doubt as to the advisability of the operation in the interval, we have been led to one of confident enthusiasm." Although probably few if any have had an experience so extensive or satisfactory, many of the best-known surgeons at home and abroad, including McBurney, Keen, J. William White, McGuire, Eastman, Mayo Robson, Treves, Czerny, and many others, have expressed themselves in favor of operation in the interval. It should be noted, however, that whilst this is true of the more progressive surgeons abroad, the majority, probably, are still ultra-conservative, operating only in cases of the greatest urgency. The advantages of operation in the interval are very evident, among which are the following: The lessened danger to life when operating upon a patient in health, instead of a patient weakened by pain, with tissues inflamed, and in a condition unfavorable to repair or the resistance of infection; the possibility of devoting ample time to the preparation of the patient, instruments, and dressings, and of selecting a favorable time and place for operation; the greater probability of avoiding ventral hernia when operating through a moderately small incision, separating the muscle-fibers according to McBurney's method and closing the wound immediately and firmly instead of resorting to more or less prolonged drainage and closure of the wound by granulation; and the slight danger of fecal fistula when it is possible to devote sufficient time to operation so that the appendix may be removed and the stump cauterized and carefully buried by Lembert's sutures. Unfortunately some cases are urgent, and it is in many cases impossible to wait and operate in the interval; it is also difficult to discriminate between those cases in which it is wise to wait and those demanding immediate operation.

**Science and the Country-Practitioner.**—From a number of congratulatory letters we choose one to copy, not chiefly because of its praise of the PHILADELPHIA MEDICAL JOURNAL, but because it admirably illustrates an aspect of medical life to which we have often had our attention called by conversation with country-practitioners. All know how many of the most eminent members of our profession began life not only as country boys, but began their professional life as country doctors. The names of Sims, McDowell, Koch, Jenner, and many others quickly come to mind. But there are other reasons why in our time the physician of the country and village will more frequently than formerly be alert-minded, progressive, and thoroughly conversant with the best science of the day. The chief of these is that the fact of raising the standards of medical education and the crowding of the profession necessarily supplies better minds and a more perfect scientific equipment of these minds, to the profession generally, and so to the country. But besides this, many careful men will prefer a ripening period during

early professional life beyond the somewhat congested and not infrequently morbidly active conditions of the cities. It is, nowadays, by no means a proof of lethargic-mindedness to choose the first location in suburban or village districts; we do not by any means think the best intellects among the new college-graduates are now uniformly choosing the cities in which to begin practice. The city gives social helps, the friction of mind on mind, etc., but it is a growing custom for country-practitioners to take occasional post-graduate courses, to form medical societies, etc. Moreover, the literature, which the countryman can have is rapidly improving in quality, and cheapening in price. Let him renounce cheap journalism, nostrum-papers—the devil and all his ways—and subscribe for the best journals, and his scientific abilities will not suffer. We trust that the majority of country-practitioners are or soon will be of the opinion of our correspondent (in a very far-away place) whose letter we herewith reproduce:—

"I wish to express my appreciation of the opportunity of reading Prof. Virchow's lecture in the last issue of your JOURNAL; I heartily thank you for publishing it; and I believe it to be another proof of the high literary and professional merit of the PHILADELPHIA MEDICAL JOURNAL, the cheap, trashy, what we may call "Jim-crow" journals do not publish such splendid articles, because they do not appreciate them; nor do their readers. I sometimes think that we "country doctors," practitioners in the small towns, lose interest in scientific progress because we are out of touch with the master minds of science. Such articles as this lecture and the addresses of the presidents of sections of the British Medical Association which you recently published, remind us that medicine is a part of science, that science is progressive, and that it is our duty to *know* and to *appreciate* these productions of master minds. My library contains some of the works of Huxley, Tyndall, Darwin, and Spencer, and it is needless to say that I admire them. I believe the time is here when the physician must understand and believe in evolution, as put forth in Virchow's lecture—cellular evolution—and the evolution of all living beings, and their community of laws—to practise medicine intelligently; for, as Spencer says, such belief must influence the life and daily acts of those who hold it."

**Etherion** is the name given to a new gas discovered by Mr. Chas. F. Brush, of Cleveland, Ohio. If the discovery is confirmed by further investigations, it seems likely to be the most profoundly important one made in physics in recent times. The new gas is evolved in high vacua experiments from the glass of the tube itself, or from pulverized glass, and other substances placed in the tube. At 36 millionths pressure the residual gas disclosed "an astounding phenomenon," a heat-conduction twice as great as air and nearly as great as hydrogen. At .96 of one-millionth pressure the heat-conductivity was twenty times as rapid as hydrogen. The heat-conductivity and the molecular velocity of gases being directly related, it follows that the molecular velocity of the new gas is at least 100 times that of hydrogen, and perhaps (from a conservative estimate of the heat-conductivity) it may be a thousand or more times greater. At the low estimate, this makes the mean molecular velocity (at the temperature of melting ice) of etherion more than 105

miles a second, a velocity so great that it would not remain within our atmosphere, "*unless the space above also contained it.*" The density of etherion is computed, at the low estimate, as at least only the ten thousandth part of that of hydrogen, and exists in our atmosphere in the proportion of much less than one millionth. Thus the hypothesis is rendered probable of an interstellar atmosphere. Mr. Brush thinks etherion will be found to consist of a mixture of three or more gases, forming one or more periodic groups of new elements, all much lighter than hydrogen. This intensely interesting communication (appearing in *Science*, Oct. 14, 1898) closes with the following paragraphs:

"The transmission of radiant energy through space has always been to me a fascinating phenomenon, and I have indulged in much speculation concerning the ether—that mysterious something by means of which it is effected. The remarkable properties assigned to the ether from time to time, in order to account for observed phenomena, have excited my keen interest; but I have long entertained the hope that some simpler explanation of the mechanism involved will be found. To me, a less strain of the imagination is required in the assumption that, instead of a continuous medium, gaseous molecules of some kind, endowed perhaps with a mode or modes of motion at present unknown to us, are the agent of transmission; a gas so subtle, and existing everywhere in such small quantity, that it has escaped detection.

"Perhaps the molecular hypothesis of the ether has proved so attractive to me because it supports the hope that we may sometime compass the perfect vacuum—a portion of space devoid of *everything*. Such a vacuum would be opaque to light, and gravitative attraction could not, I believe, act through it. It might afford a new point of view from which to study the profound mystery of gravitation; an *outside* point.

"The late De Volson Wood (*Phil. Mag*, November, 1885) considered the question of a gaseous ether mathematically, and deduced certain necessary properties of the hypothetical gas; chief among which were exceedingly small density and exceedingly high specific heat. Possibly we are about to find a gas which will fulfil the required conditions. It may be etherion, or its lightest constituent if it turns out to be a mixture. I venture to express the hope that etherion will at least account for some phenomena at present attributed to the ether.

"On account of the presumably extreme smallness of its molecules as compared with those of glass, etherion probably passes through the latter when any considerable difference of pressure exists on opposite sides, though the passage may be very slow. It seems to be condensed or compressed in glass, as before indicated, and may evaporate on the side of lower pressure, and be absorbed on the side of higher pressure, after the manner of hydrogen in passing through palladium. In my own experiments the heat-transmission ascribed to the ether may be due to the presence of the new gas inside the bulb. A small fraction of a millionth would be sufficient, and this might escape detection by the pressure-gauge, on account of the necessary compression in the gauge-head causing absorption by the glass. Again, etherion must always be present to some extent in all 'vacuum tubes' (as well as in my own conduction-bulb), on account of its long-continued evolution from glass, and may be the medium of propagation of the Röntgen rays in the vacuum-glass and air."

**The Pathogenesis of Epilepsy.**—Despite an enormous amount of clinical and experimental work, the true nature of epilepsy, one of the most common and most dreaded of all nervous diseases, remains to this day shrouded in mystery. Much difference of opinion exists in the first place as to the exciting cause of the



convulsive attacks. Some believe that in its essence epilepsy is a form of autointoxication; others that it is due to reflex causes. Haig and his school attribute it to the uric acid diathesis, while Ohlmacher has recently espoused the thymic origin of the disease. A similar difference of opinion, although not so diversified, obtains with regard to the starting point of the epileptic seizure. Gowers, Ferrier, Hitzig, and Umverricht believe the seat of origin is in the cerebral cortex. Nothnagel, it will be remembered, holds that there is a convulsive center in the medulla oblongata, a view that is held by Kussmaul and Schroder van der Kolk. Finally, there is a group of authors that believe in a mixed origin. Umverricht, in an interesting address delivered at the Congress of Internal Medicine in 1897 (*Sammlung klin. Vorträge*, No. 196) gave the details of numerous experiments on dogs in which he found that stimulation of the cerebral motor cortex produced general convulsions and that the excitation spread superficially to adjacent motor areas, apparently by the shortest nerve paths. Furthermore, he found that if a portion of the motor cortex was removed, the corresponding muscles did not participate in the seizure. Johann Prus, in a recent study, repeated Umverricht's experiments, and modified them in various ways. His conclusions are not alone of extreme interest, but, if corroborated by others, will mark an important epoch in the study of epilepsy as well as in that of the physiology of the nervous system. Umverricht had asserted that the convulsions spread, as was stated above, along the surface of the brain-cortex, radiating from the point of origin, and had derived from his observations what he calls the law of irradiation, which expresses this mode of dissemination. Prus, however, found that the epileptic attacks did not always become generalized in the manner described by Umverricht, and that the convulsions produced by repeated stimulation of the identical motor area might become generalized in diverse ways, and furthermore, that despite the destruction of the motor center the corresponding muscles always participated in the epileptic attack, when the cortex was adequately stimulated. If a circular cut is made round a motor center and the area is stimulated, the convulsion becomes generalized in the normal way, and if the occipital lobe is separated from the frontal by means of a groove made with a Paquelin's cautery and the occipital lobe is then stimulated, a typical epileptic seizure is produced. Studies with a galvanometer and with a muscle-nerve preparation (laying a fresh sciatic still connected with the muscles of a frog's leg on the cerebral cortex) very often showed absence of currents even during the strongest convulsions. Prus thus seems to prove that the cerebral cortex plays no active part in the generalization of the epileptic attack. He then investigated other parts of the brain, and found that after destruction of one of the pyramids no matter which hemisphere is stimulated, the convulsions become generalized

as before. It is therefore necessary to assume that there is in the dog a bilateral innervation of the cerebral cortex for all the muscles of the body and that in case of division of the pyramidal tract the excitation spreads along the commissural fibers of the other hemisphere, or that the conduction in the cortical epilepsy takes place along centrifugal paths hitherto unknown. The experiment to settle this question yielded the most astonishing results. The author usually found that division of both the pyramidal tracts, division of the crura, incision into the pons deep enough to cut across the pyramidal tracks and, finally, total extirpation of both pyramids did not prevent the development of epilepsy when the cortex was stimulated. Only one conclusion was possible—that the paths along which the impulses are conducted after division of the pyramids must lie outside of the latter and outside of the tracts in the pons. These hypothetic motor pathways, the existence of which seems almost established by his experiments, he designates as extrapyramidal tracts.

He then divided the mesencephalon in the region of the posterior quadrigeminal bodies, taking care not to injure the pyramidal tracts, and found that even with the strongest stimulation of the cerebral cortex he was unable to provoke an epileptic attack, whence he concludes that the extrapyramidal tracts run in the dorsal part of the mesencephalon, in the tegmentum or in the substantia nigra.

The next question to which he addressed himself was to determine whether in electrical stimulation of the cerebral cortex, motor or sensory cells are stimulated. For this purpose he painted the cortex with various chemical solutions, such as chloral, chloroform, ether, potassium bromid, morphin, and antipyrin, none of which thus applied prevented the development of the convulsions when the cortex was stimulated. But after an application of a 10% cocaine solution stimulation of the cortex failed to produce the convulsive attack. These experiments seem to prove that in the region of the motor cortex sensory elements, or at any rate the termination of sensory fibers, exist. They furthermore prove that the *starting point of cortical epilepsy is either sensory-nerve arborizations or sensory ganglion cells*, and not motor cells or motor fibers. Various other experiments by the author seem to strengthen the evidence in favor of the existence of the extrapyramidal tracts. In his opinion the latter subserve especially the conduction of impulses for associated movements.

As stimulation of the sensory elements of the cortex seems necessary for the production of epilepsy, it may be concluded that the latter is really the expression of a complicated reflex, in which the extrapyramidal tracts play the chief role. The reflex movements, like all reflexes, become generalized through the medium of the gray matter of the mesencephalon, the medulla oblongata, and the spinal cord.

The author's experiments are so striking, and their results lead to such novel and revolutionary conclusions, that a repetition of them seems urgently demanded. Apart from the technical skill required to perform them, there is one other feature that surrounds experimentation along this line with difficulties, and will deter many from entering the field, and that is the cruel necessity of operating upon animals without the aid of an anesthetic.

## Correspondence.

### THE PHARMACEUTIC MANUFACTURER AND THE JOURNALIST.

OFFICE OF

NEW YORK, October 8, 1898.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

I have seen a good deal in print during the last few years in reference to the sufferings of medical practitioners, by the intrusion on their privacy (and perhaps painful leisure) of representatives of pharmaceutical houses. I have also seen severe editorial attacks on such houses by medical journals, after they failed to get an advertisement from a given house. I believe your readers will be interested in having a little peep behind the manufacturers' curtains—a word about *their* troubles. How are they treated by the profession? In most cases, of course, honorably and fairly. The editor of a certain obscure medical journal received in due course a circular letter from me, and then proceeded to solicit an advertisement for his journal in the letter given below. No comment is necessary, but you will see how near it comes to blackmail.

I would add that manufacturing pharmaceutical houses constantly receive such letters, and they are overwhelmed continually with worthless articles from members of the profession—pay expected, of course. And in many cases that have come under the writer's observation in years past, if such contributions are declined, the party in question openly fights the house that has turned him down.

Very sincerely yours,

\* \* \* \* \*

The letter referred to is given herewith verbatim:

THE JOURNAL

NEW YORK, October 1, 1898.

M.D.,

New York City.

MY DEAR DR. —

Your favor of the 3d just to hand, and in reply would say that while I have been very much pleased with your preparation, yet you will appreciate the fact that as long as your company does not see fit to extend to our journal a share of its advertising patronage there is no reason why we should use and recommend to our patients, either in private practice or in the hospital work, your preparation so long as other similar and probably equally good preparations do advertise in our journal. Our belief is in reciprocity, and those who favor us we feel that we are called upon to favor their preparations.

As you will see by referring to our advertising pages, we have the advertisement of competing preparations which we must use.

Very sincerely yours,

### AMANITA PHALLOIDES POISONING. WITH RECOVERY.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

Mrs. E. A. N., aged 55 years, ate a third of a raw mushroom about 10 A.M., on September 21st. No untoward symptom developed during the day. After supper, at 7 P.M., the woman was seized with slight cramps in the abdomen, which steadily became more severe, at last affecting the thighs. She began to vomit, at 8 P.M. Becoming alarmed at her sudden, extreme, and, to the family, unaccountable prostration, I was called, and found the patient in a condition of collapse, with a temperature of 100.5° F.; a small, weak, rapid pulse; respirations shallow; moderate tympanites; slight tenderness on pressure over the entire abdomen; contracted pupils; cold perspiration; pallor; anxious, drawn expression; mild delirium; intense retching and profuse watery stools, natural in color and odor. I gave immediately morphin sulphate, gr.  $\frac{1}{2}$ , atropin nitrate, gr.  $\frac{1}{100}$ , strychnin nitrate, gr.  $\frac{1}{40}$ . Hourly there was administered fluid extract of belladonna, gtt.  $\frac{1}{2}$ , fluid extract of nux vomica, gtt.  $\frac{1}{2}$ , bismuth subnitrate, gr. ij. After every act of emesis, sodium bicarbonate,  $\mathfrak{zss}$ , was given in half a glass of water. Whisky was permitted ad libitum, and hot applications were made. From 12 P.M., all of the symptoms gradually subsided. The treatment was continued for two days. At the end of a week the woman had entirely recovered.

I believe this to be a case of poisoning with the *Amanita Phalloides*. The reason the symptoms are so long in developing is that the phallin is absorbed in the small intestine instead of the stomach.

Respectfully,

Winnetka, Ill.

H. C. R. NORRIS, M.D.

**The Spanish Drug-Bill in Cuba.**—According to the *British Medical Journal*, a German medical journal states that from the commencement of the Cuban insurrection in February, 1895, to the end of January, 1898, there were sent from Spain to Cuba 20,000 kilograms of various preparations of quinin, 400 kilograms of opium, 2,890 kilograms of carbolic acid, 1,400 kilograms of corrosive sublimate, 2,370 kilograms of iodoform, 350 kilograms of rhubarb, and 2,530 kilograms of castor-oil. In the way of dressings there were 16,000 meters of diachylon-plaster, 66,070 kilograms of cotton-wool, and more than 545,000 meters of gauze. The total value of these consignments is estimated at nearly 3,500,000 pesetas (£140,000). The medical service of the Spanish army comprised from 500 to 600 medical officers and about 100 pharmacists. During the three years 50 medical officers and 16 pharmacists died, mostly of yellow fever.

**The London County Council and the Water-Supply of London.**—The London County Council has recommenced its sittings, and, as was to be expected, the subject of the water-famine in Northeast London came on for early notice. By figures, by lurid prophecies of ill, and no less by jokes, member after member held the action of the East London Waterworks Company in the recent famine up to contempt. All that was said against the company in the Council chamber will not, however, be received by the public quite seriously. It is an open secret that the County Council desires to have the control of the water-supply of London, so that it is the political, or rather municipal, game of advanced members to run down the present management of the companies. The medical profession is on the side of the London County Council. They do not trust implicitly the present arrangement for securing an adequate supply of pure water, and they would prefer that the whole of the drinking-water of the city were subject to the inspection of some competent medical supervisor, such as the present medical officer to the Council, Mr. Shirley Murphy.



# American News and Notes.

**An epidemic of diphtheria** is prevailing in Elizabeth, N. J., and is assuming rather large proportions.

**The Ohio State Hospital for the Insane**, a new edifice located at Massillon, was dedicated and formerly opened with appropriate ceremonies, October 14th.

**Tired of Life at One Hundred and Four.**—A man, aged 104 years, who had been in good health and circumstances, hanged himself in Jefferson County, Tennessee, on October 17th.

**The Southern Surgical and Gynecological Association** has postponed its Memphis (Tennessee) meeting until December 13, 14, and 15, 1898, on account of the prevalence of yellow fever.

**Fatal Mushroom-Poisoning.**—Eight members of a family in Trenton were poisoned on October 16th, by eating mushrooms, three with fatal results, and with the possibility of death in a fourth case.

**Georgetown University.**—Dr. S. S. Adams, formerly professor of pediatrics, has been elected professor of the theory and practice of medicine, to succeed Dr. J. W. Lovejoy, who has been made emeritus professor.

**Addition to the City Hospital, Harrisburg, Pa.**—Ground for the new addition to the City Hospital was broken, October 10th. Among other rooms, the addition will contain a new operating-room, sterilizing-room, and storerooms for surgical dressings.

**New Municipal Hospital in Havana.**—The new municipal hospital of Nuestra Senora de los Angeles was inaugurated in Havana, October 16th. It is situated on the site of the old La Integridad Hospital, where the unfortunates from the Fosos find a refuge.

**The Library of the Late Dr. Theophilus Parvin**, professor of obstetrics and gynecology in Jefferson Medical College, comprising about 900 volumes and pamphlets, has been donated by Mrs. Parvin to the medical department of the public library of Indianapolis.

**The Albert Lea Medical Journal** is a new monthly publication to be devoted to modern medicine, surgery, and prophylactic medicine, under the editorial charge of Dr. Hamilton H. Wilcox, of Albert Lea, Minn. It announces as its motto: A merry heart doeth good like a medicine.

**Yale Medical School.**—The vacancy caused by the retirement of Professor Lusk, head of the physiologic department at the Yale Medical School, has been filled by the appointment of Professor B. Moore, formerly instructor of physiology in the University College Hospital, London.

**Columbia University and Her Fallen Heroes.**—Columbia University, in New York City, will erect a memorial gate to commemorate the patriotic services and death of Dr. John Blair Gibbs, Dr. George W. Lindheim, and Hamilton Fish, Jr., a trio of her sons who fell during the late war.

**Denver Clinical and Pathological Society.**—At the annual meeting held October 14, 1898, the following officers were elected: President, Dr. Charles A. Powers; first vice-president, Dr. Herbert B. Whitney; second vice-president, Dr. J. N. Hall; secretary, Dr. G. E. Tyler; treasurer, Dr. H. G. Wetherill.

**Harvard Medical School.**—Dr. William T. Porter, formerly assistant professor of physiology, has been made associate professor of physiology; Dr. Charles Harrington, formerly instructor in materia medica and hygiene, has been made assistant professor of hygiene; Dr. Pfaff has been appointed instructor in pharmacology, to succeed Dr. Harrington.

**Chicago Pathological Society.**—At a meeting held October 10, 1898, Dr. Otto Folin read a paper entitled "The Pepsin Digestion-Products of Proteins." Dr. D. J. Eisen-drath read a paper upon "The Pathogenic Action of the Bacillus Pyocyaneus, with report of a case of Ovarian Abscess caused by this organism." Dr. J. A. Capps read a paper entitled "Aneurysm of the Coronary Artery."

**Medical College of Ohio.**—Dr. Samuel Nickels has resigned the chair of materia medica and therapeutics, and has been made emeritus professor; Dr. B. K. Rachford, professor of physiology, succeeds Dr. Nickels, and Dr. Allyn C. Poole, professor of chemistry, succeeds Dr. Rachford; Dr. Stephen Ayres has been appointed professor of ophthalmology; Dr. William H. Crane has been appointed lecturer on chemistry in place of Dr. Poole.

**High Mortality in Chili.**—We notice in an article on the sanitation of Santiago in the *Revista Chilena*, that the death-rate in Chili from 1885 to 1889 was 30.3 per thousand, and from 1892 to 1896, 31.2. The number of illegitimate births is also high; in England the proportion is 1 to 13, while in Chili it is 1 to 3, and during the first quarter of the present year, 1 to 1.3. The natality is larger than in other countries,—45 per thousand; in Germany it is 40; in England, 36; and in France, 26. The infant mortality is correspondingly high,—37.74% in Santiago.—[*Jour. Am. Med. Assoc.*]

**The Minnesota State Board of Health and the Transportation of the Dead.**—The Minnesota State Board of Health, in line with action taken by the General Baggage-Agents' Association, the National Embalmers' Association, and the Conference of State and Provincial Boards of Health, regulating the transportation of the dead, has directed that rules adopted by these bodies shall go into effect November 1, 1898. It has arranged to grant a special license to embalmers wishing to place themselves in a position to properly prepare bodies for shipment. Its first examination was held September 9th. Ninety-six applicants presented themselves for examination. Of these 84 passed. A second examination will be held October 27th.

**Smallpox in Pennsylvania.**—The present status of the disease in Pennsylvania, according to information kindly furnished by Dr. Benjamin Lee, Secretary of the Board of Health, is as follows:

Municipality.	County	Date of outbreak.	Total cases.	Deaths.	Recovered.	Houses infected.
E. Vincent Twp.	Chester.....	9-18-98	5	0	2	1
"	"	9-30-98	2	1	0	1
Spring City.....	"	10-3-98	1	0	0	1
Royersford.....	Montg'y.....	9-29-98	2	0	0	2
			10	1	2	5

All the cases still sick are expected to recover.

**The Chicago Lying-in Hospital and Dispensary.**

—Mr. A. Slimmer, of Waverly, Ia., has offered to give to this institution the sum of \$15,000 in December, 1899, provided that the sum of \$45,000 be collected by December 1st next. Of the \$60,000, which it is hoped thus to acquire, \$10,000 are to be expended in the purchase of a plot of ground, and \$50,000 for the erection of a suitable building thereon. It is to be trusted that the efforts of Mr. Slimmer and the directors of the institution will be attended with success, as Chicago stands alone among the large cities of the civilized world in being unprovided with an adequate lying-in hospital.

**The Practitioner, the Medical Record, and Sanitariums for Tuberculous Patients.**—The following interesting item is taken from the *Practitioner*:

"Another question of priority is suggested by the following statement, which I find in the *New York Medical Record* of September 3d:—

"On this side of the Atlantic the great benefit to be derived from pure air and suitable diet by those suffering from consumption has for a considerable time been fully recognized, and the treatment has been placed on a practical footing by the establishment of properly equipped sanatoria in various parts of the country. Since at the *European sanatoria, notably Gröden, have followed our lead*, while England has been the last to adopt the system, and, in fact, as yet has given it only a tentative trial."

"This is surely a striking example of the spirit of annexation which has been aroused in American patriots by their victories over Spain. The backwardness of England in the matter of the open-air treatment of phthisis is freely admitted, though it may be pleaded in extenuation that it has only recently been shown that our treacherous climate is not an insuperable bar to the adoption of the system here. But as regards the statement that several European countries, 'notably Germany,' have followed the lead of America in the treatment of phthisis, one can only say, with Count Smorltork, that it 'surprise by himself,' and also by the calm assurance with which it is made. In this decrepit and despot-ridden Old World, we fondly believed that the pioneer of the open-air method was Brehmer, who opened a sanatorium at Görbersdorf so long ago as in 1859. So sunk in this delusion are Brehmer's countrymen that on this very ground they are even now taking active steps to erect a monument to his memory. I venture to think that Dr. Dettweiler of Falkenstein and several other directors of 'lung-sanatoria' in Germany will be surprised to hear that they are following the lead of America. Perhaps the able editor of the *Medical Record* will be good enough to let us know the evidence on which he based his interesting contribution to medical history."

**Obituary.**—DR. RICHARD POTTS, Fredericksburg, King William County, Va., October 5th, aged 80 years.—DR. CHARLES LEONARD FOX, Lowell, Mass., October 5th, aged 28 years.—DR. CHARLES MOSES HOLMES, Northampton, Mass., October 7th, aged 39 years.—DR. CHARLES POMERY WORCESTER, Newtonville, Mass., October 9, aged 37 years.—DR. N. S. LINCOLN, one of the physicians in attendance upon the late President Garfield during his last illness, at Washington, D. C., October 13th, aged 70 years.—DR. HERMAN S. BRAHAM, Rochester, N. Y., October 2d.—DR. J. F. BOYCE, Santa Rosa, Cal., September 30th.—DR. HUBERT D. ENSIGN, Boone, Ia., October 2d, aged 55 years.—DR. W. F. McLEAN, Elyria, Ohio, October 5th, aged 65 years.—DR. D. W. WHITTAKER, Chattanooga, Tenn., October 3d, aged 47 years.—DR. S. B. H. NICHOLS, Conning, N. Y., September 30th, aged 63 years.—DR. D. L. PAINE, Oregon City, Ore., September 30th, aged 55 years.—DR. C. H. SEVIER, Brownsville, Tenn., September 30th, aged 59 years.—DR. F. HALANCE, a prominent physician and founder of *Medicina Cientifica*, Mexico.—DR. DONALD A. TAYLOR, a son of Major Blair D. Taylor, surgeon in charge of the general hospital at Fort McPherson, himself a graduate of the University of Virginia and an assistant surgeon at the

general hospital at Fort McPherson, of peritonitis, October 15th.—DR. CHARLES McCULLOCH, formerly vice-president of the Albany (N. Y.) Medical College, Gloversville, N. Y., October 15th, aged 50 years.—DR. C. P. WORCESTER, Boston, Mass., October 9th, aged 37 years. Dr. Worcester was for seven years at the head of the department of the State Board of Health for the examination of food and drugs, and for six years secretary of the faculty of the Harvard Medical School. He had been also a trustee of the State schools at Monson, Westborough, and Lancaster.—DR. HENRY LANDIS, Reading, Pa., October 18th, aged 53 years.—DR. HENRY A. GILMAN, superintendent of the Iowa State Hospital for the Insane, at Mt. Pleasant, Ia., October 10th.—

**Chicago Medical Society.**—At a meeting held October 12th, DR. L. HARRISON METTLER stated that the newer conception of **locomotor ataxy** is the very reverse of the old. The disease is essentially a degeneration of the lower sensory neuron and the sclerosis of the sustentacular elements is merely a secondary effect. The sensory neuron consists of a cell-body situated in the posterior spinal ganglion and two processes projecting in opposite directions. The distal process, extending from the skin to the body in the posterior spinal ganglion, is a modified dendrite; the process reaching from the body to the gray matter of the cord is the neuraxon. At the end of the neuraxon is an arborization whose terminal branches pass upward in the cord as far as the medulla oblongata and possibly even to the thalamus. Some branches run for a short distance downward in the posterior columns. At the end of the modified dendrite is found imbedded within the muscular tissues, the peculiar little sensory organ known as the muscle spindle. This is a minute spindle-shaped body containing from two to six small striated muscular fibers, all surrounded by a capsule enclosing a lymph-space. These fibers, which are about one-third the size of the outside muscular fibers, separate and then reunite before they emerge at the opposite end of the spindle. Each spindle has a distinct artery, vein and separate nerve-supply, which connects it with the posterior roots of the cord, and experiment has shown conclusively that the function of the spindle is sensory, probably subserving the so-called muscular sense. In tabes the nerve-terminals within the spindle have been found to be degenerated, even when the nerve-fiber between the spindle and the posterior root was normal. In polyomyelitis and the dystrophies generally the spindle nerve-endings are always normal, even when the surrounding muscular tissues have undergone extreme atrophy.

In locomotor ataxy, therefore, a degeneration is observed in the opposite extremities of the lower sensory neuron, namely, in the arborizations on the one hand and in the muscle-spindles on the other. This accounts for many of the disease-symptoms of tabes. It is the result of a perversion of the nutritive function of the body of the neuron within the spinal ganglion. The functional activity of the neuron-body is lowered by toxemia, overexertion, and traumatism. Heredity must also necessarily play an important role. The highly specialized character of the sensory neuron and the arrangement of the circulating apparatus of the cord are sufficient to explain the selective action of such general causes as toxemia, etc., upon the sensory elements. Three important conclusions result from this newer conception of the pathology of locomotor ataxy. The first is that syphilis is not the *only* cause of the disease; the second is that with an early diagnosis, a more hopeful prognosis is possible; and the third is that the treatment must be directed toward renourishing and reeducating debilitated neurons



rather than toward dissolving and breaking down hyperplastic neuroglia.

"**The Rapid Transit Medical College,**" according to Dr. Albert Abrams ("A Prorogued Meeting of the Antiseptic Club,"—*The Medical Fortnightly*, Oct. 15, 1898), "is richly endowed and provided with well-equipped laboratories. It has a full corps of professors, whose names scintillate with all the effulgence of medical erudition, and command veneration wherever uttered. The faculty of this college, lavishly endowed by nature with humanitarian motives, has only one object in view: the creation of physicians, who will go forth among the poor and afflicted to disseminate the mighty truths of advanced medicine."

#### FROM THE ANNOUNCEMENT.

Matriculants must have thorough knowledge of English, Latin, Greek, Chemistry, Botany, Physics, etc., etc.

Three courses of lectures are necessary before acquiring the time-honored degree of M.D.

The candidate for graduation must have a character.

The candidate must be 21 years of age.

He must write a medical thesis.

He must have paid all fees due the college.

All fees must be paid in advance. No promissory notes will be accepted. The college is founded on a strictly cash basis. Our diplomas are warranted hard finished, fire- and water-proof, and executed in a business-like manner. They exceed in size by 12 inches the diplomas issued by our competitor, "The Never Refuse Medical College." A guaranty is issued with each and every diploma, entitling the holder thereof to legal protection in case of suit instituted for malpractice, or arrest for criminal operations. Prizes are issued weekly by this college, to persons furnishing us with the largest number of students.

The Faculty is composed of Dementia Senilis, M.D., F.A.K.E., etc., professor of chemistry, and business manager; Atrophia Cerebralis, M.D., professor of commercial medicine; Delusio Cerebralis, professor of cosmetic medicine, adjuster of visual defects to the faculty in the case of students designed for graduation, etc., etc.

The College has, in connection with it, the *High Mortality Hospital for the Indignant Poor*, and also a *Home for Indigent and Superfluous Physicians*, established in connection with The Rapid Transit Medical College. The "Home" was filled to repletion, and the applications for admission were all referred to the associated charities. The latter-named society was instrumental in furnishing the disappointed physicians in many instances with lucrative employment as messenger-boys, servants and porters on railroad-cars.

#### PRIVATE KEY TO THE SAME

We consider the classics, and all other subjects, superfluous; if we were of a contrary belief we would not get any students.

We must adhere to the three courses of lectures, which may be taken in one week, one month, or one year, according to the monetary inclinations of our honorable students.

The faculty has a well-lubricated conscience, and can overlook so trifling a defect as characterlessness.

Any age will be accepted, unless the candidate is an imbecile; in which case an affidavit will be necessary, setting forth the age, which must not be under ten, nor over one hundred.

This exaction will be waived in the case of students who cannot write.

This rule is inviolable, although the tuition fee may be paid in beans, or other staple products.

**Denver and Arapahoe Medical Society, of Denver, Colo.** At a regular meeting held October 11, 1898, Dr. WM. P. MUNN read a paper on **The Choice of Route in Operations on the Bladder**. He chiefly considered the choice between the suprapubic and the perineal route. The disadvantages of the former are the danger of wounding the peritoneum, even with the exercise of the utmost care; the frequency of infection of the wound and the consequent failure to obtain primary union; and the impossibility of properly draining a cavity from the top. The danger of wounding the rectum by the perineal incision is much less than that of wounding the peritoneum by the suprapubic operation; the perineal operation is simpler and more speedy, drainage is easily maintained, and healing occupies less time. The perineal operation affords ready access and sufficient opportunity in the following classes of cases: (1) Foreign bodies in the fairly normal bladder; (2) In at least one-third of the instances of enlarged prostate when it is desired to slit the prostate; (3) Single polyps, suitably located; (4) For simple exploratory incision; (5) For prolonged drainage; (6) Large growths of the prostate or bladder, in conjunction with the suprapubic incision. The suprapubic operation is demanded or justified in the following conditions: (1) For the removal of calculi or other foreign bodies of such shape or size as to prevent removal through the perineal wound; (2) Removal of calculi or growths inaccessible through the perineum by reason of their situation; (3) In the few cases in which it is necessary to gain more information by sight or touch than can be gained through the perineum; (4) Sometimes to secure proper operative manipulation; (5) For drainage in a small proportion of cases of enlarged prostate. The suprapubic operation is not often required as a primary surgical procedure, but its greatest usefulness is found when it is resorted to either as a secondary measure or in conjunction with the perineal operation.

Dr. WILLIAM C. MITCHELL read a paper on **The Gonococcus**. Bumm first succeeded in obtaining pure cultures of the gonococcus in 1885, by inoculating gonorrheal pus on solidified human blood-serum obtained from the placenta. The method was imperfect because the medium was solid, other microorganisms frequently growing so rapidly as to prevent the development of the gonococcus. Wertheim developed pure cultures by inoculating sterile liquid human blood-serum with gonorrheal pus, adding the same amount of agar to each tube, carefully mixing and plating the contents. Bockhard substituted pericarditic exudate, and various other pathologic sera have been successfully used. Wassermann introduced the use of hog-serum, his method being to place in Erlenmeyer flasks 15 cu. cm. of hog-serum diluted with from 30 to 35 cu. cm. of water; then adding 2 or 3 cu. cm. of glycerin and 0.8 gm. of a 2% solution of nutrose to prevent the solidification of the serum when cooked over the flame. The mixture is heated over a flame for from 20 to 30 minutes. It is then mixed with equal parts of ordinary 2% agar at between 50° and 60° C. Dr. Mitchell succeeded in obtaining pure cultures of the gonococcus by the Wassermann method, which he exhibited. He also found that the addition of nutrose is unnecessary to prevent solidification. The microscopic examination of gonorrheal pus may be relied upon by the practising physician, and if proper staining-methods be followed it is absolutely reliable. The Gram method is the one upon which reliance should be placed. If, after proper staining, the following are found, the gonococcus is unquestionably present: (1) Diplococci about one micromillimeter in size, of a coffee-bean shape, and in char-

acteristic grouping; (2) within the cells; (3) complete decolorization by the Gram method.

**Health Reports.**—The following statistics concerning smallpox, yellow fever, cholera, and plague have been received in the office of the Supervising Surgeon-General of the Marine-Hospital Service during the week ending October 15, 1898.

## YELLOW FEVER—UNITED STATES.

		CASES.	DEATHS.
LOUISIANA:			
Alexandria	Oct. 6, reported		
Amite City	Oct. 13, reported		
Baton Rouge	To Oct. 6	22	
Bowie	Oct. 6	1	
Delogny	Oct. 1	1	
Franklin	Oct. 6	14	
	To Oct. 6	375	1
	Oct. 7	34	
	Oct. 8	19	1
	Oct. 9	20	
	Oct. 10	28	
	Oct. 11	20	
	Oct. 12	19	
	Oct. 13	26	
Harvey's Canal	To Oct. 6	14	1
Houma	To Oct. 8	8	
Jefferson Parish	To Sept. 20	5	
Lake Charles	Oct. 10, reported.		
Lebdell	Oct. 12, reported.		
New Orleans	To Oct. 1	33	
	To Oct. 8	62	
Plaquemine	Oct. 1	1	1
	To Oct. 8	3	
St. James' Parish	Oct. 2	1	
Wilson	To Oct. 1	50	1
	To Oct. 8	247	1

## MISSISSIPPI:

Bay St. Louis	Oct. 11	9	
Canton	Oct. 10	4	
Clinton	To Oct. 8	2	
Crystal Springs	Oct. 11	5	
Edwards (vicinity)	To Oct. 6	6	
	Oct. 7	1	
Fayette	Oct. 6	1	
	Oct. 7	2	
	Oct. 9	2	
Harriston	Oct. 6	4	
	Oct. 6	42	1
	Oct. 7	2	
	Oct. 8	1	
	Oct. 9	9	
	Oct. 10	14	
	Oct. 11	13	2
	Oct. 12	11	
	Oct. 13	16	
Hattiesburg	Oct. 6	2	1
	Oct. 9	10	
	Oct. 10-13	6	
Hermanville	To Oct. 6	2	
	Oct. 11	1	
Jackson	Oct. 6	6	
	To Oct. 6	41	1
	Oct. 7	6	
	Oct. 8	10	
	Oct. 9	6	
	Oct. 10	3	
	Oct. 11	11	
	Oct. 12	11	
	Oct. 13	14	1
Natchez	Oct. 7	2	
	Oct. 13	6	
Orwood	To Oct. 6	79	1
	Oct. 10	6	1
Oxford	To Oct. 6	52	6
	Oct. 7	1	1
	Oct. 8	2	1
	Oct. 9	1	1
	Oct. 10	1	
	To Oct. 8	470	5
	Oct. 11	10	
	Oct. 12	3	1
	Oct. 13		1
Poplarville	Oct. 9	2	
	Oct. 11	7	
Port Gibson	Oct. 6	1	1
Ridgeland	Oct. 8	3	
	Oct. 10	1	
	Oct. 11	1	
Starkville	Oct. 6	3	
	Oct. 7	1	
	Oct. 8	1	
	Oct. 13	1	

Taylors	Oct. 6	4	
	To Oct. 6	100	11
	Oct. 7	3	1
	Oct. 8	1	
	Oct. 12	0	1
Waterford	To Oct. 6	2	
Water Valley	To Oct. 6	10	
Waveland	Oct. 10	6	
	Oct. 11	9	
	Oct. 12	2	
	Oct. 13	2	
Woodville	To Oct. 6	1	

## YELLOW FEVER—FOREIGN.

CUBA:			
Cibara	Sept. 1-15	4	
MEXICO:			
Tampico	Sept. 24-Oct. 2		11
Vera Cruz	Sept. 22-29		10

## SMALLPOX—UNITED STATES.

OHIO:			
Cincinnati	Oct. 8	3	
Dayton	Oct. 8	1	
Sandusky	Oct. 8	1	
St. Mary's	Oct. 8	2	
Unionopolis	Oct. 8	1	
New Paris	Oct. 8	1	
Oberlin	Oct. 8	1	
Wapakoneta	Oct. 8	20	

## PENNSYLVANIA:

Chester Co. near Spring City	Oct. 7	7	
Sayre, Bradford Co.	Oct. 7	1	

## SMALLPOX—FOREIGN.

BRAZIL:			
Bahia	Aug. 27-Sept. 3	23	3
	Sept. 3-Sept. 10	28	4
	Sept. 10-17	29	5
ENGLAND:			
London	Sept. 10-17	2	
SPAIN:			
Gibraltar	Sept. 10-18	1	
RUSSIA:			
Odessa	Sept. 17-24	2	1
Warsaw	Sept. 10-17	0	7

**Tri-State Medical Society of Alabama, Georgia, and Tennessee.**—The tenth annual meeting will be held in Birmingham, October 25th, 26th, and 27th. The following is the scientific program: President's Address, by J. A. Goggans, Alexander City, Ala.; Modern Treatment of Corneal Opacities, with Report of Cases, by M. L. Heffelfinger, Huntsville, Ala.; Keratitis, by A. A. Greene, Anniston, Ala.; The Surgical Treatment of Trachoma, by S. Kirkpatrick, Selma, Ala.; Purulent Ophthalmia; A New Method of Treatment, by Frank Trester Smith, Chattanooga, Tenn.; Color-Blindness, by H. S. Persons, Montgomery, Ala.; Eye-Affections in General Diseases, by J. L. Minor, Memphis, Tenn.; Treatment of Affections of the Singing Voice, by Richmond McKinney, Memphis, Tenn.; Syphilis of the Nose, by S. L. Ledbetter, Birmingham, Ala.; Diphtheria, by H. L. Appleton, Cedar Bluff, Ala.; Diphtheria, by W. D. Travis, Covington, Ga.; A Case of Addison's Disease Treated with Adrenal Extract, by H. A. Moody, Baily Springs, Ala.; Suggestion in the Healing Art, by E. T. Camp, Gadsden, Ala.; Chorea, by S. W. Fain, Chattanooga, Tenn.; Neurasthenia and its Treatment, by Charles E. J. Smith, Atlanta, Ga.; Recent Advances in the Treatment of Gonorrhea, by F. Goodwin Dubose, Florence, Ala.; The Treatment of Intestinal Obstruction and Constipation by Electric Injections, by R. P. Johnson, Oak Park, Ill.; Perfection of the Aseptic Technic, by W. F. Westmoreland, Atlanta; Curettage of the Uterus, by John G. Clay, Thompson's Station, Tenn.; Extirpation of the Pancreas, by H. Berlin, Chattanooga, Tenn.; A Few Remarks on Bone Surgery, by M. Goltman, Memphis, Tenn.; A Simple Operation for Hemorrhoids, without Injections, Ligature, Clamp, Cautery or Crushing, by R. R. Kime, Atlanta, Ga.; Peritonitis; Report of a Case, by D. S. Middleton, Rising Fawn, Ga.; Urinary Calculus—Suprapubic Cystotomy: Report of a Case, by James S. White, Franklin, Tenn.; Supra-



vaginal *vs.* Vaginal Hysterectomy, by Clement Ritter, Selma, Ala.; Extra-Peritoneal Shortening of the Round Ligaments in the Correction of Retrodisplacements of the Uterus, by M. C. McGannon, Nashville, Tenn.; Acute Anterior Poliomyelitis, by E. D. Bondurant, Mobile, Ala.; Early Diagnosis of Cancer of the Uterus, by Thomas S. Cullen, Johns Hopkins Hospital, Baltimore; Surgery of Typhoid, Harvey W. Cushing, Johns Hopkins Hospital; Membranous Colitis, by Louis Wm. Johnson, Tuskegee, Ala.; Organic Disease of Mitral Valve, by J. T. Seay, Fern Bank, Ala.; Lobar Pneumonia, with Treatment, by J. U. Ray, Jr., Blocton, Ala.; Fevers of Alabama, by Chas. McAlpine Watson, Florence, Ala.; Some Fevers of St. Clair Co., Ala., by Eugene P. Cason, Ragland, Ala.; A Fever Indigenous to the Cumberland Plateau, by N. H. French, Wartburg, Tenn.; Continued Malarial Fever of Southeast Alabama, by William R. Belcher, Daleville, Ala.; Malaria, by W. H. Bell, Oxford, Ala.; Some Malarial Manifestations, by J. N. Pearson, Florence, Ala.; Typhoid Fever, by E. A. Mathews, Clanton, Ala.; Typhoid Fever, by E. Eugene Mitchell, Oneonta, Ala.; Typhoid Fever, by S. W. Welch, Alpine, Ala.; Typhoid Fever—Report of Cases, by C. L. Guice, Harris, Ala.; The Treatment of Typhoid Fever, by Julius Jones, Rockford, Ala.; A Rational Treatment for Typhoid Fever, by Gaius R. Johnson, Marion, Ala.; Typhoid Fever, by G. Manning Ellis, Chattanooga; Typhoid Fever, by W. H. Moon, Goodwater Ala.; Some Interesting Cases of Laparotomy, by C. Hamilton, Rome, Ga.; Laparotomy for Gunshot-Wound of Abdomen; Report of Case with Unique Features, by R. E. Fort, Nashville, Tenn.; Puerperal Eclampsia, by Thos. F. Moore, Linwood, Ala.; Some of the Emergencies of the Lying-in-State, by David A. Morton, Boaz, Ala.; Puerperal Septicemia, by Robert B. Stapleton, Dotham, Ala.; A Few Remarks on the Treatment of Puerperal Fever, with Illustrative Cases, by J. C. Johnson, Glen Allen, Ala.; Hypodermic Medication, by E. P. Nicholson, Valley Head, Ala.; Communal Hygiene, by Ernest B. Sangree, Nashville, Tenn.; Two Cases of Surgery, by S. W. Purifoy, Lowesboro, Ala.; Functional Impotence, by W. H. Mangum, Georgiana, Ala.; Syphilis of the Nervous System with Report of Cases, by W. J. Love, LaFayette, Ala.; Disobedience to the Mandates of Nature is Treachery of a Suicidal Tendency, by P. G. Trent, Sr., Roanoke, Ala.; Animal Heat, by W. S. Edwards, Gadsden, Ala.; Two Interesting Cases of Sunstroke, by J. W. Ash, Springville, Ala.; A Case of Complete Obstruction of the Common Bile-duct by a Floating Gall-Stone. Operation; Immediate Recovery; and Restoration to Perfect Health. A Short Study of Gall-Stones in the Common Duct, by W. H. Hudson, LaFayette, Ala.; Scarlet Fever and its Sequelæ, by John Thomas Chapman, Selma, Ala.; Smallpox, by Frank Prince, Bessemer, Ala.; Smallpox in Alabama, by G. B. Wimberly, Reform, Ala.; The Treatment of Burns on Modern Surgical Principles, by C. B. Jackson, Horse Creek, Ala.; The Treatment of Fractures by Plaster-of-Paris Bandages, by M. B. Cameron, Sumpterville, Ala.; Some Suggestions in the Treatment of Typhoid Fever, by J. C. Le Grand, Birmingham, Ala.; Typhoid Fever, by J. D. Gibson, Birmingham, Ala.; Ectopic Gestation, by W. E. B. Davis, Birmingham, Ala.; The Management of the Puerperal State, by C. C. Jones, East Lake, Ala.; Fracture of the Spine; Presentation of Two Cases, by B. G. Copeland, Birmingham, Ala.; Abortion, by Emmett K. Moon, Bridgeport, Ala.; Abnormal Cardiac Phenomena: Their Differentiation and Significance, R. M. Cunningham, Pratt City, Ala.; Conservative Gynecology per Rational Medication, by R. H. Hayes, Union Springs, Ala.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon EDWARD C. WELCH will proceed to Angel Island for duty.

Acting Asst. Surgeon F. M. C. USHER will report to the commanding officer, K. 8th Cav., for duty to accompany that troop to Huntsville, Ala.

Leave for 15 days is granted Acting Asst. Surgeon JESSE RAMSEY, II, Oct. 5.

Acting Asst. Surgeon W. B. WINN will proceed from Fort Niagara to Huntsville, Ala., for assignment to duty with the 8th Cav.

Major THOMAS O. SUMMERS, surgeon, will proceed to Memphis.

Leave for one month on account of sickness, with permission to return to the United States, is granted the following-named officers: Acting Asst. Surgeons J. R. TACKETT, C. VAN HOOD, Sept. 27.

Acting Asst. Surgeon MANUEL MARTINEZ OSUNA is assigned to duty in the city of Santiago.

Major JOHN J. ARCHINARD, brigade-surgeon is assigned to the 9th U. S. Inf., as surgeon and major.

Acting Asst. Surgeon T. C. AVERY is relieved from duty with the 5th U. S. Inf., and will proceed to the United States.

Acting Asst. Surgeon FRED. J. COMBE is relieved from duty at the Detention Hospital and assigned to the chief surgeon's office.

Acting Asst. Surgeon A. M. F. DE YBARRA is relieved from duty at the reserve divisional hospital and assigned to the military hospital.

Leave for one month is granted Major WILLIAM B. BANISTER, brigade surgeon, Oct. 7.

Major LOUIS W. CRAMPTON, surgeon, will report for duty pertaining to the muster out of the 5th Maryland Volunteer Infantry.

Major GEORGE R. FOWLER, chief surgeon, will proceed to Washington, D. C., on business pertaining to the Medical Department, and report in person to the Surgeon-General of the Army.

Major JAMES H. HYSSELL, chief surgeon, will proceed from Knoxville, Tenn., to Washington, D. C., on business pertaining to the Medical Department.

Major AUGUSTUS A. DE LOFFRE, surgeon, will report by telegraph to Col. Luther R. Hare, chief mustering officer at Austin, Tex., for duty in connection with the supervision of physical examination of the volunteer regiments to be mustered out in Texas.

First Lieut. WESTON P. CHAMBERLAIN, on duty at the U. S. General-Hospital, Fort Monroe, will proceed to Richmond, Va., for duty pertaining to the muster out of the 3d Virginia Volunteers.

Acting Asst. Surgeon JAMES B. HALLWOOD will proceed to Knoxville, Tenn., for duty.

Acting Asst. Surgeon THOMAS R. MARSHALL will proceed from Camp Wikoff to Jacksonville, Fla., for duty.

Leave for 10 days is granted Major WILLIAM R. HALL, surgeon, Oct. 8.

Major CHARLES L. HEIZMANN, surgeon, will turn over the medical and hospital property in his possession at Camp Wikoff to Major IRA C. BROWN, brigade-surgeon, to be stored and cared for by him at that place until further orders, and Major HEIZMANN will return to his proper station, Fort Adams.

Major EUGENE L. SWIFT, brigade-surgeon, is relieved from further duty at Camp Wikoff and will proceed to Concord, N. H., for duty pertaining to the muster out of the New Hampshire Volunteer troops.

Acting Asst. Surgeon RUFUS D. BOSS will proceed to Anniston, Ala., for duty.

Acting Asst. Surgeon ANITA N. MCGEE will proceed to Fort Monroe on business pertaining to the Medical Department of the Army.

So much of S. O. 227, Sept. 26, this office, as directs Acting Asst. Surgeon M. F. McMASTERS, to proceed to Cuba, is revoked, and he will report for duty pertaining to the muster out of Pennsylvania volunteer troops.

Leave for 8 days is granted Acting Asst. Surgeon HENRY BAK, Oct. 8.

Acting Asst. Surgeon A. DOUGLAS BRYDEN, now at Fort Hamilton, will report at Bedloe's Island, N. Y., for duty.

Major ALFRED E. BRADLEY, brigade-surgeon, in command of the U. S. Hospital Ship "Relief," now at Fort Monroe, will proceed to this city on business pertaining to the Medical Department, and on completion of that duty will rejoin the U. S. Hospital-Ship "Relief," at New York City.

Major RUDOLPH G. EBERT, surgeon, will proceed to Vancouver Barracks for duty.

Major JOHN D. HALL, surgeon, will proceed to Benicia Barracks, Cal., for duty.

Major WALTER D. McCaw, brigade-surgeon, is relieved from further duty at Fort Thomas and will proceed to Fort Porter for duty.

Major WILLIAM F. DE NIEDEMAN, brigade-surgeon, now at Camp Meade, Pa., will proceed to Jefferson Barracks, for duty pertaining to the muster out of 1st Missouri Vols.

Major MARSHALL W. WOOD, surgeon, is relieved from further duty with troops in the field, and at Camp Wikoff, and will proceed to Boise Barracks and turn over the medical property for which he is responsible at that post: upon conclusion of which he will proceed to Fort Douglas.

The following changes in duties and stations of officers are made: Major TIMOTHY E. WILCOX, surgeon, now at Fort Schuyler, will proceed to New York City for temporary duty pertaining to the muster out of the New York Vols., to relieve Major WILLIAM C.

Borden, brigade surgeon, and on completion of that duty will return to his proper station. Major Borden is relieved from further duty at Fort Snelling and will proceed to Washington Barracks for duty to relieve Major George W. ADAIR, surgeon. Major ADAIR will proceed to Fort Sheridan for duty.

Captain CHARLES LYNCH, A. S., now on temporary duty at Camp Frank Ardmore, I. T., will proceed to Little Rock, Ark., for duty pertaining to the examination of the 1st Arkansas Vols., to be mustered out.

Captain HENRY R. STILES, A. S., will rejoin his proper station, Fort Preble.

Captain CHARLES WILCOX, A. S., will proceed to Columbia, S. C., for duty pertaining to the muster out of the 1st South Carolina Vol. Inf.

First Lieut. GUY C. M. GOLDFREY, A. S., will proceed to Huntsville, Ala., and report for duty with the 10th U. S. Cav.

First Lieut. JAMES M. KENNEDY, will proceed to Huntsville, Ala., and report to Brigade General Louis H. Carpenter, for assignment to duty.

First Lieut. WILLIAM E. RICHARDS, is detailed as a member of the examining board appointed to meet at Huntsville, Ala., vice Captain CHARLES WILCOX, asst. surgeon, relieved.

Acting Asst. Surgeon THOMAS Y. ABY, will proceed to Jacksonville, Fla., for assignment to duty in the 7th Army Corps.

Leave on surgeon's certificate of disability granted Acting Asst. Surgeon JAMES S. KENNEDY, is extended one month on account of sickness.

Acting Asst. Surgeon WILLIAM E. DE SALAZAR, will proceed to Jacksonville, Fla., for assignment to duty in the 7th Army Corps. Oct. 10.

Acting Asst. Surgeon JOHN W. WRIGHT, having arrived at Fort Monroe from Ponce, Porto Rico, will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon J. G. MACNAMARA will proceed to Fort Snelling for duty.

Acting Asst. Surgeon IRA L. SANDERSON will proceed to Fort Meade for duty.

Lieut. Colonel ALBERT HARTSUFF, chief surgeon of the department, will proceed to Columbus Barracks and Fort Thomas to inspect the affairs of the medical department at those posts.

Acting Asst. Surgeon JOHN B. ALCORN will proceed to Knoxville, Tenn., for duty.

Acting Asst. Surgeon JOAQUIN L. DUENAS will proceed to Havana, Cuba, and will report to Col. JAMES G. C. DEE, A.Q.M.G., president of the board to locate camp-sites, for assignment to duty with the board.

Acting Asst. Surgeon W. P. LAWRENCE will proceed to Knoxville, Tenn., for duty.

Leave heretofore granted Acting Asst. Surgeon WM. E. STEMEN is extended one month on account of sickness. Oct. 11.

Leave heretofore granted Acting Asst. Surgeon WM. E. WEST is extended one month on account of sickness.

Major WM. B. DAVIS, surgeon, commanding U. S. general hospital, Fort Myer, is relieved from all duty at Fort Myer, other than in command of the U. S. general hospital.

Major CHARLES K. WINNE, surgeon, now at Fort Crook, will proceed to Omaha, Neb., for duty pertaining to the muster out of Nebraska Volunteers.

Major EZRA WOODRUFF, surgeon, now at Fort Trumbull, will proceed to Fort Adams, for duty pertaining to the muster out of Rhode Island Volunteers.

First Lieut. JOHN H. STONE, Asst. Surgeon, is detailed as a member of the examining board appointed to meet at Huntsville, Ala., vice First Lieut. WM. E. RICHARDS, Asst. Surgeon, relieved.

Leave granted Acting Asst. Surgeon HUMPHREY BATE, JR., is extended one month on account of sickness. Oct. 12.

Acting Asst. Surgeon JOSEPH M. HELLER, is relieved from further duty at the U. S. General Hospital, Montauk Point, and will proceed to Fort Ethan Allan for duty.

Acting Asst. Surgeon GEORGE W. PATTERSON, in addition to his duties at the U. S. General Hospital, Fort Myer, will furnish such medical attendance as may be required by officers, enlisted men, and their families at that post.

Acting Asst. Surgeon O. S. WOOD will proceed to Knoxville, Tenn., for duty.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon F. ROGERS, detached from the "Monterey" and ordered home to await orders.

Passed Asst. Surgeon I. W. KITE, ordered to the "Buffalo" for passage to the Asiatic station for duty on the "Monterey."

Asst. Surgeon F. E. WAGNER, detached from the "New Hampshire" and ordered home.

Surgeon A. G. CABELL, retired, Oct. 8th; section 1453.

Asst. Surgeon J. J. SNYDER, detached from the "Niagara" and ordered to the "Vermont" temporarily.

Asst. Surgeon W. M. GARTON, detached from the Naval Hospital, New York City, and ordered to resume duties on the "Vermont."

Asst. Surgeon T. G. ODELL, detached from the "Chelsea" and ordered home.

Asst. Surgeon J. J. SNYDER, detached from the "Vermont" and ordered to the "Caesar."

## Foreign News and Notes.

**Dr. Charles Muir**, senior pathologist to the Royal Infirmary of Edinburgh, has been appointed professor of pathology at the University of St. Andrews.

**Dr. Anton Mars**, professor of obstetrics and gynecology in the University of Cracow, has been called to a similar position in the University of Lemberg.

**London Hospital.**—Mr. F. S. Eve has been appointed surgeon to the London Hospital in place of Mr. Jeremiah McCarthy, who has resigned on account of ill-health.

The new Commissioner of Prisons for England and Wales, in the place of Captain Stopford, C.B., retired, is **Dr. H. Bryan Donkin**, Physician to the Westminster Hospital.

**University of Lausanne.**—Professor de Corenville has resigned as director of the medical clinic and Dr. A. Combe has been appointed extraordinary professor of medicine.

**Theses Presented to the Faculty of Medicine of Paris.**—During the past academic year 661 theses for the degree of doctor of medicine were presented to the Paris faculty.

**The Grieg Smith Memorial**, the new operating theater at the Bristol (England) Royal Infirmary, was formally opened September 30th, by Sir William MacCormac, president of the Royal College of Surgeons.

**Medical Degrees in Austria and Hungary.**—In the future, medical degrees from an Austrian University will permit the holder to practise in Austria only, the intention being that Hungary shall enjoy "home-rule" in the matter of medical qualifications.

**Plague-Laboratory in Bombay.**—It is announced that the authorities of Bombay have provided the necessary means for the foundation of a laboratory in that city for the preparation of Professor Lustig's curative serum for plague. The director of the laboratory will be Dr. Galeotti, professor of pathology, in Florence.

**Fleischl Monument.**—A monument to the memory of the late Dr. Ernst von Fleischl-Marxow, professor of physiology in the Vienna University, will shortly be dedicated with appropriate exercises in the Vienna University. The monument is a bust in profile executed by Emil Fuchs, a Viennese by birth, but at present a resident of Rome.

**Successor to Professor Stricker.**—The faculty of the University of Vienna has nominated the following, in the order named, one of whom shall succeed the late Professor Stricker, professor of experimental pathology: Professor von Mering, of Halle; Professor Knoll, of Prague; Professor Klemensiewicz, of Gratz; Professor Lowit, of Innsbruck.

**The Spanish Sick and Wounded** in the late war seem by all accounts to be in a terrible condition of poverty. An English committee of ladies headed by the Countess de Casa Valencia, wife of the ex-ambassador to the Court of St. James, are receiving subscriptions in London in behalf of the unfortunate men and transmitting the money, as well as lint, bandage and other surgical appliances, to Spain. The committee has recently received a letter from the Duke of Sotomayor, majordomo to the Queen Regent, expressing her thanks to the committee for their efforts and her intention to personally distribute the fund among the sick and wounded.



**An epidemic of trichinosis** recently broke out in Sonderleben, Germany—about 150 people in all being affected. According to the *Klinisch-therapeutische Wochenschrift*, the official investigators have announced that the meat that gave rise to the disease did not come from an American source. This is truly a remarkable admission from German officialdom.

**"Our Friends, the Enemy."**—According to the *Lancet*, during the course of the complimentary dinner that the medical profession of Great Britain and Ireland tendered Professor Virchow on the occasion of his recent visit to England, an anonymous telegram was handed to the illustrious guest, containing the following words: "Get thee hence, vile vivisector! England spurns thee!"

**The Medical Society of London.**—The lecture delivered annually before the Medical Society of London in honor of Dr. Lettson, one of the founders of the society, who flourished about a century ago, will be given this session by Dr. Samuel West, one of the assistant physicians to St. Bartholomew's Hospital, who has chosen as his subject the Clinical Aspect of Granular Kidney. The dates fixed for the delivery of the lectures are February 6th, February 20th, and March 6, 1899.

**Doctor of Pharmacy.**—At a meeting of the Medical Association of the Loire and the Haute-Loire, held recently at Roanne, a proposition was adopted requesting the University of Lyons to revoke the decision to confer the title of doctor on pharmaceutical chemists. The medical profession is opposed to the proposition on the ground, among others, that physicians are at present not sufficiently protected, and that the creation of the proposed degree would militate still more to their detriment.

**The ancient University of Bologna**, which has fallen so much from its ancient splendor and renown, that it is now one of the most backward universities in Italy, chiefly owing to want of funds, will, in all probability, soon be in a position to recover at least some of its former glory. Professor Bacelli, the Minister of Public Instruction, has promised that, during the coming session of the Italian Parliament, he will introduce a bill to provide the necessary means for its rejuvenescence.

**Quackery Among the Ancients.**—The *Medical Press and Circular* contains the following: Of a truth, quackery seems to have been coeval with civilization. Recent researches in Mesopotamia have unearthed an enormous number of cuneiform tablets dealing with Babylonian history between the years B.C. 2800 and 2100. These documents are in two languages, and reveal organized commercial and social codes of an advanced character. The marriage-laws were specially drastic, and women were allowed equality with men in the right to trade, to hold property, and to become parties to legal proceedings. This most interesting historical investigation is yet young, but it has already disclosed, in addition to the above-noted subjects, fragments of hymns, prayers, magical texts, and literary works. Last, but not least, from its revelation of the constancy of human nature, is the presence of a "pseudo-medical treatise," otherwise a quack pamphlet. That the calling must have been lucrative even in those early days may be inferred from the fact that so costly a form of printed record as an engraved tablet was adopted. It may well be asked how many centuries will elapse before man will put a stop to these harpies who batten on his ignorance.

**Bacteriology of Noma.**—At a recent meeting of German Naturalists and Physicians held at Düsseldorf, Petruschky reported a case of noma that he had studied bacteriologically. In addition to staphylococci and a number of bacteria that had gained entrance into the mouth, he found typical Klebs-Löffler bacilli. In consequence of this the case was treated with repeated injections of antitoxic serum and the patient recovered. This was the second case of noma reported by Petruschky in which Klebs-Löffler bacilli were found.

**Comparative Longevity in the Countries of Europe.**—According to the *Bulletin Général de Thérapeutique* the average duration of life amongst the chief nations of Europe is as follows, the figures being based upon the bills of mortality for the decade 1881-90: Sweden and Norway, 50 years; England, 45 years and 3 months; Belgium, 44 years and 11 months; Switzerland, 44 years and 4 months; France, 43 years and 6 months; Austria, 39 years and 8 months; Prussia and Italy, 39 years; Bavaria, 36 years; and Spain, 32 years and 4 months.

**Professor N. A. Trzaska-Chrzonczewsky**, of Kieff, contributes a valuable article on a special method of physiologic injection of the bloodvessels and lymphatic vessels to the July number of *Virchow's Archiv für Pathologie und pathologische Anatomie*. The elder members of the profession will remember the distinguished professor as the author of many valuable papers on physiologic subjects as long ago as 1866, and will be pleased to know that he still lives, in the full enjoyment of his faculties, to inspire awe by his name and respect and admiration by his scientific attainments.

**A monument to the memory of Sigismondo Boldoni**, physician, poet, and philosopher, was recently erected at Milan, Italy. Born in Milan in 1597, Boldoni graduated in literature and medicine at Padua, lived for some time in Urbino and Rome, returned in 1623 to his native city, where he received an appointment in the Collegio dei Medici, and shortly thereafter was called to the University of Pavia to fill the chair of philosophy. He died at his post in 1630, the victim of epidemic disease that he had striven heroically to circumscribe. Young as he was he had made himself famous far beyond the scene of his activity. He was a brilliant lecturer and his "Orationes Academicæ" found readers throughout contemporary Europe. In poetry his chief work is his "Caduta dei Longobardi" (Fall of the Lombards), still admired and commented on.—[*Lancet*.]

**International Quarantine Service in Egypt.**—This service, established by the International Health-Convention at Venice in 1892, now comprises an inspector-general with a salary of from \$3,000 to \$3,600; seven superintendents of the sanitary stations: Alexandria, Port Said, Suez, Tor, Damietta, Souakim and Kosseir. The salary of the first four is \$2,400 to \$3,000; of the rest \$1,200 to \$1,500. The Tor station is not occupied except during an epidemic, the incumbent residing at Alexandria. Besides these there are six quarantine-officers with salaries of from \$1,600 to \$2,400, with an indemnity when they are sent to Tor. A laboratory for bacteriologic research has been established at Suez, and all the members of the service must be thoroughly trained and experienced in medicine and practical bacteriology, with a knowledge of French, German, and English at least. The various nations interested are all represented, France with four, which includes the inspector-general.—[*Presse Méd.; Jour. Am. Méd. Assoc.*]

**Obituary.**—DR. DAVID TOSCANI, professor of legal medicine in the University of Rome, Italy.—DR. SIMON FUBINI, professor of pharmacology in the University of Pisa, Italy.—DR. SLAWIANSKY, professor of gynecology in the University of St. Petersburg, Russia.—JAMES EDWARD TIERNEY AITCHISON, M.D., C.I.E., F.R.S., well known as a surgeon and author, and as naturalist to the Afghan Delimitation Commission, September 30th, aged 63 years.—MAURICE DAVIS, M.D., J.P., London, September 29th, aged 77 years.—HENRY LEWIS, M.D.Brux., M.R.C.S., at one time president of the British Balneological and Climatological Society, Folkstone, Eng., September 5th, aged 62 years.—DR. CARL METTENHEIMER, of Schwerin, Germany, an active promotor of sanitariums for children on the German coast, aged 74 years.

**The Royal College of Physicians of London.**—The President, Sir Samuel Wilks, has appointed Sir Dyce Duckworth, Treasurer of the College and Physician to St. Bartholomew's Hospital, Harveian orator for the year. It is the duty of the Harveian orator to deliver an address in honor of the discoverer of the circulation of the blood, and as many orations have now been delivered on this interesting but somewhat limited theme, the post has its drawbacks for a speaker who desires to say anything fresh. Dr. W. Miller Ord is the Bradshaw lecturer for the year and has chosen as his subject Myxedema and allied conditions. Dr. Ord, who is physician to St. Thomas' Hospital, was one of the earliest, perhaps the actual earliest, observer to recognize that the curious association of symptoms presented by the myxedematous subject were all parts of one condition.

**Medical Aid in the Paris Theaters.**—Heretofore the managers of all the Parisian theaters, with the exception of the four national theaters subsidized by the Government, have selected medical men whose duty it was to be present in turn at the various theatrical performances in order to render immediate medical aid when required. It has been found that many of the managers selected their friends, over whom they exercised no control, and that on several occasions no medical man was present when his services were urgently desired. The prefect of police has, therefore, issued an edict that in future all nominations for these positions must be submitted for his approval—an edict that has aroused considerable opposition on the part of the medical men. It is, however, thought that the prefect merely desires an opportunity of revoking the appointments of those who neglect their duties.

**The International Congress of Hypnotism.**—The following are the subjects proposed for general discussion at the second congress to be held in Paris during August, 1900, immediately after the close of the International Medical Congress: (1) The formation of a vocabulary of hypnotism; (2) Hypnotism in relation to the law regulating medical practice, and the interference of the public authorities in the regulation of hypnotism; (3) The relations of hypnotism to hysteria; (4) The application of hypnotism to general therapeutics; (5) The indications for hypnotism in the treatment of mental disorders and alcoholism; (6) The applications of hypnotism to general pedagogy and mental orthopedics; (7) The value of hypnotism as a means of psychologic investigation; (8) The special responsibilities arising from the practice of experimental and therapeutic hypnotism. Communications are also invited upon subjects pertaining to the clinical, therapeutic, medico-legal, psycho-physiologic, pedagogic, and sociologic applications of hypnotism and suggestion.

**Sanitary Improvements and a Metropolitan Railway in Paris.**—According to the *British Medical Journal*, the medical press of France accords its approval to the scheme of a Paris Metropolitan Railway. This scheme is now on the way to be realized. One result will be that the traffic of Paris will be lessened, and consequently fewer people will be run over. In one year 240 persons were run over at the cross-roads of the rue Drouot, the Faubourg Montmartre, and the rue Lafayette. The easy access to country-places afforded by the Metropolitan Railway is favorably regarded by sanitarians, if only as a means of occasionally breathing pure air, but this is not all, as it is firmly believed that the overcrowded Paris flats will be deserted for the more healthy dwellings in the suburbs. A sanguine prophet predicts that the real improvement in the drinking-water supply now about to be accomplished will be followed by the purification of the Paris atmosphere.

**Honors to the Medical Attendants of the Prince of Wales.**—Whatever Dr. Lucas-Champonnière may think, the Queen of England seems to think that the medical attendants of the Prince of Wales have discharged their responsible duties well. Sir William MacCormac and Sir Francis Laking, who as surgeon and apothecary respectively to the Prince, have mainly dictated the lines of treatment to be adopted, have been appointed Knights-Commander of the Royal Victorian Order; and Mr. A. D. Fripp and Dr. A. G. Delmege, Fleet-surgeon in the Royal Navy, who have had charge of the patient during his extended yachting tour, have been appointed members of the same order. The Royal Victorian Order is a new order of knighthood founded by the Queen a few years ago, and appointments in it are made exclusively as rewards for personal service to the Royal Family.

**Tuberculosis before German Naturalists and Physicians,** at Düsseldorf, September 19th to 24th.—The *British Medical Journal* states that a permanent committee, consisting of university professors, Government officials, and practitioners, was appointed to deal with this subject. Professor Finkler, of Bonn, spoke of the nutrition of tuberculous patients. He insisted on the importance of a highly albuminous diet. Dr. Möller, of Görbersdorf, demonstrated organisms closely allied to tubercle-bacilli (timothy-grass bacteria, that cause lesions in animals which resemble tuberculous lesions very closely. Herr Heydweiller, of Altona, discussed the question: Who is to build sanatoria for the poor?—the answer being the large institutions for the insurance of sick workmen. A model sanatorium for tuberculous workmen had been founded by a Hamburg insurance-company at Andreasberg in the Harz Mountains, and others had followed the example. Dr. Liebe, in an address on alcohol in public sanatoria, assumed an exceedingly strict temperance-standpoint. He contended that the alcohol-question is of extreme importance, and closely allied to that other great question—how successfully to check the spread of tuberculosis.

**The Fifth International Congress of Hydrology, Climatology, and Medical Geology** was held recently at Liège (Belgium), under the presidency of M. de Bruyn, Minister of Agriculture. The congress was well attended by representatives of various nationalities. Many important communications were read and discussed in the various sections, but the most interesting was a discussion before the whole congress by Walther Spring, the distinguished professor of chemistry at the University of Liège, on the **Colors of Natural Waters**, in which he showed experimentally that the true color of pure water is blue, as in the Lake of Geneva and that this color is the color proper to the water, and is not due to a mere reflection from the surface or to suspended



particles in the water; and that when pure water has a very slight cloudiness due to the presence of finely-divided nearly white or colorless particles in suspension, even if these are absolutely colorless, as in the case of very finely divided rock crystal, a yellow tint is given to the water, which, together with the natural blue proper to the water itself, produces a green color, as in the cases of the lakes of Neufchatel and of Constance. It has been noted by various observers that the waters of certain lakes ordinarily green became occasionally absolutely colorless, and this was shown to be due to the washing into the lakes of a fine mud of a reddish tint, due to iron oxid, which neutralized the green color of the water, rendering it for the time being perfectly colorless.

**Professor Virchow in England.**—Professor Virchow was in England during the first week of this month to deliver the Huxley Lecture, nominally to the students of Charing Cross Hospital, but really to all the medical men who could escape from their respective medical schools to hear him, as well as to a distinguished crowd of laymen. It was delivered slowly but wonderfully clearly, considering that the speaker was using a foreign tongue, and was listened to with wrapt attention. In the evening the medical profession of London gave a dinner in honor of the Father of Modern Pathology, which formed a brilliant sequel to the address. Lord Lister presided and most of the recognized leaders of the medical world were present. Professor Virchow's speech in reply to the toast of his health showed that the enthusiastic welcome extended to him during his English visit had impressed him very favorably with his hosts, for in his peroration he declared that "long before he had the privilege of friendly relations with many of the best sons of England he had learnt to admire the country which amidst the storms of political movement had preserved and developed the principles of civil and religious liberty." The sentiment, being nearly as good an opinion of England as even an Englishman could have, was received with unbounded enthusiasm by the company.

**Chemic Agglutinating Bodies and Soluble Ferments.**—At the meeting of German Naturalists and Physicians held at Düsseldorf from September 19th to 24th, Blachstein, of Göttingen, presented a communication relative to some chemic agglutinating bodies. He said that while there are as yet no substances to replace antitoxic serums, one bacterial serum at least could be replaced—that of cholera—by a number of chemically defined substances. Of these, chrysoidin is of practical importance. Besides agglutinating cholera-vibrios, it is a disinfectant of high order (1:10,000), without being poisonous. Experiments were further reported on so-called wheat-bacteria. It was shown that an aniline color (Victoria-blue) is an agglutin to both cholera-vibrios and wheat-bacteria. Victoria-blue was therefore a more general chrysoidin, a more special agglutin. Dr. Hahn, of Munich, spoke on the chemical and immunizing properties of plasmines. Dr. Hahn referred to the well-known experiments of Eduard and Hans Buchner, who had proved that fermentation could be produced by adding the juice pressed out of yeast-cells to sugar-solution. This juice was freed from particles and smallest fragments of the living cells by filtration through porcelain filters. Beside the enzyme, which causes sugar to ferment, the liquid contained a proteolytic ferment. He had prepared cholera and typhoid plasmines analogous to this yeast-plasmin. They were said to cause immunity against intraperitoneal infection of cholera and typhoid bacilli in laboratory experiments.

**A Spirit-Doctor.**—An extraordinary story of credulity was recently unfolded in the City Court of Dewsbury, near Manchester. A small shopkeeper sued an acquaintance for the sum of £67 money advanced. It transpired that the borrower had formerly been a weaver, but had deserted the loom for the more lucrative occupation of a herbalist. As a herbalist she sold bottles of medicine at half a-crown each, and also acted as a spiritualistic medium. In this latter character she approached the unfortunate plaintiff, who was a well-to-do woman in a small way and also of spiritualistic leanings, and said it was the advice of a spirit-doctor whom she had consulted, that small loans should be granted to the medium. Next the medium suggested—still acting apparently on the advice of the spirit-doctor—that her brother should marry the well-to-do woman's daughter, and the marriage took place. But this seems to have aroused the suspicions of the mother, who brought an action to recover the loans. The jury gave her a verdict for the full amount claimed. Such stories as this and one or two recent abortion cases should open the eyes of English legislators to the undoubted fact that so-called herbalists are almost invariably tricksters preying upon the ignorant public. Not one in a hundred of these persons—and there are many hundreds of them in the United Kingdom—really believe that they possess any therapeutic knowledge that could be of value to the public; their simple aim is to make money, and the falsity of the pretenses by which they make it affects them not a whit.

**The Pathology of the Colored People of the Soudan.**—The *Revue médicale* quotes the *Presse médicale* as saying that among certain people it is the fashion to credit all the diseases and vices among African peoples to European importation. For a people who have only been quite recently in any kind of communication with Christian civilization, the blacks of the Soudan would appear to be possessed of an abundant collection of pathologic conditions, if one may credit a very interesting article by Suard on the History of the French Military Post at Niore, appearing in the *Archives de médecine navale*.

Niore is situated in the northern part of the Soudan, on the confines of the Sahara desert, and has only been occupied by French troops since January, 1891, when Colonel Archinard took possession of this capital of the state of Amadou.

The inhabitants of Niore and its environs are a mixture of dissimilar races. Lustful, thievish, vain, and treacherous, they practise sodomy extensively, and have no compunction about assassination if it is lucrative and likely to go unpunished. Subjects of guinea-worm, paludism, and leprosy, they are not for all that exempt from the maladies common in the civilized world: tuberculosis, rickets, and rheumatism. Diseases of the eyes, as conjunctivitis, blepharitis, keratitis; diseases of the skin, as eczema, impetigo, tinea, itch, and phthiriasis, are the reward of their inveterate filthiness. Among them blennorrhagia and syphilis develop and are propagated with facility.

They pay no attention to sanitation. Their houses are only miserable huts in groups of two or three, surrounded by a wall, and giving shelter not only to men and beasts, but also to the dead. Slaves alone are buried in the brush; people "of quality" are interred in the soil over which eat, love, and sleep their descendants and neighbors.

Neither are they troubled with therapeutics. The Marabout sells charms, which are supposed to be both protective and curative, each one having some special property.

Wounds are dressed with sheep's dung or cow-dung diluted with urine and covered with a leaf. The woman at the beginning of her accouchement is shut up in a hut *tête-à-tête* with an old matron, who contents herself to hasten the birth with burning the rhizomes of iris or branches of resinous trees. The child either comes or not, the matron making no attempt of any kind to assist Nature.—[*New York Medical Journal*.]

**Agglutination of the Tubercle-Bacillus by Human Serum.**—At a meeting of the Académie des Sciences de Paris, on September 19th, S. Arloing and P. Courmont communicated a paper, dealing with the final stages of their researches upon the agglutinative action of human serum upon the bacillus of Koch. To obtain this reaction by means of the blood of a tuberculous subject, certain precautions have to be observed, which can be neglected when dealing with other diseases, such as typhoid fever, for instance. The serum must be used with fully-developed cultures, of which only the upper layers are taken, for the lower layers almost always contain extraneous growths. To get a marked reaction, perfectly fresh and colorless, serum must be employed. The blood, collected with aseptic precautions, is first centrifugalized so as to separate the clot. The reaction is made to take place in sterilized tubes of very small diameter, which are laid on their sides in a sloping position, so that the clusters may fall more rapidly, and at the same time cover a larger area of the tube. With every serum, three mixtures of different strengths are made—*i. e.*, 1 drop of serum to 5 drops of culture, 1 to 10, and 1 to 20. The agglutinative action produced in mixtures more concentrated than 1 to 5, or less than 1 to 20, has no diagnostic significance. The interval before reaction takes place is variable, but, as a rule, it takes longer than in typhoid fever. The tubes are examined 2 hours, 10 hours, and 24 hours after the mixture has been made. Any changes observed at a longer interval than 24 hours may be neglected. The tubes are examined both with the naked eye and under the microscope. A control-tube of culture, without any admixture of serum, should always be used, which should never show any precipitate. At the end of 24 hours, reaction is considered as certain if the tube contains well-marked clumps, and the liquid is quite clear or presents only a trace of cloudiness. Even with all these precautions, the reaction is, by no means, easy to get, and it is always as well to compare results with the agglutination obtained with the serum of a patient undoubtedly tuberculous. The results obtained by Arloing and Courmont, are remarkably interesting, but are not yet sufficiently definite to draw absolute conclusions from. They examined 26 patients suffering from advanced tuberculosis, with high temperature, and other infective signs. Of these, 92% gave the reaction, 69% with a mixture of 1 in 10, or 1 in 20, and 23% with a mixture of 1 in 5. In 2 cases of the 26, in which no reaction was obtained, the patients were in a condition of very advanced tuberculosis, a phenomenon of which the cause is at present to seek. Of 22 patients suffering from slight pulmonary or pleural diseases, 95.5% gave the reaction, 82% with mixtures of 1 in 10, or 1 in 25, and 13.5% with mixtures of 1 in 5. The only person who did not react was one with a pleuritic effusion and marked pleural thickening, in whom tubercle was very doubtful, inoculation of the pleuritic fluid into a guinea-pig having produced no effect. Of 12 patients suffering from surgical tuberculous affections, 50% reacted very strongly, and 80% feebly. Of 21 patients suffering from various disorders, 14 gave no reaction, and 7 a very feeble one; of 13 typhoid-fever patients, 6 gave a negative result;

of those that did react, 2 at least were suspected of being tuberculous; of 16 patients, aged from 18 to 30 years, and all apparently healthy, a reaction was given in 5 instances.

**Smallpox in the Soudan.**—The *British Medical Journal* quotes from Father Ohrwalder's account of *Ten Years' Captivity in the Mahdi's Camp* (by Col. F. R. Wingate, popular edition, 1898), some interesting references to smallpox which might be meditated on with profit by some people with a "conscience." In the chapter on the Mahdi's last days the following passage occurs (*op. cit.*, p. 51, *et seq.*):

"Famine and war had brought disease in their train. In addition to fever and dysentery, smallpox, which in the Soudan is endemic, increased with fearful rapidity. In Omdurman hundreds died, and the principal business of the *haut et bas* was distributing 'kafans' (shrouds). It was curious that the Soudanese, who much dread this disease, should have attributed it to the English, but that they did so is a fact, and this is how it came about. When the English retired from Gubat they left behind them a quantity of preserved stores and tinned meat. The Dervishes, in spite of the belief that they contained pork, which is an abomination to them, were so hungry that they consumed almost everything they found, and it is said that almost immediately afterwards they were attacked by smallpox, which gave rise to the idea that the English had mixed their food with the germs of the disease, and this was implicitly believed in."

This reasoning of the Soudanese is on a level with the notion prevalent among antivaccinationists and among the lower classes (and many members of the middle and upper classes, who ought to know better) that every disorder that occurs after vaccination must be due to the latter.

"Owing to the prevalence of smallpox in Omdurman many people fled to Kordofan, Darfur, and other places, and consequently caused the disease to spread over the whole country. Several false doctors, with the sole object of making money, guaranteed to check the disease by inoculation, but as the inoculated matter was frequently in itself diseased, the epidemic still further increased."

Further on Father Ohrwalder again refers to smallpox in El Obeid (*op. cit.*, p. 58). He says:

"That evening soldiers came and dragged us and our slender property to the zareba; and while waiting till huts should be made for us we were housed with slaves suffering from smallpox. This disease was then very prevalent in El Obeid, and horrible sights continually met our eyes. These unfortunate sufferers had no one to help them, and they were left to die either of the disease or of hunger; they lay about under the trees in the market-place shunned by everyone; often, when still living, they were dragged off by men, who tied ropes around their bodies, and pulled them along the ground till they were beyond the outskirts of the town, and there they were left to be devoured by the hyenas. A dreadful famine prevailed. . . . The air in the zareba was poisoned by the number of people suffering from smallpox, but, curiously enough, the disease never seemed to touch the white people."

This last statement is important, for in El Obeid the white captives, although suffering from the effects of privation, ill-treatment, dysentery, and living under the most insanitary conditions and in the closest proximity to smallpox-patients, were not attacked by the disease. Father Ohrwalder never seems to have thought of vaccination, as he merely looks upon the fact as a curious circumstance, when it was a most natural one and in agreement with what we know of the value of vaccination. It is fair to assume that Father Ohrwalder and his fellow-missionaries had been vaccinated in infancy, and probably revaccinated before leaving Europe. Such an object-lesson is surely more valuable than the absurd opinions of persons on things that they do not understand, persons who would be the first to resent being taught their own business or profession. But, *Gegen die Dummheit kämpfen die Götter selbst vergebens!*

In El Obeid, if anywhere, all the conditions relied upon by antivaccinationists were present, yet the whites did not contract smallpox. In a further passage (*op. cit.*, p. 73) the death of the great religious sheikh, Abu Gemaizeh, from smallpox, "struck down in the zenith of his success," is recorded.



Philadelphia News and Notes.

Calendar of Meetings of Philadelphia Medical Societies for the week ending October 29th.

- Monday, October 24—Neurological Society of Philadelphia.
- Wednesday, October 26—Philadelphia County Medical Society.
- Thursday, October 27—Pathological Society of Philadelphia.

**Obituary.**—DR. SAMUEL CREADICK, member of Common Council from the First Ward, died shortly after 10 o'clock on October 19th, at his home, No. 1314 South Fifth Street, where he had lived for the past ten years. Dr. Creadick had been in ill-health for a long time. He was born in Felton, Kent County, Del., in 1841, and was graduated from the Medical Department of the University of Pennsylvania in 1867. As a member of Common Council he was an advocate of sanitary and social reform.

**Philadelphia College of Pharmacy.**—The series of pharmaceutic meetings for the session 1898-99 will be inaugurated, Tuesday, October 18th, and will subsequently be held on the third Tuesday of each month. At these meetings there will be presented, as in the past, original communications, new forms of apparatus, commercial drugs, and natural specimens. In addition, subjects of general and practical interest will be discussed. Any one who can contribute to the value of these meetings by written communications, or by the exhibition of specimens or preparations, is invited to participate.

**The Philadelphia County Medical Society,** which was founded on January 16, 1849, is making preparations for its semicentennial anniversary, to be held in the middle of January, 1899. The committee having the matter in charge has decided to have a formal oration delivered by Dr. J. Chalmers DaCosta, to be followed on Sunday evening, January 15th, by a religious service, conducted by the Rev. Kerr Boyce Tupper, at which a plea will be made for the Mutual Aid Association of the Society. On Monday, January 16th, which corresponds with the date of the organization of the Society, a dinner will be given at Horticultural Hall, at which prominent speakers will be present and respond to toasts.

**Pathological Society of Philadelphia.**—At the meeting held October 13th, the president, DR. W. E. HUGHES, delivered the annual address. He spoke of the work of the society during the past year and mentioned that 100 written communications accompanying specimens had been presented. He spoke also of the desirable change that had been effected in the publication of the Society's Transactions, viz: from a volume every two years to a fasciculus monthly, distributed to the members of the society and to prominent pathologists and libraries throughout the civilized world. The following officers were elected for the ensuing year: President, Dr. W. E. Hughes; vice-presidents, Drs. John Guiteras, F. A. Packard, Alfred Stengel, and Charles W. Burr; secretary, Dr. David Riesman; treasurer, Dr. Thompson S. Westcott; recorder, Dr. A. E. Taylor.

**Maternity Hospital of Philadelphia.**—At the last meeting of the Board of Governors, Dr. J. V. Ingham reported the death of Dr. Lawrence S. Smith, who on October 14, 1896, had been unanimously elected by the Board as a member of the obstetric staff to succeed Dr. Barton C. Hirst, who had

resigned; and who had since his election served most acceptably as a member of the staff of the Hospital. On motion, the members of the Board expressed their sincere sorrow at the loss sustained, not only by the Hospital, but by the medical profession and the community in the death of Dr. Smith, a man of great ability in his profession, a patriot, whose death was directly caused by disease contracted in the service of his country, in the war with Spain. The members of the Board expressed their deep sympathy with the family of the decedent, in their great affliction, and directed the Secretary to make a minute of this action of the Board. Dr. W. R. Nicholson, Jr., was elected a member of the obstetric staff to succeed Dr. Smith.

Vital Statistics of Philadelphia for the week ending October 15, 1898 :

Total mortality .....	351	
Diseases.	Cases.	Deaths.
Pulmonary tuberculosis .....	.....	58
Diphtheria .....	119	27
Heart-disease .....	.....	24
Nephritis .....	.....	21
Marasmus.....	.....	18
Senility.....	.....	15
Pneumonia.....	.....	13
Apoplexy .....	.....	13
Inanition.....	.....	12
Typhoid fever.....	200	11
Carcinoma.....	.....	11
Gastro-enteritis.....	.....	10
Scarlet fever .....	18	1

**Must be Vaccinated.**—The Board of Health, through Chief Clerk John J. McCay, has sent a circular to the authorities of all schools and academies in the city calling their attention to section 12 of the Act of Assembly, approved June 18, 1895, forbidding the reception of pupils in the various institutions who have not been vaccinated. The section of the Act referred to is as follows: "All principles or other persons in charge of any public, private, parochial, Sunday, or other schools are hereby required to refuse admission of any child to the schools under their charge or supervision except upon a certificate signed by a physician setting forth that such child has been successfully vaccinated or that it has previously had smallpox." It is the intention of the Board of Health to enforce this law, and to institute prosecutions against all persons who are found to have violated the provisions of the Act.

**Philadelphia County Medical Society.**—At the meeting held October 12th, Dr. A. FERREE WITMER read a paper on **amyotrophic lateral sclerosis**, and presented a case with the following history: An American, 45 years old, by occupation a machinist, married ten years, childless, and of temperate habits, had worked steadily for 25 years, frequently 15 hours daily for months at a time, but was free from neurotic inheritance. He had had typhoid fever seven years previously. His present illness began in December, 1896, the first symptom being weakness of several muscles of the left hand, and a month later wasting began in the interosseous muscles of that hand. The atrophy progressed slowly until 6 months later, when the entire arm became powerless. Five months after the onset of wasting in the left hand, the right hand became similarly affected, but the wasting did not progress to the same degree. Fibrillary twitchings were noted at irregular intervals in both hands. In June, 1897, the left arm and hand became denuded of hair. This grew again in

a few months and at present is equal to that on the right hand. The bladder and rectum are under control; sexual activities are weakened. The lower limbs are normal in all respects. The special senses and general sensibility are not impaired. The eyelids have felt droopy for the past 3 months. The man is of large frame, though spare. His facial expression is marked; intelligence is vigorous; the tongue and lips are slightly tremulous. There is no other incoordinate movement of muscles. Those of the shoulder-girdle on both sides are atrophied, but not to the degree seen in the arms and hands. The muscles of the chest and back are apparently not affected. The vegetative organs are normal. Electric examination disclosed discordant activity of the overworked muscles, but no degenerative changes. Gait and stature are normal. The knee-kicks are both exaggerated. Ankle-clonus is present on both sides. Elbow-jerks, wrist-jerks, and jaw-jerks are present. The occurrence of amyotrophy in America was noticed; 11 cases in all being reported. The comparative frequency of the affection in those using the hands to excess is pointed out, *i. e.*, in 8 of the cases, including the present. Trauma and infection as possible causes were also considered. Following Mills, the affection was grouped in the class of the acquired neuronal degeneration of the motor type. The consensus of opinion regarding the morbid anatomy of this affection points to a primary lesion of the pyramidal tracts with secondary involvement of the gray matter. The sequence of the symptoms in the present case was paresis, wasting, tremor. The paresis was of the flaccid form, the wasting did not show the clawed hand, but rather the simian characteristics. Dr. Witmer was inclined to regard this condition as involuntary. The dropping of the hair in the more affected limb, also the lack of involvement of the lower limbs, with probable impairment of the sexual functions, were commented upon as unusual features. The differential diagnosis between this and allied affections was considered at length. While the prognosis is necessarily grave, a plea was made for painstaking effort to check the progress of the disease, and it was stated that the case presented had been under observation for nearly a year without apparent increased degeneration. Massage, galvanism, and strychnin were the remedies employed.

**Philadelphia Pediatric Society.**—At a meeting held October 11th, Dr. J. C. GITTINGS presented a case of **congenital absence of the humerus** in a boy, aged 9 years. The hand hangs from the shoulder-joint by a fibrous band. The bones of the metacarpus are well formed but small. The carpus consists of four or five bones. The radius and ulna are apparently fused, presenting an indication of separation at the lower end. Midway in its course this fused bone bends at an obtuse angle, suggesting an elbow-joint, but a skiagraph shows firm bony union between the two indicated bones. These also apparently reach almost to the shoulder-joint, without any attempt at articulation. Dr. R. C. CLEEMAN made reference to a case of congenital absence of the femur.

Dr. L. C. PETER reported two cases of **obstetric palsy** occurring in brothers, 4 and 8 years of age respectively, and one case in a baby 7 months old. In all the cases the vertex presented, labor was difficult, and there was noted from birth flaccid palsy of the left arm and shoulder, and in two of the cases atrophy of the deltoid, biceps, brachialis anticus, supraspinatus and infraspinatus muscles. In the oldest patient the serratus magnus and the rhomboids were involved. The mixed form of degenerative reaction was present in all the atrophied muscles. A point of especial

interest was the involvement of the serratus magnus. The direct cause of injury leading up to the form of palsy is thought to be traction upon the head with forceps badly applied, or direct pressure on the neck by the hands of the operator in head-presentation. When the breech presents extraction of the after-coming head with the fingers hooked over the shoulders may cause the injury. The nerves involved are the fifth and sixth cervical. In the discussion, Dr. JAMES HENDRIE LLOYD said that he thought the main involvement in the cases was of the posterior thoracic nerve, causing paralysis of the serratus magnus and the winged scapulas. This he thought almost unique as an obstetric paralysis, but he has seen similar paralysis in adults from carrying heavy weights. Dr. J. P. C. GRIFFITH, basing his remarks upon reported cases and others observed by himself, thought the diagnosis between cerebral palsies and obstetric paralysis often difficult and always important. Dr. PETER added that the long thoracic nerve comes from the fifth and sixth cervical nerves, and as these latter were the nerves injured, the lesion of the former nerve is readily accounted for.

The president, Dr. F. A. PACKARD, read a paper on **gonorrheal arthritis in an infant**, aged 6 months. The patient was first seen for a gastroenteritis, and at this time was found suffering with a vaginal discharge. Two days later swelling of the left wrist occurred, and gonococci were discovered in the vaginal discharge. The wrist was thought to have become involved rather than the knee, because of the greater motion to which the former was subjected. The usual remedies were without effect. Rest on a splint with absolute fixation caused rapid improvement.

Dr. ALFRED HAND, JR., read a paper on **acute retropharyngeal abscess**, with remarks on the diagnosis. A case was reported in which there had occurred sudden rise of temperature, with evident follicular tonsillitis and pharyngitis, and gastroenteritis. Fever persisted in spite of improvement in the other symptoms. Bronchitis developed and persisted, but did not seem sufficient to cause the fever. Empyema and retropharyngeal abscess were suspected. There was no dysphagia, but food was regurgitated; the glands at the angle of the jaw were enlarged, and a swelling appeared on the posterior wall of the pharynx. This was incised at the end of three days and some pus evacuated. Fever persisted for three days, but finally subsided, and food was no longer regurgitated. In the discussion, Dr. J. P. C. GRIFFITH remarked that retropharyngeal abscess is likely to engender grave general disturbances without definite local symptoms.

## Selected formula.

### For Acne:

Alcohol, hot tea, coffee, soups, spiced dishes, and starchy vegetables must be interdicted. Moderate exercise is enjoined. Menstrual and uterine derangements must be treated. Gastric disturbances and constipation should be avoided by appropriate measures. Ichthyol as a "vaso-motor steadying" drug should be given in the form of gelatin-coated pills, each containing  $2\frac{1}{2}$  grains, to be taken after meals. This dose to be gradually increased.

LOCAL MEASURES.—Calamin-lotions (gr. xx.—i ad  $\bar{3}$  i) with glycerin, lime-water, and rose-water.

When acne is a prominent feature, sulphur-lotions are applicable, or sulphur hypochlorid freshly prepared ( $\bar{3}$  i— $\bar{3}$  ii) to the ounce of lard, with potassium carbonate (gr. v) and a little almond-oil.

—J. J. PRINGLE.



## Society Proceedings.

### MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-fourth Annual Meeting, held at Nashville, Tennessee, October 11, 12, 13, and 14, 1898.

FIRST DAY—October 11th.

The Association met in the Hall of the House of Representatives at the State Capitol, and was called to order by the chairman of the committee of arrangements, DR. DUNCAN EVE.

Prayer was offered by Rev. JAMES I. VANCE, D.D.

Addresses of welcome were delivered by HON. J. M. HEAD, on behalf of the city and State, and DR. C. S. BRIGGS, on behalf of the profession of Nashville.

After the reading of the reports of the Secretary and Treasurer, which were accepted, DR. JOHN YOUNG BROWN, of St. Louis, delivered the *President's Address*.

**The Mississippi Valley Medical Association.**—Dr. Brown dealt with the history of the Association during the 24 years of its existence. Its rapid growth is due to the loyalty of its members and to the fact that from its inception it has been a distinctively working-body. It has never been a mutual admiration society. Suggestions were made for its improvement, and inasmuch as the Association contemplated the publication of an annual volume of *Transactions*, it was proposed that the dues be raised from \$3 to \$5.

**Immunity.**—DR. CHARLES T. MCCLINTOCK, of Detroit, said that of late years a large part of the laboratory-work in medicine has had to do with immunity. Many facts have been discovered, which in a few instances have been of immediate practical value in the treatment or prevention of disease. For the most part, however, they are uncorrelated, often contradictory, and their meaning not clear. Hypotheses have been advanced, but as yet there is no theory that will even approximately explain the facts of immunity. The future of work in this line is full of promise. For the infectious diseases, at least, immunity and cure are one and the same. A patient suffering from diphtheria will be cured only when his tissues are immunized against attack by diphtheria-poison. There are several kinds and various degrees of immunity, *e. g.*, natural and artificial or acquired. Apparently these are entirely different in kind, dependent on different functions of the body, effected by different substances. There is also racial immunity. Furthermore, there is an immunity correlated with age. Variations in susceptibility are noted in different varieties of the same species and even in different families. Again, there is an individual immunity. Still again, one part of the body, even one portion of the same tissue, may be immune, while the rest is highly susceptible. These facts are not to be explained by general resistance, good health, etc. The most vigorous man may acquire smallpox or influenza. The healthiest cow is liable to be seized with pleuropneumonia. Metschnikoff's theory of phagocytosis is the best explanation at hand for natural immunity. Nuclein seems to be the germicidal agent elaborated by the white corpuscle. If natural immunity is due to one or several chemic agents, it follows that it is limited. Recovery from an attack of certain infectious diseases is followed by more or less immunity to the respective disease. In some instances, as in scarlet fever, or syphilis, this acquired immunity usually lasts for life. The immunity following recovery from disease is not proportional to the intensity of the disease-process. The ability of an organism to resist attack by disease-germs or their products can be increased, trained, educated. Thus, in producing diphtheria-antitoxin, horses can be made to bear without apparent harm several thousand times the fatal dose of poison for an untreated horse. It may happen that diphtheria or measles may disappear after generations or centuries, owing to the fact that the race has become immune. To what extent acquired immunity can be inherited is both interesting and important. This sort of immunity is usually lost, at least so far as tests will show, before the animal reaches the adult stage. It is not the same as the immunity of the suckling. This is due to the fact that the immunizing bodies pass into the milk. The child receives from its

mother not only food, but disease-resisting power. There are also active and passive forms of acquired immunity. The horse producing antitoxin is actively immune; his tissues are producing antitoxin. The child receiving a dose of antitoxin is passively immune. It has borrowed the strength of the horse. There is an immunity to poisons. The wolf thrives on putrid flesh. Some animals are immune to snake-poison. The insusceptibility of the morphin-user may be something more than mere tolerance. The drug may be in part destroyed, and this anti-power may have to do with the craving for the drug. There is no satisfactory explanation for the facts of acquired immunity. The various theories as to the nature of antitoxin and its mode of action were recited, with the conclusion that antitoxin, in some way as yet unknown, stimulates some portion of the body, and this in turn destroys the poison. There is no antitoxin, but in short, an immunizing body. Immunity and cure are the same thing. DR. GEORGE W. JOHNSON, of Dunning, Ill., has had some experience with nucleic acid in the treatment of pulmonary tuberculosis in cases of mixed infection, and has noticed a diminution in the number of pyogenic bacteria. He asked whether the phagocyte attacks the tubercle-bacillus as it does pyogenic bacteria. DR. MCCLINTOCK replied that he knows of no reliable investigations that have been made with reference to that point. DR. ERNEST B. SANGREE, of Nashville, said that it is believed by many investigators that the phagocytes eat live tubercle-bacilli, and that cases in which tubercle-bacilli are included in the phagocytes have a better chance of recovery than those presenting opposite conditions. DR. DUDLEY S. REYNOLDS, of Louisville, expressed a fear that experimental observers have failed to note the necessary equilibrium between the circulating blood-current and the lymph-stream. He elaborated the theory of phagocytosis, and showed how phagocytosis can never be successful in the presence of obstructions in the lymph-channels.

**Hygiene vs. Drugs in the Treatment of Pulmonary Tuberculosis.**—DR. C. L. MINOR, of Asheville, N. C., embraced under hygienic and dietetic treatment all such non-medicinal measures as are directed toward an increase in the vitality of the organism, and of its resistance to disease, and considering climato-surgery but a branch of hygienic treatment, although he confined his remarks to the proper application to individual cases of exercise, gymnastics, hydrotherapy, rest, sleep, diet, amusements, clothing, and quarters. Partial and unsatisfactory use of such measures is more or less general, but unless directions be definite and specific, they will fail of their purpose. The difficulty of getting a patient to yield implicit obedience to the doctor was dwelt on; the indefiniteness of the orders given being in part to blame. If the patient is to recover, both he and the doctor must work hard, no half-hearted seekers for pulmonary health being likely to recover. The necessity of carefully and fully writing out exact orders for every detail of the patient's life, to be followed religiously, was urged, such a prescription being, in cases of pulmonary tuberculosis, of more value than the more common one for drugs. All such measures were, for convenience, classed under three heads: Those affecting the patient's surroundings, his life, and his exercise. The common abuse of exercise was deplored, and the invariable rule stated of "exercise short of the point of fatigue," and the other of no exercise with a temperature over 100.4°. A gradual accustoming of the patient to longer and longer walks, beginning with only 50 or 100 yards in many cases, and increasing until finally from 2 to 10 miles can often be easily tolerated, and a judicious use, later on, of walks, on increasing incline, till steep hills are easily surmounted, was warmly recommended. Pulmonary gymnastics was especially dwelt upon for use in non-active cases, and among several methods recommended for chest-development, and the increase of vital capacity, that form of Indian-club swinging, called the double figure-of-eight, was chiefly recommended. In carefully selected cases, certain drugs have undoubted value as adjuvants; never, however, as the chief resource. The short life of most drugs in the therapy of tuberculosis was noted, and ascribed to the fact that no man can treat this disease long, and not realize that nothing that upsets the stomach can be other than a curse to the patient. The only valuable results are those based on a vitalizing of the whole system, a stimulation of metabolism, on a strengthening of the cells to oppose the



invader. The thing to be attacked is not so much the lesion in the lung directly as the lowered vitality of the body, the diminished capacity of the lungs, and the deficiency of appetite; and drugs directed to a conquering of the bacillus *in situ* are not to be compared with measures that enable the organism itself to acquire the strength to overcome disease. These things can be brought about best by an improvement in nutrition, which must after all come through the stomach, and an increase of the amount of oxygen taken into the lungs. Air and food are the drugs in which trust can always be reposed; if a patient can be taught to get both in good amounts wherever food can be assimilated and enjoyed, and air breathed deeply, there is hope of cure. If two-thirds of the medicine-bottles could be thrown away, and the other third used less often, while a hygienic plan of life should be followed, the appetite stimulated by nature's appetizer—air and exercise—which are alone permanent in their results, and which are as superior to gentian or quassia as sunlight is to darkness.

**Congenital Scoliosis.**—Dr. S. C. BALDWIN, of Salt Lake City, said of scoliosis that it is the most common of all deformities; most often found in children under 10; rarely beginning after 18; and the more common in girls in the ratio of 5 to 1. The etiology is in a large number of cases most uncertain. Congenital scoliosis is quite rare. Tubby of London, in the latest English work on deformities, says that he has been able to verify only four cases. The case reported by Dr. Baldwin was first diagnosed as scoliosis when the child was 21 months old, but the father had noticed the "lump" ever since the child was first washed. The interesting features of the case are that the curvature was in the lower cervical and upper dorsal regions. There was some pressure on the cord, as shown by the more or less deficient development of the right side. The convexity of the curve was to the left, with partial paralysis of the forefinger of the right hand, and sweating and flushing of the left side, with none on the right. The condition was thought to be due to a lack of amniotic fluid in utero, probably allowing the muscular walls of the uterus to press on the fetus and hold it in a faulty position, and in this way cause a wedge-shaped development of the bodies of the vertebrae. This theory has been advanced by Weissenberg, Hirsch and Schanz in the last year. In the case reported the mother was small, and passed at the time of confinement so little water that she did not know there was any, and felt no motion, comparatively, during pregnancy. Dr. SAMUEL E. MILLIKEN, of Dallas, Tex., has seen one case of scoliosis in a child under one year of age, but he was not prepared to say whether it is congenital or not.

**The Therapeutic Value of Marmorek's Serum.**—Dr. WILLIAM L. BAUM, of Chicago, dealt with the literature of the subject in an exhaustive manner. Twenty-two cases have come under his observation in which the serum was used: 19 of erysipelas; 1 of erysipelas plus tuberculous nuchal glands; 1 of facial erysipelas during childbed without septicemia; and 1 of erysipelas with puerperal septicemia and double labial abscess. The last was the only fatal case. The following deductions were drawn from an analysis of the literature and from personal experience: (1) In pure streptococcal infections the serum undoubtedly exercises a favorable influence on the course of the disease; (2) in the mixed infections the influence of the serum is noticeably demonstrable, but it merits further trial as an adjunct to other treatment; (3) considering the grave character of the complications of a nonstreptococcal nature reported, ordinary rules of therapeutics demand that in such cases, as with the diphtheria-antitoxin, all indicated therapeutic procedures must be employed as well as the serum; (4) in view of the fact that erysipelas-streptococci and phagocytes have been found to exist side by side in the lymph channels, it is fair to assume that the influence of the serum is directly exerted bacteriologically on the streptococci and not entirely through stimulation of phagocytic action; (5) the initial dose in all cases should be 20 cu. cm., to be followed by 10 or 15 cu. cm., according to the indications, every 24 hours. Dr. CHARLES D. MINOR said that his experience is practically confined to secondary infections in tuberculosis. Dr. SAMUEL E. MILLIKEN has used anti-streptococcal serum in two cases, both of which terminated fatally; one of abscess of the liver, the other of suppurative appendicitis. Dr. WILLIAM K. JACQUES, of Chicago, called attention to infections in the pulmonary

tract that he has found to be purely streptococcal, and in such cases he has advised injections of anti-streptococcal serum with good results. Dr. BAUM, in closing, emphasized the importance of diagnosing the kind of infection present.

**Unguentum Hydrargyri, or Blue Ointment, Administered by the Mouth.**—Dr. ALBERT REHNHEIM, of Paducah, Ky., reported three cases of syphilis in which he administered blue ointment by the mouth with satisfactory results. The method of administering blue ointment by inunction is disliked by the patient on account of its nastiness and inconvenience; hence, if another method of using the ointment can be substituted with the same good and quick results, why not do so?

Dr. JAMES T. WHITTAKER, of Cincinnati, delivered the *Address on Medicine*, dealing with the subject of **Diabetes mellitus**.

**Mastoiditis; When to Operate and How.**—Dr. ANDREW TIMBERMAN, of Columbus, O., said that to know when to operate one must be able to exclude the diseases that are often accompanied by inflammatory conditions over the mastoid, without actual involvement of the bone, and which quickly recede when the primary disease is properly combated. Every physician encounters cases of simple furunculosis and diffuse external otitis presenting as marked symptoms pain and swelling of the mastoids. The tissues are boggy and the edematous condition is determined by palpation and pain on pressure. Such diseases, as well as syphilis, must always be excluded before operating. Cases of mastoiditis are divisible into two classes, the first comprising those complicating acute aural disease; the second those complicating chronic aural affections. This division ignores primary mastoiditis, which is exceedingly infrequent. The following conclusions were expressed: Operative measures should be instituted (1) to preserve the function of hearing, as well as to prevent a fatal issue; (2) earlier in mastoiditis due to scarlet fever, diphtheria, and the worst cases of influenza, than when due to "colds," measles, typhoid fever, etc.; (3) in the acute cases of mild infection, when subsidence does not occur within at most 8 days (Schwartz); a shorter period is safer in the presence of virulent infection; (4) in cases of recurrent mastoiditis due to any cause; (5) in those of mastoiditis complicating chronic suppurative otitis; (6) in acute cases attended with drooping of the lining membrane of the superior posterior wall of the external auditory canal, carrying with it Shrapnell's membrane; (7) in chronic cases when at the same place a crater-like opening leads to the epitympanic recess and entrance into the antrum, even though in neither case symptoms immediately menacing life be present. Dr. Timberman favors the typical or original Schwartz method of opening the mastoid antrum. Its success in given conditions justifies its application; its failure in given conditions has resulted in a more perfect procedure styled the Schwartz-Stacke, or radical, operation. Dr. J. HOMER COULTER, of Chicago, maintains that the general practitioner should not treat cases of mastoiditis in which the symptoms are well defined, and no one who has not had considerable surgical experience should attempt the Schwartz operation. Dr. J. A. STUCKY, of Lexington, said that in many cases of necrosis of the malleus he has made a free incision along the posterior superior wall of the canal, curetted the diseased bone away, tamponed the canal lightly with iodoform-gauze, and patients have done well without undergoing the radical operation. Dr. DUDLEY S. REYNOLDS, of Louisville, laid stress on the importance of constitutional medication in the stage of invasion in cases of mastoiditis, saying that an ounce of prevention at this time is most precious bestowed. Dr. L. B. GRANDY, of Nashville, called attention to a point not mentioned in the paper—the differential diagnosis between mastoiditis and mastoid periostitis. If cases are carefully observed there is as much difference between the two conditions as there is between periostitis of the tibia and epiphysitis. This differentiation is of paramount importance in the treatment, whether medical or surgical.

**Prophylaxis in Nose and Throat Diseases.**—Dr. J. HOMER COULTER, of Chicago, said that there are many preventable pathologic conditions in the nose and throat, and that many of the ordinary diseases of this portion of the anatomy have evolved into more serious and distinctly different affections. He omitted any reference to such condi-



tions as syphilis, tuberculosis, diphtheria, influenza, or the exanthemata, inasmuch as the possible prophylaxis in each affection is a matter of general knowledge. He also omitted reference to any technical details, which are at best mooted points with authorities. Surgery does not cure all conditions, nor does it even prove always a prophylactic blessing. So also do local applications and constitutional treatment prove unavailing if universally depended upon. This is due in a measure to the lack of carefully exacting and eliminative diagnoses. With the development of knowledge of the physiology of the nose and throat have come also new ideas of the connection between many diseases of these organs and of their relative etiologic importance. The interference with ventilation and drainage is a most important factor, and one usually amenable to surgical treatment. "Taking cold" is not only frequent but susceptible to prophylactic measures. The clothing of the entire body is a factor of paramount importance in prophylaxis. Too much clothing about the head and neck is just as disastrous as insufficient protection. Adenoids, polypi, spurs, exostoses, deviations, deflections, and sensitive areas are all amenable to surgical treatment and demand such interference as soon as recognized. On the other hand, too much surgery is quite as disastrous as too much conservatism. The tonsils are the cause of other and reflex pathologic conditions as frequently as are adenoids. Mouth-breathing should be recognized as a most significant danger-signal. Anything that produces an alteration in the normal physiologic metabolism of the mucous membrane of the nose and throat; any alteration in the nutrition of the parts; any abnormal variation in functional activity; any considerable change in the histologic anatomy—are each and all remedial surgically or otherwise, and are, therefore, amenable to prophylactic efforts.

#### Peritonitis or Quinsy: Cause and Treatment.

—DR. J. A. STUCKY, of Lexington, Ky., said that of ten authors consulted, seven, after citing hereditary predisposition, exposure, etc., mention rheumatism and gout as the most prolific causes of quinsy. Close observation and careful testing in selected cases is convincing that the rheumatic, or more probably the uric acid, diathesis has more to do with the causation of this disease than any other factor. The majority of cases of quinsy, if seen within 48 hours after the onset, can be aborted to such an extent that suppuration will not take place. In cases that progress to suppuration, early and free puncture is advocated, just as soon as there is marked distention, in order to relieve pain, and stop the destructive suppurative process. For this purpose Dr. Stucky uses a modification of an ear-spoon, first described by Spier, and not a knife.

SECOND DAY—October 12th.

#### Complete Inspection of the Rectum by Means of Newer Mechanical Contrivances.—DR. CHARLES MARTIN, of Cleveland, O., exhibited a set of proctoscopes provided with obturators of peculiar form; an illumination-apparatus susceptible of adjustment to a number of positions; and an improvement on the Yale chair which facilitates the placing of the patient in the knee-chest posture, without requiring any movement on his part after he is properly seated. The improvement consists essentially of an upholstered board attached to the left arm of the chair, and a mechanism controlled by crank and lever, which form a part of the running-gear. The anoscope exhibited is $\frac{1}{2}$ in. (1.27 cm.) in length, and is designed for the inspection of that part of the rectum which is surrounded by the pelvic floor. The proctoscope is 4 in. (10.16 cm.) long, of sufficient length to reach into the inflatable rectum, not of so great a length as to obstruct a complete view of the rectal chambers, and yet of sufficient length to reach the promontory of the sacrum when the pelvic floor is displaced upward by the proctologist's manipulations. Both instruments are $\frac{3}{8}$ in. (2.22 cm.) in diameter; this diameter having been determined upon as the result of calibration in many normal ani. The average diameter of the instrument is equal to the degree of painless expansibility of the anus. The obturators have contracted necks, so that the instruments can be used as ointment-applicators. The middle part of the obturator is channeled; this makes the instrument useful as a nozzle for rectal irrigation; because of its contracted neck the obturator may be used as a self-retaining nozzle. The surface of each obturator is fluted

in such a manner that it may be used as a two-way irrigator when properly fixed within its tube. The technic of the inspection is as follows: The patient sits on the chair with his legs crossed and his body facing the knee-board, which is attached to the left arm of the chair. The chair-back is changed to the horizontal by a movement that puts the patient into the Sims posture. The fixed rectum is now examined by means of the short anoscope. After this portion of the rectum is inspected the chair's lever is extended, its crank turned, and the chair tilted to such an extreme degree of the oblique lateral position that the chair-seat is almost perpendicular, and the knee-piece, which is a part of the left arm of the chair, and against which the patient's knees are pressing, is almost horizontal. Now, at a time when the patient is resting easily in a position that is equivalent to the knee-chest posture, the anoscope is introduced, the obturator withdrawn, and the inspection of the ballooned gut is completed. The patient is passively returned to his feet by executing in the reverse order the several steps of this procedure.

#### The Relation Between the Genito-Urinary Tract and the Rectum; In Operations upon the Female, Which should receive Priority?—DR.

JOHN L. JELKS, of Memphis, contended that the gynecologist should be as well prepared to remove hemorrhoids and treat an ulcerated rectum as to dissect a cicatrix from a cervix or repair a perineum. The rectal surgeon often finds that, although the rectum is involved to such an extent as to be chiefly complained of, the chief source of danger to the patient is a pus-tube or some other disease. In other words, to relieve the patient and restore her to health and happiness, he must also dissect from the cervix uteri a cicatrix and repair a lacerated perineum. In another case he may be required to sever a urethral stricture.

**Rectal Fistula in the Causation of Ischiorectal Abscess.**—DR. WILLIAM B. BRUNS, of Deckerville, Ark., reported a case with two large pus-pockets, in which he opened the abscess, emptied the cavity, and subsequently performed an operation for the removal of the fistula.

**Hydrotherapy in Stomach-Diseases.**—DR. GEORGE D. KAHLO, of Indianapolis, said that water is essential to the performance of all physiologic functions; yet its importance as a remedial agent is not so generally recognized. He does not oppose entirely the use of drugs in diseases of the stomach, but he believes that water ranks first among therapeutic resources. It may be used internally as a drink, by lavage as a douche, and as a spray, and externally applied either locally or generally. Its effects, when administered internally, depend upon the conditions of the stomach in respect to both taking of food and whether or not there is normal digestion, as also upon the amount and temperature of the water ingested. Cold applications of all kinds are antiphlogistic, and when prolonged are sedative. They are indicated in acute gastritis and in the control of vomiting and hematemesis, but to obtain their full effect it is necessary that their local application produce an active hyperemia of the skin. Hot applications are useful in the treatment of gastralgia, hyperesthesia, gastric ulcer, and chronic gastritis. The beneficial influence of such agencies as diet, exercise, massage and electricity, not to speak of a few of the more important drugs that are thus used, is not to be ignored; and in obstinate cases especially, physicians are not likely to rely wholly upon any one remedy, however valuable. To be successful, hydrotherapy, like all other forms of treatment, must have for its governing factors an exact diagnosis, a thorough knowledge of the patient, a full understanding of the causative influences and a clear conception of the effects of the remedial agent. To this must be added the confidence and cooperation of the patient.

**Auto-Intoxication of Intestinal Origin.**—DR. THOMAS HUNT STUCKY, of Louisville, read a paper on this subject.

**Clinical Report of a Case of Abscess of the Liver.**—DR. EDWIN F. WILSON, of Columbus, reported three cases, in two of which the diagnosis was confirmed by post-mortem examination, and in the other by aspiration. In all three the abscesses were chronic when they came under his observation. In only one of the cases was there a history of dysentery, although in another scars of healed ulcers were found in the large intestine. In cases of hepatic abscess the enlargement of the liver is upward. Hoover has made a



diagnosis of abscess of this condition from a friction-sound in the axillary line between the eighth and tenth ribs. Wilson has not heard this sound in any of his cases, but it should be borne in mind when making an examination in this region. Two of the cases reported were mistaken for malaria. This mistake can be avoided by more general blood-examination. The absence of plasmodia would settle this at once.

**The Importance of Early Diagnosis in Surgical Cases.**—DR. J. C. MORFIT, of St. Louis, has recently seen two cases of pyosalpinx cured by surgical interference. Both had been treated by good practitioners, yet neither had made a complete physical examination, and consequently the real trouble was not detected. One was treated for indefinite inflammation of the bowels, the other for malaria. These cases were cited to emphasize the duty of the physician to himself and to his patients of utilizing every available means to arrive at an early and positive decision as to what he is treating.

**Gonangiectomy and Orchidectomy for Hypertrophied Prostate in the Aged.**—DR. GEORGE W. JOHNSON, of Dunning, Ill., reported 5 cases, and made a second report on 28 cases previously recorded. The following conclusions were announced: (1) All cases of prostatic hypertrophy should be given at least two weeks of palliative treatment, with rest in bed. This treatment should be regulated according to the conditions. (2) If no relief is had from this line of treatment, a thorough and systematic examination should be made for vesical calculi and polypi, as well as structural and malignant disease of the prostate and bladder. Cystitis, acute prostatitis, and prostatic abscess should always be borne in mind. The urine should be examined frequently. In cases of cystitis the ureters should be catheterized, to determine the condition of the kidneys. This can now be easily done with the Harris instrument. If by digital examination through the rectum the prostate is found to be enlarged, its approximate dimensions should be noted and urethral measurements taken. The patient should then be as well prepared as possible for operation. Having decided upon operative interference, the operator alone must decide upon what operation he will perform. Gonangiectomy or orchidectomy offers less risk to life. (3) Chloroform should be used, as it requires less time and is not so irritating to the kidneys. The operation should consume as little time as possible. Gonangiectomy or orchidectomy can be performed more quickly and with less shock than any other operation. Strict attention should be given to the after-treatment. (4) The time for relief after operation is irregular. In Dr. Johnson's experience the relief has not been as clearly defined as to hours and days, nor as immediate as in most cases reported. In but two cases has the catheter been required after operation. Enuresis was constantly present for from one to six weeks after operation. (5) More immediate relief is given in cases of orchidectomy, and the prostate grows softer and diminishes more rapidly in such cases than when gonangiectomy is done. (6) The kidneys should be carefully watched and supported after operation. Mental symptoms appeared in three of the cases, in two in consequence of renal disease. (7) Long-standing and troublesome hernias can be successfully treated in the aged. Dr. Johnson has successfully treated 84 such cases; in none of which has a recurrence taken place up to this time. Of this number he has encountered the condition of congenital with acquired hernia in 6 cases. In 5 of the cases the acquired sac was outside of the congenital one. In one case it was within it. (8) Bassini's operation was resorted to in all but 5 cases, and in these Fowler's method was used. (9) Cystic degeneration of the testicles was encountered in 25 cases. These usually had chronic hydrocele also, and were always cases with hernia of long duration. (10) When the intestines occupied the scrotum in large mass, they were returned to the abdominal cavity 3 or 4 days before the operation. (11) Examinations were also made for vesical calculus, but none was found. (12) The somatic condition is greatly improved, and when bilateral orchidectomy was done, the patients become obese. (13) A thorough line of palliative treatment of from 2 to 6 weeks' duration, with rest in bed, was given each patient. (14) In cases of herniotomy the patient was kept in bed from 3 to 5 weeks, unless very asthenic, with the hope of getting better organic union and thereby minimizing the liability to recurrence.

### THIRD DAY—October 13th.

**The Progress of Renal Surgery.**—DR. GEORGE BEN JOHNSTON, of Richmond, Va., delivered the address on surgery. Renal surgery, he said, is altogether a matter of the past three decades, having had its commencement with the successful nephrectomy performed by Simon in 1869. Dr. Johnston dealt with nephrotomy; floating and movable kidney; renal and ureteral calculi; neoplasms of the kidney; tuberculosis of the kidney, when not part of general military tuberculosis, which, he said, may either have its origin in the kidney or may be an ascending affection from the bladder. Hydronephrosis also received attention. Emphasis was laid on the conservatism that has developed in the field of renal surgery and which now marks the attitude of the surgeon in this as in other branches—a conservatism that realizes that the glory of surgery is not in amputation or mutilation, but in saving important organs.

**Why I Perform Vaginal Ablation in Pelvic Inflammatory Cases.**—DR. WILLIAM R. PRYOR, of New York City, said that up to October 1, 1898, he has performed vaginal hysterectomy for pelvic inflammatory lesions, exclusive of fibroids and cancer, 80 times, and since that date an additional number of times. No case has died either from the operation or from complications. In no case has a fecal fistula developed, or a sinus, or a vesico-vaginal fistula, or a hernia. There have been no cases of phlebitis and none of intestinal obstruction. The vagina has in no case been shortened. The technic of the operation is described in the *American Journal of Obstetrics*, vol. 38, No. 6, 1898.

**A Consideration of the Limit to Operative Gynecology.**—DR. SHELBY C. CARSON, of Greensboro, Ala., emphasized the importance of medical gynecology, contending that surgery cannot advance a legitimate claim to even the larger part of this great field. Surgery as a science is pronounced as practically without limit, but as an art it has probably reached the summit. True surgery, of all other branches, is based upon principles, and hedged in by fixed laws; when these are disregarded there is no true surgery. The folly of the ablation of the ovaries and tubes in many cases is manifest. The nerve-element in woman is of importance, the anatomic connection between the nervous system and the genitalia being admitted. As a consequence, neurasthenia is a frequent result, for which surgery affords no relief.

**The Therapeutic Value of Leaving Large Quantities of Normal Salt-Solution in the Abdomen.**—DR. J. WESLEY BOVEE, of Washington, D. C., reported 6 cases to illustrate the usefulness of this procedure. In a number of cases the effect was not so marked, and in a few but little benefit was apparent. The first case was one of papillomatous broad-ligament cyst; 15 liters of normal salt-solution were left in abdomen, with marked increase in the amount of urine. The second case was one of large multiple uterine fibroma, and a large ventral hernia. At a secondary operation, 3 liters of normal salt-solution were introduced into the abdominal cavity, and one liter under the breast, with marked urinary increase. The third case was one of papillomatous fibro-adenocystoma of right broad ligament; 8 liters of normal salt-solution were left in the abdomen; considerable urinary increase followed. The fourth case was one of multilocular ovarian cyst; 5,000 cu. cm. of normal salt-solution were left in the abdomen; increased excretion of urine followed. The fifth case was one of multiple fibroma of the uterus, with pelvic adhesions. Great shock attended the operation. Two liters of normal salt-solution were left in the abdomen; and increased urinary excretion followed. In the sixth case, one of multilocular chondro-cystoma of left ovary, 7 liters of normal salt-solution were left in the abdomen; and the excretion of urine was nearly doubled during the following six days. The marked stimulating effect of the fluid on the kidneys was noticeable in all these cases. Penrose has found that the average amount of urine excreted during the first 24 hours after operation in 100 cases was 13.4 ounces; for the second, 14.6 ounces; and for the third, 19.8 ounces. He also found that for the first day the maximum amount of urine was 27 ounces. In many of Dr. Bovee's cases this maximum was much more than doubled. While the number of cases in which he has used these large quantities of normal salt-solution is small, the effect should encourage a further application of the procedure in proper



cases. No evil result from the solution was observed in any of the cases.

**A Plea for Pelvic Cellulitis and Peritonitis.**—DR. F. F. BRYAN, of Georgetown, Ky., reported 20 cases, and drew the following conclusions: (1) Cellulitis and peritonitis are important manifestations leading to the greatest amount of suffering that woman is heir to. (2) Their recognition and the retention of their nomenclature should keep physicians constantly on the watch for them. (3) Their proper treatment in the early stages will obviate these later evils to a great extent, as cellulitis and peritonitis are easily curable in the early acute stages. (4) Should opportunity for an early cure not be offered, then the chronic cases should receive suitable medical and minor gynecologic treatment, as a result of which many will be cured, others obtain relief, and a respectable quota will, of necessity, have to turn to surgery for their cure.

**Surgical Treatment of Paralysis in Children.**—DR. ALEX. C. WIENER, of Chicago, pointed out that a clear distinction should be made in diagnosis, as well as in treatment, between cerebral and spinal paralysis. A common symptom in both diseases is a paralysis, and yet there is a great difference between the two affections. In spastic paralysis one group of muscles becomes rigid and overpowers its opponents, rendering them overstretched and useless, but still their innervation is by no means disturbed. In spinal paralysis there is a true degeneration of the lower neurom and the dependent muscular groups. This being borne in mind, the treatment is to equalize the balance between the spastic and the overstretched muscular group by lengthening the rigid muscles. This is done either by tenotomy, resection of tendons, or loosening the attachments of the muscles from the bone, as is done in a spastic condition of the abductor muscles of the pelvis. The after-treatment consists mainly in not allowing the extremity to leave its over-corrected position too soon, and in strengthening the functionally weakened opponents by massage, baths and electricity. Apparatus in these cases is utterly useless and should be entirely discarded. Any other peripheral cause of reflex irritation, as phimosis, occlusion of the prepuce, or of the clitoris, is, of course, to be removed. Anterior poliomyelitis is attended with a true paralysis of certain muscular groups. This may be overcome by apparatus that supplants the paralyzed muscles, or by operative procedures. The latter consist in division of the belly of an active muscle up to the place of its insertion, and sewing the corresponding part of the tendon into the cleft of the tendon that belongs to the paralyzed muscle. The inactive muscle is supplied with the vigor of the innervated muscle, care being taken that the sheath of the tendon is preserved. By this artificial change in the arrangement of muscles the function of the muscle is transmitted to another. There is taking place an alteration of the reflex activity in the nerve centers of the muscles; hence the importance of the function of the extremity is by no means related to a mere mechanical act.

**The Diagnosis of Gonorrhea in Women.**—JOSEPH RILUS EASTMAN, of Indianapolis, said that diagnosis of this affection in women is comparatively easy, even without the microscope. With a history of impure coitus, free purulent secretion from the vulva, vagina and urethra, intertrigo, burning on micturition and vesical tenesmus, the diagnosis is not far to seek. Upon inspection one usually detects a discharge of tenacious pus, or greenish or yellowish streaks upon the linen may alone be in evidence. The gonococcus grows fat upon flat epithelium. A comprehensive examination of the discharge is not complete until the secretions of the urethra, Skene's lacunæ, the glands of Bartholin, the vagina and cervix, have been searched through; and in chronic cases several preparations should be made from each of these. To secure unmixed gonorrheal pus from the cervix uteri, care should be taken that the platinum wire does not come in contact with the vagina. It is best to first rinse, and then dry the vagina with cotton to free it from mucus. It will be concluded after many examinations for gonococci, that the urethra is the seat of predilection of gonorrhea in women, and that the vulvitis and vaginitis are secondary, being caused by the bathing of these parts with the discharge from the urethra and cervix. The diagnosis of acute gonorrhea may be made by contemplation of the clinical phenomena alone. For example, if acute urethritis be present, it

is almost certain that the gonococcus is to blame. Observation for a few days will establish the diagnosis beyond peradventure, as the symptoms of non-specific urethritis will disappear rapidly. In chronic gonorrhea too much dependence upon clinical manifestations is hazardous. Condylomata are often present, but they appear also often independently of gonorrhea. Debris-laden discharge from the vulvo-vaginal glands is usually an expression of old gonorrhea, but other germs, as the staphylococcus aureus and saprophytic forms, may occasion just such a discharge. Among the more common indications of chronic gonorrhea are the gonorrheal maculæ of Sânger, red papules about the openings of the vulvo-vaginal glands, sclerotic inflammation of these glands, which are felt as hard, non-sensitive nodules under the examining finger, cysts of these glands and scars and erosions in the vulva. All of these conditions may be caused by other germs than gonococci. Here, as in acute gonorrhea, the most reliable indication is the urethritis.

**Posterior Displacements of the Uterus.**—DR. A. M. CARTLEDGE, of Louisville, divided the treatment of uterine displacements into measures that correct the cause and methods of support by suturing and shortening the round ligaments. Sometimes it is necessary to employ both methods in the same individual in order to make the result permanent. In the first category are to be included thorough curettage; repair of cervical lacerations, if present; perineorrhaphy and restoration of the pelvic floor; tonics, laxatives, and rest. These methods, if carried out successfully, will ultimately relieve the vast majority of posterior displacements. They are not so dramatic or sudden in their relief as ventrofixation and Alexander's operation, but they are more in accord with rational ideas. In order to succeed they require time—from 6 to 8 months—for the structures to resume their normal tone. They also usually require to be supplemented for some weeks or months following their performance by anterior and posterior tamponade, or a well-fitting pessary to hold the uterus in position until the repaired parts regain their strength. It is irrational surgery to use any form of support until existing causes have been removed as far as possible. As between ventrofixation, vaginofixation and Alexander's operation, preference should be given the last, if no accompanying disease is suspected. When such disease exists, the operation of ventrofixation should be practised, as it gives opportunity for inspection and correction of the pelvic disease. It is the best operation in all cases of adherent uteri.

**Some Phases of Intestinal Obstruction.**—DR. A. H. CORDIER, of Kansas City, Mo., said that the causes of this condition are many and varied. Modern methods of diagnosis in skilled hands have led to the saving of many lives that, heretofore, would have been lost by delay in resorting to the proper treatment. While the diagnosis of intestinal obstruction can usually be made early, there are some cases in which the pathologic manifestations are so insidious or so vague that their detection requires time and much careful clinical analysis. The falsehoods uttered by pain and the truths untold by opium have been very expensive to human life in the management of intestinal obstruction. Surgical treatment for the relief of this condition should be resorted to early, and it should be thorough and quick. No protracted delay or chronic surgery should enter into the management of acute intestinal strangulation, as such cases stand prolonged anesthesia and the slow surgery badly.

**Essentials to Success in Abdominal Surgery.**—DR. F. F. LAWRENCE, of Columbus, O., read a paper on this subject.

**The Surgical Treatment of Exophthalmic Goiter.**

—DR. BAYARD HOLMES, of Chicago, said that this mode of treatment is based on the theory that in exophthalmic goiter the direct morbid factor is an increase in the normal excretion of the thyroid gland. He gave a synopsis of the physiology and pathology and an outline of the embryology of the thyroid, after which he reported a case upon which he had operated, and which was a powerful argument in favor of surgery in dealing with this affection.

**Some Forms of Gangrene and their Treatment.**—

DR. J. S. NOWLIN, of Shelbyville, Tenn., said that gangrene means death of a part, and is applied to the soft tissues. The blood is always involved in this condition. If the blood is performing its functions there can be no local death. The blood-channels being destroyed, gangrene necessarily fol-



lows. Gangrene appears sometimes suddenly after injuries to the spinal cord. Normal functional activity in the blood prevents the first step in the process of inflammation. Simple endarteritis may be the cause of gangrene; an inflamed artery is then surcharged with blood, stasis results, coagulation takes place, the lumen is destroyed to a certain extent, and gangrene results. Sepsis is doubtless a most frequent cause of gangrene in the extremities. In traumatic gangrene the surgeon should look out for sepsis. If there be a simple endarteritis, with tissue-formation, amputation should be performed at the first evidence of failing vitality.

#### FOURTH DAY—October 14th.

**Diphtheria and Its Logical Treatment.**—DR. A. M. OSNESS, of Dayton, O., said that the pathologic process in diphtheria is caused by the serum-albumin at the point of infection becoming moderated from incorporation with the specific virus. It is then repudiated by the blood-stream, and exudes into the neighboring tissues, where it, plus necrotic cells and fibrin, forms the pseudo-membrane, that is, a congenial nidus for the Klebs-Löffler bacillus. The intoxication of the system depends upon the energy of the lymphatics, upon which devolves the removal of the exudate. In the treatment the use of antitoxic serum offers the risk, of overtotoxicity from additional toxin, or systemic impairment from invalidation of the centers; while calcium monosulphid given to children in  $\frac{1}{2}$ -grain doses every half hour for a period of 36 hours has yielded the best of results. Water should be taken internally quite freely to help elimination of the toxin. Local swabbing is resorted to as well with a mixture such as the physician deems necessary.

**The Early Diagnosis of Diphtheria.**—DR. WILLIAM K. JACQUES, of Chicago, said that outside of laryngeal complications, the mortality from diphtheria is due to the toxin produced by the Klebs-Löffler bacilli. No physician can successfully treat diphtheria unless he understands the nature of this toxin, how it is produced, and how the cells may be fortified against its destructive action. He must understand that the Klebs-Löffler bacillus is a distinct, living entity, or vegetable organism; that one of the products of its existence is diphtheria-toxin, just as the result of the life of the yeast-plant is alcohol. To appreciate the danger of his patient, a physician must understand the rapidity with which these bacilli multiply under favorable conditions. The clinical symptoms manifesting their residence may give no indication as to the rapidity with which the fatal amount of toxin is being produced. Understanding that toxin is a product of these germs, their multiplication means an increased amount of toxin, which soon reaches the fatal point unless checked by the use of antitoxin. This demonstrates the importance of a physician knowing at the earliest possible moment what germs are present in an angina. In order to ascertain the value of direct diagnosis, by which is meant the examination of material taken directly from the infected area, without waiting for incubation, the Chicago Health Department has introduced the following culture-outfit for the use of physicians: A sterilized swab is placed in a glass tube; a slide carefully wrapped in paper is placed with this in an envelope, together with a culture-box and directions for using it. Physicians are requested to inoculate the swab from the inflamed site, to spread a little of the mucus upon the slide and to allow it to dry. The culture-medium is inoculated from the same swab and it is returned to the glass tube. The whole outfit is then to be sent to the nearest incubator-station or laboratory. When no antiseptic treatment has been administered before the culture is taken, and the disease manifests malignancy by stupor, hoarseness or swelling of the cervical glands, it has been possible in about 50% of the cases to find sufficient bacilli to warrant a diagnosis of diphtheria, even before any trace of membrane is visible. When it has been possible to get a small portion of membrane to spread on the slide, there has been no difficulty whatever in about 75% of the cases in making a direct diagnosis. In the malignant form of diphtheria nearly 50% of the cases die unless proper treatment is administered. Any physician who neglects to make a correct diagnosis during the time when the remedy is efficacious, that is, during the first two or three days, is responsible for the result. The technic of the bacterial diagnosis of diphtheria is simple. The entire outfit for this work

may be obtained for less than \$100. The essentials may be acquired at home by any physician who is willing to devote no more than his leisure moments to it. To demonstrate the protective value of antitoxin, the following experiment was made: On October 10, in the presence of Dr. F. W. Reilly, Assistant Health-Commissioner of Chicago, Dr. Wynekoop, Assistant Bacteriologist, Dr. Jaques and Dr. Adolph Gehrmann injected 9 guinea-pigs with four times the fatal dose of diphtheria-toxin. The first 3 had been immunized two days previously by the injection of 0.1 cu. cm. each of antitoxin. The next 3 received 0.2 cu. cm. of the same antitoxin each, following the injection of toxin. The third 3 have had no treatment whatever since the injection of the toxin. The pigs were correctly labelled as to condition, which presents decided effects upon the fourth day. All the pigs that received antitoxin remained alive and apparently well. Of the 3 not protected, 2 died. The third was still alive, thus apparently possessing natural immunity against the toxin.

**Pichi.**—DR. H. W. WHITTAKER, of Columbus, O., said that in Chili, South America, pichi is found growing as a shrub in abundance. No doubt the active principle of the drug resides in the balsamic resin, but chemic examinations have so far been unsatisfactory in determining its chemic composition. The annoying symptoms of chronic cystitis, with enlarged prostate, yield to the action of pichi. Cystitis complicating specific urethral infection, involving the prostatic urethra, is a combination that under favorable circumstances does not readily respond to treatment, and yet under the influence of this drug the conditions become more tolerable. Pichi is indicated in all of the various forms of diseases of the liver. In the presence of gall-stones, pichi has proved a valuable remedy in assisting the secretion of bile and theoretically aiding the discharge of the stones. Uric-acid formations rapidly disappear from the urine under the corrective influence of the remedy and the general condition of the patient improves.

**Rupture of the Body of the Uterus During Confinement.**—DR. J. HENRY CARSTENS, of Detroit, reported a case of this kind.

**A Few Practical Points in the Treatment of Posterior Urethritis.**—DR. A. RAVOGLI, of Cincinnati, recapitulated the principles of the treatment for this disease as follows: (1) Irrigations with the Janet method in a recent case of gonorrhea will in many cases prevent posterior urethritis; (2) irrigation with the recurrent catheter with potassium permanganate, followed by injections of protargol, will cure in a relatively short time a case of subacute posterior urethritis without complications; (3) when chronic posterior urethritis lasts for a long time, and has caused infiltration of the submucous tissues, then the application of sound with ichthyol-salve yields the best results.

**Varicocele.**—DR. F. E. KELLY, of Lamoille, Ill., outlined the operation for radical cure and the indications for its performance. He considers Bennett's operation of resection of the veins and shortening of the spermatic cord the ideal radical procedure, which he described in detail.

**The Arthritic Diathesis.**—DR. R. A. BATE, of Louisville, applied the term diathesis to an inherited predisposition to altered nutrition. He assumed in diathesis an inability on the part of the cells to produce oxidation and he mentioned the diseases generally conceded to be dependent upon the arthritic diathesis. He has experienced favorable results from anti-lithemic remedies in glycosuria, nasal and bronchial asthma, lithiasis, albuminuria, obesity, eczema, paresis, rheumatism, angina pectoris, recurrent typhlitis, vertigo, biliousness, dyspepsia, neuralgia, and migraine.

**A Trilogy of Diseases: Acute Articular Rheumatism, Endocarditis, and Chorea.**—DR. ALBERT E. STERNE, of Indianapolis, advanced considerations concerning the nature of these three affections and of the connection of chorea with a manifestly infectious disease, namely, acute articular rheumatism. A case was reported in point. While Dr. Sterne could report several instances of chorea associated with both arthritis and heart-lesions, this is the only case known to him in which the sequence of this trilogy seemed distinctly connected with a suppurating injury, following a fairly incontestable portal for the invasion of the system by the ordinary pus-microbes. If it be admitted that valvular disease is mainly rheumatic, or at least infectious in character, then the list of cases of chorea connected with the diathesis becomes much greater, inasmuch



as from 25% to 50% (Osler) of cardiac patients give a history of chorea. Looking at the question impartially, it seems almost imperative to assume an intimate relationship between the three diseases.

The following preamble and resolutions were offered and adopted unanimously.

WHEREAS, The general public, the medical profession and drug-trade of the United States have long suffered extortion at the hands of foreign manufacturers of synthetic remedies; and

WHEREAS, Our lax and indulgent patent-laws bestow a triple monopoly upon the process, the composition, and the name of chemic products for medicinal use, thus excluding every possibility of a healthy competition; and

WHEREAS, The same evil has been recently disclosed in the domain of biologic medicine by the patent granted Professor Emil Behring and the Höchst Farbwerke for antiphtheric serum, a patent that could not be obtained in Germany, France, England, or Canada; therefore be it

Resolved by the Mississippi Valley Medical Association, that the seal of its condemnation be placed upon the unethical and unprofessional conduct of Professor Behring; that it is the duty of every member to renounce the use of the Behring serum; and that the American manufacturers who purpose contesting the patent in the courts are entitled to the moral and substantial support of every American practitioner;

Resolved, That an earnest appeal be made to the members of the Commission on the revision of our patent and trademark laws, appointed by President McKinley, and their assistance invoked for the modification of existing laws and the suppression of prevailing abuses;

Resolved, That a copy of these resolutions be sent to every medical journal in the United States and to members of said Commission, as follows: Hon. Arthur F. Greeley, Assistant Commissioner of Patents, Washington, D.C.; Hon. Peter Grosscup, Chicago, and Mr. Francis Forbes, New York City.

Resolved, That the members of this Society be urged to write their Congressional representatives at Washington and bespeak their support of any measures of relief ultimately proposed by the Commission.

The following officers were elected for the ensuing year: President, Dr. Duncan Eve, Nashville; first vice-president, Dr. A. J. Ochsner, Chicago; second vice-president, Dr. J. C. Morfit, St. Louis; secretary, Dr. Henry E. Tuley, Louisville; treasurer, Dr. Dudley S. Reynolds, Louisville.

Chicago was selected as the place for the next meeting, the time of which is to be fixed by the Committee of Arrangements and the Executive Officers.

**Scurvy in Children.**—C. G. Levison (*Pacific Record of Medicine and Surgery*, August 15, 1898) gives brief notes of two cases in which bottle-fed infants became restless and extremely sensitive on handling, and after a short time a leg became apparently helpless. At first joint-trouble was suspected, but after making a diagnosis of scurvy the food was changed and orange-juice was administered, with the result that all the symptoms disappeared within thirty-six hours.

**The Second Spanish Congress of Otorhinolaryngology** met during September in Barcelona. The following subjects were discussed in general session: What is there to be Expected from Electrotherapy in Labyrinthine Affections?; Surgical Treatment of the Cerebral Complications of Otic Origin; Diagnosis and Treatment of Incipient Laryngeal Carcinoma; Results of Surgical Treatment in Laryngeal Tuberculosis; Is there a Diathetic Pharyngitis?; Treatment of Frontal Sinusitis.

**Appendicitis Complicating Typhoid Fever.**—A. H. Cordier (*Kansas City Medical Index*, October, 1898) reports a case of typhoid fever of 6 weeks' duration in a man 22 years old, in which the temperature followed the typical curve and the Widal test responded conclusively. After about 10 days of indisposition, tenderness over the appendix, rigidity of the abdominal walls, and enlargement in the right iliac region, led to the suspicion that the appendix was the source of the trouble, and on removing it an ulcer was found to have destroyed all but the serous coat of the organ.

## The Latest Literature.

### British Medical Journal.

October 1, 1898. [No. 1970.]

1. A discussion on the Significance and Consequences of Different States of Vascular Pressure, with their General Management. WILLIAM BROADBENT, J. B. BRADBURY, T. D. SAVILL, HENRY HANDFORD, D. W. SAMWAYS, W. J. TYSON, P. WATSON WILLIAMS, J. HADDON, A. HAIG, and D. DRUMMOND.
2. The Alternating Administration of Drugs by Rotation as a Practical Principle of Treatment by WILLIAM EWART.
3. The Importance of Increasing the Respiratory Capacity in the Anemias of Young Adults. W. F. SOMERVILLE.
4. Ether-Pneumonia. DAVID DRUMMOND. (With Charts.)
5. The Treatment of Congestion of Liver not Dependent upon Organic Disease or Associated with Febrile Disorders. WILLIAM BAIN.
6. The Diagnosis of Early Thyroidal Fibrosis. GEORGE R. MURRAY. (Illustrated.)
7. A Plea for the More General Use of Tuberculin by the Profession. MCCALL ANDERSON.
8. A Discussion on the Open-Air or Hygienic Treatment of Consumption. T. F. S. CAVERHILL, WILLIAM CALWELL, B. J. GUILLEMAND, A. BOURCART, J. E. VIVANT, P. SYDNEY JONES, JANE WALKER, W. A. DENTON JOHNS, FREDERICK CHURCHILL and W. BEZLY THORNE.
9. A Discussion on Clinical Varieties of Hepatic Cirrhosis. ALEXANDER JAMES, WM. OSLER, ROSENSTEIN, W. EWART, J. B. BRADBURY, JAMES BARR, M. A. BOYD, HENRY HANDFORD, KARL J. GERHARDT, DAVID DRUMMOND, O. ROSENBAACH, T. M. ALLISON and THEODORE FISCHER.
10. Remarks on Locomotor Ataxy. O. ROSENBAACH.
11. Case of Protracted Sleep Extending over Fifty Days. E. MARKHAM SKERRITT and JAMES STEWART.
12. Remarks on the Alcohol Neurosis. J. STRACHAN.
13. On Four Obscure Cases of Intracranial Diseases. H. J. CAMPBELL.
14. A Case of Bilateral Occipital Porencephaly. T. A. CLINCH. (Illustrated.)
15. A Case of Localized Pontine Lesion. J. WALTER CARR. (With Diagram.)
16. A Discussion on the Treatment of Intracranial Tumours. DAVID FERRIER, F. X. DERCUM, JOSEPH COLLINS, WILLIAM BROADBENT, JOHN M. MACCORMAC, C. E. BEENOR, H. F. WATERHOUSE, E. F. TREVELYAN, J. MITCHELL CLARKE, J. M. COTTERILL and BYRON BRAMWELL.
17. A Discussion on the Influence of Micro-Organisms and their Toxins in the Production of Diseases of the Central and Peripheral Nervous System. THOMAS BUZZARD, F. X. DERCUM, JOSEPH COLLINS, F. J. SMITH, J. M. MACCORMAC, J. A. ORMEROD, R. A. FLEMING, F. W. MOTT, DAVID FERRIER, ALEXANDER BRUCE, E. F. TREVELYAN and BYRON BRAMWELL.
18. On the Bilateral Action of the Latissimus Dorsi in Hemiplegia. CHARLES E. BEEVOR.
19. A Discussion on Ear-Disease and Life-Assurance. P. MCBRIDE, THOMAS BARR, URBAN PRITCHARD, T. M. HOVELL, R. M. JOHNSTON, HERBERT TILLEY, E. C. BABER, W. L. MUIR, G. M. LOW, WILLIAM HILL, J. D. GRANT, T. G. LYON, JAMES RITCHIE and L. H. PEGLER.
20. The Rational Treatment of Phthisis, with References to Nordrach Sanatorium. R. MANDER SMYTH.
21. Another Case of Poisoning by Linimentum Camphoræ: Recovery. J. H. F. WAY.
22. Toxic Symptoms Produced by a "Headache Powder." R. E. P. SQUIBBS.
23. Sloughing of Abdominal Wall and Prolapse of Fetal Intestine in a Transverse Presentation. H. P. BARLOW.
24. Death from Lightning. E. DAVIES.
25. "Measles in an Infant: Possible Infection at Birth." F. C. FITZGERALD.
26. A Case of Hemophilia. C. R. JONES.
27. Eczematous Eruption Produced by Atropin. WILLIAM BRYCE.
28. Ectropion of the Female Urethra. ISAAC MOSSOP.



1.—Broadbent notes that in many long-lived families the **pulse-tension** is likely to be low. Long life results because there is less wear on the heart and vessels. Very high tension is sometimes hereditary, and is usually associated with diseases due to or attended with faulty metabolism, such as gout and nephritis. In functional nervous conditions, such as neurasthenia, in particular, Broadbent considers the pulse-tension a most valuable index in prognosis and treatment. Cases with high tension are usually much more amenable to treatment because they are commonly dependent upon some intoxication. Epilepsy, too, when associated with high tension, is much the more readily treated, and the prognosis is the better. Uremic convulsions are considered probably due to increased intracerebral vascular pressure, and it is thought that Cheyne-Stokes breathing occurs only with high intravascular pressure. The treatment of low pressure is to eliminate the cause of the condition if possible, such causes being deranged digestive or other secretions, or sometimes serious organic disease, and to use cardiovascular tonics. High pressure is best managed by eliminative treatment, which should include some preparation of mercury. Bradbury insisted upon the value of erythrol tetranitrate in the treatment of cases of high tension, and mentioned a case simulating Raynaud's disease, in which recovery ensued under the use of this drug, and another case in which grave uremia was entirely controlled in the same way, and the patient recovered completely. Savill considered the important change in the arteries in this condition a numerical hypertrophy of the muscle of the middle coat. Samways thought that the importance of high tension is usually somewhat overestimated, as there is always, even in healthy cases, an excess of blood-tension. Williams insisted that the increased tension is usually intended for some good purpose, commonly, perhaps, to eliminate toxic matter. The poisonous substances should be eliminated by drugs and proper diet, leaving the tension alone as far as possible until the cause of the increased tension has been removed. Haddon stated his ability to diagnosticate pregnancy, and perhaps the occurrence of menstruation, by the increased blood-pressure shown by sphygmograms. Haig insisted that uric acid is the chief cause of increased blood pressure.

2.—Ewart recommends a system of **alternating administration of drugs by rotation**, because of the cumulative effects of certain drugs and of the fact that other drugs lose their effects soon; and because with most drugs the early doses are much more effective than later ones. He, therefore, recommends that several drugs be given together, in the sense that one drug, however, being given one day, another the next, and another on the third day; then, if necessary, beginning again with the first given.

3.—Somerville insists that breathlessness, palpitation, and muscular weakness, as well as many other similar symptoms that are due to **anemia**, may often be much improved by instructing the patient in the proper manner of respiration; and he recommends that respiratory education should always be undertaken in connection with the common methods of treating uremia. He believes, further, that deep respiratory movements have a marked effect upon the function of the liver, acting in the way of massage of this organ.

4.—Drummond reports a number of cases of **ether-pneumonia** and reports the results of postmortem-examination in two, using the evidence in support of his contention, that pneumonias sometimes called septic are probably due frequently to the ether and not to sepsis, and that ether causes many more deaths in this way than is usually recognized. At postmortem-examination in the two fatal cases the typical appearances of catarrhal pneumonia, both macroscopically and microscopically were found. It is not questioned that bacteria were the immediate cause of the pneumonia, but it is insisted that the ether was the primary predisposing cause. It is considered that pre-existing lung-disease makes the patient especially liable to ether-pneumonia.

5.—Bain discusses that chronic form of **congestion of the liver** which is **not associated with any discoverable organic disease** or with fever, and which persists for weeks or months. It is generally due to alcohol, rich foods, sedentary habits, gout, disturbance of digestion, residence in the tropics, and sometimes it is associated with the climacteric. The symptoms usually include depression with irritability of temper, headache, vertigo, general lassitude,

and disturbance of digestion. The skin is commonly muddy in color. The liver is frequently somewhat enlarged and a little tender. The urine is concentrated, and it is believed that the amount of ammonia in the urine is an important diagnostic sign as between chronic congestion and cirrhosis of the liver, being much increased with the latter, and, at most, not markedly so with chronic congestion. The venous radicles have been found distended upon the abdomen over the liver with chronic congestion, so that this is not considered a sign of great value. The condition is to be treated by careful diet, exclusion of alcohol, but little liquid at meals, together with exercise, particularly such as causes a good deal of respiratory effort, and with cholagogue drugs. Treatment at special baths is particularly valuable.

6.—Murray reports four cases of what he terms **early thyroid fibrosis**, a condition characterized by some change in the color of the skin, which is distinctly yellow with a pink flush on the cheeks, giving the patient at first glance the appearance of good health. The face is a little broad and heavy, but the subcutaneous swelling is comparatively slight. The skin is somewhat dry and scaly, and the hair may partially fall out. The patient suffers from marked lassitude and is easily fatigued. There are often hallucinations of sight and hearing, such as the appearance of rather ill-defined illusive objects—the patient may, for instance, see rats quickly crossing the floor, or he may hear bells or voices. The temperature is usually about normal. Improvement follows upon thyroid treatment, and this is considered the chief point in the diagnosis. If such improvement does not occur the condition can scarcely be considered thyroid fibrosis. (In none of the cases was there any post-mortem or other examination of the thyroid, and it is certainly doubtful whether the condition is associated with the thyroid in any way.)

7.—Anderson thinks that Koch's **new tuberculin** is somewhat safer than the old preparation, as it causes less reaction. He advises its use as a diagnostic test, as a means of discovering additional foci of disease that are not made evident by the usual methods, and as a curative agent. He cites a case of lupus in which inflammation of the right elbow-joint, not previously suspected, was lighted up by an injection; and another case in which there was disease of the apex of one lung, the other being apparently normal. An injection of tuberculin caused moist rales to appear in the apex that did not previously seem diseased. Four cases are reported treated with tuberculin, one of them with the new product, and the other three with the old. The latter improved greatly, while the one treated with T. R. improved moderately. There is nothing convincing in the author's statements here made with regard to tuberculin.

8.—Caverhill insists that there is nothing new in the **open-air treatment** of pulmonary tuberculosis as it has been known since the time of Hippocrates. Experiments show that early treatments were more complicated and more difficult than necessary, and it is insisted that the cure should be undertaken near the patient's home, and in a climate like that in which he has been accustomed to live and work. It is found that rainy weather is well borne, as a rule. The patient should be put to bed at once if he has any fever, but the windows should be kept constantly open, and as soon as the temperature has been normal for a week he should be permitted to be up and about in the pavilions, and as soon as possible without causing rise of temperature, he should be allowed to walk, the distance being increased constantly. He should be hardened to damp and cold as soon as possible. One should use mental rest always, and, when necessary because of fever or marked exhaustion, bodily rests to be followed by regular exercise, overfeeding, particularly with fats, vegetables, and farinaceous foods; and the patient should, if possible, be almost all the time in the open air. Calwell insisted upon the importance of admitting cases to sanatoria before the disease has progressed to an advanced stage. Guillemard described the treatment of pulmonary tuberculosis in the High Veldt in South Africa. He insisted that the coast is not suitable for tuberculous cases in that country, but that in the higher regions, the climate is perfectly suitable and of extremely valuable assistance in treatment. The accommodations for patients are, however, not at all satisfactory. Bourcart and Vivant related their results in the treatment of tuberculous cases in the south of France, *i. e.*, at Cannes and Monte Carlo. Of



cases in early stages they reported 90% of cures among a total of 123 cases. Among 87 cases in the hectic stage, there were 20% of cures, and among 204 cases of surgical tuberculosis, the results are described as remarkable. Jones insisted that his study of cases in Australia has demonstrated to his entire satisfaction that altitude is an extremely important and almost essential element in the treatment of pulmonary tuberculosis. Churchill showed plans that he had had made for the erection of corrugated iron verandas against the chalk cliffs at places along the coast, for the treatment of tuberculous cases. These regions are not occupied and are very cheap, and these verandas could be arranged so that the patients might have sun and fresh air in both summer and winter.

9.—In an analysis of 32 cases of **hepatic cirrhosis** James found that the liver was small most frequently in those cases in which there was no jaundice, and yet that in many cases of jaundice the liver was not enlarged, while in many without jaundice the liver was enlarged. Hemorrhages often occurred without ascites. They were usually associated with a large spleen, but they also occurred with a large liver. The disease runs an indefinite and a typical course and is dependent on other factors than those determining the mere size of liver. It bears a striking resemblance to acute yellow atrophy. As to the cause, one may assume that it is an irritant (1) that may be carried to the liver by the blood of the portal vein or hepatic artery; this may act, primarily, on the liver's tissue, or, secondarily, through its disturbing effects on digestion, causing the transmission of toxic substances to the liver. (2) The irritant may consist in backward pressure in the hepatic veins, such as occurs in cases of heart-disease. This, also, may be primary or secondary. (3) The irritant may be in connection with the bile-ducts. It may be a calculus acting mechanically, distending the ducts and checking the liver-function; or it may be what appears at first as a simple catarrhal jaundice spreading from the large bile-ducts to the small and thence to the hepatic parenchyma. (4) The irritant may develop in connection with the surface of the liver, as for instance, the adhesions formed by a gastric ulcer; (5) or in connection with the interior of the liver, as from hydatids or from the cicatrix of a liver-abscess. The irritant acts on the liver by interfering with the normal processes of growth, development, and reproduction, thus causing the great degeneration and destruction of the elaborated and specialized cells, and a certain amount of degeneration but relative increase in the amount of the simple and little-specialized fibrous tissue. Other forms of cirrhosis are described. One occurs in men who have been alcoholic from early life. In youth the trophic power of the liver-tissue withstands the chronic irritation. Beyond the age of 40 the digestive disturbances arise, and later, ascites. The liver is small, the spleen enlarged. The patient gradually becomes weaker, then comatose, and dies within a few months. A second form occurs in old alcoholics. After exposure to cold the patient develops what seems to be catarrhal jaundice. This becomes more intense, digestive disturbances arise and the liver and spleen become enlarged; but there is no ascites. The patient gradually weakens, becomes comatose, and dies within a year. A third form occurs also in old alcoholics. Jaundice develops after exposure and it increases; digestive disturbances are aggravated, especially vomiting, the spleen is enlarged, and ascites develops, to be relieved by tapping. The jaundice disappears more or less completely, the effusion does not return, the liver and spleen grow smaller. Abstinence from alcoholics will result in cure. A fourth variety occurs in young people, often young women. There is no history of alcoholic indulgence, but appearances of hereditary weakness, congenital syphilis and tuberculosis, possibly a history of peritonitis. Exposure to cold induces jaundice, dyspepsia, and possibly ascites. The liver is found enlarged, its surface somewhat irregular. The spleen is enlarged. Life may be prolonged indefinitely. Ascites may occur occasionally, but tapping gives months or years of relief. Osler regretted that the hypertrophic cirrhosis of Hanot, which he considers a clinical entity, easily separable from the enlargement of the liver of common cirrhosis, and from the common enlarged and fatty cirrhotic alcoholic organ had not been considered. Rosenstein thought that the importance of alcohol is much overrated in the etiology of cirrhosis of the liver. Bradbury felt that the occurrence of

pyrexia in this condition is not sufficiently recognized. Barr insisted upon the differentiation between hypertrophic cirrhosis and biliary cirrhosis. He considered alcohol an exciting cause of the former, and thought such cases amenable to treatment if they came under observation at a sufficiently early date and alcohol was withdrawn. Pyrexia in cirrhosis he considered a complication dependent upon some infection. Boyd desired a more simple classification, indicating the point from which the cirrhosis arises, whether from within or without. The pathologic changes were the same in all forms, differing only in the source from which they sprang and the size of the liver when the deposition began. While admitting that syphilis and scarlatina produced cirrhosis, Drummond thought that alcohol is the most potent factor in its production. Rosenbach spoke of the connection between disease of the heart-muscle and true cirrhosis of the liver. That the heart muscle is first attacked is shown by minute investigation that disclosed signs of heart-affection, particularly dilatation of the right ventricle.

10.—Rosenbach believes that there is an individual, probably innate, disposition to **locomotor ataxy**. The disease is not found in the parents or relatives of the patients. It seems rather to be a primary anomaly in the condition of the spinal cord, and of the nervous system, pointing plainly to an individual weakness of formation, which has ensued either in the act of generation, or during the process of gestation. It is not believed that syphilis is a factor in the development of this disease any more than it is a factor in that of pulmonary tuberculosis, with which it is associated with as great frequency as with locomotor ataxy. Nor is it believed that mere functional troubles, such as the abnormal condition of the reflexes, or slight troubles of muscular coordination in executing difficult movements, develop in every case into the typical form of tabes, but that they may stop at any stage, while the abnormal state of the reflexes remains constant. From this, it is concluded that Westphal's sign cannot be considered characteristic of the entire series of symptoms anatomically represented by so-called gray degeneration of the posterior columns. It is not believed that there is any pathognomonic symptom of tabes, but attention is called to two symptoms that are considered of value in making an early diagnosis. The first is the remarkable increase of the abdominal-wall reflex. It is believed that abdominal or other cutaneous and tendon reflexes are antagonistic phenomena, that this antagonism may serve in doubtful cases as a means of diagnosis, that patients during the first period of locomotor ataxy with loss of the patellar reflex have an unusually marked abdominal reflex, whilst the lack of the latter, along with increased patellar reflex, is indicative of a cerebral lesion, which causes no irritation in the neighborhood of the affected spot. In cases of well-advanced tabes, the reflexes, induced by tickling or firmly and quickly striking the soles of the feet, are generally remarkably vigorous. The second sign, upon which stress is laid, is the behavior of the patient, when asked to rise on his toes, with his eyes closed, and to remain standing. Those in the first period of tabes, with the slightest symptoms of musculotonic troubles, and without any sensible alteration, are not able to execute this act. These two signs, in addition to Westphal's or Robinson's phenomenon, indicate with certainty insufficiency of the musculotonic apparatus. Lightning-pains are considered the first indication of beginning trouble in the tactile sphere. The belief is finally expressed that tonic of the extensors is derived largely from the brain, whilst tonic or excitability of the flexors is derived chiefly from the spine; that there exists in affections of sensory ascending nerves, as well as in those of motor nerves, an antagonism between flexors and extensors, though in an opposite manner; and that there is an antagonism between long and short ascending sensory nerves, as well as between descending tonic and motor nerves.

11.—Skerritt and Stewart report the case of a remarkably healthy young man of 17½ years, who had been studying hard for a year prior to his illness, and had recently passed the examination for admission to the Royal Navy. Two months later he began to grow very drowsy, going to sleep at his meals and while talking to his friends. It became difficult to arouse him from his slumber, as much as ten or fifteen minutes being required on one occasion to awaken him sufficiently to make possible the taking of nourishment. In the period of deepest sleep there was marked priapism, and the hands had to be tied to prevent masturbation. Urine and



feces were voided involuntarily. After about six weeks the man began, while half-awake and half-asleep, to talk incoherently, asking the same question three or four times within a quarter of an hour. His weight, which had fallen off greatly, began slowly to increase. At the end of about two months he sat up for an hour or two daily. He had to be taught how to balance himself standing, and how to walk without falling to one side. There was no mental impairment. The memory was clear with regard to events prior to the beginning of the sleep and to those following after, but there was no knowledge of what had occurred in the intervening period.

**12.**—Strachan considers **alcoholic intemperance** to be in some instances a **neurosis**. It is confined to no class, to no sex, and it is increasing. It is periodic in onset and quite unaccountable in course. As the disease progresses, the intervals of sobriety tend to become shorter. The victim inclines to shrink from observation, and is generally quiet and morose under the influence of alcohol. The taking of stimulants by children in adolescence is a frequent cause of the condition. Women are more susceptible than men. The male subjects are usually of an almost distinctly characteristic nervous temperament; of a genial, kind-hearted, feminine type. Heredity is a strong predisposing cause. The subjects are exceedingly susceptible to alcoholic stimulants. A little produces exhilaration, which is followed by reaction of extreme nervous depression that demands a repetition of the stimulant in order to obtain relief. The second reaction of depression is greater than the first, calling for further stimulation, and thus insuring a continuance of the drinking. The attacks end in severe gastric disturbance and complete nervous prostration, perhaps delirium tremens, on recovery from which the craving has passed away. The only cure or preventive is total abstinence from alcohol.

**13.**—Campbell reports four cases of **obscure intracranial disease**, the first was one of hemiplegia due to the invasion of the cortex of the motor area by tubercle-bacilli, death resulting from general tuberculosis. The second case was one presenting symptoms of tumor of the pituitary body. A necropsy disclosed a pachymeningitis in the region of the sella turcica. The postmortem evidences of swelling of the tissues and consequent filling up of the space were not so great as the symptoms had suggested, probably in consequence of the vascularity of the parts. The third case was in a boy of 15 years. At the autopsy the right half of the brain was found suffused with blood under the pia mater from the rupture of small vessels on the surface; the lateral ventricles, the iter, and the third and fourth ventricles were distended with blood-clot from hemorrhage from the choroid plexus, apparently in the right ventricle. The case is of interest from the rarity of hemorrhage at this age, and from the casual association of hypertrophied left heart, adherent pericardium, and congenital cystic kidneys. The fourth case was one of occlusion of the posterior cerebrals and basilar by two emboli, which first cut off the blood-supply from the perforated space, and later obstructed the basilar. Mitral stenosis existed.

**14.**—Clinch reports a case of **bilateral occipital perencephaly** in a woman who, at the age of 26 years, developed pulmonary tuberculosis complicated by empyema, which was opened and drained. The signs of tuberculosis abated and the mental condition improved. After a year the patient had reverted to her former mental state. At the end of twenty years she had an attack of pneumonia, which stirred up the old tuberculosis, from which she died after a short time. At the necropsy the membranes of the brain were found soft, slightly thickened, opaque, very edematous, and stripping easily. Upon removing the dura mater on the left side a large cyst was revealed having very thin walls. The contained fluid spurted out when the walls were punctured. The cyst rested on the occipital fossa of the skull and replaced most of the occipital lobe. On the right side there was a similar cyst of smaller size. Externally the arachnoid seemed to cover the cysts; internally they were lined by the pia mater, and laterally the pia and arachnoid had fused. They were crossed by vessels and thickened fibers of subarachnoid tissue. The convolutions behind the pia mater were radiate in their arrangement and terminated in the center in a smooth, convex surface, which was made up of compressed nervous tissue and thickened ependyma, which was the termination of the dilated posterior horn of the ven-

tricle. This was the most evident on the left side. Externally these convolutions were continuous with those that lay close to them. The brain was small, edematous, and soft. The optic nerves and tracts were much atrophied. The posterior cerebral arteries were the same size as the superior cerebellum, presenting the appearance of a quadruple division of this vessel. The lungs were tuberculous. The evidence of congenital origin in this case suggests that the anomaly may have been dependent upon a delivery that was tedious and prolonged. There was no evidence of vascular or hemorrhagic origin. There were two important clinical symptoms in the case, internal strabismus and nystagmus, and optic atrophy. These may be localizing symptoms of some importance, as twenty years prior to death the right eye alone deviated.

**15.**—Carr reports a case of **localized pontine lesion** occurring in a woman aged 51 years, who, while engaged in washing, suddenly felt giddy, faint, and fell down. In a few minutes she was able to walk with assistance. There was no loss of consciousness. Speech was at once indistinct; the face was drawn to the right; the right arm and leg were said to be paralyzed. When examined, 15 days later, the woman was unable to walk or stand, but she could sit up or turn over in bed. There was no paralysis of any limb. The plantar reflex could not be obtained on either side. There was paralysis of the internal and external recti muscles on both sides. The left masseter muscle contracted less strongly than the right. There was some loss of painful sensibility on both sides of the face. The seventh nerve was absolutely paralyzed on the left side, with some weakness of the right. The left facial muscles yielded reactions of degeneration and none at all to faradism. On the right side they responded normally to both currents. There was profuse sweating on the right side of the face and more sweating on the right side generally than on the left. The sense of taste was impaired. Deglutition was difficult; articulation indistinct. The tongue was protruded to the left. There was no mental impairment. The patient slowly improved, but the paralysis of the facial and ocular muscles remained entirely unaltered, and she suffered much from headache. At this junction the woman was lost sight of. It is believed that there was but one lesion, and from the bilateral character of the symptoms, the evident involvement of the trunks and nuclei of the sixth, seventh, and, to a less extent, the fifth, eleventh, and twelfth cranial nerves, the lesion is located in the center of the lower part of the pons extending more to the left than to the right of the median line. The sudden onset points strongly to a vascular lesion, either hemorrhage or thrombosis, more likely softening from thrombosis in consequence of atheroma.

**16.**—The prognosis of **intracranial tumors** is unusually grave, as they are all virtually malignant, causing a fatal termination, if not by their destructive influence upon the part invaded, then by the injurious pressure exercised upon the brain itself. Internal medication, except in specific cases, yields at best only palliative results, while surgical interference is indicated in but a small proportion of cases. It is a fair estimate to say that only 7% of cerebral tumors are capable of being dealt with surgically. While operation is not always followed by recovery, the results are, nevertheless, sufficiently beneficial to the patient, in such a large number of cases, as to justify surgical intervention. According to statistics collected by Starr in 1896, the tumor was found in 72 cases and removed, and the patients recovered; while in 35 the patients died. In 48 cases the tumor was not found, and in 7 it was not removed. Thus, of the total number operated upon, the recoveries amount to 44%. These figures are not satisfactory, as they furnish no information as to the permanency of the cure. Ferrier has collected the records of 55 cases reported since 1896. Among these complete recovery ensued in 13%; of those in which the after-history is uncertain and those in which life was prolonged for several months, there were 51 cases of relief or partial recovery; a curative or beneficial result in 64% against death in 36%. The results of cerebral surgery for intracranial tumors, therefore, compare most favorably with many of the other major operations of surgery, *e. g.*, gastroenterostomy, nephrectomy, strangulated hernia, etc. The immediate causes of death are shock, hemorrhage, and sepsis. It has been suggested that shock may be lessened by performing the operation in two sittings. It is well known



that sudden death does occur in cases of cerebral tumor, and it is not difficult to see how the mutability from operation may be affected by such an accident occurring coincidentally or subsequently. Infiltrating tumors, composing a large proportion of intracranial tumors, are likely to recur in spite of the most complete extirpation. Cases have been reported, however, in which after repeated operation the tumors have undergone retrograde metamorphosis. Mistakes in diagnosis are not uncommon. In some cases there is no tumor at all, and in others the attempts at localization have failed. There is, as yet, no method of distinguishing between cortical and subcortical tumors, between the encapsulated and diffuse varieties; nor can it be positively asserted whether function is disturbed on account of a primary invasion of certain areas or as a result of pressure. Despite the uncertainty in the results of diagnosis, operation is indicated as an extirpatory measure, for the risks of operation are less serious than those of delay. Even if the tumor should prove to be inaccessible, or for any reason inoperable, the benefits accruing from the relief of pressure are so pronounced as to warrant such operation. Encapsulated tumors are the most amenable to operation, but unfortunately these are in the great minority; if the tumor is a soft, infiltrating one, with no line of distinct demarcation, no attempt should be made to remove it. Solitary tubercles and gummatous tumors and cicatrices that do not yield to specific treatment are to be regarded as fit for operation. While cerebellar growths are classed by some authorities as inoperable, Ferrier takes the opposite view, based upon a series of experiments on monkeys. The difficulties of exact diagnosis with tumors of the cerebellum are great, and unless there are accessory symptoms it is frequently impossible to make an accurate regional diagnosis. As to the medicinal treatment of all intracranial tumors, a course of vigorous specific treatment is proper in every case before operative measures are considered.

**17.**—Buzzard thinks that **micro-organisms** may exert their influence upon the nervous system either directly, by their presence in the affected parts; or indirectly, by means of the circulation of their toxins. Tetanus and diphtherial paralysis are pointed out as typical examples. It is probable that infantile paralysis is a specific disease due always and only to a particular microorganism, even though there is no evidence of breach of continuity opening an avenue of entrance to the microbe, and no specific microbe can be perceived; and the existence of a toxin is only to be inferred from the clinical symptoms. In support of this opinion reference is made to the occurrence of several large epidemics, and examples from private practice are cited that point distinctly to coincidence of seizure. The statement is made further that it has not been uncommon for infantile palsy to have been preceded by a recognized wound of the skin. Thus far bacteriologic examinations have, however, been negative. The selective action of tonic bodies on the nervous system is a subject of great interest. It is in the district of the anterior spinal arteries that the most destructive effects seem to occur. It is probable from the clinical symptoms that whilst at the onset there is a profound interference with the nutrition of neurons over widely extended area, recovery rather rapidly occurs in such as do not suffer destructive change in their nuclei. If this happens the lesion is permanent. Although sensory neurons are sometimes affected, a resulting destructive change in them is rarely, if ever, observed. In diseases like diphtherial paralysis and chronic alcoholism various portions of the cerebrospinal axis appear in different cases to receive the brunt of the toxic influence. There is a growing opinion that insular sclerosis may be found to depend on an infective agent. The disease, or, at all events, the condition characterized by its pathologic lesions, may show itself as a more or less important sequel of some of the infected fevers. It is certain that some mode of infection would best explain the clinical features and pathologic anatomy of this disease. The frequent and remarkable tendency to more or less long-continued periods of remission of symptoms, followed by a fresh outburst, suggests infective origin. Peripheral neuritis also is probably of infective origin. Myelitis is apparently capable of being caused by a variety of infective agents. Numerous examples of myelitis in which chill or fatigue appears to have been the only notable antecedent to suggest the question whether they may be due

to the action of parasitic bacteria derived, under favoring circumstances, from saprophytes. Tabes is dependent, at least for one factor, upon syphilis. Buzzard relates an experience in which he treated both husband and wife for tabes, the latter having contracted syphilis from the former. There is evidence to the effect that syphilis affects the arterial system along with, but evidently not directly in connection with, fine changes in the cells of the spinal ganglia, which apparently shows that a toxin may induce at one and the same time degeneration in the parenchymatous nerve-substance and coarser changes in the external tissue. This circumstance may possibly have an important bearing upon the pathology of disseminated sclerosis. It may be found that the (assumed) toxin that is the essential cause of disseminated sclerosis may occasion fine degenerative changes in the nervous parenchyma in some localities coincidentally with vascular changes in others.

**18.**—While examining a chest Beevor observed that in **coughing** the *latissimus dorsi* contracted on both sides, causing a powerful expiratory effort, although the textbooks on anatomy describe this muscle as one of inspiration. Beevor gives the following explanation of the double action of this muscle. In the act of expiration a part of the muscle that arises from the iliac crest and the spine compresses the abdominal cavity and assists the expiratory movement, while in inspiration the action is produced by the part of the muscle arising from the three or four lower ribs, elevating them. The unilateral action of the muscle is expanded on the upper limb, and is shown by making the patient adduct to the side of the chest the upper limb placed in a horizontal position, when the muscle acts independently of its fellow on the other side. There are three conditions of action of this muscle: (1) Reflex coughing or sneezing, a bilateral action; (2) voluntary coughing, bilateral; (3) voluntary adduction of humerus, unilateral. In 12 cases of hemiplegia, in 10 of which the unilateral action was lost it was found that in reflex coughing the expiratory action of the *latissimus dorsi* was about equal on the two sides; that in voluntary coughing the action of the *latissimus dorsi* was obtained on the paralyzed side, although frequently diminished or occurring later than on the normal side; and that in all cases the unilateral voluntary action of adducting the shoulder-joint was absent. From the nature of these cases it appears that a lesion of the motor cortex and of the internal capsule will paralyze the opposite *latissimus dorsi* as the unilateral upper-limb muscle, but will not paralyze it when it acts as a bilateral muscle of respiration, even in most cases when this is voluntary. This is explained by the fact that in voluntary movements of the right arm the action can only be produced from one cortex, the left; in voluntary movements of coughing the muscle acts with its fellow of the other side, and can be brought into action either by the right or the left cortex, although it acts strongly through impulses from the cortex. This differentiation is of great importance in diagnosis in separating cerebral lesions from those of the spinal cord and peripheral nerves, and is of especial value in cases in which the arm and the leg of one side are involved without the face.

**20.**—Smyth considers diet and the improvement of nutrition, rest, and exercise, and their right adjustment to febrile and quiescent cases, supervision and regulation of every habit of life, of far higher importance to cases of **pulmonary tuberculosis** than excessive purity of the air they breathe and the amount of sunshine they are able to enjoy, desirable as these factors undoubtedly are. These regulations are only satisfactorily carried out in sanatoria. In the *Nordrach sanatorium* few cases of early tuberculosis are seen. The average length of treatment for all cases is five months. Relapses in patients that were expected to remain well occasionally occur, but they are usually slight. As a patient there Smyth had unusual opportunities of observing its methods. He never saw any prejudicial effects from change of season or bad weather upon the patients, notwithstanding the fact that the winters are very severe. The results of the treatment are the same in winter as in summer, and rapid cures occur in periods of comparatively sunless weather, showing that sunshine is by no means an essential. One is taught at Nordrach the absolute unimportance of the weather, however bad, in the production of a common "cold," which Dr. Walter, the director, believes to be due to an infection somewhat similar to influenza; and also with



regard to the state known as a chill, which, as applied to tuberculous patients, is a definite, though insidious relapse due to over-exertion and marked by pyrexia and increased expectoration. This chill rarely happens at Nordrach, owing to the careful supervision. A fresh, acute "cold" or catarrh is never seen at Nordrach, because the isolation and open-air life render the chance of direct infection practically impossible; nor, for the same reason, are fresh attacks of bronchitis, pleurisy and other complications seen. Drugs are little used. Upon arrival patients are at once encouraged to discard overcoats, mackintoshes, and all heavy clothing, when walking, whatever the season of the year. They may wrap up as much they like, for the sake of comfort, while at rest, provided the windows are left open. No regard is paid to the character of one's boots, nor whether the feet or clothes are wet or dry, nor is wearing of flannel next to the skin insisted upon. No harm need be apprehended from absolutely fearless exposure, so long as over-exertion is avoided. At best, there is always good to be obtained from the free draft. The patient, whose morning-temperature does not keep below  $37^{\circ}\text{C}$ ., and his evening-temperature below  $38^{\circ}\text{C}$ ., is kept in bed, alone in his room, with the window wide open in all weathers. This isolation is insisted upon, to secure absolute rest. After the temperature has been normal for a week, regular exercise, without fatigue, is directed. This is apportioned according to the patient's strength, state of nutrition, temperament, and, above all, with constant regard to temperature. Thus, the quiescent state is never interfered with, but goes on gradually to ultimate rest. The environment of a sanatorium is of far greater importance than meteorologic conditions, and the success of Nordrach is, in some measure, due to the isolation of the sanatorium from towns and traffic. Nordrach's sanatorium is limited to 45 patients, distributed in four houses, of four, five, sixteen, and twenty beds. The friends and relatives of the patients are not allowed to visit them until the latter are fully settled in the new way of life. No effort is made to amuse the patients, and the sanatorium is so located as not to be easy of access. Only three meals a day are given, and yet a much greater improvement of nutrition is brought about there than in other institutions. The statistics are not given, but the percentage of recoveries is stated as much greater than in other sanatoria.

**21.**—Way reports the case of a girl, 2 years of age, who had taken two tablespoonfuls of **camphorated oil**. When seen, about half an hour later, the patient was unconscious, rigid, and deeply cyanosed, with her pupils dilated and her pulse hardly perceptible. A solution containing five grains of zinc sulphate was administered, and ejection of some food recently taken, followed. The child was then placed in a hot bath and cold was applied to her head. The rigidity gradually subsided and consciousness returned. There were no convulsions throughout and there was no after-trouble.

**22.**—A young woman who had taken a **head-ache powder** became faint, and cyanosed, and her pulse was feeble, her extremities cold and numb, and there were other symptoms of collapse. She was successfully treated by stimulants, inhalations of ether and the application of warmth.

**23.**—A primipara who had been in labor three days was delivered by version of a fetus of about seven months, which was found in a transverse position. It had evidently been dead for some time, as the skin was macerated and an opening about an inch in diameter, with ragged edges, was found on the right side just above the iliac crest, which had been caused by pressure against the partly dilated os. The mother made a good recovery.

**25.**—An infant was seized one week after birth with sneezing, coughing, and irritation of the eyes, and two days later the characteristic rash of **measles** appeared. Other children in the house had been suffering from the disease and it is believed that infection occurred at birth.

**26.**—Jones reports the case of a girl, 7 years old, who suffers from two to four attacks of hematemesis a week. Several times there had been decided melena. A slight pinch produced bruising, a pin-prick caused bleeding for twenty-four hours, and after extraction of a tooth there was bleeding for a week. There was no family history of **hemophilia**.

**28.**—A girl, 9 years old, who had had painful and bloody micturition, was found to present a small, rounded swelling, the size of a cherry, around the urethra, which could be

reduced by pressure, but immediately returned when pressure was removed. There were no signs of worms, vesical calculus, or other likely cause. After the trial of astringents, without satisfactory results, it was decided to operate, and, under chloroform, two elliptic portions were removed from the sides of the prolapse and the opposing edges were stitched together. There was no difficulty in micturition after the first day, pain and frequency diminished, and three weeks after the operation the condition was completely relieved.

### Lancet.

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1. The Medical Profession and the State: Their Relationship, Especially with regard to Vaccinal Legislation. JOHN C. McVAIL.
2. Medical Progress. L. A. WEATHERLY.
3. Epidemic Cerebrospinal Meningitis. A. H. WENTWORTH.
4. The Influence of Position in Fractures and Dislocations as shown by a Comparison of these Injuries in Man and Animals. EDRED M. CORNER.
5. Six Cases of Malignant Disease of the Cervix Uteri treated by Vaginal Hysterectomy. FREDERICK J. McCANN.
6. A Case of Cancer of the Pylorus presenting some Unusual Features. J. MICHELL CLARKE.
7. Case of Intraperitoneal Rupture of the Urinary Bladder; Abdominal Section; Suture; Recovery. H. LITTLEWOOD.
8. One Hundred and Thirty Cases of Ringworm observed in the Skin-Department of University College Hospital, London. GEORGE FERNET.
9. A Case of Typhoid Fever in which a Fatal Issue from Extreme Tympanites was Averted by Puncture of the Transverse Colon. J. W. DALGLIESH.
10. Vaccination and Vaccination-Marks. JOHN LOWE.
11. Double Empyema followed by Recovery. W. H. COOKE.
12. A Case of Accidental Overdose of Chloroform. EDWARD LAWRIE.
13. A Simple and Effectual Method of Sterilizing Catgut. A. W. MAYO ROBSON.
14. Van Ermengem's Method of Staining Flagella: A Modification. J. W. W. STEPHENS.
15. A Note on a Case of Sacro-iliac Disease. ARCHIBALD W. CUFF.
16. A Case of Septic Peritonitis; Laparotomy; Recovery. H. W. MILLS.
17. Note on a Case of Oxalic-Acid Poisoning; Recovery. F. J. LORIMER HART.
18. A Case of Chronic Glanders; Recovery. (Under the care of Mr. William Rose.)
19. A Case of Hernia of the Appendix Vermiformis; Operation; Recovery. (Under the care of Mr. William Ernest Good.)

**1.**—McVail calls attention to the fact that the question of **compulsory vaccination** belongs to the State and not to the profession. The State is responsible for the law, but the profession must continue to advise the State aright, and whatever be the law, and even if there be no law, the profession must advise the individual aright. It is more than ever the duty of the medical men to advise revaccination as a supplement to primary vaccination, on account of the present anti-vaccination tendency. Vaccinations done at the present day should be as efficient as possible, to insure "taking." If vaccination and revaccination were universal, small-pox hospitals would be almost or altogether needless, and if they were entirely wanting such hospitals would be almost useless, at least against the epidemic disease. In the intermediate condition, with vaccination and revaccination partly prevalent, hospital-isolation is of the greatest value, and must be a routine part of the procedure with regard alike to sporadic and epidemic disease. Every measure supplementary and complementary, no matter how uncertain, must be utilized. It is the first duty of the profession to use every means to educate the public, who choose the lawmakers, in the very truth about vaccination.

**2.**—While commending the great advances made in **medicine and surgery** Wetherly warns against the evident tendency to apply the manufacturer's tempting pocket-preparations and the placing of too great reliance upon the



various instruments of precision in diagnosis, and the performance of exploratory surgery to the exclusion of giving one's powers of observation a chance of arriving at a right conclusion.

**3.**—Wentworth gives an interesting description of **epidemic cerebro-spinal meningitis**. He considers lumbar puncture one of the most accurate methods of diagnosis practised at the present day. To obtain accurate results great care should be used in the introduction of the needle. Failure to obtain fluid may be owing to the fact that the needle may not enter the spinal canal, that it may be within the spinal canal but outside the dura mater, that it may be in the subarachnoid space but be occluded by a bloodclot or a small particle of skin; it may be in the subarachnoid space, with its point buried in the dura mater on the opposite side; or the lumen of the needle may be obstructed by resting against one of the nerves. These sources of error can be controlled by the use of a wire that is large enough to completely fill the lumen of the needle. If the lumen is shown to be clear by passing the wire and the fluid does not flow upon its withdrawal, the chances are that the needle has not penetrated the dura mater. It should then be withdrawn for a short distance and thrust in again, directing the point more toward the median line. The chief source of error in examining the fluid is reliance upon its microscopic appearance alone. The observation should be fortified by microscopic and bacteriologic examinations. There is no constant and definite relation between the severity of the symptoms and the degree of turbidity of the spinal fluid. There is little or no connection between the number of organisms and the number of cells present in the spinal fluid. In many cases there appears to be a slight connection between the number of organisms found in the spinal fluid and the severity of the disease. Unless a subsequent examination of the spinal fluid is carefully made no deductions as to the presence or absence of meningitis are justified.

**4.**—Corner makes some interesting observations of the **relative frequency of fractures and dislocations in man and animals** as illustrating the effects of the quadrupedal and bipedal positions upon injuries to the skeleton. A diagram accompanies the report, showing the relation to each other of the segments in the fore-leg and hind-leg of a horse. The difference between the bony anatomy of horse and man is pointed out showing why fractures of one bone are more common in man than in the horse and vice versa.

**5.**—McCann reports six cases of **carcinoma of the cervix uteri** operated upon by him by **vaginal hysterectomy**, in five of which recovery apparently ensued. The sixth patient suffered a recurrence and died. Her disease was recognized as adenoma of the cervix of a highly malignant type.

**6.**—Clark reports a case of **carcinoma of the pylorus** in which the symptoms began six months prior to death. The onset was sudden and severe. There was a marked swelling in the epigastrium which gave rise to a peculiar area of tympany closely simulating and leading to the suspicion of subphrenic pneumothorax. The lower ribs on the left side were much bulged out by the epigastric swelling. The apex-beat was pushed upward and inward to the third left intercostal space. Posteriorly on the left side the dullness began at the seventh rib and the lower angle of the scapula, and over this area the breath sounds and vocal resonance were absent. The air entered the upper part of both lungs freely. The liver-dullness ended abruptly in the median line at the right border of the tympanitic swelling. The lower part of the abdomen was not distended. The area of tympany extended upward to the junction of the ensiform cartilage with the sternum in the median line, to the fifth rib in the parasternal line, and to the left as far as the anterior axillary line at the level of the seventh rib. To the right it extended as far as the line joining the nipple with the middle of Poupart's ligament. The left flank was dull. Elsewhere the abdomen was resonant. No tumor could be felt, owing to the distention of the abdomen. Exploratory puncture in the left eighth intercostal space, as later events showed, produced a pneumothorax. Examination after death showed the left pleural cavity to be full of air, but containing no fluid. The stomach was greatly distended, but it lay upward and to the left, instead of extending downward. It occupied the left epigastric region, its lower edge being

at the level of its lower border. It extended under the left lower ribs pushing up the diaphragm to the level of the fourth rib in the mammillary and axillary lines. The tympanitic area was due entirely to the stomach and distended transverse colon, which lay immediately below it. The pylorus was completely surrounded by a firm mass of scirrhous carcinoma, which gave rise to obstruction and dilatation. There was a mass of hard, pale, white retroperitoneal glands infiltrated with carcinoma lying behind the stomach and just above and around the pancreas. This was probably responsible for the upward distention of the stomach.

**7.**—Successful results in the **operative treatment of intraperitoneal rupture of the bladder** depend largely upon early diagnosis. In the case here reported the operation was performed about 36 hours after the injury was sustained, at which time about 3 or 4 pints of urine had accumulated in the peritoneal cavity. The rent in the bladder-wall was closed by 8 or 10 Lembert sutures of catgut, all the vesical coats, with the exception of the mucous membrane, being included. The wound in the bladder-wall healed without any complications, the patient being able to urinate within 6 hours after the operation.

**8.**—Pernet reports the results of a study of **130 cases of ringworm**. In a general way these agreed with those of previous London observers. In cases of small spored ringworm the diseased hairs on the scalp were usually found growing in various directions. Small-spored kerion was not observed. The mycelium in the small-spored fungus was found invading a hair at its root-end. It is believed that the fungus finds its way into the epidermis before the hairs are affected. The abundant segmented and sporulated mycelium was never observed in the case of microsporon Audouini of the scalp. On the body the lesions appear sometimes in distinct rings with a well-defined border and somewhat depressed center. The border was frequently decidedly reddened, and even slightly inflamed. Small-spored tinea circinata was as frequent as tinea circinata due to large-spored fungi. Small-spored tinea tonsurans may rarely be associated with multiple small patches and rings on the body and limbs. The microsporon-form of scalp-ringworm appeared to be more contagious than that of megalosporon-origin. In cases of large-spored ringworm the diseased hairs with tinea tonsurans are usually broken off at or near the level of the scalp, only occasionally projecting beyond it. This form may be most obstinate to treatment. The clinical appearances, both on the scalp and on the body, vary. Two cases of kerion observed belonged to this group, but it could not be ascertained that they were derived from the horse. In tinea sycosis the fungus is not readily found, especially when suppuration is well marked. The varieties of trichophyton megalosporon could not always be differentiated with certainty with the microscope. In reference to the relative frequency of large-spored and small-spored tinea tonsurans, 96 small-spored were found to 4 large-spored. As to the etiology, it was never possible to demonstrate an animal origin. Several of the cases of tinea tonsurans had apparently been contracted in fever-hospitals. The differential diagnosis of large-spored and small-spored ringworm could usually be arrived at on clinical grounds alone, and could nearly always be confirmed by a microscopic examination. Nearly all of the London cases of ringworm of the scalp are small-spored and consequently most obstinate to treatment. Of the remaining rare large-spored cases some are extremely resistant to treatment.

**9.**—Dalgliesh reports a case of **typhoid fever** in which the patient was in a condition of collapse. Abdominal tympanites was most extreme. The transverse colon was distinctly delineated running across the abdomen. The introduction of a long tube through rectum led to copious evacuation of typical pea-soupy fluid, which was horribly offensive. Its removal, however, afforded no relief, so that Southey's trocar and cannula were pushed into the dilated colon. On removing the trocar much gas escaped with a loud, hissing noise, continuing for two minutes. There was immediate relief to the distention and the general condition improved remarkably. The tympanites later recurred to some extent. The patient had one rather profuse intestinal hemorrhage and a series of chills, which responded to quinin. Recovery was eventually complete.

**10.**—Lowe insists upon the use of every means to meet the objections and prejudices of those opposed to **vaccina-**



tion, which can be done by rendering the operation absolutely harmless and painless, so that no possible exception can be taken to its performance, and by fully educating the public in the knowledge of freedom from pain and risk that it secures and to the enormous benefits that follow from it. Lowe believes that vaccination can be effected without producing a mark. The marks are a palpable proof that the operation has been non-antiseptic. They show that the pustular or suppurative stage has been reached, and that the febrile state has been intensified and general irritation set up in the system by the absorption of poison from the pustules, which is not a necessary part of vaccination. To prevent a vesicle that is fully formed from going on to the formation of pus Lowe applies by means of a fine camel's hair brush a solution of pure carbolic acid on the seventh or eighth day, the surrounding skin having been previously protected with salad-oil. A few seconds after this application, tepid water is poured over the spot and a piece of antiseptic wadding is applied and strapped on lightly. The scab separates without a trace of suppuration and, therefore, without leaving the faintest cicatrix. It is not believed that the protective influence of the vaccine is in the least diminished by this treatment.

**11.—Double empyema** is a grave, as well as uncommon, condition. Cooke reports a case in an 11 year old girl, who presented signs of marked dyspnea, with orthopnea. Pleural effusions developed on both sides, and at two successive operations, within a week of one another, the fluid was aspirated, and the cavities drained. That the child should have recovered from this serious condition was remarkable. It is not advisable in cases of double empyema to attack the two sides at the same operation, an interval of a few days or a week being allowed to elapse between the two procedures.

**12.—Lawrie** reports a case in which **accidental overdose of chloroform** was taken in during the struggling stage. The fault of the administration consisted in not giving the patient more air when the struggling became violent and the breathing abnormally deep. The Hyderabad Commission, in explanation of the mechanism of the action of an overdose, claimed that the fall of blood-pressure continuing after the vapor has been removed is probably due to absorption of a portion of the residual chloroform already in the air-passages.

**13.—Robson** recommends the following **method of sterilizing catgut**: The gut, loosely wound on glass reels, is enclosed in a metal cylinder containing xylol, and the cylinder is sterilized in boiling water for from twenty minutes to half an hour. If the catgut is not used at once it may be kept as long as five weeks in methylated spirit.

**14.—Stephens** recommends the following **modification of Van Ermenger's method of staining flagella**. Instead of using silver-nitrate solution, he uses largin, a compound of silver and albumin, which is not precipitated by chlorids or albumin, and contains over 10% of silver. He follows exactly the usual procedure, using as a silver-bath a 2% largin-solution, which will contain about 0.2% of silver.

**15.—Cuff** reports the case of a child, 10 years old, with a distinctly tuberculous history, that presented the classic signs of **sacro-iliac disease**. Under an anesthetic, after turning back a large semilunar flap, exposing the bone, a crown of bone was removed with a trephine from the neighborhood of the base of the inferior posterior iliac spine, just above the upper border of the great sciatic notch, and immediately over the joint. The abscess lay beneath the fascia, and communicated with the joint by a sinus. Another small abscess-cavity, containing granules, and minute fragments of bone and pus was found in the articulation itself. The after-treatment consisted in the injection of iodoform-emulsion, and in the use of iodoform-gauze in packing the cavities. The patient was kept in bed for several months, a long splint being applied on the diseased side for fixation. Seven months after the operation, the patient was able to resume his occupation, and had not shown any signs of recurrence or disability.

**17.—Hart** reports a case of **oxalic-acid poisoning** in a boy, aged 15 years. He saw him 12 minutes after the poison had been swallowed. At this time the patient was unconscious, his skin markedly pallid and clammy, and his extremities cold. The radial pulse could not be felt. The pupils were fairly dilated. The jaw was fixed in tetanic spasm, and froth exuded from between the teeth, the boy

just recovering from a severe convulsion. One-tenth of a grain of apomorphin was injected hypodermically; a stomach siphon-tube was introduced after the jaws had been pressed apart, and a pint of warm water was placed in the stomach, but immediately expelled. Vomiting continued, and consciousness returned. The boy now was given a half ounce of powdered chalk, suspended in water, and this also was shortly ejected. Recovery proceeded under stimulation. The quantity of poison taken was upward of 2½ drams.

**18.—The diagnosis of chronic glanders** in this case was greatly simplified by a definite history, viz., that the disease had existed in several horses among which the patient had been working. The disease manifested itself in the development of three abscesses, one on the forehead, one on the right arm, and the other on the right leg. Despite the extensive and long-continued suppuration the patient's health suffered but little, and the favorable result attained demonstrates the fact that by persistent operation the local poison can be removed. Repeated operations were required on each of the abscesses at various times, all of them showing a marked tendency to burrow beneath the tissues.

**19.—Hernias of the vermiform appendix** almost always occur in women, and if strangulation ensues, the symptoms are unusually severe. Good reports a case in which the patient, a woman, aged 29 years, presented the appearances of an irreducible strangulated femoral hernia. On opening the hernial sac it was found to contain a portion of strangulated and congested appendix, of unusual length, measuring about 7 inches. A double ligature of catgut was applied, and about an inch of the appendix was removed.

#### New York Medical Journal.

October 15, 1898. [Vol. lxviii, No. 16.]

1. A Study of Two Cases of Cerebral Tumor, with a Report of the Results of an Operation in the One and an Autopsy in the Other. ALFRED WIENER.
2. Natural Immunity of the Mucous Membranes of the Respiratory Tract. HENRY L. WAGNER. (*Preliminary Report*.)
3. Leprous Ulcer of the Lip. HENRY L. WAGNER.
4. On the Use of Schleich's Mixtures for Anesthesia in Operations on the Nose and Throat. EMIL MEYER.
5. The Newer Pathology of Locomotor Ataxia, and its Bearing upon Treatment. L. HARRISON METTLER.
6. On the Relationship of the Nose to Diseases of the Skin. WALTER A. WELLS.
7. The Heated-blood Treatment in Connection with Croupous Pneumonia. An Additional Report. CARL E. EINSTROM and AXEL W. GRAFSTROM.
8. Koplik's Spots as an Aid in the Diagnosis of Skin-Lesions. JACOB SOBEL.
9. Obstruction of the Nose and its Influence upon the Human Organism. J. GUTTMAN.
10. Shall Patients be Informed that they have Cancer or Syphilis? C. C. MAPES.

**1.—Wiener** reports two cases of cerebral tumor. The first patient was a man, 21 years of age. He was a seven months' child, was born after a normal labor. His father was alcoholic. From the symptoms a cortical tumor involving the centers for the face and the arm, together with the posterior extremity of the third left frontal convolution, was diagnosed. The slow growth, and the irritative nature, as shown by the diminished reflexes and epilepsy, indicated glioma. Trephining was done over the area representing the centers for speech, the face and the arm centers on the left side, but on account of the profuse bleeding when the scalp and skull were opened the operation was discontinued. The wound was again opened a few days later, and the dura incised, immediately behind which there was a dark-brownish mass occupying the entire opening and in the location diagnosed. Slight manipulation of this mass induced so much hemorrhage that its removal was not attempted. Microscope examination of a portion removed showed it to be but a teleangiectatic glioma. Two months later the patient, though totally blind, was entirely free from headache and epileptic seizures. After six months he presented paresis affecting the right side of the face, and the right upper and lower extremities, with some loss of power



in the left leg and arm. The knee-jerks were present. The patient could perform any movement asked of him, though more slowly than a normal individual. The movements on the right side were ataxic. There was bilateral abducens palsy, more marked on the left. Nystagmus was present in the right eye on looking toward the left. The tongue was protruded straight, but it looked shriveled on the right side. There was slight analgesia on the left side of the face, and there was a constant tendency to fall toward the right side and backward. Constant drooling was present, and words could not be pronounced. The muscular sense was much affected on the right side. Although equally familiar with German and English, the man appeared to understand German better. The tumor had increased in size, although there had been no severe headaches or epileptic seizures. The condition of the patient at this time suggested that the neoplasm had been growing as rapidly within the hemisphere as outside of the skull. The frontal ataxia, the forced laughing, the bilateral abducens palsy and the aphasia all pointed to extensive invasion by this growth. The second patient was a boy, aged 7 years, whose father was alcoholic, and who received a blow over the left fronto-parietal region of the skull one month before coming under observation. The symptoms were supposed to date from this period, but for some months previously the gait had been somewhat awkward, and the child complained of pain in his right leg. Examination disclosed paresis of the two lower branches of the right facial nerve, without any electric change. The tongue was protruded to the right. There was analgesia and slight anesthesia on the right side of the face, with paresis of the left upper and lower extremities and some disturbance of sensation. The knee-jerks were wholly absent on both sides. The left arm and leg were used more than the right. There had been no epileptic seizures. The appearance was apathetic, although the child was fairly intelligent and physically well-developed. He presented bilateral optic neuritis. A diagnosis of tumor was made, and on account of the complete hemiparesis, with partial hemianesthesia, the absence of epileptic seizures and loss of muscular sense, it was thought to be subcortical, and in close proximity to the internal capsule. The location and general symptoms indicated a glioma. Later on the patellar reflexes reappeared and eventually became much exaggerated. Anesthesia and headaches increased. The child staggered like a patient with cerebellar ataxia. The right arm was totally paralyzed. The facial palsy was very marked. The extensive paralysis in the arm and face, the slight involvement of the leg, together with marked pressure-symptoms, led to the belief that, after all, the greater part of the tumor would be found to occupy the centrum ovale. Trephining was decided upon, but was prevented by tonsillitis and a subsequent attack of scarlet fever. Following the scarlet fever the headaches were excruciating. The paralyzed side became contracted, blindness and complete walking impossible. Death resulted after five months, intelligence being preserved to the last. Upon post-mortem examination the convolutions over the left hemisphere were found much flattened. Horizontal sections through the hemispheres disclosed a soft infiltrating tumor occupying most of the left hemisphere. In the upper portion the entire hemisphere appeared to be infiltrated, and in the frontal portion the cortex was encroached upon. In the lower part of the hemisphere the tumor was entirely frontal in location. The centrum ovale, the corpus striatum, and the internal capsule were almost completely destroyed. Here and there in the tumorous mass there were small hemorrhagic areas. The corpus callosum was slightly infiltrated. Microscopically the tumor proved to be a gliosarcoma. The three special points of interest in these cases were: (1) The absence of the knee-jerks in the beginning of the disease; (2) the frontal ataxia; and (3) the etiology. As to the first, the belief is expressed that if the theory that the corticospinal tract exerts a reflex inhibitory influence upon the deep reflexes is accepted, the following explanation will hold: If these fibers are in some way irritated by a mass growing in their midst, the first effect would be an increase of the inhibitory function resulting in either diminution or absence of reflex. As the fibers are gradually destroyed, the inhibitory influence lessens and finally the reflex gradually begins to return, and eventually becomes exaggerated. The frontal ataxia is accepted as

proof that the lesion has encroached upon the frontal lobes. It is due to involvement of the trunk-muscles, which have their cortical representation in this particular portion of the brain. As to the etiology, in both cases the father was alcoholic. In one case the birth was premature and the development was delayed. In another there was a history of trauma, which is not believed to have been connected with the origin of the tumor, as the history shows the existence of at least one symptom prior to the injury. These tumors are thought to owe their existence to some congenital cause, just as do the idiopathic epilepsies, and so forth, frequently observed in the children of alcoholic parents. Trephining is advised even when there is no other hope of success than the relief of the general symptoms.

2.—From his own researches, Wagner concludes that the comparative scantiness of bacteria in the nose is due only to mechanical devices, and that the activity of bacteria, if not too numerous, is checked by a certain biologic process, induced by chemotaxis. With regard to the **natural immunity of the respiratory mucous membranes** he holds that this natural resistance depends principally upon the activity of leukocytes, whose action on bacteria does not consist in their total destruction, but in greatly diminishing their power to form poisonous products, by producing enzymes that are capable of impairing the chemic structure of the bacterial body. These enzymes have apparently no effect upon albumin or albuminoid substances, but they are able at the blood-temperature to convert cane-sugar into glucose, and to increase fluid starch and cellulose; therefore, the cytoplasmatic defense of mucous membranes consists in disabling the foreign cell in its activity either to form poisonous products or to enter their tissues. In other words, the bacteria are slumbering in the mucous membranes, just as similar latent life is seen in the vegetable kingdom, and in this inactive state the bacteria are carried away from the mucous membranes by the secretions and excretions.

3.—Wagner reports a case of **leprous ulcer of the lip** occurring in a middle-aged man, a smoker, who had lived for some years in China, who developed a peculiar dark-brownish ulcer, with some small nodules on his lower lip. The ulcer was painful and thought to be syphilitic, and some portions of it scraped away for microscopic examination were found to contain a large number of lepra-bacilli and innumerable pyogenic cocci. The bacilli were located partly in the cells and partly outside of them. The patient failed to return after this single observation. The case was undoubtedly one of tubero-leprosy, and demonstrates a channel through which this disease may be communicated.

4.—Mayer considers the **Schleich mixture** an almost ideal anesthetic, especially adapted for operations upon the nose and throat. He has employed it in 23 cases with great satisfaction, using, in every instance but two, either the No. 1 or the No. 2 mixture. The absence of violent excitement and rapid return to consciousness, the latter insuring a safeguard against postoperative hemorrhage, are factors that make each of these mixtures especially attractive in operations in the region named.

5.—Mettler sums up the **newer pathology of locomotor ataxia** as follows: There is a lowered vitality of the nervous apparatus, inherited or acquired, resulting in defective nutrition of the neurons. The neurons, whose function subserves the most highly specialized and most recently acquired sense are the first to exhibit signs of malnutrition in parts farthest removed from their affected nutrition-centers in the posterior spinal ganglia, viz.: the cutaneous and spinal-cord arborizations respectively. This conception of the pathology simplifies the treatment and makes the prognosis much more hopeful, provided the diagnosis is made at an early period, before complete degeneration of the neurons and the subsequent sclerosis have taken place. In the modern management of locomotor ataxia all measures that conduce to a restoration of the normal metabolic function of the nerve-cells or neurons should be adopted. Absolute rest in the recumbent posture for several hours a day, the administration of tonics, the withholding of all drugs tending to depress nutrition, conjoined with systematic gentle active and passive exercise, should be adopted. As the nutrition is stimulated by these measures the reconstruction of the nervous apparatus must be looked to. The Frenkel system, consisting of all kinds of light exercise, gymnastics and the doing of things that compel the patient to coordinate his



movements, such as walking along straight and curved lines chalked upon the floor, stepping over a series of equidistant, low, upright slabs, and so forth, should be persistently tried. In the light of its newer pathology, and under rational methods of treatment, applied in accordance with the newer conception of the disease, locomotor ataxia is far from being so hopeless an affection as it was once thought to be.

**6.—The relationship of the nose to diseases of the skin** has been established beyond doubt by both clinical and experimental evidence. Instances in which the skin and the mucous membrane of the upper air-passages are simultaneously involved are numerous, *e. g.*, among the acute infectious fevers, the coryza of measles, the pharyngitis of scarlet fever, and so on. Also in certain constitutional or diathetic diseases, such as leprosy and scurvy, the same sympathy in the pathology of the skin and the respiratory tract is to be found. The explanation of these clinical phenomena has not been finally determined upon; it may be that these structures are seats of predilection for certain diseases. There is another class of cases, however, in which the relationship of the nose to diseases of the skin is clearly one of cause and effect; there is reason to believe that these cutaneous manifestations are of a nasal reflex origin. To this class belong the group of cutaneous diseases known as the angioneuroses, including urticaria, herpes, pemphigus, erythema exudative multifiform, and others.

**7.—Elfstrom and Grafstrom** report two cases of **croupous pneumonia treated by injections of heated blood**. One of the patients died and the other recovered rapidly.

**8.—Sobel** reports a case of measles in which the eruption was irregular, in part suggesting a syphilid. The character of the eruption on the abdomen and thighs being a trifle suggestive of measles, an examination of the buccal mucous membrane was made and the **spots of Koplik** were found in abundance. Further investigation of the case showed the existence of measles in the child's home. There were no catarrhal symptoms, and but slight febrile reaction. In 35 cases of beginning measles in children, Sobel has never erred in basing an early diagnosis upon the existence of Koplik's spots. An extensive investigation of skin-diseases, especially those simulating measles, has convinced him that these spots appear in no other disease. They are absolutely characteristic and pathognomonic of measles. Whatever the history and the symptoms measles can always be diagnosed by the presence of the spots. Even in the eruptive stage, when the rash is fully developed and irregular in type, they still remain reliable. Especial attention is called to the close resemblance between certain violent cases of miliaria and measles. The face may be covered with innumerable papules closely aggregated in patches, and the eyelids may be swollen; the child shuns light, and there may exist symptoms of coryza, accompanied by slight rise of temperature. In cases of this nature the absence of Koplik's spots at once excludes the existence of measles. These spots are small, round, bluish-white, of more or less uniform size and shape, with either a definite area of congestion or a diffuse red background. They never ulcerate, occur on the mucous membrane of the cheeks and lips, rarely on the tongue, and never upon the gums, pharynx, hard or soft palate. The most common seat is opposite the region of the lower molars. The number of spots does not influence the prognosis, nor does it bear any relation to the severity of the attack.

**10.—Mapes** holds it to be the physician's duty to inform patients, who have contracted syphilis, of the true nature of the disease. While, in many cases, such information communicated to the patient's family may cause a disruption of domestic relations, it is unquestionably more important that the community at large should be protected against the danger of innocent inoculation. Greater precaution should be taken with patients having extragenital chancres, and one should not hesitate to urge isolation when thought necessary. It would be better, did the same legislative regulations apply to syphilis and gonorrhea, as apply to other contagious and infectious diseases.

### Medical Record.

October 15, 1898. [Vol. liv, No. 16.]

1. The Functional Neuroses, with Special Reference to Neu-

rasthenia—Its Pathology and Treatment. A. D. ROCKWELL.

2. A Case of Suppurating (Streptococcus) Peritonitis. WILLIAM R. PRYOR.
3. A Case of Fracture-Dislocation of the Cervical Vertebrae—Segments of Vertebrae Wired and Pressure-Symptoms Relieved. A. V. L. BROKAW.
4. Six Abdominal Operations. EDWIN M. COX.
5. Silver and Silver-Salts in Surgery, with Special Relation to Wound-Treatment. WILLIAM SEAMAN BAINBRIDGE.
6. The Relation of Phosphaturia to the Treatment and Prognosis of Fracture. JOSEPH L. HOWELL.

**1.—Rockwell** looks upon **neurasthenia** as a condition in which the nervous system is exceedingly susceptible to fatigue; although the patients are often capable of sustained effort, and may accomplish excellent work, only to collapse later. The nutrition is impaired, and therefore electricity, particularly the static current, is of service. It has been found that tubes filled with iron-filings may, by various influences be changed from conductors to nonconductors of electricity, and it is believed that some similar process occurs in the central nervous system.

**2.—Pryor** states that there are three chief methods of treating **streptococcus-infection** occurring after parturition; the old one with strychnin and alcohol, which has lately been advocated; that with antistreptococcus-serum, and the strictly surgical treatment. He urges the publication of reports of all cases, with the mode of treatment adopted, and he reports an interesting case complicated by endocarditis treated successfully by surgical and stimulating measures.

**3.—Brokaw** reports a case of **fracture of the cervical vertebra**, in which his treatment consisted of rest and fixation, no attempt being made to reduce the existing deformity by manipulation and extension. After six months, there were evidences of pressure upon the cord, as indicated by motor and sensory disturbances in the right and left arms. At the operation, the spine of the fourth cervical vertebra was found to have been fractured and badly united, the spines of the fifth and sixth cervical vertebra to be widely separated, and the ligamentum nuchæ completely severed. Distortion and latent rotation were quite marked. The latter conditions were corrected, and the fractured spines secured in place by silver wire. Recovery was uneventful, the sensory and motor disturbances being entirely relieved, with the exception of partial paralysis of the parts supplied by the ulnar nerve.

**5.—Attention** has been drawn of late from several sources to the **antiseptic value of the silver-salts**, and Credé has, by a series of experiments, explained this antibacterial action. The bacterial secretions, acting upon silver and entering into combination with its oxids, are organic acids, pre-eminently lactic acid; the antiseptic that an infected wound when dressed with metallic silver generates of itself is silver lactate. The preparations that are now used are pure metallic silver, a solution of metallic silver, silver lactate, and silver nitrate. In the Carola Hospital, the home of the silver-treatment, these various silver-preparations have been extensively used, with eminently satisfactory results, both in the preparation of material for sutures and ligatures, as well as of dressings and solutions. Even when a strong solution is employed there is entire absence of systemic effect and, no evidence of local irritation.

**6.—A careful estimation of the amount of phosphoric acid to the urine** and a study of the relations of the alkaline to the earthy salts will supply information of undoubted value to the surgeon in the prognosis and treatment of **fractures**. Howell found in 12 cases of fracture a marked increase in the total quantity of phosphoric acid, and a relative increase in the elimination of earthy phosphates. The conclusions drawn are as follows: (1) During the course of the reparative process after a fracture there is increased elimination of phosphates amounting to decided phosphaturio; there is a large relative increase of the earthy salts in comparison with the alkaline; as the fracture is repaired and the patient is in condition to resume free occupation these abnormal conditions disappear. It might be possible to decide by urinalysis when the patient could walk, or, after he had begun to walk, whether there was any inflammatory trouble in the callus, indicating the need of more rest.



## Medical News.

October 15, 1898. [Vol. lxxiii, No. 16.]

1. Shall Absorbable or Non-absorbable Ligatures and Sutures Be Employed in Hysterectomy and Salpingo-Oophorectomy? CHARLES B. NOBLE.
2. Forcible Straightening of Spinal Curvatures. JOHN RIDLON.
3. Suppurating Ovarian and Intraligamentous Cysts. WILLIAM H. WATHEN.
4. Notes on Surgery in the Recent War. WILLIAM DUFFIELD BELL.
5. Physical Condition of the First United States Cavalry (Rough Riders) at Date of Mustering Out. FRANK DONALDSON.
6. Cornell University Medical College. WM. M. POLK.

1.—During the first eight years of his work in abdominal surgery, Noble employed nonabsorbable **ligatures and sutures**, that is silk and silkworm-gut, exclusively. During the last few years catgut has been used more and more, and nonabsorbable materials relatively less. The results with nonabsorbable ligatures and sutures have been excellent. To secure the best results with silk ligatures certain definite principles must be followed. The ligatures must be sterile, and they can be made so by the method of fractional repeated sterilization. The ligature silk must be fine. If heavy pedicle-ligature is employed abscesses about the pedicle and ligature-sinuses are inevitable in septic cases. This is partly due to the fact that it is more difficult to encapsulate heavy than fine ligatures, and not less to the fact that the temptation to include large masses of tissue in the ligature is irresistible when heavy silk is employed. The use of fine silk, the ligation of small masses of tissue, and careful toilet of the peritoneum, including a careful washing of the pelvis with salt-solution as the final step in the operation, will ensure a minimum percentage of pedicle-abscesses and ligature-sinuses, when silk is employed. Pedicle-abscesses and ligature-sinuses were more common in the old days, when drainage was frequently employed. Noble contends that the risk of secondary hemorrhage from the use of catgut ligatures is slight, and that it may be reduced to the minimum by the intelligent use of the ligatures. The ligation of the isolated vessels affords the greatest security against secondary hemorrhage.

2.—Ridlon publishes a preliminary report of his experiences with **forcible straightening of spinal curvatures**. He has operated upon 16 cases of spondylitis, 7 cases of scoliosis, and of 1 rachitic curvature. Taking into consideration all of the cases of spondylitis, 4 had demonstrable abscesses, 1 had an old sinus, and 1 had paraplegia. No harm appears to have resulted from the abscess-complication, and the paraplegia appears to have been distinctly benefited. Pressure under the plaster-dressings occurred frequently. Only two patients have as yet been allowed to get up and walk around, one in a plaster-jacket, and one with a spinal brace. In no case as yet has reliable bony solidification been obtained at the point of disease.

3.—An **ovarian tumor** may, in consequence of torsion of the pedicle, have its circulation cut off to such an extent that its vitality is destroyed, and gangrene, suppuration, and death may ensue unless adhesions are so extensive as to furnish a sufficient supply of blood to the parts. Other suppurating tumors result from the passage of pathogenic germs from the bowel through the walls of the tumor. These germs are the pyogenic cocci, such as the streptococcus and more frequently the bacillus coli communis. Wathen reports five cases in which the suppuration in the tumor was undoubtedly the result of penetration of the tumor walls by such germs from the intestines.

5.—Donaldson, who was on duty with the Rough Riders as an assistant surgeon, states that there was no fault found with the condition of the camp or the troopers of his regiment of cavalry. Judging from their experiences in Cuba he believes that the Surgeon-General should return to the old system of regimental hospitals, for had they one such during the engagement there, much suffering and probably several lives would have been saved. When mustered out at Montauk Point there were but 30 out of the 1,200 men constituting the entire regiment, who were unable to be present. These figures are quoted as illustrating the condition in

which the men found themselves after their service in Cuba. Attention is called to the ill-effects of quinin upon those patients who had seen service out of the country. Quinin employed in the low form of malaria, with which most of the men were afflicted, often associated with gastric and intestinal trouble, usually induced severe vomiting. The treatment of these cases consists essentially in stimulating the digestive apparatus, and in proper feeding.

## Boston Medical and Surgical Journal.

October, 1898. [Vol. cxxxix, No. 15.]

1. The Physician and his Surroundings. J. S. GREENE.
2. The Abuse of Medical Charities. JAMES C. WHITE.
3. Round Shoulders. ROBERT W. LOVETT.
4. Two Cases of Claustrophobia. ALBERT N. BLODGETT.
5. On the Dissemination of the Tubercle-bacillus in Coughing. J. J. CURRY.
6. Poisoning from Headache-powders. ROBERT W. GREENLEAF.

2.—White is inclined to believe that the **abuse of medical charities** is much less common than is ordinarily supposed. In the dispensaries connected with educational institutions it should be definitely understood by the public and the profession that those seeking advice, on account of the reputation and skill of the teachers on the staff, should permit themselves, as a proper return for such advice, to be used for the purposes of clinical teaching, and they should be made to feel that an obligation on their part has been incurred, and has been thus honestly and fitly paid.

3.—From a careful study of a number of cases of the condition commonly known as **round shoulders**, Lovett has observed certain other conditions so commonly associated therewith that he recommends the term **faulty attitude**, as being more accurate. The majority of his patients were between the ages of 6 and 10; they were mostly thin and pale, and had, as a rule, grown rapidly; they were of a nervous type and usually clumsy, that is unsteady in their finely coordinated muscular movements. There were four elements that were found almost constantly in each of the cases of so-called round shoulders: drooping of the shoulders and prominent scapulae, prominent abdomen with lax walls, slight lateral deviation of the spine, and pronated feet. The treatment must be both local and general, the local treatment including exercise directed toward the development of the faulty muscles, and if necessary a brace; while the general treatment should include more careful regulation of the daily routine, with the administration of such internal remedies as seem to be indicated.

4.—Blodgett reports two cases of **claustrophobia**. The first patient was a man, aged 31 years. There was nothing of note in his family or previous history. He complained of a sensation of indefinable distress, apprehension, discomfort in the epigastrium, giddiness, and a feeling of uncertainty in walking or standing without any known reason. In an unusually severe attack under excitement he fell to the floor unconscious. He was unable to attend church, to go to a party, to the theater, or to an assembly of any kind without having the most distressing sensation of apprehension and uncertainty, which was so overpowering that he was compelled to seek the open air, when immediate relief was obtained. If escape was not possible, he lost consciousness. He was active in athletic sports, enjoyed life, was jolly, and showed no inclination to melancholy. The second case occurred in a man, aged 59 years. There was nothing peculiar in his family-history. He had always been of a nervous temperament. About ten years ago he became restless, typically neurasthenic, and moderately melancholic. For five years he has possessed a fear of enclosed spaces, which has reached such a degree that he can scarcely be persuaded to remain indoors, oftentimes not remaining long enough to eat his meals. He never attends church nor calls on his friends, and it is with the greatest effort that he can enter the business-houses to which his duties call him. He is irritable and capricious, and has lost ten pounds in weight within a year. He is somewhat emotional. His countenance has a blank aspect. His digestion is occasionally disturbed. His mental condition is slowly but steadily becoming worse. Blodgett fails to classify or to explain the origin of these



cases. They should not be considered either hysterical or insane, as is sometimes done. He formulates the idea that these various forms or different functional psychic disturbances constitute the mental equivalent of the various physical or motor functional neuroses, such as writers' cramp, and so on, which are evidently also due to some disturbance of the nervous system, the result of which is a greater or less degree of motor incoordination, and the pathology of which is equally obscure.

5.—Curry has attempted to carry out the suggestion of Flüge relative to the **bacteriologic examination of the drops from coughing patients** caught upon the surface of glass plates suspended in front of them, the observations to be made at various hours of the day, and the plates to be held at various distances. He also undertook an examination of the mouth-fluid of 12 tuberculous patients, owing to the fact that this fluid is better adapted to the formation of fine drops than is the tough sputum. The sputum in all contained tubercle-bacilli, which were found in the mouth-fluid in only nine, at some hour of the day and usually only in small numbers. In 3 cases many bacilli were found at nearly every examination. Examinations were made morning, noon, and night, and the bacilli were most plentiful in the early morning. In 3 of the cases it was only after a long search that tubercle-bacilli were discovered. On plate-examination one-half of the cases yielded negative results, all of these patients having a low cough and keeping the lips closed during coughing. In the 6 positive cases each patient had a loud cough, and kept the mouth open during coughing. Two kinds of drops were noted on the plates: fine drops, some of which were found with difficulty on stained slides containing chiefly mouth-fluid; and larger drops, from 1 to 5 mm. in diameter, which apparently came from the trachea. The latter presented microscopically the same appearance as a small drop of sputa. These drops contained the bacilli most frequently, while the small drops contained them only occasionally. Curry is inclined to believe that Flüge has greatly exaggerated the danger of disseminating tubercle-bacilli through the medium of these small drops floating in the atmosphere. In the first place, only a comparatively small part contain bacilli, and such small drops readily become dried and then act in the same manner as so much tuberculous infected dust.

6.—See page 806.

### Journal of the American Medical Association.

October 15, 1898. [Vol. xxxi, No. 16.]

1. The Evolution of Specialism in Medicine. CHARLES A. L. REED.
2. A Contribution to the Pharmacology of Cannabis Indica. C. R. MARSHALL.
3. The Therapeutical Economics of Open Composition. ALBERT B. PRESCOTT.
4. The Modern Intestinal Antiseptics and Astringents. WILLIAM FANKHAUER.
5. The Medicinal Treatment of Some Digestive Diseases. A. L. BENEDICT.
6. The Treatment of Heart-Disease by Saline Baths and Resisted Movements (Schott Method). CHARLES LYMAN GREENE.
7. Notes on Typhoid Fever. J. P. BARBER.
8. Climatic- vs. Serum-Treatment of Pulmonary Tuberculosis. F. E. WAXHAM.
9. A Few Considerations Regarding Climatic Change and Pulmonary Tuberculosis. S. G. BONNEY.
10. Accidents in Eye-Operations. F. C. HEATH.
11. An Inexpensive 60-Lens Ophthalmoscope, without Reflex-Disc. GEORGE M. GOULD.
12. Demonstration of an "Autofundoscope." GEORGE M. GOULD.
13. Therapeutic Value of Some Medicinal Agents in Physical Diseases and Some Psychical Troubles. T. B. GREENLEY.
14. The Sulphocarbolates. WILLIAM F. WAUGH.
15. Incompatibles. E. A. RUDDIMAN.
16. Glandular Extract. ISAAC OTT.
17. The Wounded of the Porto Rican Campaign. N. SENN.

### 18. Colpoperineorrhaphy and the Structures Involved. BYRON ROBINSON. (Continued.)

2.—By extraction with organic solvents and subsequent fractional distillation there have been isolated from **cannabis Indica** a monoterpene and a sesquiterpene, a crystalline paraffin, an indistillable pitch, and a resinous body—cannabinol. From experiments on animals and on himself, Marshall has determined that that cannabinol is the most active ingredient. The residual *pitch*, when dissolved in oil, was active, but much less so than cannabinol. The cause of the occasional inactivity of Indian hemp was determined to be due, probably, to the oxidation of the active ingredient, cannabinol. The limitation of the oxidation to the superficial layers probably explains many of the accidents occurring in practice. If the preparation has been long in stock and imperfectly protected, these may have become comparatively inert, and scarcely any effect may be produced, while a renewal of the prescription from deeper parts may produce marked effects. The variation in activity of the preparations of Indian hemp will not, however, account for all the differences in effect produced. A difference in individual susceptibility also exists. It is probable that certain types of men are more susceptible than others, and that certain habits, such as the alcoholic, have an inhibiting influence in this direction. The cannabis-preparations were found to be, for all practical purposes, insoluble in water, also in weak acids, and but slightly soluble in weak alkaline solutions. It is therefore probable that the cannabis-resin is absorbed under the influence of the alkaline juices of the upper part of the intestine. Cannabinol has an unimportant influence on the organs of circulation and digestion, but its main action is on the nervous system, and probably on the cerebral cells. Therapeutically, cannabinol is likely to be a valuable hypnotic. It is purer and more reliable than the cannabis-preparations on the market, but it does not appear to possess any other advantages over them. It is not a powerful cerebral depressant and belongs rather to the substances termed "sleep-producers" than "sleep-forcers." Owing to its comparative insolubility its action is prolonged, and this leads to depression. Its advantages are, that its lethal dose is considerable; it does not inhibit secretory activity; and it does not readily induce habituation. Its disadvantages are, the excitement produced by early doses and the depression that follows its use. It appears to be a slight analgesic, but how far its activity goes in this direction it is impossible, in the absence of experiments in which pain is present, to say.

4.—A somewhat extensive review of the opinions of various medical writers on recently introduced **intestinal antiseptics and astringents**.

6.—Greene discusses the method of **treating heart-disease by saline baths and resisted movements** as proposed by Schott, and expresses the belief that strict adherence to the plan is not essential. The important features are warmth and moisture, and excellent results are obtained without the use of any ingredient in the bath save the salt, which prevents chilling and acts as a cutaneous stimulant. The effect of baths is more permanent than is that of the movements, but both should be used, the movements in the morning and the baths at night. The class of cases best adapted to treatment are those of mitral disease, particularly regurgitation, even if advanced, and all cases of slight incompen-sation, in which marked arteriosclerosis and myocarditis are not present. Greene has not found the treatment of as much value in cases of disease of the aortic valves. The movements are considered beneficial, but the baths distinctly dangerous in cases of aneurysm, marked arteriosclerosis, chronic myocarditis and chronic nephritis. Patients should be immersed to the chin in water, never hot; voluntary movements should be avoided during and after the bath, and very sick patients should be invariably watched by a skilled attendant. Cases of extreme incompen-sation are best treated at the outset by rest in bed, and the usual remedies; they will almost always show marked improvement, and when this improvement begins to flag one may begin the baths and use the exercise with slight daily increase in the resistance. The method of treatment described is to be carried out in conjunction with the use of therapeutic measures, and is believed to be one of the most important adjuncts to the successful treatment of heart-disease.

[To be concluded.]



## Original Articles.

### THE RADICAL CURE OF INGUINAL HERNIA. SOME POINTS IN TECHNIC. REPORT OF CASES OPERATED UPON BY THE AUTHOR'S METHOD.

By J. COPLIN STINSON, M.D., C.M.,

of San Francisco, Cal.

It must be remembered at the onset that the rings and canal are only potential. They do not exist as rings and canal in the normal condition. The canal<sup>1</sup> is merely an oblique slit, flattened from above downward, curving around the pelvic bone, for the passage of the spermatic cord, and the rings are intimately blended with the structures which pass through and fill them. The external ring is an oblique slit in the external oblique aponeurosis, and under normal conditions will not admit, in addition to the cord, the tip of the finger. In studying the inguinal canal,<sup>2</sup> in order to understand it, we must throw aside and avoid all such expressions as the anterior and posterior walls, and the inner and outer borders of the canal, as they serve only to confuse and complicate the subject. The only boundaries that should be named are the floor and the roof, which are close together. *The floor* is formed by the meeting of the transversalis fascia with Poupart's ligament; *the roof* by the union of the internal oblique and transversalis with Poupart's ligament, the apposition of the conjoined tendon with Poupart's, and the inner and outer limbs of the transversalis fascia. The internal inguinal ring is merely a funnel-shaped expansion of the transversalis fascia which the cord carries on it. This expansion may be weakened, but it is never an opening except when made so artificially. When the internal ring is examined from inside the abdomen (after the removal of the peritoneum and the subserous fat) it appears as a crescentic edge, over which, close to the pubic bone, turns the spermatic cord. The transversalis fascia in this region is stronger and more developed than in others, and consists, in most cases, of bundles of firm and almost tendinous fibers. A well-marked band passes along parallel with Poupart's ligament, and spreads out toward the anterior superior spine. This is called the outer limb of the internal ring, or the outer portion of the transversalis fascia. Another band of fibers, like that just described, proceeds from near the angle between the rectus and pubis, turns upwards as it approaches the internal ring and forms its inner boundary. This is the internal limb of the internal ring, or the inner portion of the transversalis fascia.<sup>3</sup> The spermatic cord passes through the external ring, and entering the canal runs obliquely upward, backward, and outward, to the internal ring, curves around

the pubic bone, close to the iliopubic suture, and entering the pelvis passes down to the base of the bladder. A protrusion in passing through the abdominal wall in the inguinal region carries before it the peritoneum and the subserous fat, but tears asunder the inner and outer borders of the transversalis fascia, displaces the conjoined tendon to the inner side, Poupart's ligament to the outer, separates the internal oblique and the transversalis in part of their attachment from Poupart's ligament, and the inner from the outer pillar of the external ring.

In deciding on an operation for the cure of inguinal hernia, the problem is to restore the structures durably to their normal positions, relations, and uses. Keeping this, the true solution, clearly before us, we have the key to the situation. I believe, if these fundamental principles are adhered to in operating on our cases of hernia, that in the immense majority of cases the patients will be permanently cured. The operative treatment of hernia is regarded by some with slight disfavor. This I can say is due to the bad results obtained by those surgeons whose technic is imperfect or whose operations are incomplete or illogical and unscientific. Sepsis is the explanation of all surgical accidents, and I am sure that if an aseptic wound becomes infected, every possible antiseptic and aseptic precaution has not been carried out. In earlier papers I reported<sup>4</sup> 85 operative cases of inguinal hernia, gave an analysis of the cases, the methods employed, and the results obtained. I stated that an operation to be followed by a permanent cure should fulfil the following conditions: 1. Cause total obliteration of the sac. 2. Allow for the safe transmission of the cord and its structure, *i. e.*, the cord should not be subject to pressure in any part of its course, and the operation should not be followed by pain, thickening, or inflammation of the cord, or in any other manner interfere with its functions. 3. Not result in inflammation, atrophy, sloughing, etc., of the testicle. 4. Close durably the breach in the abdominal wall.

I then described an operation<sup>5</sup> which I considered fulfilled these indications and overcame the objections to all the other methods of operation hitherto described. Briefly the steps of the operation are as follows:

An incision is made parallel with, and one-half an inch above, Poupart's ligament from the external ring to one-half an inch above the upper angle of the dilated internal ring, dividing the skin, subcutaneous tissues and the external oblique aponeurosis. The latter is lifted and freed from the structures beneath, till the outer border of the rectus and the shelving edges of Poupart's ligament are clearly seen. The sac is isolated, opened, and the contents cleared out, removing all altered omentum. All adhesions internally and externally are separated. Next the sac its neck, and as high as possible, the peritoneum continuous with it, are removed and the cut edges of the serosa closed with continuous sutures. The rings and canal are cleared of all masses of fat, glands, and adhesions, and all such masses that bulge into the internal ring from the subperitoneal tissue are also removed. Any markedly varicose veins of the cord are ex-

<sup>1</sup> The Surgical Anatomy of the Transversalis Fascia, etc., *Med. Rec.*, Dec. 5, 1896. <sup>2</sup> Radical Cure of the Inguinal Hernia, etc., in the *Proc. Med. Assoc.*, Jan., 1879, and read before the San Francisco County Medical Society, Nov. 10, 1896. <sup>3</sup> Preferable Operation for Femoral Hernia, etc., *Med. R.*

<sup>4</sup> *Med. Rec.*, March, 1896.

closed high up within the internal ring. The dilated internal ring is sutured. Commencing at the upper angle, bring the inner and outer borders of the transversalis fascia accurately together with continuous sutures, leaving only sufficient room at the lower angle close to the pubic bone for the cord. The internal ring is reinforced and the canal closed by uniting with continuous sutures the internal oblique and the transversalis and their conjoined tendon to the shelving edge of Poupert's ligament, leaving only room enough next to the pubic bone for the cord. Suture the cut edges of the external oblique, and the pillars of the external ring which are made to snugly embrace the cord. Finally the cut edges of the skin are closed without drainage.

Sterilized gauze is held firmly in place by long strips of adhesive plaster, then a layer of cotton and firm spica bandages. Dress the wound on the seventh day, or earlier if there are indications. Apply dressing, etc., as before, and keep the patient in bed two weeks or longer, if possible. If primary union is not obtained do not allow the patient out of bed till cicatrization is complete. The firm dressings and bandages are removed one month after the operation, when the patient is allowed to go without any pad or truss.

When the adhesions between the sac and the cord are firm it is advisable to open the sac first. This saves time, as the limitations of the sac can be more readily defined and the adhesion more easily and quickly separated. The sac in congenital inguinal hernia requires special treatment. This form of hernia is rare in adults. The sac in this form being continuous with the tunica vaginalis testis cannot be dissected out and removed in its entirety, hence it should be separated from the surrounding structures and then divided transversely above the testicle, care being taken to avoid injury of the cord. The lower half is dealt with first. The excess of the tunica vaginalis is trimmed away and the cut edges united with continuous sutures of fine catgut. Sufficient of the tunic should be left to allow of the free movement of the testicle, then the upper portion of the sac, its neck, and as high as possible the peritoneum continuous with it, are removed and the cut edges of the serosa united with continuous fine catgut sutures, as I have described in other forms of hernia. This was the method used with the sac in a case I have operated upon in October, 1896, of a man aged 31 years.

In removing the sac and the peritoneum continuous with its neck, usually  $1\frac{1}{2}$  in. or more of the serosa above the neck of the sac can be drawn down with the forceps and removed. In removing omentum it is perfectly safe to ligate the vessels only. This does away with numerous and mass-ligatures, omental stumps, and lumps of fat constricted by ligatures. To insure the ligatures from slipping off I use the "fixation ligature." The vessel to be tied is defined by spreading out the omentum, and a curved needle carrying the catgut is passed around the artery or vein by piercing the tissue of the omentum immediately surrounding the vessel. The ligature is then tied in a reef-knot and the vessel severed beyond the ligature. By this means the ligature is fixed in the omentum. In closing the different layers of the wound a continuous stitch should be used. The most suitable continuous stitch in use at present is the single knot, and double or reef-knot continuous stitch, described by Dr. C. Ford,<sup>6</sup> of San Francisco. I used the first half of the stitch to close the internal ring, to unite the cut external oblique aponeuroses, etc., but to reinforce the internal ring and close the canal I used it complete. Three stitches to the inch should be inserted to accurately approximate the edges. For passing the stitches we should use needles that can be quickly threaded, easily handled without a holder, and that readily penetrate the tissue without contusion or producing hemorrhage. I find that a moderately fine, curved Hagedorn needle, about  $2\frac{1}{2}$  in. long, with the curve corresponding to the quarter of a circle, answers best for introducing the buried sutures. In fat patients a needle with the curve corresponding to the half of a circle should be used for the deeper layers, while a very fine straight Hagedorn is best for the skin. Primary, firm, and durable union should be regarded of first importance in our operations, hence the buried suture and ligature materials are of prime importance. Many failures in hernia-cases are due to the use of sutures, *e. g.*, ordinary catgut and tendon, that are absorbed before the union is firm and durable; to the use of

non-absorbable sutures; or not suturing each of the layers separately and thus accurately. The structures dealt with in hernia-operations are in the main tendinous and fibrous, requiring several weeks for durable union. Non-absorbable materials, *e. g.*, silk, wire, silk-worm gut, etc., should not be used as buried sutures and ligatures, as they all, at times, even when the wounds heal by primary union, act as foreign bodies, work their way to the surface, and form slow-healing, painful, and troublesome sinuses. Cases have been observed in which<sup>7</sup> patients have been incapacitated for weeks and months on account of sinus-formation. At times repeated operations have to be done to remove the ligatures or sutures, and still later second operations to cure the hernia. In earlier articles<sup>8</sup> I reported cases in which sinuses formed following the employment of silk, silver wire and worm-gut as buried sutures. In addition I reported one case in which sinuses formed following the use of too heavy chromicized catgut. Chromicized tendon<sup>9</sup> is the most suitable material for a buried suture, as it is non-irritating, and when well chromicized is not absorbed for two or three months, when it is replaced by fibrous tissue. To ligate vessels and close the peritoneum I use fine catgut, for the skin fine catgut or silk.

The catgut I use I prepare myself. In earlier papers<sup>10</sup> I described a method of sterilizing and storing catgut which has proved to be absolutely reliable. In passing I may state that two sizes of catgut are all one needs, Nos. 25 and 20, according to the American wire-gauge system.<sup>11</sup> The fine catgut to be used for the skin, peritoneum, ligating vessels, etc., the other chromicized, in the absence of chromicized tendon to be used as buried sutures, for the other layers. The preferable form of catgut is that put up in bowlines,<sup>12</sup> each about one yard long and rolled separately in bunches.<sup>13</sup> I select bowlines because they are more easily prepared and more handy to manipulate in operations. Before the operation a sufficient number of the lines can be removed with sterilized forceps from the storage bottle without infecting the rest of the gut.

To Prepare the Catgut:—1. Place the bowlines in ether for several days to remove the fat. 2. Change to a sterilized vessel containing 1 to 4,000 corrosive sublimate in pure ether,<sup>14</sup> in which the gut is kept one week, to disinfect the gut. To complete the process, and have the material in the most suitable fluid, place the gut in a sterilized bottle with a screw or other air-tight top. Pour in ordinary alcohol to more than cover gut. The alcohol should fill only half the bottle. Stand the bottle in water which reaches nearly to the lower edge of screw top. In order not to take a chance of breaking the bottle, stand it on a folded towel placed in the bottom of the vessel containing the water, which is heated to the boiling-point. When the air is driven from the bottle by the boiling alcohol, screw down the top tightly. It takes a couple of minutes to drive off the air. Leave the sealed bottle in the water at the boiling point for fifteen minutes. At the lapse of the time the bottle is removed, allowed to cool, and then the gut is ready for use. There is no danger of an explosion with the top screwed down tightly. If one wishes to chromicize the gut, then, after removing it from the bichlorid ether solution, place it in an alcoholic solution of potassium bichromate made as follows: Take 15 gr. of potassium bichromate,<sup>15</sup> dissolve it in an ounce or so of sterilized water, add the chromate solution to a pint of ordinary alcohol (sterilized). Leave the gut in this solution till it is a golden color (usually about 24 hours are sufficient), when it is removed and placed in a sterilized basin and sun-dried, which takes a couple of days or longer. The gut is then placed in

<sup>7</sup> Disadvantages of Non-absorbable Suture in Operations for the Radical Cure of Hernia. W. B. Coley, *N. Y. Med. Jour.*, Feb. 29, 1896. <sup>8</sup> *Med. Rec.*, March, 1896. *Charlotte Med. Jour.*, Nov., 1896. <sup>9</sup> The chromicized tendons I have used with such good results for five years were sterilized by Messrs. Van Horn & Ellison, of New York. <sup>10</sup> *Charlotte Med. Jour.*, May, 1896. *Pacific Med. Jour.*, Jan., 1897. <sup>11</sup> System Introduced into Surgery by Robert T. Morris in his lectures on Appendicitis, etc., at the N. Y. Post-Graduate Medical School and Hospital. <sup>12</sup> Bowlines were first used as a routine in surgery, by Robert T. Morris, New York. <sup>13</sup> As sold by Keller, Nassau Street, New York. <sup>14</sup> The amount of corrosive sublimate in a pint of pure ether used by the writer is in the proportion recommended by R. T. Morris in his lectures on Appendicitis, etc., at the New York Post-Graduate Medical School and Hospital. <sup>15</sup> The amount of bichromate of potash in a pint of the tanning fluid used by the writer is in the proportion recommended by Robert T. Morris in his lectures on Appendicitis etc., at the N. Y. Post-Graduate Medical School and Hospital.

<sup>6</sup> The interrupted stitch by a continuous method, *Penn. Med. Jour.*, July, 1896.



a sterilized bottle with an airtight top, alcohol is poured in to more than cover the gut, and boiled as already described. The gut is sun-dried to get the same effect which is obtained in the process of tanning hides. The bichromate of potash penetrates the tissues of the gut and become so intimately associated with the fibrils that it is not dissolved out by heat and solutions. Only a comparatively short portion of the surgeon's time is engaged during the processes described, in return for which he has an absolutely sterilized material. The tendons, catgut, and silk I use during operations are placed immediately before them, between sterilized folded towels wrung out of 1 to 500 mercuric chlorid solution.

During the past few years many methods of operation have been described and used for the cure of inguinal hernia. At the present time one sees this surgeon using an incomplete method; that surgeon an operation involving the principles of cicatricial tissue forming a barrier; another introducing extraneous materials, *e. g.*, loops of wire, wire fences, nonabsorbable sutures, bone-plugs, etc., into the rings and canal; another displacing and disarranging the structures, and still another, an operation involving the principles of restoring the structures durably to their normal positions and uses. Reviewing these operations the question arises, which is the best to adopt? We can only arrive at the very best conclusions on this matter by reviewing these several methods of operation, keeping in mind the point to determine the choice which fulfils all the indications for a permanent cure. In the article on the treatment of inguinal hernia in "Dennis' System of Surgery," vol. iv, published 1896, the authors, Drs. Bull and Coley, stated that the principles upon which modern operations for inguinal hernia are based are the following: 1. Simple ligation of the sac and extirpation (Socin). 2. Ligation of the sac and suture of canal (Czerny, Banks, Barker, Championnière, McCormac). 3. Infolding of the sac and suture of canal (Macewen). 4. Torsion of the sac in canal (Ball). 5. Torsion of the sac and suture of canal, with the sac external to the aponeurosis of the external oblique (Kocher). 6. High ligation of the sac and suture of canal after displacement of the cord (Bassini, Marcy, Halsted). 7. High ligation of the sac and closure of the canal by cicatricial plug; the wound being allowed to heal by granulation (McBurney). To these I add the method I have described, the principles of which are: 8. (a) Supracorrection of the peritoneum by removing the sac, its neck, and, as high as possible, the peritoneum continuous with it, and closure of the cut edges of the serosa with continuous sutures; (b) suture of the internal ring, placing the cord close to the pubic bone; (c) reinforcement of the internal ring and closure of the canal by uniting the contiguous muscles and their conjoined tendon to Poupart's ligament, (d) suture of pillars of external ring.

I shall review the following operations: Bassini's, Halsted's, Macewen's, Kocher's, and the operation I have described, and in so doing the advantages and objections to the other methods not reviewed will be clearly shown.

Bassini's and Halsted's methods are so nearly identical that they may be taken together. Bassini displaces the cord to the upper angle of the dilated internal ring, near the anterior superior spine, the cord finding its way down beneath the external oblique aponeurosis, between the two layers of buried sutures, while Halsted displaces the cord 2 cm. further out, nearer the anterior superior spine, between the edges of freshly cut muscular layers, the cord finding its way down beneath the skin between the layer of buried and skin sutures. Halsted also excises in the canal what he designates as superfluous veins of the cord. In both these operations the spermatic cord, through being displaced, is shortened, and on the stretch; from its new relations, it is subject to pressure, muscular contraction, and the liability of adhesions to surrounding structures from the new internal to the new external ring; thus the functions of the nerves and vessels of the cord and the cord proper are interfered with, and following these operations there may be thickening, swelling, tenderness, or inflammation of the cord; and swelling, inflammation, sloughing, hypertrophy or atrophy of the testicle. Thickening and swelling of the cord I have frequently seen follow the Bassini operation. The spermatic cord is put on such a stretch that it is subject to the continuous traction of the bladder on the one hand and the testicle on the other, and there is no doubt with this traction, aided by gravitation, that the cord will find its way back to its normal position. The higher the cord is transplanted and the internal ring displaced, the nearer they are to parietal peritoneum, intestine, omentum, etc., and thus by contiguity relapse is favored. Disturbances of the bladder, scrotum, etc., follow these operations. No immediate and very little remote benefit is derived by excision of veins of the cord in the canal, as this does not materially reduce the size of the cord at the internal ring, where the breach first occurs. The neck of the sack should not be tied off. The ligature is liable to slip, and in tying the knots a piece of omentum or bowel is liable to be included, giving rise to adhesion, obstruction, etc. Ligation also leaves a pouch in the peritoneum and causes puckering of the serosa, which favors the formation of adhesions between the parietal and visceral layers. A single layer of buried sutures, or two layers with the cord interposed, is objectionable. The edges of the different layers, not being brought accurately together, overlap, become irregularly matted together and adherent to one another, and thus the union which results is liable to be weak and evanescent. Halsted has more relapses than Bassini. This is easily explained, as the former displaces the cord higher and uses one layer of buried sutures, while the latter uses two layers of buried sutures; the deeper forms a wall, while the other is an additional barrier.

The following reports bear out the objections I have stated to these or other somewhat similar operations.

Halsted<sup>16</sup> reports atrophy of the testicle in three of his cases following his operation. W. B. Coley<sup>17</sup> reports a case of orchitis which terminated in suppuration and required incision following a Bassini operation.

W. B. DeGarmo<sup>18</sup> showed six cases operated upon by the Bassini method, and in giving their histories, etc., stated that in the first case shown "There were no adhesions in the sac; 48 hours after the operation the patient was passing but little urine. The bladder was much disturbed, a trochar was introduced and with difficulty 36 ounces of urine were drawn off. Later Eugene Fuller opened the bladder through the perineum and introduced a tube which was kept in ten days." In the second, "A double inguinal hernia, the patient had a marked edema of the scrotum on the right side. I have shown this case to you because it is not fair to show all cases that are good and not the bad." In the third, "After the operation there was an enormous edema of the scrotum and penis. There is still some enlargement of the testicle, and he will have to wear a suspensory on account of it." In the sixth case shown, "The testicle was at the external ring, the cord was made shorter by the Bassini operation, and the testicle sloughed off, and another operation had to be done for its removal." G. M. Brewer,<sup>19</sup> in a report of "The condition of the parts found upon autopsy six weeks after a Bassini operation," stated that "A certain amount of induration was felt for some time over the course of the spermatic cord extending to the testicle. This, however, was not specially tender to the touch. The portion of the peritoneum lining the inguinal region showed a slight puckering. The vas deferens, spermatic artery, and a number of veins were traced upward through the artificially made internal ring and downward into the scrotum, becoming more united and apparently bound together as they approached the testicle."

Bishop<sup>20</sup> stated that "After the Bassini operation, even when the tissues have gained their firmness, the inner extremity of the internal ring is in direct line with the outer extremity, that there was no protection whatever against ventral hernia at the new point at which the cord made its exit from the abdomen, and that a relapse is a relapse, by whatever name the new hernia may be known."

Tailleus,<sup>21</sup> of the cases in the service of Prof. Doux in the years 1890 to 1894 inclusive, 324, reports that at first silk was employed, later catgut; 74 recurred; of 288 inguinal hernias 16.7% recurred. Bassini's operation was less successful than that of simple suture, giving nearly 36% of recurrences as against a little over 12% by the last-named procedure (ligature and excision

of the sac, a single layer of sutures through the external oblique and some fibers of the internal oblique)—suppuration occurred frequently, particularly in inguinal hernias. Of the 324 cases, 257 healed by first intention, 15.2% of recurrence of primary-union cases; 22.4% of recurrence in suppuration-cases. Suppuration was more frequent after Bassini's operation than that of simple suture. Of 288 cases of inguinal hernia there was atrophy of the testicle in 12, hydrocele of the cord and testicle in 3, varicocele in 3. The atrophy was more frequent after Bassini's operation.

S. C. Gordon, in the *Medical News* of July 16, 1898, stated that "He had seen more or less swelling of the testicle in all operations done by both the Bassini and Halsted methods." In describing a case he states: "I feared if I did the Bassini operation it would press too hard on the cord." The Bassini operation was not performed and "the patient recovered with no discomfort from these usual complications."

I have notes of a case operated upon by Halsted's method. The patient, a male nurse, was admitted to the N. Y. Post-Graduate Hospital with a mild attack of urethritis and orchitis, while I was house surgeon. Examination showed a marked recurrence of the hernia, and on the same side the cord thickened and tender, the testicle enlarged and painful. The cord and testicle on the other side were normal and did not subsequently become involved. Under treatment the urethritis got well, and the pain and most of the tenderness in the testicle subsided, but when he was discharged from the hospital there was a marked thickening of the cord and enlargement of the testicle.

This is not a detailed report from all the literature of the day, nor have I written operators for reports of their cases. I do not think this necessary, as the cases I have cited are sufficient in themselves to show that the principles of these methods, like McBurney's, and those operations in which extraneous materials are introduced, are false in theory and no longer justifiable in practice. When relapse does occur there are associated, at times, such deplorable symptoms that no truss can be worn with any degree of comfort. A possibly cured rupture, an enlarged, thickened, and adherent cord, and a hypertrophied or atrophied testicle are a most lamentable combination.

The last case I operated upon by Bassini's method was in September, 1894; since then I have employed the method described and recommended in this paper.

The methods of Kocher and Macewen are sometimes used, but they are both open to so many objections that they are not used frequently at the present time. Both these methods are incomplete, as the canal and rings are not exposed. Kocher himself states that his method can only be used when the sac is not too large, or its walls too thick. In Kocher's operation the aponeurosis and the other structures are bruised during the manipulations of the sac, and by working through a small slit in the aponeurosis a great deal of damage is done to all the structures. The sac in any hernia-operation should not be twisted, tied off, or anchored superficial to the aponeurosis, or at any other place. The sac should not be infolded and anchored as a plug in the canal and internal ring, or any other place. I have already stated the objections to tying off the sac.

<sup>16</sup> *Johns Hopkins Hospital Reports*, May, 1895. <sup>17</sup> *Am. Journ. of Med. Sci.*, May, 1895. <sup>18</sup> In a clinical lecture at the N. Y. Post-Graduate Medical School and Hospital reported in the *N. Y. Post-Graduate Journ.*, Sept., 1895. <sup>19</sup> *Am. Med. Surg. Bulletin*, Feb., 1896. <sup>20</sup> *Medical Chronicle*, June, 1896. <sup>21</sup> On the ultimate results of the radical cure of hernia, in the *Revue Médicale de la Suisse Romande*, July 29, 1897.



Twisting has the same objections, and, in addition, as Kocher himself states, it is liable to cause sloughing. Anchoring the sac, by fixing its neck, forms a cone in the peritoneum into which bowel, omentum, etc., slip, and the cone by the constant pressure of a protrusion from behind and within is converted into a wedge which will be likely to reopen the rings and canal, and be followed by a relapse of the protrusion. The infolding of the sac into a pad or truss, which is placed in the canal and internal ring, favors relapse. Pathologic material which has been thrown off is returned to the abdomen. A pad or truss making pressure over the internal ring from the outside is very seldom curative in adults, and is bad enough; but a pad or truss in the canal and the internal ring is worse, as it serves to keep the rings and canal open, and being acted upon by the pressure of the diaphragm, transmitted through the intra-abdominal contents, acts as a wedge, which, by still further opening the rings and canal, favors a relapse of the protrusion. Bishop<sup>22</sup> reports sloughing of the infolded sac following Macewen's method. In both of these methods the suturing of the rings and canal is incomplete. In fact, neither of these operations fulfils the indications for a cure, as none of the strictures are returned to their normal positions. The chief reasons for failures in operations for hernia have been due to the efforts of surgeons in not repairing and restoring the structures durably to their normal positions, relations and uses, and by the illogical and unscientific introduction of extraneous material, the displacement or disarrangement of structures in an attempt to improve on nature.

Now, as to the operation I have described, and used with every advantage. The lifting and freeing of the external oblique aponeurosis exposes well the deeper structures, which, later on, by this free dissection, are brought accurately together, without tension, to close the gap in the abdominal wall. Supracorrection of the peritoneum at the dilated internal ring causes total obliteration of the sac, strengthens the serosa by converting its outer surface from a convex to a slightly concave one, carries the former location of the sac high up within the abdomen away from the internal ring and the cord, and leaves a smooth surface, which allows of the free movement of the intestines over its surface. It is better to over-correct, as the peritoneum may relapse a little, which carries it back to the normal condition. Very seldom will it be necessary to excise the veins of the cord. I have frequently met with enlarged veins which, after the removal of the sac, etc., in a short time resume their normal size. When there is a markedly varicose condition of these veins their excision, when performed high up within the internal ring, is followed by good results, as this reduces the size of the cord above the internal ring and canal, both of which on this account can be made a little

smaller. The clearing out of the rings and canal of masses of fat, glands, adhesions, and the removal of all such masses that bulge into the internal ring from the subserous tissues, removes material which would favor relapse by keeping the rings and canal open. Placing the spermatic cord at the lower angle of the internal ring close to the pubic bone, restores it to the normal position, where it is not subject to pressure or in any other manner interfered with. It hugs the pubic bone, whence it passes down to the base of the bladder. It is absolutely unnecessary to form a new internal ring. The suturing of the enlarged ring, as I have described, restores it to the normal size. The lower the internal ring is placed the farther it is away from the parietal peritoneum, intestine, omentum, etc., and thus not likely to favor a relapse of the protrusion. The closure of the internal ring is the most important step of the operation, most of the success depending upon the accurate suturing of this opening in the transversalis fascia, as it is here that the breach first occurs. This layer of sutures forms a wall, while the other layers of sutures reinforce it and form additional barriers against a relapse. The layers are sutured separately, as it is by this means alone that they can be accurately approximated, and thus firm and lasting union results.

This operation I have used in 14 cases, 1 was 7 years old, 3 between 10 and 15 years, 5 patients between 30 and 40, 3 between 50 and 55, 1 was 65, while another was 70. In my last 10 cases I used with advantage, in dealing with the sac, what I call "super-correcting the peritoneum at the internal ring."<sup>23</sup>

So far the results are interesting, as they show how easily the steps of the operation can be carried out, how well the wounds have healed, and how well the operation fulfils all the indications and overcomes the objections to all other methods. In every case the steps of the operation were easily performed.

In one case, operated upon by Dr. Dudley Tait and myself, the surgical dresser in the hospital ward removed the dressing from the wound on the third day after the operation. Fine catgut had been used as a skin-suture. In removing the adhesive strips he tore open the skin-wound by pulling the newly-cut ends of the strips from the wound. The final result will not be marred by this mishap.

In a strangulated intestinal hernia, operated upon by Dr. G. Gross and myself, we had an opportunity of making a postmortem examination 4 days after the operation. The history of the case presented several points of interest.

The patient, W. O. W., aged 70, had an inguinal hernia on the right side. Since 1885 he had worn a truss, which lately failed to do its work. The rupture came down twice during the first week in June, 1896, and was reduced on both occasions by a physician, the second time on June 5th, but the

<sup>22</sup> *Med. Chronicle*, June, 1896.

<sup>23</sup> I first described this in an article on "Femoral Hernia" in the *Med. Rec.*, Dec. 8, 1896.

pain in the abdomen continued and, as it became more severe, bilious vomiting set in. As the intestine was apparently reduced, and the patient had at other times had bilious attacks and abdominal distress, he was treated by his physician for biliousness, but without relief. A consultation was called, but notwithstanding the treatment given, the patient became worse. On June 7th the vomited material was of a greenish-brown color, and next day it was brownish and foul. Dr. Gross and I were called in and met the other physicians in consultation. Nothing could be made out by ordinary palpation of the inguinal region, but by bimanual palpation, the index-finger of one hand inserted into the canal through the external ring, and making pressure externally with the fingers of the other hand, I clearly demonstrated by forcing gas, etc., out of the strangulated mass that a knuckle of bowel was caught at the internal ring. Diagnosis of strangulation at the internal ring was then made. All agreed on operation at once. Assisted by Dr. Gross, I performed operation, which showed the sac at the internal ring the size of a small pear, it was full and tense, and when opened some blood-stained fluid escaped. At the internal ring was a loop of small intestine constricted by a firm fibrous band  $\frac{1}{2}$  in. wide; the constricted loop was purple and had not lost its luster. There was no gangrene, and no necrotic spots on the bowel or at or above the constriction, which was divided. When the intestine was drawn down, a large quantity of pale yellow serum escaped from the abdominal cavity. The circulation gradually returned to the bowel. An enlarged gland, the size of a hickory-nut, which bulged into the internal ring from the subserous tissue, was removed. The sac was dealt with, and the other steps of the operation carried out, as I have described in detail elsewhere. Operation was not followed by shock; the pulse was 98, and fairly strong, and there was no vomiting. Two hours afterward the pulse was 84, full and strong; rectal temperature 99.6°. The patient complained of gas-pain, but could not expel any gas, even with a rectal tube. At 11 P.M. (7 hours after the operation) the pulse was 84, rectal temperature 98.2°, the abdomen slightly distended; no gas had been expelled, so a small enema was ordered; the bowels moved, considerable gas was expelled, and urine passed. On the following day the pulse was 80, rectal temperature 99.8°, the patient had vomited once; no gas had been expelled since 3 A.M., the abdomen was moderately distended. Another small enema was given, the bowels moved, and some gas was expelled; then by catheterization  $1\frac{1}{2}$  pints of urine were drawn off. On account of distention persisting, calomel gr.  $\frac{1}{4}$ , with sod. bicarb. gr.  $\frac{1}{2}$ , was ordered every hour for six doses. At 10 P.M., pulse was 86, rectal temperature 101.2°, the abdomen more distended. June 10th, at 7 A.M., temperature was 101.8°, the pulse 105; at 4 P.M., the pulse was 104, temperature was 102.2°; at 9.30 an enema was given and some gas was expelled. On June 11th, pulse was 128, temperature 103.6°; the patient died at 6.10 P.M., with a rectal temperature of 103.6°.

The autopsy was by Dr. Gross and myself at 9 A.M., June 12th. There was no redness or other evidence of inflammation in any of the sutured layers; the abdomen was distended and there was no fluid in the peritoneal cavity. Palpation of the inguinal and scrotal regions showed the cord and testicle to be normal. Firm pressure gave no evidence of weakness of the abdominal wall. The skin-edges were united. We were surprised at the degree of union present in the other layers. The skin was not adherent to the aponeurosis. The edges of each of the sutured layers were united with fresh plastic lymph, which also covered the sutures. The edges of the peritoneum were smoothly united, and located up in the abdomen away from the internal ring. The cord was freely movable. The bladder, kidneys, and liver were normal. A small red line, covered with a thin film of lymph, was found at the former seat of constriction, which was in the ileum, about  $1\frac{1}{2}$  feet above the ileocecal valve. There was no obstruction of the bowels. The bowel above the former site of constriction was distended, and for about two feet there was local peritonitis, which had also extended downward for about six inches. I consider that death was due to local peritonitis, produced by a continuance of paralysis of the intestine which had been so long constricted. The rest of the intestines was not the seat of any inflammatory action, except the cecum, which on its outer side was bound by old adhesions to the side of the pelvis.

About one foot above the ileocecal valve was a diverticulum of the ileum, communicating with the latter by an opening  $1\frac{1}{4}$  in. wide; its coats were continuous with those of the ileum; it measured  $2\frac{1}{4}$  in. long,  $1\frac{1}{4}$  in. wide, widest at its junction with the ileum. This patient had a possible chance with operation, but none without it.

In the other cases the results have been very satisfactory. All made good recoveries; no recurrences; no one wears a bandage, pad, or truss. No symptoms referable to the cord and testicle, or any other structures.

Since April, 1896, cases have been operated upon successfully by this method by Dr. Robert T. Morris, of New York, Dr. Dudley Tait, Dr. Julius Rosenstirn, Dr. Campbell Ford, and Dr. H. G. McGill, San Francisco, Cal. Dr. Robert T. Morris, of New York, in writing me in April, 1896, of the first case in which he had performed this operation, stated that "I tried your hernia-operation, and it seemed all right; but time alone will show the value of the resource." Dr. W. B. De Garino, in writing me March 11, 1896, stated that "My objection is, that it brings the cord directly out through all the tissues at the external ring, thereby inviting direct hernia at this point. This objection is purely theoretical."

Dr. J. Macready, of London, Eng., in writing me April 2, 1897, stated that "I am much interested in your method of operating, and feel sure that you are right in not displacing the cord at the inner ring outwards, as in Bassini's operation."

Dr. C. Ford, of San Francisco, Cal., stated at the meeting of the Medical Society of the State of California, 1897, in discussing a paper on the radical cure of hernia, read by Dr. W. Le M. Wills, of Los Angeles, that "Dr. Stinson has described an operation which I have done several times with the most beautiful and perfect success."

From a study of the cases cited and comparison of the methods used by various surgeons, I can only draw the following conclusions: 1. That with careful anti-septic and aseptic precautions, provided the operator is skilful and familiar with the special anatomic and pathologic conditions associated, an operation for the cure of hernia has a mortality at or about *nil*, or less than that associated with the condition previous to the operation. 2. That sterilized chromicized tendon, or chromicized catgut, is the most suitable material for a buried suture. 3. That in closing the wound it should be sutured layer by layer, separately, and thus accurately, using continuous stitches. 4. That in the immense majority of cases the patients are cured by operation. 5. That the operation I have described (a) restores the structures firmly and durably to their normal positions, relations, and uses; (b) has all the advantages of the other methods of operation, but none of their disadvantages; (c) that having many additional advantages, and fulfilling all the indications for a radical cure, it should be followed by the best results.



## ADVANCES IN AND THE PRESENT STATE OF RENAL SURGERY.

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As the nineteenth century draws to a close, surgery extends its domain over all viscera. Organs, such as the liver, the lungs, the brain, whose affections were before amenable only to the resources of medical therapeutics, have received in the last few years the benefits of surgical intervention. The kidney has, in this respect, been one of the first. Hardly 20 years ago, the first nephrectomies, practised under the cover of antiseptics, showed the possibility to do away, without much danger, with an organ whose role is so important in the mechanism of life. Then came nephrotomy, restored to youth and renovated from old times, to open abscesses and remove calculi having the kidney for their seat. Each year the number of these operations has increased, and, to-day, these interventions count among the best conquests of modern surgery. It is time to turn attention toward the traveled path, to consider these operations, to look at their successes and their failures, to state their relative indications and their counter-indications, and to outline, in a word, the present state of renal surgery.

In this paper, I do not intend to go over the question of renal operations in their technic, as this would carry me too far. I shall limit myself to a study of the comparative value of nephrectomy, of nephrotomy, etc., in the various affections against which we are called to act.

To-day, diagnosis is based upon foundations solid enough to enable us, in the great majority of cases, to recognize the existence and nature of the affection; but this is not enough. Once any affection of the kidney is ascertained, it is necessary also to determine its physiologic and functional significance. That determination has to be made for the healthy kidney when we have to perform nephrectomy; the integrity of the congener commands therapeutic indications in renal surgery, and we have in catheterization of the ureter a certain means of defining it. Now, catheterization of the ureter is an indispensable practice for anyone who practises renal surgery; it is the only means given us to collect the urine of one kidney and to deduce from its analysis the grave consequences it suggests.

Nitze, Albarran, and others successfully catheterize the ureter by the aid of their improved cystoscopes. I am unable to do this yet, on account of the few cases I have had in my practice and in my clinics. In the future, I shall lose no opportunity to practise ureteral catheterization. In the female and with the aid of Kelly's tubes it is easier.

Let us pass now to the study of the operative indications for renal surgery.

### I.—RENAL LITHIASIS.

It is in renal lithiasis that surgery yields the best of its successes. Here the operation is usually simple, its consequences benign, and the remote results often perfect; but it is on early intervention that success depends. It is necessary to operate early, before the kidney is deeply altered. Nothing is gained by waiting; the kidney undergoes changes, becomes sclerosed and infected. Grave accidents may, as with anuria, occur at any moment and force us to operate under most unfavorable conditions. Hence we ought to intervene as soon as the diagnosis is established.

Thanks to the works of Guyon in France, and of his pupil, Legueu, the clinician is provided, on this question, with sufficient data and the diagnosis of renal calculus is easy of establishment for the trained practitioner. The localization in the hypochondria of fixed pains, or with ureteral irradiations and hemorrhages provoked by walking or fatigue, are the most important among the symptoms permitting us to affirm at an early period the existence of a renal calculus; and when, notwithstanding the duration, these pains persist without lessening, we have the certainty that the renal calculus is too voluminous to be passed spontaneously through the ureter, and from this fact the indication for the operation is established.

I will reduce to three the conditions in which we are called to operate for accidents of renal lithiasis, and I will study one after another the value of intervention: (1) For a calculus in a healthy kidney; (2) for a calculus in a diseased kidney; (3) for anuria.

**CALCULUS IN A HEALTHY KIDNEY.**—It is here that we find the conditions for the ideal operation, simple in its execution, benign in its consequences. The kidney is exposed through a lumbar incision, rapidly decorticated, and brought out of the oblique wound. One hand compresses the vessels between the thumb and the index-finger, and with the bistoury, the convex border is incised. This incision is necessary for the discovery of the calculus. Neither external palpation nor acupuncture is, in my opinion, sufficient. Bleeding is copious when the vessels are not well compressed; but it is always possible to control it when they are so compressed. The calculus is extracted with forceps. When it is voluminous, its ramifications spread sometimes into the diverticula of the pelvis and it is necessary to follow them into it with the forceps and the finger. Often they have to be crushed to pieces. With patience and prudence, the difficulty is soon overcome. The main operation is then terminated. Three or four strong catgut-sutures are passed into the renal parenchyma and are sufficient, once tightened, to stop hemorrhage and secure coaptation.

Some surgeons drain the pelvis. This practice seems to me useless. I have always closed the renal wound. As a precaution, I have put a drainage-tube in the

lower angle of the lumbar wound, but in future I shall do without it and try to obtain immediate and complete union.

During the first days after the operation, the urine is strongly colored with blood; on the following days it becomes again limpid. Secondary hemorrhages occur only in case the renal wound has been partially closed.

The cure is assured, but what becomes of these patients in the future? What is the therapeutic result of the operation? One can ask from an operation only what it can give; here we ask only the removal of the calculus and we have nothing more to obtain. These patients are, and will always remain, predisposed to lithiasis; they are liable to the re-formation of new concretions, if we do not modify their tendencies by an appropriate diet. Thanks to these consecutive precautions, we can avoid these relapses, for which nephrolithotomy is by no means responsible.

**CALCULUS IN A DISEASED KIDNEY.**—When lithiasis has lasted a long time, the kidney undergoes changes that will depend upon the aseptic or septic conditions of the lesion. The method of treatment employed and the results of the intervention will differ in each instance.

A. The lesions due to aseptic calculi are characterized by sclerosis or by hydronephrosis. In sclerosis, which is true atrophy, when the kidney is transformed into a pocket of small volume, with thin walls, retracted upon a voluminous calculus, we do not think of removing the calculus and saving the kidney; what would remain of it is hardly useful for secretion.

Removal of the organ by immediate nephrectomy appears to me the most logical course to adopt. Here nephrectomy is all the more indicated, as the other kidney is usually healthy; otherwise the patient would present symptoms of another nature than the ones to which I have reference at this moment.

Calculous hydronephrosis, on the contrary, requires conservative treatment. Here the kidney, though thinned and distended, is still useful. It participates yet in the depuration of the organism, and, unless it be considerably dilated and altered, it will go back to its former state and recover its normal function. The observation of facts makes it fully evident that once the calculus is removed by nephrotomy, with the formation of a fistula of the kidney, the urinary secretion rises again, both in quantity and in quality, and, in a short time, the lumbar fistula closes all the better, because the ureteral obstacle was caused by the foreign body.

In calculous hydronephrosis, I would advise, then, primary nephrectomy only when the renal pocket is enormous and the parenchyma is reduced to the thickness of a thin sheet of paper. Under any other circumstances nephrotomy is the operation to be chosen.

B. In septic lesions, with or without distention, I

prefer nephrotomy. In calculous pyelonephritis, as in pyonephrosis, it is often difficult to determine if the calculus is primary or secondary to the infection. In practice, it is true, this matter is only of small importance; nephrotomy answers the double indication—removal of the foreign body and drainage of the suppurating pocket. If, however, the kidney is much altered and the lesion is proved to be unilateral, recourse could be had to nephrectomy.

In Germany, Israel chooses this last operation; in France, on the contrary, Guyon adheres exclusively to nephrotomy. I hold the latter view, because secondary nephrectomy permits of a later operation that would, if it should happen, allow of a radical cure for a fistula or for persisting suppuration.

## II.—ANURIA.

Among the complications of lithiasis calling for immediate operation is anuria. To understand the necessity for this operation and the benefit we have a right to expect from it, it is necessary to consider briefly what it is and how it is brought about. By his extensive writings and experience, Legueu has established the following cardinal facts: Anuria results from the obliteration of one ureter by a calculus. If the other kidney ceases its function, it is not by virtue of a reflex; such a reflex does not exist. It is because the other kidney is already diseased or suppressed in its function. This pathological physiology can be stated clearly by this axiom of Legueu: "The anuric is an individual living well with only one kidney." This solitary kidney being obliterated in its excretory canal, it is absolutely necessary to remove that obstacle. For that purpose two operative routes are in existence; either to attack the ureter and perform ureterectomy, or to give attention to the kidney, split it on its convex border and thus provide a way for the escape of the urine—the operation of necessity; or to remove, at the same time, the obliterating calculus—the ideal operation. If it be borne in mind that the obliterating calculus is generally in the pelvis, or near the superior extremity of the ureter; if it be considered that the precise localization of the calculus is through another channel, difficult enough to point out precisely from the clinical data, we will accept, I think, without dispute, the preference for the renal operation over the ureteral one.

Legueu has been able to cure three patients of nine by splitting the kidney and pushing up the calculus by compression and massage of the ureter from below upward into the pelvis. At one of these operations, I had the privilege of being present and of assisting in 1894. The operation is grave, without doubt, but its gravity depends much more upon the circumstances under which it is practised than upon its nature. In spite of that, it secures to the patient 66 chances of cure out of 100; whereas if he is left to himself his



chances are slender, as statistics show them to be only 25%.

**NEPHRORRHAPHY.**—In cases of floating kidney, nephrorrhaphy was one of the first methods employed in renal surgery. As always happens, when a new operation springs up with the relative security of modern asepsis, the number of operators is increased, case-histories are not taken, thoughtlessness creeps in, and the proper indications are not sufficiently studied to justify the reasonable propriety for surgical interference. Such was the case with nephrorrhaphy; but failures, observations and experience, all carefully reported, threw a new light on the subject, and now such authority as Israel has come to the conclusion to refuse systematically the operation for nephroptosis.

Personally, though I do not agree with Israel *in toto*, I can readily understand his conservatism. It is my opinion that there are two points to establish in cases of floating kidney:

(1) There are patients—mostly women—in whom the floating kidney is but a part of a complex condition, in which enteroptosis and neurasthenia appear to play the principal role. Here, all the viscera are altered in their suspension, and the patients are nervous in the proper meaning of the word. When nephropexy is performed on such a patient, there is absolutely no therapeutic benefit. Without doubt, the kidney is fastened, but the pains that were localized in this region persist and manifest themselves elsewhere. Topoalgias succeed each other or superimpose themselves, and surgery is powerless against these troubles that belong to internal medicine.

(2) On the other hand, there is another class of patients, in whom the floating kidney seems to be the first and the only cause of the general nervous symptoms, and who present the following characteristics: The kidney is the sole cause; its pains seem to be in itself and of itself; hence, on the basis of the axiom, "removal of the cause and the disease disappears," the operation is justifiable. It secures a good result, not only by the disappearance of pains that depend upon renal mobility, but by stopping, by the fixation of the mobilized viscera, the progressive march of ptosis and of nervous symptoms.

After all, I believe that nephropexy is indicated when the share of the floating kidney, in the run of observed troubles, is primary and preponderating.

### III.—HYDRONEPHROSIS.

Hydronephrosis, that is to say, a tumor constituted by the aseptic dilatation of the pelvis and of the kidney, is susceptible of various therapeutic measures. The question is undecided; the ideas relating to the causes of this condition have been, until now, poorly worked out, but we begin to have light and to establish our views in this regard upon precise knowledge that will permit us to evolve an intelligent method of treatment

based upon the highest form of therapeutics, which deals with hydronephrosis from the point of view of cause and effect.

We recognize generally ureteral obliteration as the cause of this disorder. By removing the obstacle, hydronephrosis can be prevented, the renal parenchyma protected against destruction by distention, and an organ saved that later will resume its normal function. Thus calculous hydronephrosis, hydronephrosis from renal mobility (called also intermittent) will be treated; the first by the removal of the calculus, the second by nephrorrhaphy, with the object of rectifying the curve of the ureter and securing a free flow of urine.

When the interference is caused by a stricture of the ureter, the question becomes more complex. Dilatation of the stricture is impracticable from above downward and from below upward. Consequently, it has been proposed to excise the stricture and to inoculate into a new aperture made into the pelvis, the corresponding orifice of the ureteral end. This operation, called by Bazy ureteroneopyelostomy, has been performed in America and in France, but the number of operations is too small yet to authorize the consideration of its definite results. However, it is adapted only to hydronephrosis not much developed and with a kidney not totally lost. If the hydronephrosis is enormous, if the tumor occupies the entire abdomen, it is impossible to perform any operation other than nephrectomy. This operation must be effected by the transperitoneal method, and it yields a good result, because the lesion is local and the other kidney is ordinarily healthy.

### IV.—RENAL NEOPLASMS.

In approaching the consideration of renal neoplasms, we find that surgery has made but little advance, especially in regard to its ultimate therapeutic effect. I leave out of consideration benign tumors of the kidney, as these are rare. Observations of fibroma, lipoma, angioma of the kidney are few, and the facts are too rare to formulate from them other conclusions than the ones suitable to these species of tumors when they are developed in other organs, viz., wide ablation, complete and total enucleation, more often by partial nephrectomy.

Malignant tumors, on the contrary, sarcomata and epitheliomata, appear under conditions entirely different at operation. When seen early and when limited in growth, they can be removed by nephrectomy, and at this period the operation is relatively benign because the lesion is unilateral and the other kidney is always healthy. The remote results of the operation are, however, bad, recurrence taking place in from 75 to 80% of cases within 6 months after the operation; and I question if the risks incurred are compensated for by the lack of a complete and useful survival.

These reservations are still more justified when they

apply to a tumor whose limits are beyond the kidney and which has acquired a large volume; then adenopathy is constant. Legueu has shown that varicocele can be caused by compression of the spermatic veins by lymphatic glands. Now, varicocele is constantly found with tumors of the kidney, the more so when they are cancerous, and the serious conclusion is that the operation is futile because there is already glandular propagation, or that, even if an operation is performed, the affected glands must be removed when they are found—a most difficult thing to do.

It must be admitted, then, that the surgery of the renal cancer is not encouraging in its results; and surgeons are discouraged more and more when facing an inability so often verified, and for my part I consider the operation indicated only at the beginning when the tumor is yet unappreciable. When the tumor is palpable, it is already too late for intervention.

#### V.—TUBERCULOSIS OF THE KIDNEY.

Tuberculosis of the kidney is primary or secondary. In one case, as in the other, the lesions are not always localized in the kidney, and the accompanying or consecutive lesions deserve to be considered in arriving at a final operative determination. When the lesion is bilateral, nephrectomy is out of the question. Nephrotomy alone can intervene; it permits of drainage, of scraping, if necessary, a pocket of pyonephrosis. Not only does it treat the tuberculous lesion itself, but also it modifies the secondary infections. It protects, then, the other kidney from toxic resorptions and eliminations that endanger its integrity. Consequently, nephrotomy yields a good immediate result; but, unhappily, the remote result is not so favorable. The fistula persists, tuberculosis continues its work and its generalization; and nephrotomy is really only an excellent palliative operation.

When the lesion is unilateral, the hopes and the exigencies of the surgeon are entirely different. If the renal focus has started first and the tuberculosis is primary in the kidney, we have a right to propose and perform a primary nephrectomy. Descending vesical tuberculosis would not be here a contraindication, because the observations of Albarran and Tuffier have established the fact that after nephrectomy the tuberculous cystitis due to descending infection improves and becomes attenuated. Hence, for the operation to be really curative, it ought to be performed early and before extension to other organs or to the other kidney has taken place.

Unhappily, the initial lesions remain latent for a long time, except in certain cases of the painful and the hematuric form. Renal tuberculosis only clearly manifests itself at a late period, and therefore, for a long time, the number of observations will be restricted that would indicate primary nephrectomy for a limited renal tuberculosis.

#### VI.—RENAL INFECTIONS.

The surgery of renal infections, other than tuberculosis, is likewise undeveloped and is liable to remain so for a long time. Opinions on this point are divided and the practice of each surgeon varies. Pyelonephritides that belong to surgery are divided in two classes: (1) Those with distention; (2) those without distention.

A. In cases of pyelonephritis with distention, the necessity of operation is formally established by the fact of retention and by the toxic resorption to which it gives rise. Two operations, nephrectomy and nephrotomy, are in existence; nephrectomy, which secures a radical cure; and nephrotomy, which oftentimes leaves, as a sequel, a permanent fistula. Between these two operations, which is to be preferred? The bilateral distribution of the lesions, which is easily verified, settles, at once, the question for a whole class of facts; nephrotomy alone is the operation to have recourse to, no matter what may in the future be the sad consequences. The immediate therapeutic benefit, the suppression of fever, the raising again of the general state of the strength and of the appetite are sufficient advantages for running the risks of a consecutive fistula.

When, however, the lesion is clearly unilateral, nephrectomy again comes under discussion. Under such conditions its advantages appear to me sufficient, and I do not hesitate to consider it as superior to nephrotomy. As to the objection to the gravity of the operation, I would answer that that gravity results, above all, from the state of the other kidney, whose physiologic and functional integrity is the condition that indicates nephrectomy. Hence, confining ourselves to cases of unilateral lesions, nephrectomy is, in my opinion, the operation of choice for pyonephrosis.

B. In cases of pyelonephritis without distention, it is not the question of intervention that comes under discussion, but rather the usefulness of operation. Does suppuration of the pelvis, even if the evacuation of pus is regularly accomplished, justify an operation? To this question the answer, a few years ago, would have been negative, but in the face of the proved inability of medical therapeutics in such cases, I believe it necessary to interpret the meaning of our facts from another point of view.

Catheterization of the ureters, draining the pelvis through the ureter, is already, for a few specialists, a practical means, though not an easy one, of disinfecting, by antiseptic washings, the suppurating cavity; but when, notwithstanding these means, the suppuration is not checked, or even modified, nephrotomy intervenes again as a precious resource to secure by a double road the drainage and the disinfection of the pelvis. Nephrectomy, on the contrary, is of rare application, because the lesion, of an origin most often ascending, is nearly always bilateral.



## VII.—POST-OPERATIVE RENAL FISTULAS.

There is yet a point that I should like to dwell upon in closing. It is the method of handling postoperative renal fistulas. By their persistency after nephrotomy for certain conditions, they call for direct intervention, and it is a question to know what operation to choose. Here again a distinction is necessary. Generally, the fistula persists because the ureter is obliterated and because the cavity of the pelvis continues to suppurate. These two elements serve as a basis for the intervention. The obliteration of the ureter must be overcome by retrograde catheterization, and if this is effected, the chances of the fistula closing are good. If it remains open, the margins of the renal fistula should be freshened, the kidney separated from the wall, and the kidney and the wall sutured separately. If the ureter remains impermeable, the only remedy is removal of the kidney.

The persistence of suppuration is the great cause after nephrotomy for the persistence of the fistula. It is therefore probable that the formation of a fistula has yielded all that it can; the destroyed kidney is of no use, and if the other kidney is healthy, secondary nephrectomy is the only operation capable of curing definitively the fistula and the patient. Secondary nephrectomy is then often painful, laborious, and difficult; but it ought to be performed, though only in individuals who are strong enough to support a serious shock.

Such then is briefly the present state of renal surgery, which has, in the last few years, made much progress, though it is far short of perfection. With the exception of neoplasms, I believe that future developments will lie mostly in the surgery of the ureter, which commands the kidney, as the urethra commands the bladder. In the future, we ought to endeavor to treat early renal infections and ureteral stenosis by ureteral catheterization, and then, I hope, the suppurating detentions of the pelvis, which are to-day the great cause for nephrotomy, will become very rare.

## THE MEDICAL LIBRARIES OF THE UNITED STATES.

BY C. D. SPIVAK, M.D.,  
of Denver, Colorado.

EVERY conscientious physician, even from the best equipped medical schools, will acknowledge that the three or four years of collegiate study were simply years of preparation. Real knowledge of the science and art of medicine is post-graduate, and is acquired slowly and gradually. The longer one is in practice the more this fact impresses itself upon the mind. Life is one long post-graduate course, which we take in different ways, in different institutions, and from different teachers. *Private practice* is the first institution, a teacher grim and morose, but of the

highest order, if one only knows how to take advantage of its chastising lessons. *Hospital practice* is an institution wherein instruction is more systemized, the observations more certain, and the results better noted. Unfortunately there are but few in a city and less in the country who, in our days of "pull and push," can utilize it. *Medical societies* are valuable means of education, fostering and encouraging thought. But they have their drawbacks—the stated meetings that one is unable to attend; the subject that one is obliged to listen to in which he is not interested; the idle and empty discussions from which there is no escape even in the best societies, etc.

There is but one grand institution that stands above all, that has all the virtues and none of the defects of those enumerated, and that is the *library*. Every book, indeed, is an institution in itself. On this shelf is my physiological laboratory, on the other my biological institute; here is my anatomical theater, there my lying-in-hospital. Whenever I wish I can converse with Virchow, DaCosta, Keen, and Senn. I can, at will, make all the dead, from Galen to Charcot, arise and give me in turn some of their wisdom. There would be no great disaster were all the medical colleges to be closed for a number of years—the Western colleges included. But medical science would suffer incalculable loss if no medical literature should be published for a single year.

The utilization of medical literature requires that all the medical records of the past and the present, from every clime and zone, should be brought together under one roof. Surely no one man can ever aspire to build up such an edifice. Some of the more fortunate may be able to buy all the books they wish to read, but no individual can afford to get together all the books that he *might* at some time wish to consult. But when the efforts of one are ineffectual, the cooperation and combined strength of the many will bring us nearer the ideal. An arrangement by means of which one book supplies the want of many at a small cost to all concerned is the most logical and feasible plan, and such an arrangement is a *public medical library*.

NUMBER OF MEDICAL LIBRARIES.—The father of our general public libraries—Benjamin Franklin—also laid the foundation of the first public medical library in the United States—the library of the Pennsylvania Hospital in Philadelphia, of which institution Franklin was the secretary for many years. This library was organized in 1760. The College of Physicians of Philadelphia claims the honor of having the second medical library, organized in 1788. Only two libraries were founded in the eighteenth century. With the advent of the nineteenth century, we notice that the number of medical libraries has grown steadily from the two just mentioned to 120 at the present time.

DATES OF ORGANIZATION.—That the importance of the library has grown in appreciation among the medical

profession in an increasing ratio can be seen from the subjoined tables. One library was founded in the first decade of this century, and 15, 8, and 16 respectively during the last three decades.

BY WHOM ORGANIZED.—The medical libraries of the early days were organized in conjunction with existing institutions. The first library, as has already been mentioned, was organized as an adjunct to the Pennsylvania Hospital, and from time to time we find that the visiting staff of hospitals found it convenient to have a reference-library near at hand, so that at present there are 12 hospitals in the United States supplied with good reference-libraries. Medical societies come next, and have founded 24 libraries. The medical colleges have not been slow in recognizing the value of reference-libraries for their faculties and students. I have been able to obtain reports of only 24. At least 6 pharmaceutical colleges and 1 veterinary college have libraries. Governments, as a rule, seldom take the lead in initiating reforms and innovations. It was not until 1863, when Dr. J. S. Billings became custodian of the library of the Surgeon-General's Office, that the collection commenced to grow. I need not tell you that the Surgeon-General's library is the greatest one in the world, nor of the value of the splendid index to the whole medical profession of the world. Owing to the zeal of many accomplished librarians, medical departments have been organized in 45 public libraries. The youngest creation in medical libraries is the offspring of State and local boards of health, of which we have at least five. Of course, like the pharmaceutical and veterinary libraries, they make specific collections—books on hygiene, sanitation, reports of boards of health, etc.

GEOGRAPHIC DISTRIBUTION.—At the first glance it may seem that the organization of medical libraries was arbitrary, following no sociologic law of growth and development. A study of some of our tables, however, will show that their organization and growth have been in inverse ratio to the population of cities. The three cities in the United States having more than one million of population have each medical libraries (100%). Out of 4 cities with a population of more than 400,000, 2 have medical libraries (50%); out of 12 cities having a population of over 100,000, 6 have libraries (50%); of 6 cities having a population of over 70,000, 2 have medical libraries (33%); of 11 cities having a population of over 50,000, 3 have medical libraries (25%); of 30 cities having a population of over 30,000, only 3 have medical libraries (10%). Massachusetts stands at the head with one library to every 203 physicians. New Hampshire, the District of Columbia, Rhode Island, Louisiana, New York, Colorado, Maryland, Illinois, Ohio, Oregon, Minnesota, Pennsylvania, and Michigan have each one library to less than 1,000 physicians; whereas Iowa, Kentucky, Texas, Indiana, Missouri, and Connecticut have one library each to 3,000, 4,000, and 5,000 physicians. That

such States as the Dakotas, New Mexico, and Oklahoma have no libraries is to be expected; population is sparse and scattered, the number of physicians residing in any one town is small, etc.; but why such States as Arkansas, Florida, Mississippi, Nebraska, North Carolina, Vermont, and Wisconsin have not a trace of a medical library is incomprehensible. Especially painful is the fact that New Jersey, with 2,044 physicians, and being in close proximity to such States as New York and Pennsylvania, should go on record as not having made even an attempt to organize a medical library. Even little Rhode Island outstrips her.

THE SIZE OF LIBRARIES.—The aggregate number of volumes in all libraries is 659,116. The Washington library is the only one that has passed the 100,000 mark. Philadelphia and New York have probably by this time reached it. Boston will soon have 80,000, and through the last munificent gift of Nicholas Senn, Chicago has 50,000. Cincinnati has 30,000 volumes, Baltimore, Brooklyn, New Orleans, Buffalo, and Worcester each have over 10,000. There are about 70 other cities each with more than 1,000 volumes.

That numerous medical libraries have come into existence during the last decade; that all the world has manifested interest in the library of the Surgeon-General's office, and in the work of Dr. Billings; the organization of the Association of Medical Librarians; the establishing of medical departments in public libraries; these and many other things go to prove that the time is ripe for improving, modifying, and controlling the growth of medical literary organizations.

SUGGESTIONS FOR THE IMPROVEMENT OF EXISTING LIBRARIES.—I. *One Library in One City.* There is no necessity of having more than one library in any one city. Boston, Chicago, and New York have gained much by adopting such a plan. The libraries in Boston have given all their medical books to the Boston Medical Library Association; the library of the New York Hospital has been recently transferred to the Academy of Medicine. The same plan should be adopted in Philadelphia. The library of the Pennsylvania Hospital is at present little used and should be added to the collection of the College of Physicians. The same plan should be adopted in Washington, New Orleans, Baltimore, Worcester, Buffalo, Cleveland, and Cincinnati, each of which has more than one library. All that is necessary is to emulate the example set by the Chicago public libraries. A conference of representatives of each library should be held "to consider and adopt such measures as would prevent the unnecessary duplication of the purchase of volumes by the respective libraries, and, if possible, to define the special field which each library should occupy in such purchases."<sup>1</sup>

(a) In cities, therefore, where there is already in ex-

<sup>1</sup> The John Crerar Library Second Annual Report, for the year 1895. Chicago, 1897.



istence a medical library all the public libraries should cease buying medical books, and should transfer all the medical works they possess to the medical library. A committee of representative medical men should be able to get an appropriation annually for the purchase of medical books, or the medical library should become a department of the general library. Both the public library and the medical library will be the gainers by adopting this plan.<sup>2</sup>

(b) In cities where there is no medical library proper, and there are several public libraries each having a medical department, one of these should become the custodian of medical books.<sup>3</sup>

II. *Make better use of existing libraries*, and revive the libraries which are in a state of syncope. Here, *e. g.*, is a library of 4,000 volumes in Louisville, Ky., of which Dr. Bodine says: "It has not been increased for several years. It is not much used by anybody, and we have all lost interest in this collection of old books."

In Detroit, Mich., there exists a medical society by the name of the Detroit Medical Society and Library. They should either drop the word library or do something to justify the appellation. Having fallen into disuse, the library was turned over to the public library. Mr. Utley, the librarian of the public library, takes a great deal of interest in the medical department, but the members of the profession do nothing to encourage him. I have received the most amusing returns from a city in the East. To all my questions as to number of books, journals, etc., I have received the monosyllabic answer "none," except the date of founding and the name of the librarian. In Salem, Mass., there is a library of 3,500 volumes, the existence of which is not known even to the resident physicians. The library has no income, no expenditure, no current medical periodicals, and no books are issued. All there is to be learned about the Utica Medical Library Association is that it was founded in 1879. All my questions were answered with an interrogative sign. Dr. J. H. Glass volunteered the following statement: "The organization to-day is a little more than a nominal library association. The books we have collected have been frittered away or are stored unavailably in the general library building of the city."

HOW TO ORGANIZE NEW MEDICAL LIBRARIES.—There are two ways. A library can be organized in connection with an existing medical society, or in connection with a public library. It will depend upon the circumstances. If the medical society is large enough to pay rent, salary to a librarian, subscribe to journals, and buy books, then by all means this is the better plan. In the majority of cases, however, the societies are poor, and it is expedient to organize a medical department in an existing library. All there is to do is to invite the librarian to a meeting of the society specially called for

the purpose of considering the question of a medical department. I can assure you that the librarian will take at once a deep interest in the movement. In Worcester the public library houses, catalogues, and has general supervision over the books. The medical society buys books and subscribes to grounds. In Denver the *Colorado Medical Library Association* subscribes to all the journals and pays for the binding, and the public library, besides cataloguing and taking care of the property, buys all the books and binds them. The Library Association owns all the periodicals, reports, and transactions, and the public library owns all the books.

THE UNION CATALOGUE.—When for some reasons a library cannot be organized, the foundation of such can be laid by adopting the plan of the union catalogue, which is based upon the following reasoning:

"The essence of a reference-library is to have the books obtainable, with some ready means of knowing just where each is to be found. It is not necessary that they should all be collected under one roof and one ownership. It is only necessary that their titles and location should be furnished in a well-arranged catalogue."<sup>4</sup>

In every city there are several private collections of valuable medical books and periodicals. They can be made available to all the members of the profession in the community by simply cataloguing all the books in any one city, taking as a basis one of the largest private libraries, and adding to it all the titles of books from the other private libraries. This card-catalogue should be placed in the public library. By adopting this plan not only will it be of service to him who has to do some research-work, but everyone, before deciding the question of subscribing to a new journal or a new book, will consult first the union catalogue, and if he find that the book or the journal is received by a friend, he will not duplicate.

There are 165 medical colleges and 120 medical libraries in the United States. In the whole of Europe there are not as many colleges, neither are there as many libraries. The superfluity of professors with us is offset by the number of medical libraries, which is a unique feature of the United States and one to be proud of.

There is no profession which has such a large and valuable literature as ours, and there is none in which the care of its literature is so sadly neglected. Every physician should aid in establishing and filling medical libraries. Not only is professional progress hindered, but human health and lives are endangered by the present neglect of a matter of such profound importance.<sup>5</sup>

<sup>4</sup> How Every City May Secure a Medical Library. By C. D. SPARK, M.D. *Med. Jour.*, Oct. 2, 1897. I wish to express my thanks to the gentlemen who have aided me in collecting the statistics and who have encouraged me in my work. To mention all the names is impossible, but I cannot forego the opportunity of expressing my gratitude to the Denver and Arapahoe Medical Society, to Mr. J. C. Dana, to Drs. Henry Sewall, E. R. Axtell, James R. Chadwick, John B. Hamilton, the editor of the *Journal of the American Medical Association*, Nicholas Senn, Geo. M. Gould, Edward Jackson, A. C. Getchell, Wm. Brown, J. S. Billings, J. C. Merrill, Melvil Dewey, and E. Souchon, for their encouragement and aid.

<sup>2</sup> Example, Boston Medical Library, Boston. <sup>3</sup> Example, Newberry Library, Chicago.

## THE MEDICAL LIBRARIES OF THE UNITED STATES.

NUMBER	LOCATION	NAME	ORGANIZED	CLASS	SUBJECT	INCOME	EXHIBITION	LIBRARY	NUMBER OF BOOKS	PERIODICALS	ATLAS	TOTAL NUMBER	VOL. ADDED	BOOKS ISSUED	TERMS OF USE	LIBRARIAN	POPULATION	NOTES
1	ALABAMA.																	
1	Montgomery	State Bd. of Health Lib.	1875	B. H. S.								85,000	12	200	F. L.	W. H. Sanders, M.D.	25,883	
2	CALIFORNIA.																	
2	San Francisco	Cooper Med. Coll.	1865	M. L. C.								2,611	30	129	1916 F.	Louise R. Ford, M.D.	28,497	
3	"	Univ. of California	1869	M. L. C.					\$700.00							Joseph C. Rowell		Z.
4	CONNECTICUT.																	
4	Hartford	Hartford Med. Soc.	1875	M. L. C.								2,000			F. L.	Dr. Edward K. Root	53,230	X.
5	New Haven	Yale Univ. Lib.	1700	M. L. C.					550.00			8,309	43	176	F. L.	Addison Van Name	81,298	
6	COLORADO.																	
6	Denver	Colo. Med. Lib. Assn.	1893	M. L. C.								5,342	177	933	F.	John Parsons	15,000	
7	Pueblo	Pueblo Co. Med. Lib.	1896	M. L. C.					87.00			6,62	15	350	R.	W. W. Bollette	12,225	
8	DIST. OF COLUMBIA.																	
8	Washington	Lib. Surg. Gen. Office	1863	M. L. C.	Gen.				10,000.00			123,924		3,580	F.	J. C. Merrill	229,750	
9	"	Marine Hospital Service	1872	M. L. C.	Gen.							2,416	28	60	F.	L. R. Walter Wynant, Supervisory Surgeon		
10	"	Med. Sec. of D. C.	1819	M. L. C.								1,000			F. L.	Edwin L. Morgan, M.D.		
11	GEORGIA.																	
11	Augusta	Med. Col. of Ga.	1835	M. L. C.								3,000			F. L.	Dr. Eugene Foster	55,300	
12	ILLINOIS.																	
12	Chicago	Bennett Med. Coll. Lib.	1870	M. L. C.								1,500			F. L. R.	W. B. Day	1,567,857	Z.
13	"	Chicago Coll. Pharmacy	1859	P. L. C.								2,000		50	R.	Frederick H. Hild		
14	"	" Pub. Lib.	1872	M. D. C.								100			R.	J. Dresend		
15	"	Field Colum. Museum	1894	M. L. C.					250			337			R.			
16	"	Habington Med. Coll. Hosp.	1894	M. L. C.								1,000			F.	Clement W. Andrews		N.
17	"	John F. Rogers Lib.	1894	M. D. C.	End.							2,050	7	220	8901 L.	Dr. M. F. Hatfield		
18	"	Library of Alumni Assn. of N. W. Univ. Med. Coll.	1890	M. L. C.	S.				500.00			2,050	7	220	8901 L.	Dr. M. F. Hatfield		
19	"	The Newberry Lib.	1890	M. D. C.	End.							2,050	7	220	8901 L.	Dr. M. F. Hatfield		
20	"	The Quine Lib.	1895	M. L. C.								2,050	7	220	8901 L.	Dr. M. F. Hatfield		
21	Evansston	Northwestern Univ.	1855	M. D. C.					\$500			2,050	7	220	8901 L.	Dr. M. F. Hatfield		
22	INDIANA.																	
22	Indianapolis	Raymond Clark Lib.	1879	M. L. C.					3,000			1,500	15		F. L.	Sec. of Central Col. of Phys. and Surg.	15,000	
23	IOWA.																	
23	Iowa City	State Univ.	1850	M. D. C.														
24	KANSAS.																	
24	Lawrence	Univ. Kansas	1865	M. D. C.														
25	KENTUCKY.																	
25	Louisville	Univ. Louisville	1857	M. D. C.					None			4,000			F. L. R.	Dr. E. L. David	161,120	
26	LOUISIANA.																	
26	New Orleans	Charity Hosp. Med. Lib.	1851	M. L. C.	H.							4,977			F.	William Beer	242,029	X.
27	"	Fisk Free Public Lib.	1897	M. D. C.	T.							2,365	106	49	F. L.	Sidney F. Boland, M.D.		
28	"	Orleans Parish Med. Soc.	1878	M. L. C.	S.				1,000.00			2,365	106	49	F. L.	Sidney F. Boland, M.D.		
29	"	Tulane Univ. of La.	1855	M. D. C.								3,500		250	F. L. R.	Dr. John A. Bacon		
30	MAINE.																	
30	Brunswick	Lib. Med. School Maine	1820	M. L. C.					75.00			3,900	12	100	F.	George T. Little	6,012	
31	MARYLAND.																	
31	Baltimore	Enoch Pratt Free Lib.	1882	M. D. C.	E. T.							1,335	8	24	727,000 F.	Bernard C. Steiner	134,439	
32	"	Johns Hopkins University	1876	M. D. C.	E.							7,000	125		F. L.	N. Murray		
33	"	Lib. Med. & Chir. Fac. Md.	1830	M. L. C.	S.				2,200.00			8,315	118	887	774 F. L.	Miss M. C. Noyes		



NUMBER.	LOCATION.	NAME.	ORGANIZED.	CLASS.	SUPPORT.	INCOME.	ENDOWMENT.	EXPENDITURE 1897.	NUMBER OF BOOKS.	PERIODICALS.	PAYMENTS.	ATLAS.	TOTAL NUMBER VOLUMES.	MEDICAL JOURNALS 1897.	VOLUMES ADDED 1897.	BOOKS ISSUED.	DAYS OF USE.	LIBRARIAN.	POPULATION.	INFORMATION.	
MASSACHUSETTS.																					
34	Boston	Boston Athenaeum	1807	M. D.		\$6,000.00		\$6,000.00	12,020	16,584	21,358		1,500					Charles K. Bolton	404,295		
35	"	" Med. Lib.	1875	M. L.	S.								28,004	480				James R. Chadwick, M.D.			
36	"	" Pub. Lib.	1852	M. D.	T.						136		20,255	590				Herbert Putnam			
37	"	Mass. Coll. Pharmacy	1867	M. L.	C.								1,540								
38	"	Med. Lib. Boston City Hosp.	1891	M. L.	H.			300.00			417	3	3,270	15	139						
39	"	Lib. State Board Health.	1869	P. H.	S.						4,000		6,000	27							
40	"	Treadwell Library	1868	M. L.	H.			\$3,000			58		2,103								
41	Cambridge	Harvard University																S. W. Abbott			
42	Danvers	Danvers Lunatic Hospital	1878	M. L.	H.			200.00	300	300	1,000	10						Dr. Arthur T. Cabot	81,319		
43	Milford	Thurber Med. Assn.	1878	M. L.	S.													Wm. H. Fillingham	8,181		
44	Methuen	Medford Asylum Lib.	1895	M. L.	H.			140.00	70	6			81					Chas. W. Page, Sup't	8,918		
45	Medford	Lib. Es. S. Dis. Mass. Med. Soc.	1804	M. L.	S.			None			None		1,200	Nn	None			George M. Cutler, M.D.	822		
46	Springfield	City Library	1875	M. D.	S. & T.			None					350					Dr. French, Sup't.	34,437		
47	Waverley	McLean Hosp. Med. Lib.	1880	M. L.	H.			500.00	1,500	43	16	12		3,500	20			James E. Simpson	51,534		
48	Worcester	City Hospital	1873	M. L.	H.			60.00	280	3	5			1,200	40			Margaret F. Newell	98,687		
49	"	Clark University	1887	M. D.	C.			1,500	1,000	20								Louis N. Wilson			
50	"	Free Pub. Lib.	1859	M. D.	T.													Samuel S. Green			
51	"	Worcester Dist. Med. Lib.	1822	M. L.	S.			530.96	9,225.15	51,545.50	668	54		7,415	30	212	209	Albert C. Gitchell, M.D.			
52	"	Worcester Lunatic Hosp.	1877	M. L.	H.				500		23	10		560	23			Dr. Quincy, Sup't.			
MICHIGAN.																					
53	Ann Arbor	Med. Lib. Univ. Mich.	1874	M. L.	C.			2,500.00			1,490		7,702	131	577			Raymond C. Davis	11,071		
54	Ann Arbor	Public Library	1855	M. D.	T.				2,151	1,736	6		3,806	42	73			H. M. Fley	26,534		
55	Grand Rapids	Public School Lib.	1895	M. L.	T.													Miss Lucy Hall	79,124		
56	Lansing	Lib. St. Bd. Health	1873	R. H.	S.			200.00				5	10,675	70	345			Henry E. Baker, M.D.	15,854		
MINNESOTA.																					
57	Minneapolis	Med. Dept. St. Univ.	1888	M. D.	T.				2,191		476	10	2,507	21	697			M. Edith Bowen	192,833		
58	St. Paul	Cansey Co. Med. Society	1897	M. L.	S.			700.00	600	1,400			2,000	111				J. S. Kohrock, M.D.	140,262		
MISSOURI.																					
59	St. Louis	Public Library	1873	M. D.	F.				1,987	1,309	450		3,296	8	99			F. M. Crunden	550,000	Z	
NEW HAMPSHIRE.																					
60	Concord	N. H. State Lib.	1895	M. D.	H.				2,000	500	1,000		2,500					Arthur H. Chase	47,004		
61	"	St. Bd. Health		R. H.	H.								600					Frederic A. Watson			
62	Hanover	Parishman's Coll. Lib.	1769	M. D.	C.				1,526	718	1,181	8	2,252	5				M. D. Bisbee	1,817		
NEW YORK.																					
63	Albany	Albany Coll. Phar.		P. L.	C.								12					Medwell Dwyer	97,129	Y.	
64	"	N. Y. St. Lib.	1891	M. L.	C.			3,500.00	1,757	2,630	5,000		7,387	194	772						
65	Brooklyn	Brooklyn Coll. Phar.	1891	P. L.	C.								14,000	300	1,400			William Browning, M.D.	957,163	Y.	
66	"	Lib. Med. Soc. Co. Kings	1845	M. L.	C.								1,222					H. L. Edmundson, Sup't.	335,700	Y.	
67	Buffalo	Buffalo Coll. Phar.	1886	P. L.	C.						125	36	2,600					E. P. Van Duzee			
68	"	Buffalo Pub. Lib.	1836	M. D.	T.				1,328	1,436			685					M. D. Mann, M.D.			
69	"	Crosvener Library	1859	M. D.	T. E.						1,000	20	6,057	79	542			Charles Rice, Lib. D.			
70	"	Niang in Univ. Med. Dept.	1887	M. L.	C.								100					Mary A. Booth			
71	"	Univ. Buffalo	1845	M. L.	C.			1,200	1,200	500			12,800		150			W. C. Gilman, Theaps. D., M.D.			
72	New York	American V. C. Coll.	1831	P. L.	C.			400.00	7,800	5,000			1,200					Wm. S. Dwyer, M.D.			
73	"	College of Pharmacy	1862	M. L.	H.								2,156					Heinmann G. Kutz, M.D.			
74	"	College of Home & Hosp. Lib.	1865	M. L.	H.								1,559					R. Clark Bell			
75	"	Eclectic Med. Coll.	1866	B. H.	S.						400		50,000	746	2,680			J. W. S. Gendley			
76	"	Health Department	1867	B. H.	S.								1,000					George Jansen			
77	"	Lib. N. Y. Acad. Med.	1847	M. L.	S.			15.00					1,000					J. S. Hallings			
78	"	Lib. N. Y. Eye & Ear Inf.	1892	M. L.	S.						1,000		5,774	71	122	47		Mary H. Stockwell			
79	"	Lib. Phys. German Hosp.	1857	M. L.	S.			558.92					508					Heinrich			
80	"	Med. Coll. & Hosp. for Women.	1872	M. L.	C.								1,500					W. T. Peoples			
81	"	Medico-Legal Soc.	1872	M. L.	S.						5,000							J. W. S. Gendley			
82	"	Memorial Lib. Assn.	1820	M. D.	S.								3,000					George Jansen			
83	"	Mont. Memorial M. & S. Lib.	1867	M. L.	S.								5,423	977	391	6,000					
84	"	N. Y. Home Med. Coll. & Hos.	1889	M. L.	C.				2,820	2,591	2,800	12	9,000	10							
85	"	N. Y. Pub. Lib.	1865	M. D.	T.				3,250	3,750	2,000		9,000	10							
86	"	Wom. Med. Coll.	1884	M. L.	C.								825								
87	"	Post Grad. Med. Sch. & Hos.		M. L.	C.								600								
88	"	Hudson R. St. Hos. Med. Lib.		M. L.	S.								347					Heinrich			





## SUMMARY.

Number of Medical Libraries in the United States..... 120

## CLASSIFIED AS FOLLOWS.

Medical Libraries.....	75	Pharmaceutical Libraries.....	6
Medical Departments in.....		Medico-Legal Libraries.....	1
General Libraries.....	45	Veterinary.....	1
Medical Libraries proper.....	67	Medical Departments.....	45

## SUPPORTED OR OWNED BY.

Societies.....	24	State or Government.....	8
Colleges.....	24	Board of Health.....	5
Hospitals.....	12	Taxation (local).....	32

## DATES OF FOUNDING.

1700.....	1	5th Decade, 18th Century.....	4
1788.....	1	6th ".....	8
1st Decade, 18th Century.....	1	7th ".....	6
2d ".....	1	8th ".....	15
3d ".....	3	9th ".....	8
4th ".....	2	10th ".....	16

## GEOGRAPHIC DISTRIBUTION.

States having Medical Libraries..... 30

14 States have 1 Library each.	1 State has 9 Libraries.
6 " " 2 Libraries "	1 " " 10 "
3 " " 3 " "	1 " " 19 "
2 " " 4 " "	1 " " 29 "

## NUMBER OF LIBRARIES BY STATES.

1 Library.—Alabama, Georgia, Indiana, Iowa, Kansas, Kentucky, Maine, Missouri, Oregon, South Carolina, Texas, Virginia, West Virginia, Wisconsin.

2 Libraries.—California, Connecticut, Colorado, Minnesota, Rhode Island, Tennessee.

3 Libraries.—District of Columbia, Maryland, New Hampshire.

4 Libraries.—Louisiana, Michigan.

9 Libraries.—Ohio.

10 Libraries.—Illinois, Pennsylvania.

19 Libraries.—Massachusetts.

29 Libraries.—New York.

## CITIES HAVING MEDICAL LIBRARIES. 57.

41 Cities have 1 Library each.	1 City has 17 Libraries.
6 " " 2 Libraries "	1 " " 9 "
4 " " 3 " "	1 " " 7 "
2 " " 5 " "	1 " " 4 "

## NUMBER OF LIBRARIES IN CITIES WITH REFERENCE TO POPULATION.

Cities having more than 1,000,000 inhabitants	3.	Libraries	3
" " " " 800,000	1.	"	0
" " " " 400,000	4.	"	2
" " " " 200,000	9.	"	8
" " " " 100,000	12.	"	6
" " " " 90,000	3.	"	3
" " " " 80,000	6.	"	4
" " " " 70,000	6.	"	2
" " " " 60,000	6.	"	0
" " " " 50,000	11.	"	3
" " " " 40,000	17.	"	2
" " " " 30,000	30.	"	3
" " " " 20,000	20.	"	2
" " " " 10,000	77.	"	7
" " " " 9,000	"	"	0
" " " " 8,000	"	"	2
" " " " 7,000	"	"	2
" " " " 6,000	"	"	1
" " " " 5,000	"	"	1
" " " " 4,000	"	"	0
" " " " 3,000	"	"	0
" " " " 2,000	"	"	0
" " " " 1,000	"	"	1
" " " less	1,000	"	1

## ENDOWED LIBRARIES.

New York Academy of Medicine.....	\$55,000
University of Pennsylvania.....	10,000
College of Physicians, Philadelphia.....	8,500
Cleveland Library Association.....	7,000
Treadwell Library.....	3,000
Worcester City Hospital.....	1,500
Thorber Medical Association.....	600
The Quine Library.....	500

## MEDICAL LIBRARIES WITH REFERENCE TO NUMBER OF PHYSICIANS BY STATE.

	Number of Physicians.	M. L.	M. D.	Number of Libraries.
Alabama.....	1846	1		1
Arizona.....	93			none
Arkansas.....	2289			none
California.....	3119	1	1	2
Colorado.....	966	2		2
Connecticut.....	1178	1	1	2
Delaware.....	245			none
District Columbia.....	729	3		3
Florida.....	649			none
Georgia.....	2425	1		1
Idaho.....	117			none
Illinois.....	6594	5	5	19
Indiana.....	1714	1		1
Iowa.....	3051		1	1
Kansas.....	2773		1	1
Kentucky.....	3323		1	1
Louisiana.....	1275	2	2	4
Maine.....	1121	1		1
Maryland.....	1762	1	2	3
Massachusetts.....	3848	14	5	19
Michigan.....	3529	2	2	4
Minnesota.....	1513	1	1	2
Mississippi.....	1671			none
Missouri.....	5373		1	1
Montana.....	282			none
Nebraska.....	1721			none
Nevada.....	81			none
New Hampshire.....	673	1	2	3
New Jersey.....	2044			none
New Mexico.....	151			none
New York.....	11139	21	10	29
North Carolina.....	1534			none
North Dakota.....	190			none
Ohio.....	7034	7	2	9
Oklahoma.....	217			none
Oregon.....	736		1	1
Pennsylvania.....	8356	6	4	10
Rhode Island.....	526	1	1	2
South Carolina.....	1140	1		1
South Dakota.....	409			none
Tennessee.....	3436		2	2
Texas.....	4381		1	1
Utah.....	242			none
Vermont.....	640			none
Virginia.....	1978		1	none
Washington.....	777			none
West Virginia.....	1046			1
Wisconsin.....	1800			none

## RATIO OF LIBRARIES TO NUMBER OF PHYSICIANS IN STATE.

Mass.....	1 Library to 203	S. C.....	1 Library to 1140
N. H.....	224	Cal.....	1 1558
D. C.....	243	Tenn.....	1 1718
R. I.....	263	Wis.....	1 1800
La.....	318	Ala.....	1 1846
N. Y.....	383	Va.....	1 1978
Colo.....	483	Ga.....	1 2225
Md.....	587	Kan.....	1 2773
Ills.....	659	Ia.....	1 3051
O. and Ore.....	736	Ky.....	1 3323
Minn.....	757	Tex.....	1 4381
Pa.....	835	Ind.....	1 4714
Mich.....	882	Mo.....	1 5373
W. Va.....	1046	Conn.....	1 5589
Me.....	1121		

## NUMBER OF VOLUMES.

Libraries having less than 100 volumes	2
" " " 100 " "	3
" " " 200 " "	2
" " " 300 " "	3
" " " 400 " "	1
" " " 500 " "	1
" " " 600 " "	5
" " " 700 " "	0
" " " 800 " "	2
" " " 900 " "	1
" " " 1,000 " "	17
" " " 2,000 " "	15
" " " 3,000 " "	15
" " " 4,000 " "	4
" " " 5,000 " "	6
" " " 6,000 " "	3
" " " 7,000 " "	4
" " " 8,000 " "	3
" " " 9,000 " "	2
" " " 10,000 " "	8
" " " 20,000 " "	3
" " " 30,000 " "	1
" " " 40,000 " "	0
" " " 50,000 " "	2
" " " 100,000 " "	1

## STATISTICS RECEIVED.

As to income from	20 Libraries
" expenditure	32
" number of books	29
" " periodicals	27
" " pamphlets	45
" " atlases	19
" total number of volumes	103
" medical journals received in 1897	51
" volumes added in 1897	48

## TERMS OF USE.

Free limited	39	Free limited	9
" " "	33	Reference	5
" limited reference	18		

## STATISTICS OBTAINED.

Direct from librarians	85
Statistics not obtainable. Used the figures given in "Statistics of Libraries and Library Legislation in the United States," published by the United States Bureau of Education, Washington, 1897	12
Statistics not obtainable. Used figures given in "Report of Public Libraries Division, 1896," published by the University of New York, Albany, N. Y., 1897	12
Known to have a medical department or medical library.	
Statistics not obtainable	14

## AGGREGATE NUMBER OF VOLUMES IN CITIES HAVING MORE THAN ONE LIBRARY.

Washington	127,340	New Orleans	11,072
Philadelphia	98,481	Buffalo	10,639
New York	96,492	Worcester	9,615
Boston	77,589	Albany	7,479
Chicago	40,590	Cleveland	6,755
Cincinnati	31,054	Utica	6,494
Baltimore	16,650	Concord	3,000
Brooklyn	14,181	Toledo	1,200

## AGGREGATE NUMBER OF VOLUMES IN ALL LIBRARIES. 659,116

## LIBRARIES OWNING HEADQUARTERS.

Academy of Medicine, New York.  
 Boston Medical Library Association, Boston.  
 College of Physicians, Philadelphia.  
 Pittsburg Academy of Medicine, Pittsburg.  
 Cleveland Medical Library Association.  
 Library of the Medical Society of the County of Kings.  
 Hartford Medical Society.

THE PHYSICIAN AND HIS PROFESSION.<sup>1</sup>

By N. W. LEIGHTON, M.D.,

of Brooklyn, N. Y.

WHEN nearing my graduation-period one of my preceptors asked, in relation to locating for practice, whether I would choose to be a small toad in a large pool or a large toad in a small pool. I told him my preference was for the former. Borrowing his figure of speech, I find myself at the present time a small toad in a large pool and in deeper water than I am accustomed to swim; therefore I ask my Fellows of the Branch to have compassion on me and help me to the shore.

On an occasion like this,—the annual meeting,—it is expected of your president, not so much that he shall offer thanksgiving and praise for what has been accomplished, as that he shall point out the necessity for fortifications to strengthen our cause and indicate the direction in which to advance our lines to a loftier plane of usefulness. I have, therefore, chosen for my theme, The Physician and His Profession, and will venture the axiom that whosoever thinks most highly of his profession will by his profession be most highly honored.

In a voyage of forty years' duration any man's log-book ought to contain some observations useful to a younger mariner. Since assuming office my uppermost thought has been what to do or say for the good of the younger members of the profession. When the medical graduate comes forth from his college, filled to overflow with scientific facts and theories and possibly with the thought that he is the latest edition and up to date, he is likely to become despondent at the slowness with which his talents receive recognition; and if he is dependent on what he collects from his practice he will often become embarrassed. At such a time the temptation to lower the standard of professional ethics is very great. Just then, a word of sympathy, an exhortation to stand firm, may result in much good to the man and to his profession. I feel a measure of sympathy for the owner of every new sign I read, and think of the time when mine was new. I wish we could inaugurate the practice of calling on every new member who locates among us, and promise him our counsel and brotherly support, and assure him that he is warmly welcomed into the fraternity and into social fellowship. We may not be able to transfer a patient to him, but we can point out the legitimate ways of securing practice and warn him against methods that will bring reproach upon the profession and sorrow to himself. He should not be discouraged by intimation that he must go hungry till one dies to make room for him, but be encouraged to exercise strict economy rather than deviate from the professional path. It is

<sup>1</sup> Address of the President of the Fifth District Branch New York State Medical Association, at Brooklyn, N. Y., May 24, 1898.



reported of Sir Andrew Clark that he told his pupils that he spent the first twelve years of practice in earning his bread, his second twelve years in earning his bread and butter, and not until the third twelve years could he indulge in luxuries.

One of the first temptations that confronted me in the beginning of my professional career was the solicitation of several druggists to send prescriptions to them and I would receive a liberal percentage. When I resented this as an insult to my profession I was told that all druggists gave a percentage and that all doctors received it. The statement was false, as might be expected from such a source, yet it was practised enough to make it a temptation to a young man. The first truss-maker that supplied a patient for me sent me four dollars in a letter, stating that it was my commission on the sale. Although I needed the four dollars, and much more, I returned it, courteously informing him my patient would pay me for my services; but that if he did not, the dignity of my profession forbade me accepting a commission. Other instrument-makers have done the same, with a similar result.

Another temptation is the solicitation of an endorsement of some new remedy, the name of which is legion. One may think that it is a good and legitimate advertisement for himself, as well as for the manufacturer, but it brings regret. Many physicians of high professional standing, now among the departed, would fain have withdrawn their names from public gaze which were placed there by an unguarded act of fancied benefit to the public. (Here let me give my conviction in parentheses, that of the so-called elegant preparations put up in wine and sirup, only a small percentage would be effective if deprived of the wine or alcohol and the sugar. Is it wise or economic to encourage the free use of such compounds, when if medicine is needed, the official remedies, already proved, can be obtained without paying 75% over their value toward the manufacturer's advertising account?)

It is a greater task to qualify as a family-physician than it is to obtain the medical degree; and it is the established family-physician who should voluntarily and cheerfully instruct his juniors. They should be treated as if they were sons or junior brothers, for they are the rightful inheritors of our work. We owe it to our patrons to provide them with competent successors. One of the most difficult problems to solve is the proper management of a patient's friends when the patient is so sick as to tax all the physician's resources. In such a dilemma the young practitioner should have free intercourse with a senior and receive gratuitous advice when a consultation in the sick-room cannot be obtained. The young physician who relies wholly on his scientific knowledge and fails to study the various phases of human nature and to seek to please as well as to cure, will find a steep ascent to prosperity. It is said of a clergyman that when asked the comparative

merits of his two sons, who were also in the ministry, answered that "John made the most display in his show-window, while George carried the largest stock in his store." A certain degree of display in the show-window is essential to success, however large the stock in store, and in the display one may be tempted to unorthodox or nonethical methods and thereby incur the displeasure of his brother practitioners. The desire to obtain eminence in the profession is commendable, and the claim to originality of thought may be justifiable, but to assert priority of ideas is boldness that may not pass unchallenged. Not long ago I was selecting an instrument, when the salesman handed me one, remarking, "Here is one made for Dr. X.; it is his own invention; do you know Dr. X.?" "Yes," I said, "I know him very well; please give him my compliments, and tell him that I have an instrument like it which was made about thirty years ago, and I obtained the design from a Surgery published about forty years ago." One of the lamentable conditions of our profession is its polity, or rather, lack of polity. I know of no other organization or body of men whose interest suffers so much by want of unity and harmony and of concert of action as does the medical profession. There are unions and societies in every branch of trade and labor, which exercise a power in self-protection. Base-ball clubs, theater-troupes, ministerial gatherings, Freemason orders, and every variety of political organization, all obtain lower rates of travel than can be obtained by medical associations. Why is it? There must be some reason. A few years ago the school-teachers of Brooklyn sought and obtained the signatures of nearly every physician in favor of prolonging the summer-vacation for a week or more. I told the teacher who asked me to sign the petition that the signatures of all the physicians in Brooklyn would avail nothing; but if she could get the support of "The Rag-Pickers' Association" she might expect success, and gave her the reason, namely, that twice, under two different administrations, the Mayor and Common Council of Brooklyn had enacted an ordinance forbidding the use of bells by the rag-pickers, and each time, after a few weeks of prohibition, the act was repealed or notice given not to enforce it. I honor the rag-pickers for their cohesion and perseverance, though I would like to stop their discordant noises. Why is it that the medical profession possesses no such power? I should add that the school-teachers' petition was laid on the table by the Board of Education, the leading opponent remarking, "You can get doctors to sign anything."

What has pained me most in all my medical career has been to see the lack of cordiality and sympathy among physicians. It does not comport with our courtesy to the public, or our charity to the needy, or our efforts to alleviate the sufferings of humanity. All suits for malpractice that I am cognizant of have been

either prompted by a brother practitioner or encouraged by his silence. This ought not to be. Even one with whom we cannot intimately fraternize should receive our protection and support against a suit. I believe I have several times prevented the prosecution of surgeons when called upon to examine the result of their services, and in cases in which I had no personal acquaintance with them. I wish it might become an established practice for each to give something toward bearing the expenses of a brother-physician involved in a malpractice-suit. I believe such a course, coupled with words of sympathy to the injured and a frown of scorn to the injurer, would terminate the abuse. In order to cultivate charity and cordiality within our ranks, more respect for individual opinions and more forgiveness for wrongs committed should be practised.

There are some men of talent and ability with whom one cannot affiliate, without overlooking their eccentricities and forgiving their discourtesies. If science and the profession can be benefited by them let us try by gentleness and persuasion to keep them within the professional traces. Many years ago a professional brother was telling me about the ill-treatment Dr. D. had shown to Drs. A., B., C., and himself. I said that Dr. D. had always treated me kindly. With more emphasis than elegance of language he replied, "Must a dog bite *you* before you believe that he bites?" "No," I answered, "but even some vicious dogs can be conquered by kind treatment." Some years ago I was called in haste to see a patient whose physician had been summoned but had not arrived. She was about to send word to him that he need not come, but I told her no, that I would care for her till he came and then retire. When his arrival was announced I retired from the sick-room to one adjoining and sent word that I would like to speak with him. I heard the answer, and noted the tone in which it was given, that if I wanted to see him for anything to come where he was. I choked down the insult, walked into the sick-room, offered my hand, which was accepted and shaken, then I explained the situation and took leave. We have continued friendly and courteous ever since.

Ian Maclaren says in purport, concerning forgiveness, if you are sure you have been correctly informed, sure you have been wilfully injured, sure you have in no way given provocation, "then let me entreat you to forgive, *that you may escape the curse of an unforgiving temper.*" "He who thinks kindly of his enemy gathers a quick reward into his own bosom."

Selfishness, envy, jealousy,—a triple poison,—seem to have attacked our profession, like an infection; propagated in the colleges, proliferated in hospitals and dispensaries, it has diffused its contagion through medical societies and to private practitioners. Is there no help for this? Is there no antidote? Would another Darwinian evolution of man eradicate the disease?

There is an ancient book, in two parts, with many

subdivisions, which some have claimed was a work of fiction; if it be so, it is the work of a master-mind and is worthy of profound study. The book teaches that righteousness exalteth a nation. Would not more righteousness exalt the medical profession? It mentions a Moses, who strove 40 years to lead his people out of bondage into a land of peace and promise. Do we not need a Moses to lead us out of an infectious atmosphere into a pure and sunny climate of moral health? And notice how many laws Moses made for his people, yet without changing their hearts. Then another and greater than Moses came; in infancy, Divine Humanity; in manhood, Human Divinity. He declared, "ye must be born again." My fellows of the association and of the profession in total, must we not be born again? Can we legislate goodness into any man? Can we legislate goodness into ourselves? Solomon says: "Jealousy is cruel as the grave, and envy like rottenness of bones." Must not the antidote of love enter into every heart and there abide till we wish to do unto others whatsoever we would have done to us?

A man at three-score-and-plus naturally takes more interest in epitaphs than one of two-score-and-minus. He ought, therefore, to be pardoned for quoting an epitaph said to be on a tombstone at Dartmoor, England:

"Here lies in horizontal position the outside case of  
George Routheigh, Watchmaker,  
whose abilities in that line were an  
honor to his profession.  
Integrity was the mainspring and  
prudence the regulator of  
all the actions of his life.  
Humane, generous, and liberal, his  
hand never stopped till he  
had relieved distress.  
So nicely regulated were all his motions  
that he never went wrong except  
when set agoing by  
people who did not know his key.  
Even then he was easily set right again.  
He had the art of disposing his time so well that  
his hours glided away  
in one continuous round  
of pleasure and delight,  
till an unlucky minute put a period to  
his existence.  
He departed this life  
Nov. 14th, 1802, Aged 57:  
wound up  
in hopes of being taken in hand  
by his Maker,  
and of being thoroughly cleaned, repaired  
and set agoing  
in the world to come."

Your President hopes that every Fellow of the Association, and every member of the medical fraternity will aim at meriting as worthy an epitaph.

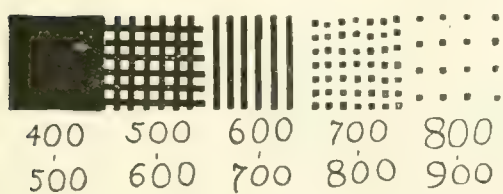
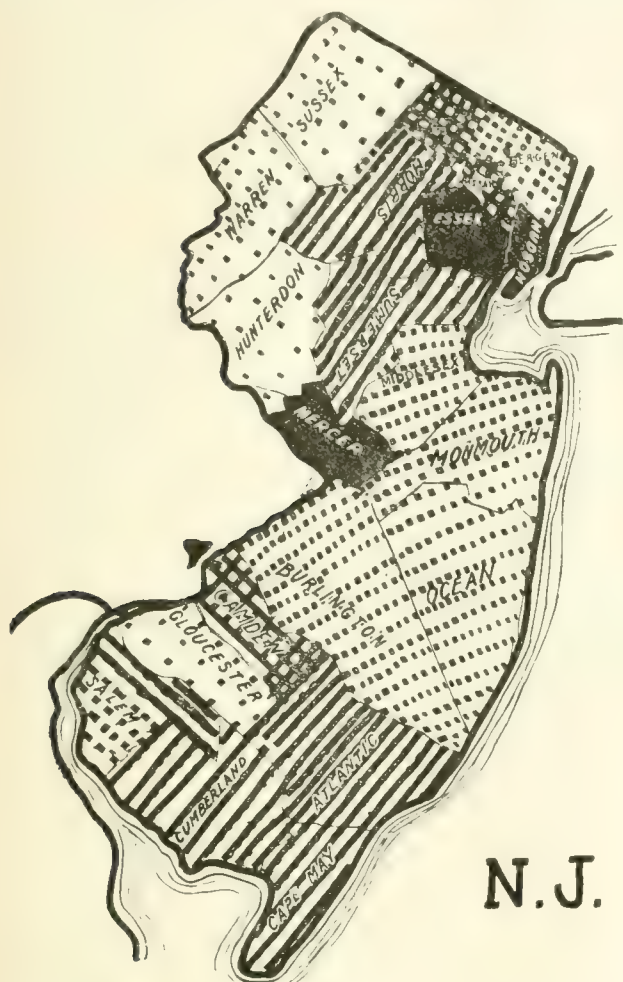
**Broad Shoulders Complicating Labor.**—C. E. Ide (*Chicago Medical Recorder*, Aug., 1898) reports a case of labor in which the head made good progress for a time, having plenty of room, but there was dystocia from the excessive breadth of the shoulders. Delivery was finally accomplished with the aid of forceps. The child weighed nearly 10 pounds and measured 14 inches around the shoulders.



## THE DISTRIBUTION OF TUBERCULOSIS IN NEW JERSEY.<sup>1</sup>

By GUY HINSDALE, M.D.,  
of Philadelphia.

THE distribution of tuberculosis in New Jersey suggests some interesting features, which are well shown in the accompanying map, in the preparation of which I



PERSONS LIVING TO 1 ANNUAL

## DEATH FROM PHTHISIS

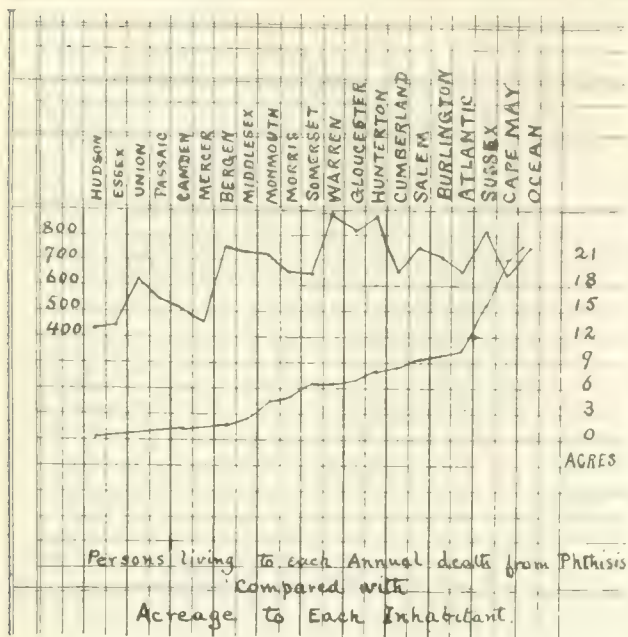
have used the report of the State Board of Health of New Jersey, for the year ending June 30, 1897; an excellent system of registration making it possible to give a correct idea of the distribution of this disease throughout the State. As I have previously shown for the

<sup>1</sup> Read at the Fifteenth Annual Meeting of the American Climatological Association, at Maplewood, N. H., September 1, 1898.

States of Pennsylvania and New York, wide variations are present in different regions of the State, but the various degrees of prevalence of tuberculous disease correspond in great measure with well-known facts relating to tuberculosis. In New Jersey there are not such wide variations in the frequency of tuberculous disease in proportion to population, as compared with New York and Pennsylvania, in which States there are counties in which the disease is three or four times as rare as in more densely populated districts. In New Jersey the counties in which the larger cities are situated show a prevalence only twice as great as in the sparsely settled regions. It will be noted that Hudson, Essex, and Mercer counties, in which are situated Jersey City, Newark, and Trenton, have from 400 to 500 persons living for every death from pulmonary tuberculosis, while Sussex, Warren, Hunterdon, and Gloucester counties have between 800 and 900 persons living for every death annually from the same disease.<sup>2</sup> The remaining counties are plotted to show the three intermediate grades. The reasons for this variation may be accounted for as follows: In the first place, elevation above tide does not play a part, as it apparently does so plainly in the case of Pennsylvania. In New Jersey, on the other hand, we find that one of the counties, Gloucester, in South Jersey, is quite low, but it belongs to the group in which tuberculosis is least frequent. It is at least as low as the three counties in which the disease is most prevalent. Neither are there any natural protecting influences, such as forests, which influence the distribution of the disease in this State. The entire southern half of New Jersey is flat and abounds in vast tracts of pine-forest, but we find it principally a variety of hard, yellow pine known as scrub-pine and scrub-oak and not the great forest-trees met with in the highlands of Pennsylvania and New York. In the northern and northwestern parts of New Jersey the surface is more diversified and even mountainous, reaching elevations of nearly 1,800 feet and the hillsides abound in hemlock and spruce. The soil in the northern half of New Jersey is largely a red clay, with outcroppings of sandstone and, in the northeastern portions, trap-rock. In Essex County there are positive evidences of a great prehistoric lake called Lake Passaic. Its southern portion is the present site of a great swamp. The soil of the southern half of the State, or at least south of the latitude of Camden, is principally sand, which reaches, in places, such as Lakewood, to a depth of 600 or 700 feet. But the character of the soil would seem to have little if any influence in the present instance in modifying the presence and distribution of tuberculosis.

It is *density of population* that bears the closest rela-

<sup>2</sup> It should be stated here that, by the returns for the year ending June 30, 1898, three counties, by a largely diminished death rate, take precedence of any of the counties in the above-mentioned group. These are Cape May, Monmouth, and Somerset counties, and for the year just closed they each have over 1,000 persons living for every annual death from pulmonary tuberculosis.



tion to the distribution of tuberculosis in New Jersey. This is true in all communities and it is well borne out in the present instance. The accompanying chart shows this graphically. The counties that have less than one acre to each inhabitant are Hudson, Essex, Union, and Passaic. These all have a high death-rate from tuberculosis. On the other hand, Atlantic, Sussex, Cape May, Monmouth, and Ocean counties have a low death-rate. Four of these are maritime counties. Sussex is the furthest removed from the sea and embraces the highest land in the State. It adjoins Pike County in Pennsylvania, one of the wildest and one of the most healthful counties in that Commonwealth. The three counties, Sussex, Warren and Hunterdon, are all inland counties, comprising high, well-drained territory not closely settled and embracing the most picturesque portion of the State.

In Mercer County, in which is situated the capital of New Jersey, the death-rate from tuberculosis is found to be twice as great among men as among women. Investigation shows that the men work in the potteries of Trenton. If it were not for the potteries in this district perhaps the results from Mercer County might be a little better.

The causation of pulmonary diseases among potters in the city of Trenton has received some attention, and in an article on this subject, Dr. E. M. Hunt (1883) says:

"All the facts as to the perils of this industry point to palpable dust, constrained positions, and sudden alternations of heat and cold, as the causes of shortened lives and of pulmonary diseases so common as to have made the potters' asthma a designation for a class of chronic ailments which kill many and are life-long to many more. These causes, so far, admit of removal or amelioration, and are so destructive in their character that the means of proper cleansing, ventilation and heating, the management of dust, and the details of method, should be closely inquired into. In no department in our State is there more need of close inspection and

of such law as will relieve this skilful working-class from evils alike destructive of life, of health, and of prosperity."

It is unfortunate, on some accounts, that travelers through New Jersey do not, as a rule, see a more attractive landscape. They generally pass through a flat, uninteresting country. Few visit the hills in the northern and northwestern portions, and these undeveloped districts, if more accessible to the larger cities, would no doubt be highly prized and largely sought.

It is encouraging to note that pulmonary tuberculosis is diminishing in New Jersey, just as it is declining in neighboring communities. The number of deaths for the year ending June 30, 1897, was 3,237, which was 121 less than the previous year, and 255 less than the average for the ten years 1887-1896.<sup>8</sup>

The health-authorities of New Jersey are keenly alive to the necessity of informing the public as to the means by which the disease is propagated and the best methods of prevention. The early recognition of the disease will greatly aid one's chance for recovery, but a little money expended by the State in prevention is better than hundreds of thousands of dollars spent in cure. Circular No. 83, of the New Jersey State Board of Health, has been ordered to be placed in the hands of every family in the State in which a case of tuberculosis exists. Dr. Henry Mitchell, the secretary, has distributed many thousands of these circulars, which explain the cause and means of communicability. Practical information is given as to the location and construction of houses; the quality of food; the disposition of sputa; the cleansing and disinfection of carpets and rooms.

Counties in New Jersey.	Population in 1897.	Deaths from Pulmonary Tuberculosis.	Persons Living to each annual Death from Pulmonary Tuberculosis.	Acreage to each Inhabitant.
Atlantic.....	37,114	56	663	10.6
Bergen.....	72,461	95	762	2.1
Burlington.....	60,061	85	706	9.5
Camden.....	105,070	206	501	1.4
Cape May.....	13,489	21	642	21.0
Cumberland.....	51,555	77	669	8.5
Essex.....	334,000	739	452	.25
Gloucester.....	32,207	40	805	6.7
Hudson.....	349,260	812	430	.11
Hunterdon.....	35,334	40	883	7.9
Mercer.....	87,762	185	474	1.6
Middlesex.....	73,878	101	733	2.8
Monmouth.....	78,109	108	714	4.4
Morris.....	61,710	92	671	5.0
Ocean.....	19,135	25	765	22.6
Passaic.....	144,499	262	551	.9
Salem.....	26,456	35	756	9.4
Somerset.....	31,301	47	666	6.2
Sussex.....	22,596	23	982	15.6
Union.....	90,578	146	620	.7
Warren.....	37,575	42	894	6.2

<sup>8</sup> The total number of deaths from pulmonary tuberculosis for the year ending June 30, 1898, is 3,225 a further reduction. A recent communication from Dr. Henry Mitchell, secretary of the State Board of Health of New Jersey, shows that the counties in which an actual reduction has been noted, are Atlantic, Bergen, Camden, Cape May, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Somerset, and Warren, a majority of the counties in the State.



BATH-PRURITUS.<sup>1</sup>By HENRY W. STELWAGON, M.D.,  
of Philadelphia.

Clinical Professor of Dermatology in Jefferson Medical College.

My attention has been called from time to time to a variety of pruritus that I have not found referred to in dermatologic literature, and yet which in my experience is not so exceedingly rare. I refer to the itching or burning that some persons suffer immediately following a bath. The sensation varies greatly in the same individual. The feeling is at times one of pricking, burning, or almost intolerable itching. It is usually aggravated if the patient yields to the desire to rub or scratch violently. While it may exceptionally be general, it is commonly seated in the legs from the hips down, and occasionally in the forearms also. The attack lasts from several minutes to half an hour or longer, becoming increasingly intense and then gradually subsiding. It is usually of longer duration when the patient goes directly from the bath to his bed; if his clothing is immediately donned the pruritus will generally be less unbearable, less marked, and usually of much shorter duration, especially if he walks about, so as to get the soothing effect of the gentle rubbing of the underwear.

Close observation of several cases presenting the disorder under consideration has failed to afford a wholly satisfactory explanation. Season has apparently little if any influence; the affection not being more common in cold weather than during the warm season. The most aggravated attacks in one case immediately followed open sea-baths, the itching and pricking beginning almost as soon as the patient was out of the water, and gaining in such intensity that he felt almost impelled to tear off his bath-costume in order to seek relief temporarily by violent rubbing and scratching. This patient was also just as frequently the subject of the itching during fresh-water bathing, whether outdoor or indoor. Even in this case, however, the intensity of the attack varied from day to day, although the man rarely escaped entirely. In many instances itching will also follow a sponge-bath, but it is then usually less violent and passes away in a shorter time. There are certain factors that, in some cases at least, unquestionably have an influence. Strong soaps tend to aggravate the condition, and mild soaps, if used in too great freedom or if not fully rinsed off, seem also to have a damaging effect. Long continuance in the water will usually promote and aggravate an attack. Very hot or very cold water is also an aggravating influence in some individuals, although, as a rule, the active factor is the bath itself, independently of the temperature of the water. Another fact disclosed is that those are most susceptible and suffer most who have naturally an irritable and dry skin, rubbing or scratching of which at any time will

leave, temporarily, red marks and streaks. Such hyperemic marks are, however, not necessarily elevated, and are not the elevated streaks or marks or welts one can usually bring out in urticarial attacks. One might readily say, however, that such individuals have what is usually termed an urticarial skin, not meaning that they must have had active and repeated attacks of urticaria. In several cases, however, a history of one or more attacks of acute urticaria was elicited, and in one or two instances this latter disease had shown a somewhat recurrent or chronic tendency.

This irritability of the skin or urticarial tendency being recognized as a factor in bath-pruritus, it can readily be understood that the disposition to the attacks is heightened by any existing or passing digestive disturbance. This element of the affection may explain why such individuals suffer more at one time or for certain periods than at other times, and how occasionally they may be almost entirely free. The individuals affected are distinctly those of a nervous temperament, and those of weak digestion and lithemic tendencies. If the predisposition is temporarily emphasized by overwork, mental worry or anxiety, dietetic indiscretions or digestive disturbance, bath-pruritus is almost invariably aggravated.

As to the matter of treatment unfortunately very often but little can be done. The water used should be between tepid and warm, neither hot nor cold. Exceptions to this rule will be observed, and some patients find the attack slight or less severe after a cold bath and some after a hot bath. Soaps should be mild and used sparingly, and be thoroughly rinsed off. The parts should be wiped or preferably tapped gently dry with a soft towel; it seems that if the skin is allowed to dry itself or is incompletely wiped or tapped dry the itching is usually much worse. In some cases the introduction of some substance into the bath, such as salt, in order to bring it up to the specific gravity of the blood is of value. The bath should be of short duration. Application, by gently rubbing in, of a glycerin-lotion or of an ointment of cold cream and lanolin, with or without a minute quantity of carbolic acid or thymol, will frequently lessen the severity of, or exceptionally abolish, the attack. But a small quantity should be employed, the skin being subsequently gently wiped with a soft towel or linen. The free use of a dusting-powder following the bath has also at times a palliative influence. The attack will be less unbearable if the bath is taken at such time as the patient immediately dresses and stirs about. Constitutional treatment should be advised, especially if there seems to exist any of the predisposing factors mentioned. The bowels should be kept free, a plain diet enjoined, the digestion carefully looked after, and the nervous system kept in proper tone. In some of the cases upon which this paper is based antilithemic remedies, especially moderate doses of sodium salicylate, seemed of positive value. The

<sup>1</sup> Read at the 22d annual meeting of the American Dermatological Association, at Princeton, N. J., June 2, 1898.

various internal remedies used for ordinary pruritus and urticaria should also be tried in severe and rebellious cases. As a rule, however, treatment may be said to be more or less disappointing.

## A SIMPLE METHOD OF PREPARING ALKALINE-ALBUMIN FOR CULTURE-MEDIA.<sup>1</sup>

By JOSEPH SAILER, M.D.,

Pathologist to St. Joseph's Hospital.

EGG-ALBUMIN has been used for a considerable time as a culture-medium, the simplest method of its preparation being to allow it to run into tubes and then coagulate at about 80° in a slanting position. Wesener<sup>2</sup> has coagulated it at this temperature in the shell after shaking vigorously for the purpose of mixing the white and the yolk. Schenk<sup>3</sup> has diluted slightly the outer layer of the white of an egg, and then coagulated the mixture at a temperature from 65° to 70°. Albumin, however, on theoretical grounds, should not be as satisfactory as one of its more diffusible derivatives, and Deycke<sup>4</sup> prepared an alkali-albumin from meat by macerating 1,000 g. in 1,200 cu. cm. of a 3% solution of potassium hydrate. This mixture was filtered, the albumin precipitated by the addition of hydrochloric acid, and filtered. The precipitate was then redissolved by the addition of an alkali, and solutions of various strengths—usually 2.5%—prepared, to which peptone and salt were added. A method somewhat similar to that of Wesener has been suggested by Nastjukow:<sup>5</sup> to 300 cu. cm. of the yoke of egg he adds 1,000 cu. cm. of a 1% solution of sodium hydrate, and then 600 cu. cm. of distilled water. The mixture is then run into test-tubes and coagulated at a temperature between 75° and 85°, and subsequently sterilized fractionally. The method here suggested takes advantage of the fact that alkali-albumin is not coagulated by boiling, and can, therefore, be sterilized by the ordinary methods. The details have not been thoroughly worked out, but the general principle is, I believe, practically satisfactory. About 100 parts of egg-albumin are taken, the yolks being carefully separated, and to this about 10 cu. cm. of strong ammonia water are added. The mixture is thoroughly stirred and tested with litmus-paper in order to be sure that the reaction is strongly alkaline. It is then diluted with water to 1,000 parts. The solution may now be boiled, adding water to supply the loss of evaporation until enough of the ammonia has evaporated to reduce the reaction to the production of a faint bluish tinge upon red litmus-paper, indicating a degree of alkalinity similar to that generally employed in cultures. It may be distributed

into tubes and used as a liquid medium, or gelatin or agar may be added to it, thus forming a very satisfactory solid medium. Agar, in particular, gives a medium that is perfectly transparent and upon which the micro-organisms grow well. As the medium is originally almost perfectly clear, it is unnecessary, after the addition of agar or gelatin, to filter through paper. The shreds of these substances, or the impurities which remain undissolved, are easily separated by passing the solution through a funnel, the stem of which contains a small plug of glass wool. Sterilization is best accomplished in the steam sterilizer, for in some of the liquid that was subjected to a pressure of 3 atmospheres in the autoclave, a considerable amount of coagulation occurred, probably due to the breaking up of the alkali-albumin molecule. Further experiments are necessary in order to determine whether the medium is improved by the addition of peptone and salt, and whether more satisfactory results will not be obtained by a stronger solution. At present I see no reason why glycerin or glucose should not also be added; that is to say, this media might replace as stock the familiar bouillon. Although extensive investigations have not been made, I have noted that the bacillus of anthrax, the bacillus of Friedländer, the colon-bacillus, and the bacillus prodigiosus, all grow exceedingly well and even luxuriantly. I have hitherto been unable, however, to obtain growths of the typhoid-bacillus and the bacillus pyocyaneus. If this difference in growth between colon-bacillus and typhoid-bacillus is confirmed by subsequent investigation, it may prove of considerable diagnostic importance.

**Tuberculous Infection by Moist Particles.**—Edwin Klebs (*Chicago Medical Recorder*, September, 1898) expresses dissent from the generally accepted belief that tuberculous infection occurs as the result of inhalation of dried tubercle-bacilli. He states that dried bacilli lose their infectiousness in a short time. This was shown by the fact that small quantities of living bacilli taken up on sterilized cotton and preserved in a glass tube closed with cotton were in all cases found to be dead after removal from Klebs' laboratory in Strasburg, Germany, to the United States. The difficulty of infecting animals by inhalation of dried tubercle-bacilli is well known. In order to determine whether infection was likely to result from the inhalation of the moist particles thrown off in coughing, a series of tests were undertaken; rectangular glasses, 6 x 3½ inches, being held 6 inches from the mouth during coughing. After staining, barely discernible spots were discovered, which the microscope showed to be made up of epithelial cells from the mouth, with comparatively few bacilli; but on further examination, spots about a millimeter in diameter were found, mostly covered with a thin layer of albuminous substance, invisible in the preparation, which contained relatively great numbers of bacilli. These spots at first all contained air-bubbles, many of which were very small, and thus appearing to furnish unmistakable evidence that they came from the air passages. With great surprise it was discovered, on comparing these small spots with the yellow masses expectorated, that they contained a larger number of bacilli proportionately than this matter, which was probably expectorated from cavities. In view of the danger of contamination from these small particles coughed up, persons cannot be shielded by the use of sputum-bottles, but only by having the patients cover the mouth during a coughing-spell with a cloth or fine paper, which must be burned after having been used.

<sup>1</sup> From the Pathologic Laboratory of St. Joseph's Hospital. <sup>2</sup> Wesener. *Centralblatt f. allg. Path. und path. Anat.*, vol. 5, 1894. <sup>3</sup> Schenk. *Wiener med. Zeitung*, vol. 32, 1887. <sup>4</sup> Deycke. *Centralblatt f. Bakt.*, vol. 17. <sup>5</sup> Nastjukow. *Centralblatt f. Bakt.*, vol. 15.



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**Druggist, Doctor & Co., Unlimited.**—There lies before us a Pittsburg daily paper of which the whole of one page is taken up with a flaming advertisement in several colors of a druggist who has the "exclusive services" of an M.D. to give "free medical advice" to the world, either personally applying, or by letter. If we had a united medical profession we might bring sufficient influence to bear upon the State Legislature to enable State Examining Boards, pharmaceutic and medical colleges, to revoke degrees and licenses to practice upon the presentation of evidence of unfitness. When shall we attain civilization?

**The Gospel of the Liver-Fluke** is the appropriate name of the fad of those who are apparently trying to rid themselves of the need of their intestinal organs. By reason of securing a supply of nutriment entirely prepared for assimilation, the intestinal organs of the liver-fluke become not only useless but completely atrophied. The stomach is sufficient as an absorbing organ. If the liver-flukes should reach a state of civilization sufficiently high we can imagine them making use of hypodermic needles and thus doing away with the need of the stomach. But there are human degenerates and parasites who have accepted the gospel of the liver-fluke and are doing their best to make useless their digestive organs. There are thousands of hysterics and self-medicating cranks (and we fear not a few physicians are perhaps thoughtlessly guilty of encouraging the silly tendency) who are literally feeding themselves with pepsin, artificial digestives, and predigested foods. The manufacturing chemist is fast assuming the role of the liver for the human fluke. The soda-water fountains keep the digestives for him, as it were, on tap. These substances, extracted from the active digestive organs of animals and plants, have, of course, their proper and necessary medical use in case of disease and temporary impairment of function in man, but a caution is decidedly needed that unless we are content to become fluke-men, parasites of the animal world, and let our digestive organs wither, we should oppose the hysteric craze of the self-drugger, and force our organs to secrete their own juices and do their own work as nature demands. Parasitism of any kind is the supreme sin which the source of our life will curse with every punishment held for those who refuse independence and progress.

**Medicine in Fiction; Mr. Kipling as a Clinical Observer.**—During the last 20 years medicine has been much exploited in fiction. Novelists have disdained the use of mysterious wasting fevers, and of subtle poisons defying detection, because brewed according to an old Italian recipe, as the means of removing superfluous characters, and have gone in for detailed study of specific diseases. To the medical man the result is almost always unsatisfactory. Every reader of the JOURNAL, who is wont to relax his mind over current fiction, can think of examples where the author, in spite of the most conscientious getting-up of salient features, betrays over and over again his real ignorance of what he is writing about. Either he magnifies the importance of a symptom that is in no way pathognomonic, or, more commonly still, his invalid is only sick in one place; he has his bad heart, his bad lung, or his bad brain, but all the rest of him is in perfect going order. The complaint, of course, has been read up in a book, but the writer knows nothing of the interdependence of the various organs upon one another, and fails to appreciate that the victim of an organic lesion is damaged in his whole physique, and not only in that region where the initial, or special manifestation of damage, occurs. Mr. Kipling, in more than one of his early stories, has fallen into this trap, but in *The Day's Work*, which is just published, he has been able to give a remarkable clinical study of opium-delirium. The madness of Findlayson, R. E., is a madness of body and mind. The antecedent circumstances are in keeping with the effect produced by the drug, and the rhapsodical dreams, as well as the physical exploits, are all exactly as they should be. Is the story of the "Bridge-builders" the confession of an opium-eater? will be the question on many lips; so we may as well answer it at once in the negative.

**Surgery on Commission.**—One of our young friends who has settled and begun practice in a neighboring city complains bitterly to us of his treatment by the older surgeons. He asserts that he has indubitable evidence that these professional competitors pay liberal commissions to country and city physicians who bring their cases in for operation. One of these men, of world-wide surgical reputation and able thereby to charge enormous fees, gives up as much as 50% to the physician who furnishes the job; while another, who

attaches M.D. and a foreign university in brackets to his name, has a standing rate of only 20%. Country doctors who have no regular operator in the city, frequently go about from surgeon to surgeon seeking the highest bidder. Our young friend reports an analogous tendency toward "business principles and methods" in the internal-medicine men themselves. A young physician who had the advantages of a thorough literary education at the expense of a neighboring State, and after his medical education, got a hospital internship by a competitive examination that (he avers) smelt of ward politics, upholds the surgeons in their commission business. He says he will not send operation-cases that come under his observation to surgeons who are not willing to divide their fees with him. Another surgeon of great ability, who cannot bring himself around to hang out the commission sign and is known by all the doctors as "not right on the divvy," finding his office scant of consultation cases, has begun to appeal directly and persistently to the dear people themselves through newspaper accounts of his discoveries and wonderful cures. In the meantime our young friend clings to the hope that when the reputable members of the profession learn the true state of affairs, or when the public learns that they are in the hands of men who exploit their ills and misfortunes, the surgeons of integrity, of scientific and ethical honesty, will be sought and will have work to do for a fair compensation.

**The Inspection of Meat in London.**—For the last three or four years the Medical Officer of the London County Council has been making extended observations of the methods employed in the large European capitals for maintaining a wholesome meat-supply to the community. He has embodied the results of his investigations in a report to the Public Health Committee of the Council, and the Committee have adopted the suggestions of his report and are now pressing the Council to give effect to them. The principal suggestion is that private slaughter-houses should be done away with, and that cattle for the London markets should only be killed in certain public places under the supervision of the County Council. This seems so reasonable, it is, indeed, so clearly the only way to combat the dangers of tuberculous food that the ordinary man would consider the matter unworthy of debate. Unfortunately the London County Council is a very large body, and in that body there can generally be found one or two people to speak in behalf of any vested interest. Now, undoubtedly, the butchers of London would suffer to a certain extent in their pockets by the proposed reform. Many of them have private shambles for which they have paid considerable sums and which would become useless if the London County Council carried out the wishes of the Medical Officer. The butchers are a wealthy trade, and have a powerful association, which has already given formal notice of an intention to

oppose in the Council the adoption of any resolution confiscating private shambles. The result of this move may be to irritate the Council into treating the butchers with exactly that want of consideration which those excellent tradesmen fear; but it is more likely to lead the Council to consider some terms of compensation. It is almost impossible to conceive that the Council, in the teeth of their Public Health Committee, and their Medical Officer, would allow to remain in the heart of London such focuses of disease as private shambles. How soon shall we see a similar movement in the United States?

**The Opening by Surgical Means of a New Side-track for the Blood of the Portal Vein.**—Under the above title, Prof. Talma, of the University of Utrecht, Holland, writes an article which appeared in the *Berliner klinische Wochenschrift*, of September 19, 1898, and which contains a novel suggestion of considerable interest regarding the treatment of hepatic cirrhosis. The observation in the postmortem-room of thick networks of veins in adhesions between the surface of the liver and abdominal wall, led Talma to the idea, that by sewing the liver and great omentum to the abdominal wall a collateral circulation could be artificially established, which would relieve the ascites of hepatic cirrhosis, in cases in which the function of the liver-cells was retained. Acting on this suggestion, Professor von Eiselsberg operated upon a case in which tapping had been performed five times, but had been rapidly followed by reaccumulation of the fluid. On opening the abdomen the surface of the liver was found granular, and the serosa white and thickened. The gall-bladder and great omentum were sewed to the abdominal wall, and the wound was closed. The wound healed kindly and the fluid did not reaccumulate in any considerable amount. The spleen remained enlarged, however, and as this was believed to be due to venous stasis, the abdomen was again opened, about three months after the first operation, and the spleen was sewed to the abdominal wall. During this second operation, occasion was taken to examine the site of the previous operation, and the subserous veins of the liver were found much enlarged in the region which was adherent to the abdominal wall. The results of both operations were satisfactory; the ascites did not return, the spleen decreased in size, and enlarged superficial veins between the site of operation and the intercostal veins became visible. The patient left the hospital relieved of all symptoms about a month after the second operation, and was seen in perfect health two years later. The possibility of the spontaneous formation of a caput medusæ resulting in relief of the distressing symptoms arising from obstructed circulation in hepatic cirrhosis has long been recognized, but any attempt at artificially producing a caput medusæ has not, so far as we know, been previously reported. The operation can be of use, as Talma



has pointed out, only in cases in which the symptoms are due to interference with the circulation without any lessening of the activity of the liver-cells, as shown by acholia or hypocholia of the feces, urobilinuria, jaundice, etc. In these limited cases, taking into consideration the gravity of the prognosis of the disease under the ordinary medical measures of treatment, and the relatively slight danger which would be incurred by so simple an operation, the procedure would seem worthy of a trial.

#### Telepathy and the Motility of the Neurons.—

We have been much interested in a little brochure, written by Mr. Leslie J. Meacham, on Hypnotism and the Use of Suggestion. Mr. Meacham is a layman who has practised hypnotism extensively and successfully, and who brings a shrewd critical acumen to bear on the theory of hypnosis. He has a very intelligent understanding of both the art and uses of hypnotism, and has shown considerable learning as well as originality in his discussion of the subject. This originality, which is a rare trait in most of the conventional works on hypnotism, is especially shown in the theory advanced to explain the physiology of hypnosis. The author has evidently been much impressed with the hypothesis of the motility of the neuron, as first offered by Rohl-Ruckard in 1890 and later by Lapine and Duval. In this country Dr. F. X. Dercum, of Philadelphia, has especially identified his name with this theory of the ameboid movements of the neuron.

Mr. Meacham has not hesitated to found his whole work on this theory, and thinks it offers a plausible explanation both of hypnosis and of the various phenomena of hysteria and the other neuroses. As an interesting example, however, of how an attractive theory can be made to do duty in the cause of advanced thought, we have been especially struck with his ingenious attempt to explain telepathy and clairvoyance. For Mr. Meacham the universe is filled with a subtle fluid, penetrating all substances; and the thoughts of men cause vibrations in this fluid and are thus transmitted through space for long distances. In fact, the whole of ethereal space is filled with psychic vibrations, which are constantly being poured out by the myriads of brains of living men and women. The highly sensitive, or neurotic, individuals are the ones who are most conscious of these unseen and unheard vibrations, and this they are by reason of their extremely sensitive and mobile neuron-endings or arborizations. Hence telepathy is merely a phenomenon of physics, just as real—and even just as explicable—as the phenomena of light or electricity. It simply required, for acceptance by the scientific world, the demonstration of a receptive organ, and this is supplied by the highly sensitive, mobile, ameboid neurons in the human cortex.

Since Professor Crookes has dignified telepathy as a branch of science worthy of presentation to the British

Medical Association, we have seen nothing that is more in line with a rational explanation of it than that advanced by Mr. Meacham. The theory requires, to be sure, some stretching of the imagination to permit of an acceptance of a thought-vibrating circumambient ether, but barring this difficulty, we can approach to some understanding of it by the aid of the little neurons, projecting their tufts hither and thither in hypersensitive search for and response to the untold and countless vibrations of a universal psychic menstruum. Mr. Meacham's book has much in it that is practical and scientific, and, as will readily be seen, it contains also some speculation that may even be pregnant with a new psychology.

The Nostrum-advertising of Newspapers is a unique and astonishing fact, when we look at it carefully and in a broad way. Is there a single newspaper in the United States that keeps its columns free from the disgrace? We would like to subscribe for it. We say this fact is unique and astonishing, and we mean thereby that, in any other department of thought or science, history or fact, it is an unheard-of thing, that, without an exception, every newspaper of the land should pursue a policy and advocate doctrines absolutely contemptible to every expert in the specialty concerned. Could it be believed that every newspaper would allow its columns to be bought and controlled on all questions of law by a set of criminals or shysters, no one of whom had been admitted to the bar? Suppose millions of dollars were yearly spent in bribing these journals in the interest of a band of criminals, to set forth legal humbuggery detested by every reputable judge and lawyer of the land? Is it not preposterous? But is it not essentially what is happening as to medical truth? Or, suppose that, as regards electricity, all journals should unite to preach and advertise a lot of nonsense as to dynamos, electric lighting, etc., at which every electrician in the world would smile derisively; or, again, imagine that the owners of an insani-tary, monopolistic water-supply should control all newspaper-utterance in the interest of stock-dividends and constantly blare forth their lies and crimes in the name of health and virtue—in any such supposed cases, would not the newspapers become ashamed, and the community find a way to make an end of it? Surely, there is not an editor, even of the yellowest variety, who would deny that what every member of the medical profession would call medical and scientific sin is in reality sin. Especially would this be admitted if, with scientific physicians, were associated the sectarians. And yet, is there a regular, homeopathic, or eclectic M.D. in the United States (not financially interested in quackery), who is not heartily ashamed and disgusted with the combined knavery, ignorance, and imposture of the newspaper "medical" advertisement? Is this riot of rottenness not all the more horrible, that,

instead of dealing with the supposed legal, electric, or sanitation questions, it deals directly with the people's healths and lives? If "the stranger from Mars" were told this astounding fact, he would surely have to deny that it could be either morally or psychologically possible. And yet, what words are strong enough to describe accurately either the fact itself, or its heinousness and brutality? Merely to account for its existence, as an evolutionist would do, seems impossible. The historian of a future age may describe our condition, but far from explaining it, all he could do would be to marvel at the supineness with which 100,000 physicians accepted this professional and social infamy, and spent the time of their county, State, and national association-meetings in electing chairmen and secretaries, or in discussing the treatment of one or two diseases. He may wonder at the love of our people for humbuggery, and the power of syndicates, but he will marvel still more at our professional silence and inaction. He may find it strange that so-called reputable men, church-members, honorables, and LL.Ds., are not ashamed, as editors and stockholders, to publish this blatant and criminal stuff, but he will think it still more strange that physicians show no sign of remonstrating with them for doing so, and even buy the papers with callous indifference.

**The Plague in Vienna.**—We have to record the melancholy intelligence of an unfortunate outbreak of bubonic plague in the Austrian capital. Some days ago, Herr Barisch, an employee in Professor Hermann Nothnagle's laboratory, while participating in investigations concerning the plague-bacillus, contracted the disease, and after a few days' illness succumbed on October 18th. The excitement occasioned by the announcement of this death was only augmented by the additional intelligence that the two nurses who had attended Herr Barisch themselves showed manifestations of the disorder. Almost immediately it was announced that Dr. Franz Herman Müller, who had been assiduous in his professional attentions to Herr Barisch, was attacked and became very ill, and that the wife of Herr Barisch and another assistant showed symptoms of the disorder. Popular excitement ran high, and the city is said to have been thrown on the verge of a panic by the death of Dr. Müller on October 23d. As we go to press there have been reported six cases with two deaths. The apprehension of the inhabitants of the city seems not to have been allayed by the extraordinary precautions taken to prevent the spread of the disease. The body of Herr Barisch was securely wrapped in clothes saturated with germicides, placed in a double coffin, and hermetically sealed. The other patients were placed in an isolation-building and are attended by Dr. Poech, a volunteer physician and two Sisters of Charity. Neither egress nor ingress is permitted. Four other suspects have also been carefully isolated. A

the animals used for experimental purposes in Professor Nothnagle's laboratory were killed and cremated. The Government appointed a committee consisting of representatives of national and municipal bodies to devise ways and means to prevent the spread of the disorder. And finally, lest they should be taken unawares, a temporary hospital, consisting of several detached sheds, was hastily erected during the night, behind the Infectious-diseases Hospital.

It seems that constant association with highly virulent bacteria does beget in some a disregard of the attendant dangers, and doubtless after an investigation of the facts it will be found that the outbreak is clearly attributable to some neglected precaution. This is assuredly not as it should be, for the introduction of the Asiatic scourge into Europe, whether through the ordinary avenues of commerce or as the result of scientific investigation, is a most serious matter, and in either instance is to be equally deprecated. True, the disease is as yet limited to a half-dozen cases and will in all probability be eradicated, but its mere presence is food for serious thought. A most painful feature of the situation at present is the unscrupulous and uncompromising attitude of the antisemitic newspapers who are accusing the Jewish physicians of having introduced the plague into the city. It is feared that this appeal to the worst passions of the mob-populace may result in plague riots against the Jews in case the disease spreads; at the least, it may lead to a serious set-back to the scientific investigation of the disorder. Dr. Müller was considered quite an authority on the plague. As a member of a committee consisting of himself, Dr. Albrecht, Dr. Ghon, and Dr. Poech, appointed by the Imperial-Royal Academy of Science, he proceeded in 1897 to Bombay and other points in India for the purpose of studying the plague. The committee returned some months ago to Vienna and the report of its members has been noted in these columns.

**A Victim of Christian Science.**—A strange story comes from London about the death of the novelist, Harold Frederic. This writer, it will be recalled, was best known by his novel, the "Damnation of Theron Ware," and he has been constantly before the public as an especially clear-headed newspaper correspondent on European affairs. In August, it seems, he was taken ill at his home near London. According to his friend and executor, who sends the report, the illness was of sudden onset, and caused a disablement of the hand and arm. The nature of the disease is not stated; it may have been a cerebral embolus from a rheumatic heart, or it may have been articular rheumatism. Unfortunately the report to which we refer is so vague and unscientific that we cannot determine at present what really ailed Frederic.

At first the patient submitted to medical treatment,



given him by some medical friends of reputable standing in the profession, assisted by Dr. Freyberger, of London, as consultant. A guarded but rather hopeful prognosis was given, and the patient received the best care and advice that modern medical science can furnish. The friends and physicians, however, seem to have reckoned without their host, for Frederic, after submitting for a period to rational treatment, apparently only in deference to his advisers, suddenly announced that he would have no more of skilled physicians, but would put himself in the hands of a Christian Science "healer." The novelist is described, by the way, as always taking his cue from Molière in a certain medieval antipathy that he was fond of displaying towards physicians. So, when his own opportunity came, he was not slow to resent the presence in his house of "doctors, pills, plasters and potions," and showed his fine skepticism by turning for aid to one of the most arrant delusions of the day.

The result was death. His friend seems to think that this was not a necessary sequence of the disease, if the patient had continued under proper care, but was due to the quackery to which the ill-balanced novelist had doomed himself. Public indignation in England has been aroused in consequence, and a coroner's inquest has been called. But whether death was inevitable or not, the logic of the event is clear, and Harold Frederic, in his own case, has demonstrated to the satisfaction of the world not only that "Christian Science" is a "fake," but, more important still, that an erratic mind may coexist with considerable literary talent, and that a sick man is not fitted to be trusted with his own disabled body.

The quality of Frederic's literary work in the field of fiction was somewhat peculiar, and, to those who have studied his most noteworthy creations, may be even suggestive of a partial explanation of the tragedy that marked the close of his life. He seems to have been a writer who could create a great situation and yet not be able himself to grasp it fully and develop it to all its logical conclusions. There was always a lack of completeness in the moral and intellectual construction of his characters and their environment. This was shown clearly in "Theron Ware," in which work the novelist made the impression on some minds that he was not quite able to work out to a full artistic finish a group of characters that had much in it to suggest a great situation and a still greater denouement. The result was a disappointment, the climax a failure, the termination rather flat. This was probably due to a lack in Frederic of sufficient training, not only in science, but in philosophy—a lack which, to the deep regret of all who have followed the work of his pen, has now displayed itself most dramatically in the manner of his death. He gave in his life much promise that was unfulfilled in his art; and, sadly indeed, he has given in his premature death the exhibition of a dismal

failure to appreciate a beneficent science or to justify an unholy craze.

**Suggestions to Writers: No. 13. As to Spelling.**  
—Over 200 years ago a sensible man, William de Bretaine, wrote as follows:—

"Neither will it become you to quarrel pedantically about the orthography of a word; as whether to write *Pe* with a diphthong or an *e* simple; but rather *do* attend to the sense and meaning of the things. What is it to us how many knobs Hercules had on his club, or whether *Pandora* was *faithful* or *false*. Let every man mind his own business and do his own duty. A wise man will employ his thoughts upon things substantial and useful. It is not meet for a man of the world, or even for a man of letters, to posture his brains with idle punctillos and disputed trifles; that superfluous sort of learning amounts to little more than *intellectual leprosy*, and serves no practical purpose. *Common-sense* is the treasure of the mind, and judgment is the key to its storehouse. It needs well with all other gifts; even as diamonds set in the hue of rubies or emeralds."

This holds good to-day, of course, but with certain qualifications. Those who in spelling advocate thoroughgoing acceptance of the general custom will upon careful reading find that the words of the astute William do not justify their sort of laissez-faireism, but rather that of those who spell as they please. Davy Crockett, when ridiculed in Congress for his incorrect spelling is said to have replied, "He must be a very ignorant man who cannot spell a word in more than one way."

In reference to the "spelling-reform" movement many seem to think it beneath their dignity, and that they are attending to "the sense and meaning of things," leaving such trivialities to children and minds of small caliber. But in the specialization of function of civilization, the tremendous amount of printing done, and the number of bothered printers, type-readers, and editors, in the world, trifles become highly important matters by mere addition. The age is microscopic, and its problems are hitherto-unconsidered but momentous little things. Those who petulantly exclaim against botheration with "the diphthong or an *e* simple," usually mean thereby that the *e*-simple faddists should not bother with the diphthong-sensible folk. And as a rule they are right. It is only necessary also to add the rider that the diphthongers must not scold the *e*-simplers. A good rule proverbially works both ways. But why not accept the rule of the world? Why not spell English as the English do? There are two or three Yankeelike answers to such questions: Why not, e.g., govern, enact laws, raise, and cut and thresh wheat, manage railways, medical associations, and do everything else on the English models? Well, we do not and, frankly, we will not, nor in spelling will we abjectly imitate. "We are the people of King Shakespere!" cry the uniformists—and in the five autographs we have of the King, he spelled his own name five different ways! The truth is that not even the deadening and crystallizing influence of conservatism and custom can prevent the continuous

change and growth in spelling and language. The German scientists have almost revolutionized the spelling of their language in the past few years, the England of Shakespere is but little less careless than he as to orthography, and even France is in pain over the laughable crystallization of her language. Change in language simply will *not* stop. Then why not go over body and soul to the fonetik fōk? Solely because Anglosaxons are not revolutionizers but evolutionizers. The method of nature and of our civilization is by changes always slow and slight in the existing thing. Upon this ground we deprecate violent changes in the forms of our words in the direction of phonetic absoluteness, and we advise the slow advance according to the spirit of genuine Americanism and philologic progress. Three-fourths of the æ's and œ's have already been dropped, and their place supplanted by the common-sense *e*. Let us do the same with the rest of the lot. The greatest of historians 100 years ago wrote *economy, æra, musick, democratical*. What smallest of historians would so spell now? Neither will the curtailing process be stopped by authority. Boswell says of Johnson, "I hope the authority of the great master of our language will stop that curtailing innovation by which we see *critic, public*, etc., frequently written instead of *critick, publick*, etc." At this time too one almost invariably spelled *authour, errour, inferiour, honour, domestical*, etc., as here written. What stickler would do so now? But he fights the plan of carrying the same law of change into the spelling of similar words. We have deleted a full half of the useless *al's* at the end of our scientific adjectives; let us, with some proper exceptions, lop off a lot more. Let us philologically and rightly change *-our* into *-or*, and *-re* into *-er*. Let us in a hundred small ways shorten, concentrate, Anglicize, and Americanize our language!

The greatest English philologist has said that "any one who is utterly ignorant of the facts of the formation of the English language has a much better chance of being listened to than those who have studied the subject. I have not been able to find, during 20 years' search, that there is any other subject in which ignorance is commonly regarded as a primary qualification for being chosen to write upon it." We are reminded of this by the appearance of articles even in medical journals sneering at "spelling reform" and "reformers," and advising against the elision of the final *e* in such words as *bromid, quinin*, etc. The writers seem to know nothing of the history of the threshing of this old straw; for example, of the four years' investigation of the American Association for the Advancement of Science, and its unanimous recommendation as to these *e's*, etc. We assure our readers that they may spell *chlorin, chlorid*, etc., without the unnecessary and absurd *e*, and with perfect philologic and scientific correctness. Some "reformers" are so hard-pressed that they feel impelled to reform genuine reform. Nothing

is more ridiculous than conservatism and dogmatism in philology—nothing except the arguments used in their support.

There are two good things that have resulted from the work of the "reformers." The conservatives formerly built the critical breastworks of their camp with what they thought the indestructible masonry of etymology. It was soon in ruins. Not one stone lies upon another. The idea that antique spelling was necessary to tell the etymologic history of a word was philologically not magnificent nor was it war. Then as a last resort the conservatives retreated behind the hastily thrown up earthworks that all change in language is unconscious, and could no more be brought about by willed design than could any unconscious tendency of cosmic evolution. The Dons were routed out of the rifle-pits by the statement of the simple fact, the absolute reverse of what had been alleged, that every change in the form of words brought about since the invention of printing had been purely a matter of conscious design and purposive intention.

## Reviews.

**The Johns Hopkins Hospital Reports.** Report in Pathology. "A Review of the Pathology of Superficial Burns, with a Contribution to our Knowledge of the Pathologic Changes in the Organs in Cases of Rapidly Fatal Burns." By CHARLES RUSSELL BARDEEN, M.D.

The author has had opportunity to study the effect of severe burns in five children brought to the hospital so severely burned that they only survived a few hours. A study of these cases, together with a review of the literature, led to the conclusion that the most probable theories accounting for death after superficial burns are based on the vasomotor changes, on the existence of thrombosis, and on toxemia; and it is not unlikely that all of these factors are operative. A possible fourth factor is direct injury to the internal organs by the heat. The author does not ascribe much importance to the changes in the red corpuscles or to the thrombosis, and would refer the lesions found in his cases to the presence of poisonous substances in the blood. The possible existence of such a toxemia should be considered in the treatment of patients suffering from burns.

**"Hand-Book for Materia Medica" for Trained Nurses.** Including Sections on Therapeutics and Toxicology, and a Glossary of Terms, with Dose and Use of each Drug. By JOHN E. GROFF, Ph.G., Apothecary in the Rhode Island Hospital, Providence. Philadelphia: P. Blakiston's Son & Co., 1898.

The task of abridging the subject of materia medica for the use of trained nurses is far from an easy one, as it is necessary to use good judgment in putting in what it would be well and helpful for her to know without leaving out the necessary part. Moreover, to arrange the subject in a practical and systematic manner for the purpose of teaching and ready reference is a difficult matter. The author of this book has succeeded admirably in doing this, and the work is sure to be in great demand by nurses. As a text-book for use in training-schools it harmonizes very well with Dock's "Materia Medica" for nurses, which has been in use for some time past, and the two books used in combination would practically include all that is necessary for a nurse to know about materia medica. The glossary is full and well selected, and sure to be helpful.



**The Pocket Formulary for the Treatment of Disease in Children.** By LUDWIG FELYBERGER, M.D., M.R.C.P. Lond., M.R.C.S., Clinical Assistant, Hospital for Sick Children, Great Ormond St., etc. 1898. London: The Robman Publishing Co.

This little book gives, in a concise and handy form, all the information which may be required as regards the treatment of diseases of children by drugs. The drugs are arranged alphabetically, and there is a table of cross-references according to diseased conditions. Nearly every drug employed in pediatrics is discussed. Many unofficial preparations are mentioned. In addition to working formulas, the text gives successively a brief account of the properties, use, therapeutics, incompatibles, dose, correction of taste, antagonists and antidotes of each drug. Both English and metric dosage is given. In the appendix are lists of pharmaceutical preparations suitable for local and hypodermic application. Considerable care and judgment has been exercised in this compilation, and it is a safe guide for the busy practitioner, who has no time to look up the literature relative to the subject in question.

**Lehrbuch der Nervenkrankheiten, für Aerzte und Studierende.** Von Professor H. OPPENHEIM, in Berlin. Mit 287 Abbildungen. Zweite wesentlich vermehrte Auflage. 8vo, pp. xiv, 985. Berlin: S. Karger, 1898. Price, 23 marks.

The first edition of Oppenheim's *Textbook of Nervous Diseases* appeared in 1894. Its aim was essentially practical and clinical, the greatest proportion of space being devoted to symptomatology, diagnosis, prognosis, and treatment, and only so much to pathologic anatomy as seemed necessary to explain the symptoms and elucidate the diagnosis. In the preparation of this, the second, edition, the book has only been subjected to such changes as have been rendered necessary by advances in the progress of neurology, several new chapters and numerous illustrations also having been added. The subject is considered under two main divisions, general and special. The former deals with modes of examination and the general symptomatology. The latter is subdivided into six parts: (1) Diseases of the spinal cord; (2) diseases of the peripheral nerves; (3) diseases of the brain; (4) the neuroses; (5) diseases of the sympathetic and the angioneuroses and trophoneuroses; (6) toxic conditions with conspicuous participation of the nervous system (with an appendix including tetanus and cephalic tetanus). The book conforms to a type for which some of our German confreres are especially noted, being concise yet comprehensive, authoritative yet not dogmatic. It is admirably printed and generously, though not effusively, and well illustrated. It deserves a wider circle of readers than it can have in the original, and it could well be translated into English and made a most useful textbook.

**Ovariectomy and Abdominal Surgery.** By HARRISON CRIPPS, F.R.C.S., Operator for Abdominal Sections to the Ward for Diseases of Women in St. Bartholomew's Hospital, etc., etc. London: J. & A. Churchill, 1898. Philadelphia: P. Blakiston's Son & Co. Pp. 624. Price, \$8.00.

The chief object of this work is to record only such operative details as the author has found valuable in his own experience. The arrangement of the book is systematic, considering in order the anatomy of the abdomen and pelvis, preparation for abdominal section, the diagnosis of ovarian tumors, ovariectomy, complications during and after ovariectomy, inflammation and suppuration of the uterine appendages and oophorectomy, abdominal fixation of the uterus for prolapse, Cesarean section, abdominal hysterectomy, extrauterine pregnancy, peritonitis, gastrectomy, excision of the pylorus, rupture of the stomach and perforating ulcer, gastroenterostomy, appendicitis and removal of the appendix, intestinal obstruction, enterectomy and intestinal anastomosis, inguinal colotomy, and surgery of the liver, gall-bladder, spleen, kidney, and hernia. As will be seen, the scope of the work is large and yet the entire field is covered in 422 pages, while 200 additional pages are devoted to a

record of cases operated upon and an index which is satisfactorily complete. There are many valuable hints contained in the book, especially in reference to the preparation and arrangement of the operating-room, the management of peritonitis and intestinal disorders, and the operative procedures on the bowel. We miss naturally many of the familiar features of the American publications, such as the clear-cut type, improved coloring of the plates, and modern spelling. The author differs materially from his fellow surgeon, Bland Sutton, as to the probable etiology of extrauterine fetation. He states that in no inconsiderable number of cases there is a history pointing to previous inflammatory troubles—the old, conventional teaching, while Sutton affirms that the great majority of the cases occur in tubes that have been previously healthy. In the cases of advanced abdominal pregnancy Cripps recommends leaving the placenta *in situ* and instituting drainage—a sound and safe practice to adopt. The plates and illustrations, while not numerous, are good, and most of them are new. The book, on the whole, is an able exposé of the present status of English abdominal surgery.

#### **A Clinical Treatise on Diseases of the Breast.**

By A. MARMADUKE SHEILD, M.B. (Cantab.), F.R.C.S., Senior Assistant Surgeon and Lecturer on Practical Surgery to St. George's Hospital, London, etc. Pp. 510. Macmillan & Co., 66 Fifth Avenue, New York. Philadelphia: John Wanamaker. Price, \$5.00.

Surgical literature has been much enriched in the past few years by the appearance of a number of volumes by men of established reputation, in which has been embodied practically all the important information with regard to the subjects under consideration to be found in medical literature, and to which the authors have added the results of their own observations. Such a book is the one under consideration. It is divided into 9 chapters; in the first of these is considered the development, anatomy, functions, and principal abnormalities of the breast. The second chapter takes up mastitis and abscess. Sheild believes that the obstinate course reported in many cases of abscess is due in great part to lack of proper drainage, and recommends the following method of treatment: A radiating incision is made from the nipple, just large enough to admit the finger, which is passed into the abscess-cavity and brought near the surface in a dependent position; in this position a free opening is made, a drainage-tube inserted and the upper incision is closed after all loculi have been broken up and the cavity has been thoroughly flushed. The third chapter deals with chronic mastitis and the fourth with affections of the nipple and integument, the value of this section being materially increased by a number of excellent colored plates. In the fifth, sixth, and seventh chapters are taken up the classification of tumors and innocent tumors, cystic formations, and sarcoma of the breast. As would be expected from the importance of the subject, a large part of the book, nearly half, consists of the discussion of carcinoma. The frequency, origin, pathologic characters, etc., of carcinoma of the mamma are fully considered and a very valuable chapter is devoted to diagnosis. Attention is called to the fact that the steps of the operation now generally advised were described by Gross in 1880, although incomplete operations have been performed until within a short time. The removal of the entire mamma, a large area of surrounding skin, and the axillary tissues in one piece, with careful stripping of the axillary and pectoral fascia, is the operation advised for ordinary cases. Whilst not absolutely condemning such operations as those of Halsted, Sheild believes that they are unnecessary in all cases. Operation for recurrent growths are held to result in occasional cures and are a means of prolonging life and preventing suffering in many cases, but extensive operations such as removal of the entire upper extremity as suggested by Berger, are considered unjustifiable, and it is doubted whether the arrest of growth will prove permanent, which is reported to have followed the removal of the tubes and ovaries, as practised by Beatson in cases of inoperable carcinoma of the mamma. The book is excellently printed, the illustrations and colored plates are numerous and most of them original, and there is a good index. It will form a valuable addition to the library of anyone interested in surgery.

**Operative Gynecology.** By HOWARD A. KELLY, A.B., M.D., Fellow of the American Gynecological Society; Professor of Gynecology and Obstetrics in the Johns Hopkins University, etc. With 24 plates and 290 original illustrations. Vol. II. 8mo, pp. 557. New York: D. Appleton & Co. Price \$7.50.

In this second volume of his magnificent masterpiece Dr. Kelly has maintained the high standard of excellence and accuracy followed in the initial volume. In the light of the completed work it would not be invidious to state positively that there has not appeared in any language or country a more thorough exposé of individual investigation and painstaking application; and the highest tribute that American surgeons and gynecologists can offer is due the distinguished author for his labors. By his untiring effort, coupled with an inherent talent and aptitude for his chosen specialty, he has materially aided in placing abdominal surgery in America where it properly belongs, in the foremost rank of all surgical procedures. The skilled gynecologist is now recognized as the close friend and adviser of his medical confrère, and occupies a niche peculiarly his own among the earnest co-laborers in an honorable profession. It would be impossible in the limited space allotted to a review to do anything like justice to the many attractive features of a book of this scope. As the former volume was concerned mainly with minor gynecologic procedures, this deals almost entirely with the serious major operations upon the pelvic and abdominal viscera. Special attention has been given to a careful consideration of the preliminaries to abdominal section, as well as to the technic of the operations in their various forms and the complications that might possibly arise during and after their performance. In the opening chapter are delineated in full the general principles and complications that are common to all abdominal operations, including the health of the surgeon; the examination, general and local, of the patient; urinalysis; the preliminary preparation of the patient and her further preparation in the operating-room; the preparation of the surgeon and his assistants; the proper dress and conduct of visitors; the length of the abdominal incision and the method of finding the peritoneum; the exposure of the field of operation; the methods of dealing with adhesions; the treating of injuries to the bladder and ureters; the ligation of the pedicle; the control of hemorrhage; irrigation of the abdomen with salt-solution; the question of drainage; the methods of closing the abdominal incision; and the abdominal dressing. Such preliminaries and generalities as these are being thoroughly considered in the light of the most recent investigations and knowledge. The more special questions that arise in abdominal surgery are taken up, such as the mooted point of vaginal drainage; the choice between the vaginal and abdominal routes in those conditions that may be treated in either way; the conservative surgery of the tubes and ovaries; operations during pregnancy; suspension of the uterus; Cesarean section and extrauterine pregnancy; myomectomy; herniotomy; and many other interesting subjects. The mere recital of these features of the book will carry some idea as to its scope and thoroughness, and when it is further stated that to a clear and concise text are added many beautiful plates and wood-cuts, with illustrative charts and diagram, one cannot do more for the recommendation of the work. We have nothing but praise to offer. Dr. Kelly's book does not claim to be a text-book of gynecology. It is not a systematic presentation of the diseases of womankind, with their appropriate methods of treatment, medical and surgical; but it is a valuable presentation of the author's experience and views upon all operative procedures associated therewith, and as such is unique and most valuable. No surgeon's literary outfit is complete without this latest addition to surgical knowledge. Finally, it is our pleasure to congratulate both Dr. Kelly on his magnificent contribution to the profession, and his fellow-surgeons on their extremely good fortune in being placed in possession of such a gift.

**Professor von Esmarch**, the distinguished professor of surgery in the University of Kiel, recently celebrated the fiftieth anniversary of his graduation in medicine.

## Correspondence.

### AN ARMY SURGEON'S EXPERIENCE WITH TYPHOID FEVER.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

It would seem that the idea which perhaps has prevailed in the medical mind, that typhoid fever spreads only through contaminated water or milk, must be modified after the experience of the army camps this summer. The fierce battle which the Seventh (and I believe all other army corps) has waged with this disease will be the subject of much study. There have been more than 280 deaths in this corps alone and in the great majority these have been from typhoid fever. The Seventh Army Corps was encamped near Jacksonville, in the flat pine woods. The water-supply was above suspicion as to bacterial contamination, coming as it does from deep artesian wells. This water is, however, disagreeable, when not aerated, because of the sulphur it contains. It is laxative, and when the regiments were supplied with water from other than the city aerated tanks, I believe it helped to produce a disorder of the stomach and bowels which made more easy the invasion of typhoid fever.

The Seventh Army Corps was provided in Jacksonville with a tub-system of sinks. Half-barrels were set in rows and these surrounded by a board screen, all freely open to the air. The regiments of each division were camped in close proximity, there being but a few feet between the adjacent guard-lines. The Second Virginia Regiment brought typhoid fever from its Richmond camp. This I discovered and so informed the corps-surgeon early in July. His reasons for not isolating this regiment I never learned. As new cases developed, the men with diarrhea, for some days before the nature of this disease was known, used, in camp, the common sinks. These sinks were not far from the company kitchens. Flies by thousands swarmed back and forth. The kitchens and dining tents were open and the food exposed. For instance, the cans of condensed milk used by some in coffee were opened by two perforations in the top. I have seen these holes surrounded by a ring of fly-specks. When one poured milk into his coffee it was over these infected fly-dejections. When the tubs from the sinks were full they were loaded into wagons and hauled away jolting along the roads. The sewage was spilled in the dry sand and the winds carried it broadcast. The epidemic spread at first slowly and then swept throughout the corps. The division hospitals filled with typhoid patients and deaths became frequent. The mortality was not extreme, for tents make the best possible typhoid hospital. It was surprising to those of us on the hospital staff who had had extensive hospital experience in the larger cities to see how well desperate cases of this fever progressed in the open tents despite the wind and rain and necessary crowding, and, for a long time, a very limited supply of medicines and hospital facilities. The wooden pavilions later built for division hospitals are certainly going to prove a failure as compared with tents for the treatment of typhoid fever. When in early August the epidemic became severe and the patients came into my wards more rapidly than they could be well cared for, I respectfully suggested to the corps-surgeon that the corps be moved to North Carolina or some other point. It seemed to me that a thoroughly infected camp should be abandoned. After an evening inspection the corps-surgeon said he would recommend the next day this immediate removal, but for reasons, of which I am ignorant, he doubtless changed



his mind. Some regiments were later removed a short distance, and in some cases a pit-system of sinks was adopted, which was undoubtedly superior to the tubs.

There has been much said about the carelessness of the volunteer soldiers in habits of eating and drinking as being a cause of so much sickness in our camps, but it is a fact confirmed by repeated personal observation and statistics that the men who drank, and kept irregular hours, and ate pastry and cake were not affected with typhoid in as large proportion as the total abstainers who staid in camp and had a regular diet. It is no less true that when the alcoholic did develop typhoid fever or pneumonia he was much more likely to die and was less amenable to treatment. This charging the cause of our sickness to the men's habits was encouraged by almost daily articles in the Jacksonville papers, which are in such constant fear of the reputation of their city as a health-resort being damaged that the truth is perverted in most that is printed on this subject. It was a fact noted by all surgeons who had the opportunity of broad observation, that the men in companies organized in cities stood the camp-life better than the apparently more sturdy farm-boys from the rural districts. The systems of the city men seemed more easily adapted to the changed life of camps.

The Seventh Army Corps is now leaving Jacksonville, after one of the hardest battles the surgeons will ever be called upon to fight—an experience that will give the doctors who have passed through it thought for years to come. We volunteers, who brought into the service of our country only medical knowledge and no great liking for military reports, will later be free with suggestions as to the way things can be bettered in the years to come. We have been daily surprised to learn that in the regular service the monthly report is to be considered before men's lives. Smarting under the severe criticism of our professional brethren in the army, which we think unjust, we, for the sake of peace, bide a more propitious time to speak. I had imagined that in these days of scientific light an army could be assembled, encamped, and wielded as a weapon of war without a larger death-rate from disease than from battles. But in a nation like this, after being so long at peace, as Colonel Greenleaf said to me, "we all had to learn. We have been managing only small army-posts, and this a new experience to all of us." Of course it was impossible to live through such a summer and not learn. Should I now be asked my advice as to building an army I would demand above all else three things: First a corps-surgeon of exceptional ability and courage, of stable, unswervable determination—a fighter. The corps-surgeon is the most important individual in this fighting machine. Should he have the narrow ideas bred by many years in a small army-post, or lack the courage and knowledge to take prompt, active steps to preserve the health of his command, all is lost. Second, I would have good captains of all companies—men of intelligence and not afraid of work. There are generals and colonels in plenty, who can plan battles, but the captain's daily contact with his men leaves in his hands the caring for their health by constant vigilance. Third, I would have good cooks. I believe it would be an economy in the army to have the company cook paid a high salary and require him to be a graduate of a most rigid training-school. The Government supplies good and ample rations (except that in southern camps fruit is lacking), and with good cooks the soldiers would be well and contented. A better disposal of sewage, a portable sterilizer to sterilize blankets and bed-

ding and clothing—many such details are bound to come, but without the three essentials mentioned a volunteer army will be weak.

Very truly yours,

J. FRED. CLARKE,

Major and Surgeon 49th Penna. Vol.

Camp Cuba Libre, Florida, September 22, 1898.

## SANITARY SCIENCE AND PRACTICE IN JAPAN.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

THE very flowery account of the sanitary progress in Japanese institutions, published by the *Lancet*, and which you copy in your number of October 15th, reads very well, but is in singular contrast with the figures taken from the last monthly return of mortality in the jurisdiction of Tokio, for August, 1897. In the list there compiled I find the following figures: cholera Asiatica, 18 male, 8 female; typhus abdominalis, 18 male, 15 female; dysentery **402** male, **405** female, kakke **187** male, 89 female; carcinoma ventriculi (?), 44 male, 26 female; meningitis, **425** male, **415** female; phthisis pulmonum, 190 male, 196 female; gastritis catarrhalis, 144 male, 123 female; enteritis catarrhalis, 101 male, 127 female; gastro-enteritis acuta, 31 male, 31 female; gastro-enteritis chronica, 72 male, 119 female.

These are all diseases which sanitary science should control. The number of dysentery deaths is enormous, and due, in all probability, to the vile drinking-water of Tokio. The kakke list is also enormous, if you think how small is the general percentage of death in that disease. Can there have existed such an exorbitant number of kakke cases in Tokio, in one month? Look at the deaths from "meningitis." It is frightful. Take the gastric and gastro-enteritic lists, which show a mortality evidently due to bad food and worse water. It is my firm opinion that the sanitary science of Tokio, in spite of the flourish of trumpets in which the Imperial Government indulges, is not one whit better than it was 25 years ago, at the time when they dismissed every foreign medical man, save Baelz, in order to show the world what they could do themselves. Well, the world can see it by the figures furnished by the Government to the *Sei-I-Kwai Journal*. I dare say that the same old shallow drinking wells on street-corners are to be seen still in Tokio, not six feet from the deep open, walled gutter-drain, and not a stone's throw from the public urinal and water-closets, which are to be found at every corner. I should not wonder if the old wooden drains were there still to feed these wells. I dare say, also, that the same old system of removing "night-filth" from these public water-closets is still in force! that is, men come to clean them in the day-time, carry the filth on their shoulders (in a bucket at each end of a pole) and empty it in public canal-boats, to be duly carried outside the city to the rice-fields for manure. This same rice-field manure pollutes every river and stream, after the rice-fields are flushed and drained, and these rivers and streams, carrying this dirt, come back again to the cities and towns to infect the inhabitants through their drinking water with cholera, epidemic dysentery, typhoid fever, etc. This system will prevail, as long as the Japanese have control of sanitary matters there. The same old mosquito is still alive in the "Kingdom of the Rising Sun," with sisters, cousins, and aunts, and woe betide the European who dares to sit in his own room without being fortified by a square mosquito-net hanging from the ceiling, as big as his room;

the net must protect, besides his person, chairs, table, and all his furniture. The mosquito is the worst plague of Japan. He carries the infection from each and all of these poisoned places to the food upon the table, and to the drinking water. Only a revolution can put down that universal poisoner. Until Japan ceases to be a rice-eating country, she cannot lay claim to a sanitary condition, as beautiful as that which the Government vaunts. When the latter discharged its Scheubes, Simmonses, Hoffmanns, etc., she deprived herself of those who had helped her to a better condition! She is as those men left her, better than before she got that foreign aid, but bad enough, as I have shown. The strange thing is the Japanese have never shown any thankfulness for what Europeans and Americans have done for them. A Japanese brain never could originate, it can only copy. I have a hundred times observed, that when you ask the Japanese a question, he answers by a number of other questions, in order to know what he should say, what you expect him to say; and then his answer is some form of answer to your own question—you have really answered your own question. When anybody tells me that a Japanese medical man has achieved anything in medical sanitary science, I at once look for the Teutonic (Anglo-Saxon, German, American) brain behind him—the brain that has made Japan.

ALBERT S. ASHMEAD, M.D.

New York, Oct. 21, 1898.

### VACCINE-FARMS AND VACCINE-VIRUS.

*To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—*

ALTHOUGH I can by no means subscribe to all the statements that Dr. McGovern made in your issue of October 1st with regard to the subject of vaccination, I was glad to see the matter brought up, and have often wondered that so little was said or done by public-health authorities in regard to the source or sources of vaccine virus in their respective localities. True, an inspection of the various vaccine-farms was made at the instance of the Pennsylvania State Board of Health, but the Board recommended no particular product, and even if it had done so, it would have had no authority to enforce its recommendation. And to what does the endorsement amount, which Dr. Slee mentions in your October 8th number? At the direction of the Tennessee State Board of Health I also, as State bacteriologist, made an inspection of the different vaccine-farms last summer, and the only one to which I was refused entrance was in Pennsylvania, although the proprietor knew that I came as a public-health official. The only inference possible was that he feared to have his methods aired, and in fact I know that they are of the crudest and most imperfect character. Indeed some of the worst vaccine-farms we have are in Pennsylvania. Our Board of Health went a step further and definitely recommended the products of three places, but we have no authority to enforce this recommendation, and I know that vaccine is used in the State from the farm that I consider the dirtiest of all. Dr. Slee is wrong with regard to the subject of extraneous organisms in the virus. They are always found on the points, and are often pathogenic. This will readily be understood by anyone who has seen the method of getting the virus from the animal—taking it from under a purulent scab. Two years ago the arm of a woman in Alabama was amputated on account of a violent septic process following vaccination, and I have heard of one or two similar cases that have occurred in the South. Some years ago I was a vaccine physician in

Philadelphia, and I well remember a number of violently sore arms that followed in my wake, and several with large axillary abscesses and such dangerous constitutional symptoms that I was kept for days on the anxious bench. Pure virus does not give rise to such symptoms; they are caused by the pus-producing organisms. The source of virus for the city at that time was decided upon through political considerations, and may yet be for all I know. At any rate, that is still the case in many other cities. Though I believe in compulsory vaccination, I do not believe in the right to inoculate the blood of a child with a substance the origin of which neither the parent nor the doctor knows, and for the purity of which no public official is responsible.

Dr. Slee is right, however, about the glycerinated virus; it is by all odds the best. This summer, while in Munich, Bavaria, I visited the city vaccine establishment, and noticed that the operator did not burden himself with aseptic precautions, but that after washing the scabs with clean water, soap and brush, and then clean water again, he scraped off scab and all down to the raw surface and put this rather offensive-looking mass into a bottle along with glycerin in the confident assurance that within a comparatively few days every dangerous organism therein would have received its quietus, and the virus be at least harmless even if not active. Experience shows, however, that virus in this form is likely to retain its activity longer than when on the customary ivory point.

The fact is, that no vaccine-virus should be permitted to be sold in a State, unless that virus has received the endorsement of the State health-authorities, after an inspection of its source by a competent bacteriologist who is officially connected with these authorities.

Nashville, Tenn.

ERNEST B. SANGREE, M.D.

### A CASE OF RETINAL DETACHMENT WITH A HISTORY.

*To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—*

I. N. B., aged 34, married, a barber working in a basement-shop, damp and illy-lighted, found on June 1, 1897, that the sight of his right eye had suddenly failed; there were a few slight twinges of pain. The man was brought to me the next day by his family physician, when I found nothing could be seen in the lower half of the field. The hand being held on a level with the eye and a few feet in front, only the tips of the fingers could be made out, and their outlines were blurred. In external appearance the eye was apparently normal, there was no tenderness anywhere, but tension was perceptibly reduced. No history of previous trouble was obtainable except that the eyes tired easily and glasses were worn to overcome the trouble. With the ophthalmoscope I found that the detached portion of the retina was above and hung down like a loose sack, hiding the disc and fovea from view. It was pinkish-gray in color and had evidently ruptured close to the ora serrata. The vitreous was extremely fluid. The patient was put to bed and remained on his back for six weeks with the eyes bandaged. At the end of this period the vision was so much improved that he would stay in bed no longer. In a few days, however, the condition was as bad as at first and a second period of rest gave practically no beneficial results. My opinion is that the sudden onset of marked trouble was due to a rupture of the retina and the pouring in behind it of the extremely fluid vitreous. This could not be the beginning of the trouble, however, as the changes in the



vitreous would require time and the rupture could not result of itself. We must presume that such changes had been in progress, unknown to the patient, for some time, the sudden blindness following the larger detachment only, attracted his attention. The patient's own history, except as regards his place of employment, was good, but this cannot be said of his family history. The mother at 50 lost the sight of one eye as suddenly as the son, while stooping to tie her shoe; that of the other following in about five years, and in both cases the cause was detachment. The mother's mother became blind at about the same age and under similar circumstances, but I could not learn the cause, as she died before the memory of my patient. The man was wearing minus lenses (1. D.) although the unaffected eye was hyperopic. As the lenses were the same, one would naturally suppose the eyes were also. Thus the affected eye was probably hyperopic, whereas most cases of detachment occur in myopic eyes. Had the glass he was wearing anything to do with the trouble? It is difficult to say. The wearing of minus lenses in cases of hyperopia serves to aggravate strain, and the condition of spasm which so often accompanies it. Thus the constant tugging of the ciliary muscle upon the internal structures of an eye predisposed (as the family-history in this case would tend to show) to this form of trouble may have been an exciting cause.

There is at least one clear lesson here, which is that the fitting of glasses should not be turned over to the jeweler, or the dealer in glasses, or the traveling optician (as this man was), or the "professor" *by the grace of the printing press*. There are quacks enough in all conscience inside the profession, without encouraging those on the outside. Such a practice is a great mistake, and one the physician should do his best to remedy in the interest of both himself and his patient.

Fargo, N. D.

Yours truly,

W. L. GRANT.

## FRACTURE OF THE SKULL BY CONTRECOUP.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

On September 15th I was urgently called at 2.30 A.M. to see a lady, aged 19, who, her brother stated, was "unconscious." I learned that the patient had retired at 11 o'clock the night before, being in good health and cheerful. At about 2 o'clock the next morning she groped her way to the bathroom in the dark to get a glass of water. On returning she stumbled, probably against the threshold or the door, and fell, the chin striking against the frame of the bed in which her sister was sleeping. The latter was awakened by the fall, and stated that she found the patient prostrate, unconscious and breathing heavily. The family tried various household measures to restore the girl to consciousness for over a half-hour, and then sent for me.

I found the conditions as follows, 40 minutes after the accident: The face was pale and perspiring, and there were no marks or signs of injury about the face, chin, or any portion of the head. A piece of the left upper lateral incisor, however, was found chipped off from coming in contact with the bed. The pupillary reflexes were present and equal. Breathing was stertorous and at times inaudible. There was complete relaxation of the extremities. Slight paralysis of the left side of the body was also made out. The patient was extremely restless, rolling from side to side, and several times she dragged herself up to a sitting posture, turned her head from side to side and then fell back on the bed again. The pulse was frequent and weak.

On examination of the pupils after half an hour, the left was found contracted and the right very dilated. There was also increased paralysis of the left upper and lower extremities, with deepening coma.

Taking all the symptoms, in conjunction with the history, the condition of the pupils, the paralysis, and the increasing coma, I diagnosticated fracture at the base of the skull by contrecoup, my belief being that the girl in falling struck the lower jaw, the shock being transmitted through the condyles to the skull-bones in the immediate vicinity and causing a fracture in the same way as when a person falls on the feet or buttocks and the shock is transmitted through the spine to the base.

All efforts to revive the patient were futile, and I allowed the family to send for their regular physician, who responded quickly. On comparing notes we agreed in the diagnosis. I then left the case. Four hours later the patient had several convulsions, no doubt due to fresh hemorrhages. She never rallied and died 12 hours afterward. The case was reported to the coroner, who made a rigid inquiry as to the nature of the case, but no autopsy.

Fracture at the base of the skull by contrecoup is rare. Wyeth in his *Textbook of Surgery* states that "a rarer form of indirect fracture of the skull is that known as *contrecoup*, in which the bones give away at the point opposite to that at which the injury is received." Erichsen in his *Surgery* says: "Surgeons occasionally meet fissures in the thin part of the skull (base), which could not be traced to the vault which directly received the injury."

I think that the extreme coma that appeared in this case points to rupture of smaller bloodvessels. If a large vessel is cut the period of unconsciousness is shorter.

Respectfully,

3 W. 114th St.,  
New York City.

ABRAHAM GOLTMAN, M.D.,

**Crossed Cerebrocerebellar Atrophy.**—At a recent meeting of the Academy of Medicine of Rome, Bignami said that heretofore studies on the subject of crossed cerebrocerebellar atrophy have proceeded from the basis that crossed atrophy of the cerebellum presupposed a similar condition of the opposite cerebral hemisphere, but that the mode of the development of the conditions has not yet been elucidated. He has recently observed four cases of extensive atrophy of one hemisphere of the cerebrum, in three of which the corresponding half of the cerebellum was diminished in size as a result of vascular changes. In none of these, nor in the fourth, in which the cerebral atrophy was less than in the others, was there any alteration in the opposite half of the cerebellum. Histologic observations show that the diminution in size of the cerebellar hemisphere is not the result of atrophy in the true sense of the word; it is the consequence rather of defective development—*aplasia*. Despite the diminution in size, the structure of the cerebellum was histologically normal. In one case in which there was marked sclerosis of the cerebral hemisphere, there was not the slightest sclerosis in either the superior or the middle peduncles. In such cases the cause that engenders the sclerosis of the cerebral hemisphere may also, without there being any continuity of the process, give rise to the sclerosis of the cerebellum, which may be crossed. When, in consequence of atrophy of one cerebral hemisphere, there ensues atrophy of the opposite half of the cerebellum, as does, without doubt, sometimes occur, the latter is to be looked upon as a defect of development, dependent upon the diminished activity of the cerebellum, which in its turn is due to the lesion of the cerebral hemisphere. As the result of animal experimentation, it is to be looked upon as unlikely that removal of one-half of the cerebellum from a newly born animal will be followed by atrophy of the opposite half of the brain.

## American News and Notes.

**University of Denver, Col.**—Dr. Hobart Warren has been appointed professor of anatomy to succeed Dr. C. D. Spivak, resigned.

**The Johns Hopkins Medical Society.**—At the recent annual meeting, Dr. J. M. T. Finney was elected president, and Dr. Thomas S. Cullen, secretary, for the ensuing year.

**The Memphis (Tenn.) Quarantine.**—The quarantine that the city of Memphis has maintained "vi et armis" since September 5th, was raised on October 21st, owing to the continued low temperature.

**The Tri-State Medical Association of Mississippi, Arkansas, and Tennessee** will meet in Memphis, December 20, 21, and 22, 1898. Titles of papers should be sent to Dr. Richmond McKinney, secretary, Continental Building, Memphis, Tenn.

**The "Texas Clinic"** is a new journal published at Dallas, Tex., under the editorial supervision of Dr. J. P. Shelmire. It proposes to devote itself chiefly to clinical reports, but it will also have in each issue an article from some well-known physician in a medical center.

**Craig Colony for Epileptics.**—The following consulting staff has been elected: Dr. C. A. Herter, consulting chemist; Dr. Ira Van Gieson, consulting pathologist; Dr. George M. Gould, consulting ophthalmologist; and Dr. Henry Ling Taylor, consulting orthopedist. Other physicians to represent other departments will probably be added to the staff in January.

**Women-Physicians and Women-Dentists.**—Recently published statistics show that there has been a remarkable increase in the number of women-physicians and women-dentists in the United States during the past 30 years. In 1868 there were 24 women-dentists and 527 women-physicians, while now there are 407 of the former and 6,882 of the latter.

**New York Obstetrical Society.**—The following are the officers elected at the annual meeting, October 11th: President, Dr. W. R. Pryor; vice-presidents, Dr. Le Roy Broun and Dr. Edwin B. Cragin; recording secretary, Dr. Joseph Brettauer; assistant recording secretary, Dr. E. E. Tull; corresponding secretary, Dr. George W. Jarman; treasurer, Dr. J. Lee Morrill; pathologist, Dr. George C. Freeborn.

**Memorial to Dr. C. W. Dellenbaugh.**—For the purpose of perpetuating the memory of the late Dr. C. W. Dellenbaugh, his widow, Mrs. Sarah A. Dellenbaugh, and children, Florence A. and Judge Frank E. Dellenbaugh, will donate to the Cleveland Medical Library Association about 350 volumes of his library. Later on, a fund will be formed, the interest from which will be used to purchase new medical books of value.

**Guarding Against Leprosy.**—The State Board of Health of California has deputed Dr. C. A. Ruggles, president of the board, to visit the Hawaiian Islands to learn the extent of the presence of leprosy, and to report measures to prevent its introduction into California. Since the annexation of Hawaii, its inhabitants are free to come to California ports, and it is the intention of the Board of Health to prepare a report for submission to the coming legislature, suggesting safeguards against the spread of the disease to American shores.

**The Montreal Medico-Chirurgical Society** met on the evening of October 14th, Dr. Craik, the retiring president, in the chair. After the President's annual address the following officers were elected: President, Dr. J. G. Adami; first vice-president, Dr. H. A. Lafleur; second vice-president, Dr. J. M. Elder; secretary, Dr. A. T. Bazin; treasurer, Dr. J. M. Jack; librarian, Dr. F. A. L. Lockhart; council, Drs. Craik, Jas. Bell and F. J. Shepherd.

**Chicago Medical Society and Chicago Society for Internal Medicine.**—At a joint meeting held October 19th, Dr. J. M. G. Carter read a thesis upon the **treatment of typhoid fever**, based upon a study of 70 cases. He said that the most important indications, in treatment, are the feeding the patient, the removal of the morbid cause by cleansing the stomach, augmenting the secretions, promoting intestinal antiseptics, and increasing the systemic resistance; the reduction of the temperature by the coal-tar derivatives, or preferably by cold sponging.

**The Massachusetts Hospital for Consumptives and Tuberculous Patients**, located at Rutland, Mass., about 1,200 feet above sea-level, was formally opened for the reception of patients, October 1st. Only patients whose condition permits a reasonable hope of cure will be admitted, and those whom a stay for a certain period does not improve will be expected to go elsewhere. The charge for patients will be uniform at the rate of 50 cents per day. Patient may be admitted upon an order from a member of the visiting staff, Drs. Vincent Y. Bowditch and Herbert C. Clapp.

**The Royal Victoria Hospital in Montreal** having soon proved too small, extensive additions are at present being made. One small wing is nearly completed and will be devoted exclusively to the resident physician's quarters. The outdoor department, which has long been congested, is being more than doubled, and will be equipped with a large operating-room. The nurses' quarters will also be increased. These additions will enable the management to provide a larger medical and nursing staff and run the hospital at its full capacity of 375 beds. The buildings are well under way and are expected to be covered in at least before December.

**Obituary.**—DR. H. C. LEIGH, Sr., Petersburg, Md., October 9th, aged 65 years.—DR. NATHAN SMITH LINCOLN, Washington, D. C., October 20th, aged 70 years.—DR. FRANCIS LIEBER, acting assistant surgeon, U. S. Army, at Ferdinand, Fla., October 10th, aged 30 years.—DR. HENRY CLAY BAKER, Malvern, Ark., October 9th.—DR. CHARLES L. FOX, Lowell, Mass., October 12th, aged 28 years.—DR. CALVIN MORGAN, Dugansville, Ky., October 3d.—DR. JOHN G. STUART, Fortville, Ind., October 7th, aged 73 years.—DR. SAMUEL ZELLER, Phoenixville, Pa., October 23d, aged 81 years.—DR. CHARLES SNYDER, North Wales, Montgomery County, Pa., October 22d.

**The New York Medical Association.**—The following are the officers elected at the meeting held October 18th, 19th, and 20th: President, Dr. Joseph D. Bryant, of New York; vice-presidents—first district, Dr. J. G. Hunt, of Utica; second district, Dr. D. C. Moriarta, of Saratoga Springs; third district, Dr. F. W. Ross, of Elmira; fourth district, Dr. W. M. Bemus, of Jamestown; secretary, Dr. M. C. O'Brien, of New York; treasurer, Dr. E. D. Ferguson, of Troy; members of council, Dr. John P. Sharer, of Little Falls; Dr. Charles H. Glidden, of Little Falls; Dr. C. E. Fritts, of Hudson; Dr. L. J. Brooks, of Norwich; Dr. Delancy Rochester, of Buffalo; Dr. C. Ellery Denison, of New York, Dr. Frederick Holme Wiggin, of New York.



**McGill University.**—This year's session in the Medical Faculty of McGill University, Montreal, was formally opened by a lecture by Dr. Clifford Allbutt, Regius Professor of Physic in Cambridge, England. Dr. Allbutt took for his subject "Teaching Methods in Medicine," which was listened to with great interest. He referred to his late visit to the United States and Canada, and spoke very highly of some of the medical institutions that he had visited, stating that Europe would have to look to her laurels if she wished ever to keep abreast of the times. The coming term promises to be one of the most successful in the history of McGill, there being about 460 students registered in medicine alone, this being the high-water mark so far. Of this number, 120 are in the first year.

**Vital Statistics of San Francisco, Cal.**—The report of the Health-Department of San Francisco for the fiscal year ended June 30, 1897, shows that there occurred 6,150 deaths amongst an estimated population of 360,000—the mortality-rate being thus 17.08 per 1,000. During the past 25 years this total number of deaths has been exceeded but three times—during the three successive years from July 1, 1889, to June 30, 1892, owing to the prevalence of epidemic influenza. The mortality-rate of 17.08 per 1,000 inhabitants has, however, been exceeded every year during the past 25 except two. Of 6,150 persons dying, 2,216 were natives of the Pacific coast; 976 came from the Atlantic States; 2,883 were foreign-born; of the remaining 75 the nativity was not ascertained. Of the total number of deaths, 1,008 are attributed to tuberculosis, and of those, 896 to the pulmonary variety.

**Suffolk County Branch of the Massachusetts Medical Society.**—At the meeting held October 19th Dr. W. F. WHITNEY made a brief farewell address as president of the society after two years of service. DR. H. F. VICKERY was then elected president.

The scientific business of the meeting was limited to a history of the cases of **soldiers at the various hospitals**. DR. HENRY JACKSON reported 126 cases of malaria, malaria with dysentery, typhoid fever, typhoid with malaria, uncomplicated dysentery, and debility that were under his care at the City Hospital. All the malarial patients received large doses of quinin, 20 grains in a single dose after the temperature had fallen one degree, together with 15 grains in divided doses through the day. In the pernicious cases subcutaneous injections of quinin hydrochlorate combined with tartaric acid in solution, 5 grains to the dram, was most serviceable. Dysentery was treated by irrigation with boric acid or saline solutions and with morphin to relieve pain. Four cases were treated with morphin and ipecac, the empirical method in India. The typhoid-fever cases from Cuba were not so severe as these from Chickamauga. Two cases of convalescence from yellow fever showed a yellowish discoloration of the nails. DR. VICKERY reported 90 cases. Whatever the disease, quinin appeared to be useful, for if it was omitted some malaria occurred. In the crescentic type of malaria Fowler's solution in 3-minim doses was valuable. DR. MINOT, of the Long Island Hospital; DR. BUCKINGHAM, of the City Hospital; and DR. HEWES, of the Coney Island Hospital, presented similar reports.

**Pulmonary Hydatids in Children.**—According to the *Lancet*, at the last meeting of the Medical Society of Victoria, Australasia, Dr. A. J. Wood read notes of three interesting cases of hydatid of the lung in children. In the first

case the Russell-Bond method of treatment was adopted, the wound in the parietes being closed after removal of the endocyst; in the second case the wound was only partially closed, but not drained; in the third case the wound was drained. All did well, but in the first case the recovery was most rapid, and Dr. Wood was of the opinion that the other two cases might have been more satisfactorily treated by the Russell-Bond method. In the discussion that followed, Mr. Russell objected to treating pulmonary hydatids by his method, owing to the danger of producing general emphysema. Dr. Wood pointed out the danger of exploring pulmonary hydatids with a needle. Bronchial tubes open on the adventitious capsule, and when the intracystic pressure is lowered, the cyst is likely to rupture and the fluid contents escape inside the adventitia, and then into the bronchi, and so asphyxiate the patient. The risk of operating on pulmonary hydatids is also well exemplified in a case recorded by Dr. H. C. Hinder in the *Australasian Medical Gazette* for August. The patient was a girl, aged 8 years. When a knife was passed into the cyst over the dull area, the opening was stopped with the finger, and the fluid allowed to escape slowly. When about 1½ oz. had escaped, she coughed and blood escaped from the mouth and from the cyst in large quantity, and she died almost immediately. Postmortem it was found that the adventitia communicated directly with the left bronchus and pulmonary artery, each communication admitting a No. 12 catheter. During life the tense endocyst completely blocked the opening, but of course the moment the tension was relieved, the artery was opened.

**Boston Society of Medical Sciences.**—At the meeting held October 18th, DR. E. W. TAYLOR, reported a **case of gumma of the fourth ventricle**, illustrated with projection-demonstrations. The case reported was a very old process, which had been under observation three years. The tumor was extraordinarily large, occupying, as the sections showed, the fourth ventricle almost completely and extending down into the medulla. The peculiar interest of the case lay in the fact that life could be maintained with so great an invasion of the medulla, showing the possibility of some of the nerve-fibers remaining intact, or, as Dr. Taylor was inclined to think, that respiration is not so fully dependent upon the centers in the medulla as has been supposed. There was a history of transitory glycosuria.

DR. OSCAR RICHARDSON presented sections of the spinal cord from a case of **hereditary ataxia**. This is the most recent case of thirteen that have ever been reported. The degeneration was most marked in the posterior columns in the lower sections; the crossed pyramidal tracts were also noticeably degenerated, and in ascending sections degenerations were plain in the region of the direct cerebellar tracts. The lesions were symmetrical. Dr. Richardson considered the degeneration to be essentially an overgrowth of neuroglia, with sclerosis. DR. PUTNAM thought the process was primarily a lack of development of the nerve-fibers rather than overdevelopment of the neuroglia, as evidenced by the symmetrical distribution of the lesions.

DR. M. W. RICHARDSON read a paper on **the Value of Urotropin as an Urinary Antiseptic**, with Special Reference to its Use in Typhoid Fever. He concluded that for the removal of typhoid bacilli from urine, salol is much inferior to urotropin, which in 10 gr. doses three times daily removes the bacilli permanently. DR. E. S. WOOD called attention to the fact that while urotropin clears urine turbid from typhoid bacilli it has no effect on the turbidity due to tuberculous inflammation of the urinary passages.

**Health Reports.**—The following statistics concerning cholera, plague, smallpox, and yellow fever have been received at the office of the Supervising Surgeon General of the Marine-Hospital Service during the week ended October 22, 1898.

#### YELLOW FEVER—UNITED STATES.

##### LOUISIANA:

CASES. DEATHS.

Alexandria . . . . .	To Oct. 15 (estimated)	200	2
Amite City . . . . .	To Oct. 15 . . . . .	1	1
Baton Rouge . . . . .	To Oct. 15 . . . . .	17	1
East . . . . .	Oct. 17, reported.		
West . . . . .	Oct. 17, reported.		
Bowie . . . . .	Oct. 6 . . . . .	1	
Cinclare . . . . .	To Oct. 15 . . . . .	11	1
Deligny . . . . .	Oct. 1 . . . . .	1	
Feliciana, East . . . . .	Oct. 17, reported.		
West . . . . .	Oct. 17, reported.		
Franklin . . . . .	To Oct. 6 . . . . .	375	7
	Oct. 7-13 . . . . .	166	1
	Oct. 14 . . . . .	13	1
	Oct. 15 . . . . .	10	
	Oct. 16 . . . . .	22	
	Oct. 17 . . . . .	7	
	Oct. 18 . . . . .	1	
	Oct. 19 . . . . .	5	
Harvey's Canal . . . . .	To Oct. 6 . . . . .	14	3
Houma . . . . .	To Oct. 15 . . . . .	40	2
Iberville . . . . .	Oct. 17, reported.		
Jackson . . . . .	To Oct. 15 . . . . .	15	
Jefferson Parish . . . . .	To Sept. 20 . . . . .		
Lake Charles . . . . .	To Oct. 15 . . . . .	1	
Lobdell . . . . .	Oct. 12, reported.		
Lutcher . . . . .	To Oct. 15 . . . . .	14	2
New Orleans . . . . .	To Oct. 15 . . . . .	74	19
Plaquemine . . . . .	To Oct. 15 . . . . .	6	1
St. Charles Parish . . . . .	Oct. 17, reported.		
St. James Parish . . . . .	Oct. 1 . . . . .	1	
Wilson . . . . .	To Oct. 15 . . . . .	303	7

##### MISSISSIPPI:

Bay St. Louis . . . . .	Oct. 11 . . . . .	9	
Canton . . . . .	Oct. 10 . . . . .	4	
	Oct. 17 . . . . .	1	
	Oct. 19 . . . . .	2	
Clinton . . . . .	To Oct. 15 . . . . .	40	
Crystal Springs . . . . .	Oct. 11 . . . . .	5	
	Oct. 19 . . . . .	1	
Edwards (vicinity) . . . . .	To Oct. 6 . . . . .	6	
	Oct. 7 . . . . .	13	1
	Oct. 16 . . . . .	3	
Fayette . . . . .	Oct. 6-13 . . . . .	5	
Harriston . . . . .	To Oct. 6 . . . . .	42	4
	Oct. 7 . . . . .	66	1
	Oct. 14 . . . . .	6	
	Oct. 16 . . . . .	2	
	Oct. 17 . . . . .	3	
	Oct. 18 . . . . .	2	
	Oct. 19 . . . . .	2	1
Hattiesburg . . . . .	Oct. 8 . . . . .	18	
	Oct. 14 . . . . .	3	1
	Oct. 15 . . . . .		
	Oct. 17 . . . . .	4	1
	Oct. 18 . . . . .	2	1
Hermanville . . . . .	To Oct. 13 . . . . .	3	
Jackson . . . . .	To Oct. 6 . . . . .	41	4
	Oct. 7 . . . . .	61	1
	Oct. 14 . . . . .	10	
	Oct. 15 . . . . .	7	
	Oct. 16 . . . . .	8	
	Oct. 17 . . . . .	16	
	Oct. 18 . . . . .	4	1
	Oct. 19 . . . . .	6	
Madison . . . . .	Oct. 6 . . . . .	45	
	Oct. 17 . . . . .	1	1
	Oct. 18 . . . . .	2	
	Oct. 19 . . . . .	5	
Meridian . . . . .	Oct. 15 . . . . .	1	
	Oct. 17 . . . . .	2	
Natchez . . . . .	Oct. 7-13 . . . . .	8	
	Oct. 14 . . . . .	4	
	Oct. 15 . . . . .	3	
	Oct. 16 . . . . .	3	
	Oct. 17 . . . . .	2	
	Oct. 18 . . . . .	3	
	Oct. 19 . . . . .	2	
Orwood . . . . .	To Oct. 6 . . . . .	79	4
	Oct. 7-13 . . . . .	6	1
	Oct. 14 . . . . .	9	
	Oct. 15 . . . . .	4	

Oxford . . . . .	To Oct. 10 . . . . .	470	36
	Oct. 11-13 . . . . .	13	2
	Oct. 14 . . . . .	1	
	Oct. 15 . . . . .	2	
	Oct. 16 . . . . .	1	1
	Oct. 17 . . . . .		
	Oct. 19 . . . . .	1	
Poplarville . . . . .	Oct. 9-13 . . . . .	9	
	Oct. 16 . . . . .	7	
	Oct. 17 . . . . .	7	1
	Oct. 18 . . . . .	1	
Port Gibson . . . . .	Oct. 6 . . . . .	1	1
Queen Hill . . . . .	Oct. 15 . . . . .	1	1
Ridgeland . . . . .	Oct. 8-13 . . . . .	5	
	Oct. 15 . . . . .	1	
	Oct. 17 . . . . .	1	
Starkville . . . . .	Oct. 6-13 . . . . .	6	
	Oct. 18 . . . . .	1	
Tailors . . . . .	To Oct. 6 . . . . .	100	11
	Oct. 7-13 . . . . .	4	2
	Oct. 15 . . . . .	1	
Tougaloo . . . . .	Oct. 16 . . . . .	1	
	Oct. 17 . . . . .	1	
Waterford . . . . .	To Oct. 6 . . . . .	2	
Waterview . . . . .	To Oct. 6 . . . . .	10	
Waveland . . . . .	To Oct. 10-13 . . . . .	16	1
	Oct. 14 . . . . .	2	
	Oct. 16 . . . . .		
	Oct. 17 . . . . .	1	
	Oct. 18 . . . . .	1	
Woodville . . . . .	To Oct. 6 . . . . .	1	
Yazoo City . . . . .	Oct. 16 . . . . .	6	
	Oct. 17 . . . . .	5	
	Oct. 18 . . . . .	4	
	Oct. 19 . . . . .	2	1

#### YELLOW FEVER—FOREIGN.

##### MEXICO:

Jimenez . . . . .	Sept. 28, present.		
Vera Cruz . . . . .	Sept. 22—Oct. 6 . . . . .		6

#### SMALLPOX—UNITED STATES.

##### WISCONSIN:

Wausau . . . . .	Oct. 12 . . . . .	1	
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#### SMALLPOX—FOREIGN.

##### AFRICA:

Natal . . . . .	Sept. 3. Epidemic among natives.		
Pretoria . . . . .	Sept. 3. Epidemic chiefly among natives and spreading rapidly.		

##### BRAZIL:

Bahia . . . . .	Sept. 17-24 . . . . .	36	5
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##### ENGLAND:

London . . . . .	Sept. 17-24 . . . . .	1	
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##### SPAIN:

Gibraltar . . . . .	Sept. 18-25 . . . . .	2	
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##### INDIA:

Calcutta . . . . .	Sept. 3-10 . . . . .	1	
Madras . . . . .	Sept. 3-19 . . . . .	1	

##### RUSSIA:

Odessa . . . . .	Sept. 24—Oct. 1 . . . . .	4	
St. Petersburg . . . . .	Sept. 10-17 . . . . .	6	1
	Sept. 17-24 . . . . .	2	4
Warsaw . . . . .	Sept. 17-24 . . . . .		3

#### CHOLERA.

##### INDIA:

Calcutta . . . . .	Aug. 27-Sept. 3 . . . . .	4	
	Sept. 3-10 . . . . .	5	
Madras . . . . .	Sept. 3-10 . . . . .	52	
	Sept. 10-16 . . . . .	41	

##### JAPAN:

Osaka and Hiogo . . . . .	Aug. 27-Sept. 3 . . . . .	2	1
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#### PLAGUE.

##### INDIA:

Calcutta . . . . .	Aug. 27-Sept. 3 . . . . .	3	
	Sept. 3-10 . . . . .	5	

##### JAPAN:

Hong Kong . . . . .	Aug. 6-13 . . . . .	1	
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**Illinois Medical Examiners' Bill.**—Strenuous efforts are being made by the legislative committee of the Chicago Medical Society to secure the passage by the next legislature of the Medical Examiners' Bill. With this object in view, the committee has prepared and sent to every member of the legislature a copy of the following letter:

DEAR SIR:—We herewith enclose a copy of a bill which is to be introduced in the next Legislature, known as a bill to regulate the practice of medicine in the State of Illinois. This is not a bill to further any school or belief of medicine. It has the cooperation of every competent practitioner in the State, whether regular, homeopathic, or eclectic. It has received the endorsement of every medical organization in the State of any standing or prominence. It is not therefore a selfish bill, but one intended wholly for the protection of every citizen in the State against *quacks* and *quackery*. You are no doubt cognizant of the fact that Illinois is one of the States that has the poorest medical laws of any in the Union. It is our desire to secure your efforts in assisting us to rectify this. To attain this end, the medical men of this city, numbering between 4,000 and 5,000, have banded together in a thorough organization, irrespective of school, to secure such legislation as will make our medical laws the equal of those of any State. We do not desire to coerce any representative into voting for this bill, but it being of such vital importance to our profession, as well as to the laity at large, we have resolved to use our every effort in defeating any candidate, irrespective of party, who does not pledge us his support in passing it. We also enclose you a copy of a pledge which you will please sign and return. If we do not hear from you we will construe the same in the light that you are opposed to the proposed measure, and will regulate our actions accordingly.

We sincerely trust you will favor us with your support, and thereby receive our thanks and gratitude.  
Very truly yours,  
Legislative Committee Chicago Medical Society,  
H. H. MCHULEY, M.D., *Chairman*.

(Enclosure):  
I do hereby pledge myself to the support of the bill to be introduced in the next Legislature, known as "A Bill to Regulate the Practice of Medicine in the State of Illinois," same bill having been endorsed by The Illinois State Medical, The Chicago Medical, The Illinois State Eclectic Societies, and the Illinois State Homeopathic Committee; and I will use every effort to secure the passage of said bill, granting to the Medical Committee the privilege of revising or amending same bill as they may see fit for the better protection of the people against ignorant practice in said State of Illinois.

Witness:  
Unless a satisfactory answer is received the following notice is distributed among the physicians:

CHICAGO, ILL.  
DEAR DOCTOR:  
Mr. . . . . a candidate upon the . . . . . ticket has declined to sign the pledge giving us his support in our efforts to pass a bill regulating the practice of medicine in the State of Illinois. Such action upon his part is sufficient guarantee to us that he would be a very dangerous and detrimental man to the interests of the medical profession as a member of the State Legislature, and we respectfully ask that you use every influence in your power and that of your friends to secure his defeat.

CHAIRMAN.  
It is to be hoped that the worthy efforts of the profession in Chicago will be rewarded with success, and that quackery, charlatanism, ignorance and superstition in the practice of medicine in Illinois will be eradicated.

**Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.**

Major W. W. GRAY, surgeon, will proceed from Fort Huachuca to Whipple Barracks to investigate and report, with full power to act, regarding a typhoid fever epidemic among the U. S. volunteers at that post.  
Leave for 15 days, to take effect on arrival of 15th Inf. at Huntsville, Ala., is granted Acting Asst. Surgeon ARCH DIXON, JR. Oct. 8.  
Acting Asst. Surgeon Surgeon B. C. LEONARDI will proceed to Fort Huachuca for duty during the temporary absence of Major W. W. GRAY, surgeon.  
Major JABEZ N. JACKSON, brigade-surgeon, is honorably discharged. Oct. 13.  
Captain FRANCIS A. WINTER, A. S., is relieved from further duty at Montauk Point and will proceed to New Haven, Conn., for duty pertaining to the muster out of Connecticut Volunteers.  
Acting Asst. Surgeon WM. E. HAMLIN is relieved from further duty at Montauk Point and will proceed to Anniston, Ala., for duty with the 2d Inf.  
Leave granted Acting Asst. Surgeon B. B. LANIER, is extended seven days. Oct. 13.

Acting Asst. Surgeon S. M. LONG, now at Montauk Point, will proceed to New Haven, Conn., for duty pertaining to the muster out of Connecticut Volunteers.  
Acting Asst. Surgeon JAMES W. MADARA, will proceed to Lexington, Ky., for duty.  
Leave heretofore granted Acting Asst. Surgeon GEORGE H. TUTTLE, is extended seven days. Oct. 13.  
Major AARON H. APPEL is relieved from further duty at Fort Porter, and from duty in the field with the 7th Army Corps, and will proceed to Fort Grant for duty. Oct. 14.  
Ordinary leave granted Major WILLIAM B. BANISTER, brigade-surgeon, is changed to leave on account of sickness. Oct. 14.  
Captain FREDERICK P. REYNOLDS, A. S., on the expiration of his present sick leave, will proceed to Ponce, Porto Rico, for duty.  
Acting Asst. Surgeon W. C. DOUGLAS will proceed from Montauk Point to Huntsville, Ala., for duty.  
Acting Asst. Surgeons RAPHAEL A. EDMONSTON and W. H. PRESCOTT are relieved from duty at Montauk Point and will proceed to Fort Monroe to duty in the Josiah Simpson U. S. General Hospital.  
Acting Asst. Surgeon VERNON J. HOPPER will proceed to Jacksonville, Fla., for duty.  
Acting Asst. Surgeon T. H. LANDOR is relieved from further duty at the Sternberg Hospital and will proceed to Huntsville, Ala., for duty.  
Acting Asst. Surgeon LOUIS A. MALONEY will proceed to New York City for transportation to Santiago, Cuba, for duty.  
Leave for eight days granted Acting Asst. Surgeon HENRY BAK is extended to include the 28th instant. Oct. 14.  
Upon arrival of Acting Asst. Surgeon VOLNEY MCR. SCHOWALTER at camp at Hiltonhead, S. C., Acting Asst. Surgeon WILLIAM P. HARBIX will be relieved from duty at that camp, and will proceed to Tybee Island, Ga., for duty.  
The following-named medical officers are honorably discharged: Lieutenant Colonel RUSH HUIDEKOPER, chief surgeon; Major THOMAS EARLE EVINS, chief surgeon; Lieutenant Colonel BENJAMIN F. POPE (major and surgeon, U. S. A.), as chief surgeon of volunteers only; Major WM. H. ARTHUR (captain and assistant surgeon, U. S. A.), as chief surgeon of volunteers only.  
Major ROBERT BURNS, brigade-surgeon, now at Concord, N. H., will report for duty pertaining to the muster out of New Hampshire Volunteers.  
Major RICHARD W. JOHNSON, brigade-surgeon, is relieved from further duty at Fort D. A. Russell, and on the expiration of his present leave will proceed to Chicago, Ill., for duty as attending surgeon and examiner of recruits at that place.  
Major CHARLES P. PARKE, brigade-surgeon, will proceed from Middletown, Pa., to Augusta, Me., for duty pertaining to the muster out of the 1st Maine Volunteer Inf.  
Major EUGENE L. SWIFT, brigade-surgeon, on completion of his duties pertaining to the muster out of New Hampshire Volunteers, will proceed to Fort Slocum for duty.  
First Lieut. HENRY A. WEBBER, A. S., will proceed to Anniston, Ala., and report to the commanding officer, 1st U. S. Inf., for duty with that regiment.  
Acting Asst. Surgeon ROBERT W. GUILER will proceed to Washington, D. C., and report to the Surgeon-General of the Army.  
Leave granted Acting Asst. Surgeon J. V. HAMILTON is extended one month on account of sickness.  
Acting Asst. Surgeon O. C. HEISE is relieved from duty at the Sternberg U. S. General Hospital, Chickamauga Park, and will proceed to Jefferson Barracks for duty.  
Acting Asst. Surgeon HENRY B. STOTTER will proceed to Jacksonville, Fla., for duty.  
Major L. C. CARR, brigade-surgeon, is relieved from duty as officer in charge of the medical supply depot, and detailed surgeon in charge of the military hospital at Santiago, Cuba.  
Major S. Q. ROBINSON, surgeon, is relieved from duty as surgeon in charge of the military hospital and detailed medical inspector of the Department of Santiago.  
Acting Asst. Surgeon J. R. DABNEY is relieved from duty with the 5th U. S. Vol. Inf., and will proceed to the United States on account of sickness.  
Acting Asst. Surgeon E. V. GEDDINGS is detailed officer in charge of the medical-supply depot at Santiago, Cuba.  
Acting Asst. Surgeon MEYER HERMAN is relieved from duty at the Reserve Divisional Hospital. He will attend to the sick on board the transports and Government ships and among the quartermaster's and commissary employees.  
Acting Asst. Surgeon J. STEBBIN KING is assigned to the 5th U. S. Vol. Inf., for duty.  
Acting Asst. Surgeon J. M. LINDSLEY is assigned to the 5th U. S. Vol. Inf., for duty.  
Acting Asst. Surgeon E. F. NUNOS is assigned to the Military Hospital for duty.  
Acting Asst. Surgeon W. M. PERKINS is relieved from duty with the 5th U. S. Inf., and will proceed to the United States on account of sickness.  
Leave for twenty days from Oct. 16 is granted Major FRANCIS METCALFE, brigade-surgeon.  
Major LOUIS S. TESSON, surgeon, having relinquished the unexpired portion of his sick leave, will proceed to Fort Ethan Allen for duty.  
Leave granted Major MARSHALL W. WOOD, surgeon, is extended one month. Oct. 17.  
First Lieut. EDWARD R. SCHREINER, A. S., is relieved from duty at the U. S. General Hospital, Fort McPherson, and will proceed to



Anniston, Ala., and report to the commanding officer, 2d U. S. Inf., for duty.

Leave heretofore granted Acting Asst. Surgeon JOHN E. BACON is extended ten days on account of sickness. Oct. 17.

Acting Asst. Surgeon BENJAMIN K. KITTRIDGE will proceed to Jacksonville, Fla., for duty with the 7th Army Corps.

Acting Asst. Surgeon ARLENGTON FORD will proceed from Fort Myer to Richmond, Va., for duty pertaining to the muster out of the 3d Virginia Volunteers.

Leave for fifteen days is granted Acting Asst. Surgeon A. A. BAILEY. Oct. 18.

Leave for two months on surgeon's certificate of disability is granted Major GUY L. EDIE, brigade-surgeon. Oct. 19.

Major GEORGE H. TORNEY, surgeon, is detailed as a member of the examining board appointed to meet at Fort Leavenworth, vice Major JOHN M. BANISTER, surgeon, relieved.

Captain HARRY L. HALLOCK, A. S., is relieved from further duty at Fort Logan.

Acting Asst. Surgeon JAMES T. ARWINE will proceed to Fort Ringgold for duty, to relieve Acting Asst. Surgeon F. A. E. DISNEY.

Acting Asst. Surgeons ERNEST W. FOWLER, ROBERT C. RIND and VICTOR E. WATKINS are relieved from duty at the Sternberg Hospital, Camp George H. Thomas, Ga., and will proceed to Fort McPherson and report to the commanding officer of the U. S. General Hospital at that post for assignment to duty.

Acting Asst. Surgeon HENRY J. HINKLE will report to the commanding officer 3d U. S. Vol. Inf., for duty.

Acting Asst. Surgeon MILTON D. NORRIS is relieved from duty at the Sternberg U. S. General Hospital, Chickamauga Park, and will proceed to Jefferson Barracks.

Acting Asst. Surgeon DWIGHT B. TAYLOR will proceed to Middletown for duty.

Leave granted Major FRANK BRUSO, brigade-surgeon, is extended two months on surgeon's certificate of disability. Oct. 18.

Leave for ten days is granted Major EDWARD C. CARTER, brigade-surgeon. Oct. 18.

Leave granted Major WILLIAM C. GORGAS, surgeon, is extended two months on surgeon's certificate of disability. Oct. 18.

Major JAMES M. JENNE, chief surgeon, now on sick leave at St. Albans, Vt., will proceed to Boston, Mass., for duty pertaining to the examination of Massachusetts Volunteers ordered to be mustered out.

Major VICTOR C. VAUGHAN, division-surgeon, and Major EDWARD O. SHAKESPEARE, brigade-surgeon, members of the board of medical officers appointed by par. 40, S. O. 194, Aug. 18, this office, are assigned to duty in Washington, D. C., for a period of two months for the purpose of completing their report.

Captain CHARLES E. B. FLAGG, A. S., will proceed from Fort McPherson to Montgomery, Ala., for duty pertaining to the muster out of Alabama Volunteers.

Captain WILLIAM F. LEWIS, A. S., is relieved from further duty with the 4th Army Corps, at Huntsville, Ala., and will proceed to Montgomery, Ala., for duty pertaining to the muster out of Alabama Volunteers. Captain Lewis will return thence to his proper station at Sullivan's Island.

Captain BENJAMIN MUNDAY, A. S., is relieved from further duty with the 7th Army Corps, and will proceed to Fort Monroe and report at the Josiah Simpson U. S. General Hospital for duty.

Captain GEORGE J. NEWGARDEN, A. S., will proceed from Fort Adams to Boston, Mass., for duty pertaining to the examination of Massachusetts Volunteers ordered to be mustered out. Captain NEWGARDEN will return to his proper station.

Captain HENRY R. STILES, A. S., will report at Fort Preble for duty pertaining to the examination of the 1st Maine Vol. Inf., ordered to be mustered out.

Captain HENRY R. STILES, A. S., will report for duty for the purpose of physically examining Maine Volunteers to be mustered out.

First Lieut. WILLIAM E. RICHARDS, A. S., will proceed from Huntsville, Ala., to Birmingham, Ala., for duty pertaining to the muster out of Alabama Volunteers.

Leave heretofore granted Acting Asst. Surgeon PERCY M. ASHBURN, is extended seven days. Oct. 18.

Acting Asst. Surgeon ARTHUR JORDAN, on expiration of his present leave will report to the Surgeon-General of the Army.

Acting Asst. Surgeon ROBERT N. PITTS, now on leave at Montgomery, Ala., will report at that place for assignment to muster duty.

Acting Asst. Surgeon ARTHUR B. SMITH will proceed to Fort Thomas for duty.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon A. C. H. RUSSELL, detached from the "San Francisco," when put out of commission, and ordered to temporary duty in the Bureau of Medicine and Surgery.

Passed Asst. Surgeon G. T. SMITH, detached from the "Solace" and ordered to the Naval Laboratory and Department of Instruction, Brooklyn, N. Y.

Passed Asst. Surgeon A. W. DUNBAR, detached from "San Francisco," when put out of commission, and ordered to the "Franklin" immediately.

Passed Asst. Surgeon R. M. KENNEDY, detached from the naval hospital, Norfolk, Va., and ordered home to be ready for orders to sea.

Passed Asst. Surgeon A. R. WENTWORTH detached from the "Marblehead" and ordered to the naval hospital, New York City.

Passed Asst. Surgeon M. F. GATES, detached from the naval hospital, New York, N. Y., and ordered to the naval hospital, Norfolk, Va.

Passed Asst. Surgeon S. G. EVANS ordered to the "Marblehead."

Asst. Surgeon W. M. GARTON, ordered to additional duty on the "Supply."

Surgeon I. W. KITE, surgeon, relative rank lieutenant, from September 2.

Asst. Surgeon R. O. MARCOUR, detached from the "Alexander," when put out of commission, and ordered to the "Arethusa."

Asst. Surgeon E. J. GROW, detached from the "Wabash" and ordered to the "Amphitrite," immediately.

Asst. Surgeon A. H. HEPPNER, detached from the "Amphitrite," and ordered home.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 21 Days Ended October 20, 1898.

Surgeon R. D. MURRAY to proceed to Meridian, Miss., for special temporary duty. Oct. 5.

Surgeon F. W. MEAD granted leave of absence for two days. Oct. 4.

Surgeon C. E. BANKS granted 5 days extension of sick leave. Oct. 1.

To assume temporary command of service at Vineyard Haven, Mass., Oct. 5.

Surgeon A. H. GLENNAN to proceed to Atlanta, Ga., for special temporary duty. Oct. 10. To visit Montgomery, Ala., en route to Atlanta, Ga., Oct. 11.

Surgeon S. D. BROOKS granted leave of absence for 4 days. Oct. 4.

Passed Asst. Surgeon J. H. OAKLEY to proceed to Birmingham, Ala., for special temporary duty. Oct. 13.

Asst. Surgeon L. E. COFER granted leave of absence for 20 days. Oct. 10.

Asst. Surgeon A. R. THOMAS to report at Bureau for special instructions. Oct. 14.

Asst. Surgeon S. R. TABB assigned to duty as sanitary inspector on U. S. Transport "Manitoba." Oct. 4.

Asst. Surgeon JOHN MCMLLEN assigned to duty as sanitary inspector on U. S. Transport "Mississippi." Oct. 5.

Asst. Surgeon H. C. RUSSELL to rejoin station at Chicago, Ill. Oct. 5.

Asst. Surgeon H. B. PARKER to report to Medical Officer in command of service at Stapleton, N. Y., for duty. Oct. 19.

Asst. Surgeon M. H. FOSTER granted leave of absence for 30 days on account of sickness. Oct. 1.

Asst. Surgeon J. F. ANDERSON granted leave of absence for 30 days on account of sickness. Oct. 4.

## Foreign News and Notes.

**Dr. Lefour** has been appointed clinical professor of Obstetrics at the University of Bordeaux, France.

**Dr. Miguel de Oliveira Couto** has been appointed assistant professor of pathology and clinical medicine in the University of Rio Janeiro, Brazil.

**Obituary.**—DR. A. J. M. DE HONDT, chief medical officer of the Ostend Municipal Hospital, president of the local Medical Commission, and knight of the Order of Leopold, aged 65 years.—PROF. BOUCHACOURT, Lyons, France, October 6th.

**The extension of the Fever Hospital at Leeds, England,** was dedicated, with appropriate ceremonies, October 1st. The extension consists of an administration-building, five wards, an isolation-house, disinfecting-plant, and washhouses.

**Medical Students at the German Universities.**—According to official statistics the number of medical students attending the various German Universities during the summer semester of 1898 is as follows: Munich, 1,416; Vienna, 1,192; Berlin, 1,090; Würzburg, 680; Leipsic, 630; Freiburg, 522; Kiel, 428; Gratz, 417; Erlangen, 414; Breslau, 364; Zürich, 340; Bonn, 337; Strassburg, 324; Greifswald, 323; Tübingen, 278; Marburg, 274; Heidelberg, 272; Geneva, 270; Königsberg, 249; Halle, 245; Giessen, 240; Göttingen, 225; Jena, 222; Bern, 189; Lausanne, 145; Basle, 141; Rostock, 99.



**"The Health of the Prince of Wales** is now practically re-established," writes a London correspondent under date October 15th; "His Royal Highness can take a little gentle exercise with the aid of a stick, and his medical attendants are well satisfied with his case."

**The Yorkshire (England) Convalescent Home for Tuberculous Patients.**—A meeting for the promotion of a convalescent home for tuberculous patients was held October 27th, under the presidency of the Lord Mayor of York. The Marquis of Zetland and Mr. W. H. A. Wharton each promised \$5,000 towards the foundation of such a home.

**Death Under Christian-Science Treatment.**—Harold Frederic, the well-known newspaper correspondent and author, died in London, October 21st, of heart-disease. Asserting his disbelief in physicians, he placed himself under the care of Christian scientists. While the latter were administering to his ailments according to the "absent treatment," death took place.

**The Midland Medical Society, of Birmingham, England,** recently celebrated the fiftieth anniversary of its foundation, by a banquet. Addresses were delivered by the president, Mr. J. W. Taylor, F.R.C.S., Sir William MacCormac, president of the Royal College of Surgeons of England, Dr. A. H. Carter, Sir J. B. Stona, Dr. W. G. Lowe, president-elect of the Society, and the Bishop of Coventry.

**The Pasteur Institute, Paris.**—On the third anniversary of the death of Pasteur, Professor Metchnikoff, the acting director of the Pasteur Institute, owing to the absence of M. Duclaux and Dr. Roux, called together the professors, the medical men, the laboratory assistants, the administrative staff, and the servants of the Institute, and all descended into the crypt where rest the remains of the master, and walked in solemn silence round his tomb.

**University of Königsberg, Germany.**—The festival dedication of the "Palæstra Albertina," the hall of learning donated by Dr. Frederick Lange, of New York, to the University of Königsberg, took place a short time ago. Professor Bezenberger, of the Philosophical Faculty and Rector Magnificus, delivered the dedication sermon. Then followed a pageant of the university fraternities, and in the evening a banquet was given, at which all the leading German men of science were present. The Faculty of Law has conferred upon Dr. Lange the degree of Doctor juris honoris causa, and Emperor William has conferred upon him the Order of the Prussian Crown.

**Dr. Javal Sued for Libel.**—Dr. Javal, director of the Ophthalmologic Laboratory of the Sorbonne, France, was recently sued for libel, the plaintiffs being a firm of opticians who manufactured spectacle lenses, called "isometric," from a glass containing baryta, and for which special advantages were claimed. Dr. Javal made an investigation of the lenses and after careful study presented a communication to the Academy of Medicine, in which he asserted that the differences between the baryta-glass and ordinary glass were quite insignificant, and the lenses were no better than those made from ordinary glass. Upon this statement is based the suit. The court found for liberty of scientific criticism, and held that a scientific man is at liberty to scrutinize any manufactured article for which special advantages are claimed and that his observations may be published in the interests of the public weal.

**Prophylactic Inoculation Against the Plague.**—A fresh example of the value of prophylactic inoculation against the plague is given by the action of the Southern Mahratta Spinning and Weaving Company with regard to their employes at Hubli, India. Of 1,173 persons on the muster-roll, 1,040 were twice inoculated, and of this number 22 died from plague, giving a mortality of only 2.1%; of the 58 once inoculated, 8 died, giving a mortality of 13.8%; and of the 75 who refused inoculation, 20 died, giving a mortality of 26.6%.

**The Increase in the Number of French Specialists.**—At the congress recently held at Nantes, Dr. Polo dwelt upon the manner in which specialist practitioners have increased in France to a far greater degree than general practitioners. In Paris there were, in 1892, 2,125 medical men, of whom 234 were specialists. At Nantes there were at the same time 100 medical men and 7 specialists. At the present time the number of specialists is doubled in both those towns, although the number of general practitioners has increased in a much smaller proportion.

**Rapid Increase of Physicians in the Austrian Empire.**—Statistics recently published by the Austrian University Educational Bureau show that, during 1889, 7,146 doctors were qualified to practice in the empire, and that, during 1896, 9,102 were qualified—a septennial increase of 30%. During the same period, however, the total number of practitioners increased 47%. From official sources it appears that many rural districts are inadequately supplied with medical men, but that despite this fact many young men seem to prefer the allurements of city-life, with nothing to do, rather than the vicissitudes of a country practice.

**Dislocation of the Heart.**—A correspondent writes: "This may be an old story; if so, I must apologize for sending it to you. Colonel Sloggett, of the Royal Army Medical Corps, who was shot in the chest, during the battle before Omdurman, recently arrived in London, and reported himself at the War office. The Director-General, on learning that Colonel Sloggett had been shot above the left nipple, and that the bullet had come out at the back, said, 'How on earth do you account for not being dead?' To which Colonel Sloggett modestly replied, 'I can only suppose, sir, that during the engagement my heart was in my boots.'"

**The English Society of Medical Officers of Health.**—The annual general meeting of the Incorporated Society of Medical Officers of Health was held on the afternoon of October 14th, when Dr. Edmund Gwynn, the medical officer of health for Hampstead, and the newly elected president of the Society, delivered an inaugural address of great interest. Starting with the inevitable historic resumé of the various events during the century, which showed that both the public and the scientific mind in England were intent on the problems of sanitation, he came rapidly to the discussion of a subject which always has a fascination as well as an importance for a London audience, viz., the atmospheric conditions of London during the winter months. These conditions are, as all the world knows, exceedingly bad, and yet all the world can see that the average Londoner is rather vain of them. He speaks sadly and yet a little proudly of times when the hand cannot be seen before the face, and with a resigned good-temper tells stories of blocked trains, lost homes and other attendants of a day suddenly transformed into night. But the medical officer of health, as Dr. Gwynn pointed out, is unable to view the matter with

such philosophy. In 1897 the death-roll in London from diseases of the respiratory organs alone was nearly 14,000 or more than equal to all the deaths from epidemic diseases put together. Many of these deaths, he said, were distinctly attributable to the abominable atmosphere of the city. The sanitary authorities, in spite of all the reports on the subject from their medical officer of health, but rarely made any attempt to deal with infringements of the Smoke Acts, but allowed chimneys to belch forth the foulest vapors uninterruptedly. Again, he pointed out, London was very behind-hand in the matter of electric lighting, a matter in which the Englishman had hardly maintained his proud position of being the most successful as well as the earliest administrator of sanitary science. It was to be hoped that before many years had elapsed the public not only of London, but of England would be better instructed as to the means that should be employed for lighting both public places and private houses, when electric light would entirely supersede gas. Dr. Gwynn concluded by saying that there was no reason why, if the laws of public health were observed, consumption should not be as capable of being stamped out as smallpox; why cancer should not become as rare as ague; and why the laws affecting epilepsy, hysteria, and insanity should not be so well understood that man might die as Nature assigned him to do, at a hundred years of age, by a painless and happy death.

**The Italian Congress of Internal Medicine** was held at Turin, from October 3d to 7th, and proved a most successful meeting. The most instructive discussions were upon blood-letting, organotherapy, and serumtherapy, with special reference to Professor Pane's antipneumococcus serum. PROFESSOR MARAGLIANO opened the discussion on **blood-letting** with a thesis reviewing the history of the practice, discussing the results of experiments on animals, and enumerating some conditions in which blood-letting might be practised with advantage clinically. Chief among such conditions are venous engorgement and toxemia, whether of microbic or of autogenetic origin. In the latter cases good may be effected by the removal of a certain amount of poison from the blood and by increase in number of leukocytes. The doctrine was enforced that there is no disease for which venesection is a specific, although it may be useful in certain morbid conditions. DR. COSTABILE, after enumerating the classes of cases in which blood-letting might be salutary, said that the struggle witnessed in recent years was not directed against blood-letting, but against the abuse of blood-letting, as formerly universally practised in such diseases as typhoid fever. Attention was called also to good results obtained by phlebotomy in four cases of hysteria. DR. COROFRESSI referred to the beneficial effects of phlebotomy in certain cases of pulmonary hemorrhage with tuberculosis. PROFESSOR DE RENZI said that he who withdrew blood from the organism withdrew an integral part of the organism. He has made experiments with blood-letting in cases of artificially infected animals, and his results are not encouraging. PROFESSOR BOZZOLO, who claimed to be one of the first to propose the intravenous injection of saline solution, suggested its use in uremia after venesection. He thought saline injections more valuable than venesection in infectious pneumonia. DR. DAL FABRO said that he practised in the mountains, and that his clientele held strong views as to the propriety of various forms of treatment, so much so that he was often compelled to be guided by their views rather than by his own. In order to meet this state

of affairs he suggested that some recognized authority, such as those who had spoken, should draw up a list of indications and contraindications for blood-letting, and publish it in the lay-press. PROFESSOR QUEIROLO, of Pisa, concluded that the good effects of blood-letting in uremia are due to diminished blood-pressure, and not to the removal of a certain amount of poison from the circulation. DR. GAY cited cases contraindicating the practice of blood-letting by means of leeches in typhoid fever. He preferred alcohol.

PROFESSOR CARLO FORLANINI presented a communication upon **suprarenal extract**, in the course of which he said that he has made observations showing that in some infectious diseases, especially typhoid fever and pneumonia, there exists in addition to myocarditis and paresis of the peripheral arteries a true toxic paresis of the myocardium, and that the myocardium thus affected is impotent to respond to the action of cardiokinetics (excitants). These facts have been confirmed by experiments on animals. Professor Forlanini now referred to further experiments showing that not only digitalis and strophanthus, but ether, alcohol, musk, ergotin, strychnin, and camphor could not modify arterial pressure lowered by angiomyocardiac paresis. He experimented with glycerin and aqueous extract of suprarenals, and Merck's hemostatic suprarenal extract. It has been shown that suprarenal extract possesses the power of raising arterial tension, strengthening the systole, and producing constriction of the peripheral arterioles. Hypodermic injection of the extract is well borne, but determines a large area of local ischemia, which persists for from two to four hours, though without injurious consequences. The increase of arterial pressure that follows the injection in healthy subjects is remarkable, and is far greater than that obtainable with digitalis or strophanthus. With injections of 5.7 cu. cm. of the extract an increase of from 50 to 60 mm. at the radial pulse is obtained, while with the maximum dose of digitalis that can be tolerated, only from 20 to 25 mm. is obtained. The pressure increases a very few minutes after the injection (from five to ten), and a supranormal tension is maintained for from seven to ten hours, according to the magnitude of the dose. Injections may be repeated several times a day. In cases of typhoid fever, when all other angiocardio-kinetics fail, suprarenal extract will increase arterial pressure by from 10 to 20 mm. of mercury, and for a shorter time than in the healthy. In the post-typhoidal condition, however, when definite lesions of typhoid myocarditis have supervened, suprarenal extract must be administered with the greatest caution, in consequence of the functional inadequacies of heart and arteries. Increase of pressure in this condition might lead to grave perturbations of heart and pulse. Suprarenal extract is considered the most potent available remedy for raising blood-pressure in cases of cardiac failure, such as attends chloroform-poisoning and the action of specific toxins, as in typhoid fever. In large doses (22 cu. cm.) it produced in one case an extraordinary rise of blood-pressure, with intermission of the pulse for several beats at a time. In cases of cardiac failure the injection should be repeated several times daily, so as to give an average of 20 cu. cm. of the extract in the 24 hours. Professor Forlanini discussed the various theories as to the mode in which the effects of the injection of suprarenal extract are produced, but as a clinician he did not think it necessary to decide whether it acted on the medulla, on the ganglia, or on the muscular walls of the heart and arteries, but he left this question for the practical physiologist, content merely to record the clinical facts. He said that various preparations are injected subcutaneously, others intraven-



ously. The most potent preparation of the gland (sphigmo-  
genia) must be used intravenously, as it undergoes almost  
immediate oxidation whenever it is introduced into the  
subcutaneous tissues.

PROFESSOR ROVIGHI read a communication on **hepatic  
cirrhosis from autoinfection**, not alcoholic. He had  
made experiments on animals by injecting ammonium car-  
bonate into the circulation, and found, after the lapse of a  
few weeks, that the organs generally were undergoing slight  
fibrotic changes, which commenced in the small vessels. The  
liver was chiefly affected, and became pale, hard, and small.  
The microscopic changes showed a proliferation of cells af-  
fecting chiefly the small vessels, and spreading thence into  
the parenchyma.

DR. APORTI read a communication on **the effects of  
iron and arsenic in anemia**. The method of experi-  
ment was to bleed a dog repeatedly so as to render him ane-  
mic, and then to give him intravenous injections of arsenic  
for a week or more, and immediately afterward administer  
intravenous injections of iron. The results obtained were  
on the whole fairly constant. After the injections of arsenic,  
the corpuscles increased in number, and after the injec-  
tions of iron, the hemoglobin-equivalent was raised. Several  
clinical cases were mentioned that appeared to verify these  
results.

PROFESSOR R. MASSALONGO and DR. C. FRANCHINI made a  
communication on the **therapeutic action of Professor  
N. Pane's antipneumococcus-serum**. After referring to  
the serotherapeutic method of treatment in acute pneu-  
monia and expounding the recent researches of Professor  
Pane, of Naples, they gave the results obtained by themselves  
in 10 cases of pneumonia, especially selected on account of  
their gravity. The disease was advanced in all the cases,  
and the patients were advanced in years, and through poverty,  
fatigue, and vicious habits were nearly all chronic alcoholics  
with weak hearts, nephritis, and arteriosclerosis. Having  
drawn a parallel by means of mortality-statistics with a series  
of cases treated by ordinary methods, the following conclu-  
sions were announced: (1) The results obtained with the use  
of Professor Pane's serum in such broken-down cases as were  
selected were better than those obtained with ordinary  
methods of treatment; (2) the serum (in contrast with ordi-  
nary methods hitherto practised) appeared to have a direct  
action on the evolution of the pneumococcus process, hin-  
dering its diffusion and aiding the process of resolution. In  
the discussion PROFESSOR BOZZOLO uttered a word of warning  
as to the use of antitoxins late in the disease. He thought  
that unless they could be used early, they are of little avail.  
PROFESSOR DE RENZI pointed out that Professor Pane's labo-  
ratory-experiments with guinea-pigs showed the high value  
of the serum in highly sensitive animals, even when used 24  
hours after injection of the toxin, and that such laboratory-  
experience was amply confirmed by clinicians. The treat-  
ment is often unavoidably delayed until the fourth or fifth  
day; but even then, if the serum be used in adequate doses,  
and by the intravenous method, good results might safely be  
predicted. The president, PROFESSOR BACELLI, assented to a  
request made by PROFESSOR QUEIROLO on behalf of the meet-  
ing to relate some of his own clinical experiences. He then  
quoted cases treated by the intravenous injection of various  
antiseptics and specifics; among others, cases of pernicious  
anemia treated by injections of quinin, cases of puerperal  
fever treated by injections of mercuric chlorid, and of 52  
cases of traumatic tetanus treated by injections of carbolic  
acid, of which only 2 died.

## Philadelphia News and Notes.

**The German Hospital**, through the liberality of Mr.  
John D. Lankenau, president of the Board of Trustees,  
despatched a hospital-train to Camp Meade, October 22d,  
and brought 36 sick soldiers to the hospital.

**Memorial to the Late Dr. Joseph Leidy.**—At a  
recent meeting of the Academy of Natural Sciences, Dr. Ed-  
ward J. Nolan, the secretary, presented to the Academy,  
as a memorial to Dr. Joseph Leidy, a work in five royal  
octavo volumes, containing writings and drawings by the  
late distinguished naturalist.

**Calendar of Meetings of Philadelphia Medical  
Societies** for the week ending November 5th.

Tuesday, November 1—College of Physicians of Philadel-  
phia—Section on Otology and Laryngology.

Wednesday, November 2—College of Physicians of Phila-  
delphia.

Thursday, November 3—Obstetrical Society of Philadel-  
phia.

**Dr. T. Clifford Allbutt**, regius professor of physic in  
Cambridge University, England, delivered a lecture on dis-  
eases of the arteries to the medical students and invited  
physicians at the Medical Department of the University of  
Pennsylvania, October 20th. In the evening he was tend-  
ered a reception by Dr. John H. Musser. On October 21st  
he delivered a lecture on the therapeutics of arterio-sclerosis  
at Jefferson Medical College.

**Children's Hospital in Germantown.**—A meeting  
of those interested in the establishment of such a hospital  
was recently held, and the following were chosen to serve as  
the board of directors: Dr. L. C. Bennerman, Robert Hamil-  
ton, John F. Keator, Edward Bennis, Edward Beasley, John  
D. Pessano, Simon Friedberger, George E. Weiss, Joseph Ed-  
wards, Dr. M. F. Van Buren, James Hutchinson, G. P. Dar-  
row, James Cody, and F. B. Heckman.

**Vital Statistics of Philadelphia** for the week ending  
October 22, 1898:

Total mortality ..... 389  
Children under 5 years of age..... 122

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	.....	36
Pneumonia.....	.....	35
Diphtheria.....	109	29
Nephritis.....	.....	25
Heart-disease.....	.....	24
Carcinoma.....	.....	23
Typhoid fever.....	94	17
Gastro-enteritis.....	.....	16
Marasmus.....	.....	14
Eclampsia.....	.....	13
Inflammation of the brain.....	.....	11
Senility.....	.....	11
Apoplexy.....	.....	11
Casualties.....	.....	11
Scarlet fever.....	20	4

**College of Physicians of Philadelphia—Section  
on Ophthalmology.**—At the meeting held October 18th,  
DR. S. D. RISLEY reported the **extraction of a piece of  
steel from the sclera** in the ciliary region by means of

the Hirschberg magnet, through the wound of entrance, which had been enlarged. The lens had not been injured. Recovery, with full acuity of vision, was prompt and uneventful. Dr. Risley reported also the extraction of a fragment of steel from the lens of another patient by the same means. After enlarging the original wound, the steel, which had become entangled in the lacerated iris, was removed only with considerable difficulty. The lens was swollen and opaque, but gave promise of absorption, leaving useful vision.

DR. CHARLES A. OLIVER exhibited a case of **foreign body in the crystalline lens**, attended with the formation of cholesterin-crystals. Three months after injury, the lens was rapidly degenerating, and was studded with masses of iridescent cholesterin. It is Dr. Oliver's intention to extract both lens and foreign body before absorption is completed. He exhibited also an eyeball enucleated for **traumatic uveitis** of 20 years' standing, that had given rise to repeated attacks of sympathetic irritation. The degenerated iris-tissue was filled with cholesterin. He showed also water-color sketches of the fundus and anterior segment of the eyeballs from 2 cases of **secondary glaucoma** in children, and from one case in an adult. In the discussion, DR. RISLEY and DR. GOULD reported instances of sympathetic irritation, caused by atrophied eyeballs, in which cholesterin-crystals existed in great abundance.

DR. H. F. HANSELL exhibited a man from whose choroid he had **extracted a piece of steel** by means of the magnet. The presence of the steel and its location were diognosticated by the ophthalmoscope and confirmed by radiographs. The passage of the body through the lens had left a path of opacity, which, however, had not increased and perhaps had diminished since the operation.

DR. G. E. DESCHWEINITZ related the history of a case of **symmetrical changes at the macula following serious iritis**, probably due to degeneration of the retinal ganglion-cells. These changes consisted in oval, grayish-red areas, one-third of the size of the optic disc, containing in their centers a few yellowish-white dots and surrounded at first by a green ring somewhat raised, so that the red portion appeared as if at the bottom of a shallow pit, the sides of which were composed of the green border described. Dr. deSchweinitz presented also a case of **paralysis of the lower half of the iris** (partial iridoplegia) following iritis, the result of exposure to cold during the menstrual epoch. The other functions of the eye were entirely restored. The condition was compared with partial traumatic mydriasis and it was concluded that the lesion was probably a peripheral one, the nerve-filaments supplying the lower half of the iris having been permanently injured by the inflammatory processes.

DR. G. M. GOULD demonstrated a **new ophthalmoscope**, complete, simple in construction and free from the defects of many instruments now in use. It has no Rekoss disc, no handle, needs no case, and contains 60 lenses in two sets, ranging from -40 D. to +30 D. The detachable mirror is easily transferred from one end to the other, and can be turned at any angle, so that with patients in bed, or in whatever position the light may be placed, examination is easily carried out. All the most commonly-used lenses are placed at one end of the (reversible) instrument, so that even the slight trouble of changing the mirror is obviated in the vast majority of cases. A mirror may also be kept permanently at each end. Peripheral rays (side illumination) are excluded from the sight-hole. Though strong and durable, the instrument is not heavy or bulky.

## Society Proceedings.

### NEW YORK STATE MEDICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Mott Memorial Hall, New York, October 18, 19, and 20, 1898.

FIRST DAY—October 18th.

**Report of the Committee of Arrangements.**—DR. FREDERICK HOLME WIGGIN, the chairman, called attention to the fact that the program included 49 scientific contributions, from 18 counties and from 4 other States.

**Report of the Committee on the Abuse of Medical Charity.**—DR. F. H. WIGGIN, of New York, chairman, described the work of the committee, most of which has already been published in the journals throughout the country. The report stated that it is the experience not only of this committee, but of all familiar with charity-organization, that the relief desired from this great abuse can only be obtained through the work of a legally constituted and impartial body, like the State Board of Charities, having the power to license and regulate institutions dispensing medical charity. DR. WICKES WASHBURN, of New York, one of those identified with charity-organization work in New York, spoke of the flimsy arguments made by the opposition before the joint committee of the legislature, and the unfortunate position there assumed by the representatives of the State Homeopathic Medical Society because of the fancied slight to them in this fight against the dispensaries.

**Address by the President.**—DR. DOUGLAS AYRES, of Montgomery County, in considering the progress in medicine, dwelt more particularly upon the advances made as a result of the introduction of the clinical thermometer and the compound microscope. The introduction of the microscope, of course, alone made possible the triumphs in antiseptic and aseptic surgery, and the wonderful strides of that infant science—bacteriology.

**Conservative Surgery in Crushing-Injuries.**—DR. J. G. HUNT, of Oneida County, presented a tabulated record of the treatment of 887 crushing-injuries observed in the course of an extensive factory-experience covering a quarter of a century, emphasizing the statement that in these days of aseptic and antiseptic surgery there is scarcely any limit to conservatism.

**The Teaching of Physiology and Hygiene in the Public Schools.**—DR. FRANK OVERTON, of Suffolk County, pleaded for up-to-date instruction on these important subjects, and showed what the public may reasonably expect to gain from the judicious and practical application of the teachings of physiology and hygiene to everyday life. A few carefully-selected and well-conducted demonstrations on anesthetized animals would not only make a right and lasting impression upon youthful minds, but would prove a potent means of neutralizing the influence of those well-intentioned but fanatical individuals—the antivivisectionists. DR. DELANCEY ROCHESTER, of Buffalo, spoke of the good that would surely accrue from disseminating among young persons of both sexes a proper knowledge of sexual physiology and hygiene, and expressed the belief that an acceptable beginning in this direction could be made by reference to the lessons of botany. Many truths concerning reproduction could in this way be imparted to the pupils without bordering upon the prurient, or exciting popular prejudice. DR. E. E. HOLT, of Portland, Me., said that no better argument for the teaching of physiology and hygiene in our schools need be advanced than that of the way in which even physicians daily violate such simple and well-known rules as those regarding the proper care of the eyes.

**A New Method of Amputation at the Knee-Joint, applicable to Cases of Senile Gangrene of the Foot.**—DR. STEPHEN SMITH, of New York, stated that many eminent surgeons have practised amputation above the knee-joint in cases of senile gangrene, alleging as a reason, that it is impossible to determine at what point the circulation has been obstructed, and that consequently one is more likely to obtain well-nourished flaps if the amputation were done at the knee or through the thigh. He showed, by reference to an anatomic chart, that there are eight arterial branches in this region, and that if the incisions and



flaps are suitably planned, this arterial supply need not be seriously interfered with. The method of amputation is as follows: A straight incision is made from two inches above the upper border of the patella downward over the center of that bone to the tuberosity of the tibia. From the lower extremity of this perpendicular incision two curved incisions are made, having their convexity downward, and extending respectively in the direction of the external and internal borders of the limb. These two incisions having been united posteriorly by a straight incision across the upper border of the calf, the flaps are dissected up from the tibia and fibula, the patella is removed and the knee-joint disarticulated. A case of senile gangrene of the foot in an alcoholic subject, 78 years old, was reported, in which the method was successfully applied. DR. J. W. S. GOULEY, of New York, said that while the method described is admirable in conception, he could not help thinking that the good result in the case quoted should be considered as fortunate. In a similar case drawn from his own experience, the freedom from hemorrhage at the time of amputation had been noted, and had been attributed to the careful application of the tourniquet, but in a few days the flaps sloughed, and the patient speedily succumbed. Postmortem examination showed that not only was the popliteal artery occluded, but a clot extended up to the upper third of the femoral artery. The Esmarch bandage was contraindicated in senile gangrene. DR. M. C. O'BRIEN, of New York, spoke of a case of senile gangrene, in which he had operated in 1882. Following the custom then in vogue in the hospital, he had applied an Esmarch bandage. The man was found dead in bed twelve days after the operation, and at the autopsy it was found that there was a continuous clot from the point of application of the Esmarch bandage to the extremity of the popliteal artery, as well as more or less obstruction of the other arteries in this region.

**Subnormal Temperature.**—DR. LEROY J. BROOKS, of Norwich, said that with the exception of temperature-changes due to variations in the nerve-centers, fever is the result of specific infection. In quite a number of instances he has known a persistent subnormal temperature to be the precursor of an attack of nervous prostration, and as such it constitutes an important danger-signal, enabling the physician, at times, to render good service by timely preventive measures. Periodic alcoholics commonly have subnormal temperature for several days prior to the outbreak, and some cases of excessive venery are said to present a similar change in the vital signs. The following conclusions were summarized: (1) Subnormal temperature is not at all uncommon; (2) it is a frequent prodrome of disease and an important indication for abortive treatment; (3) persistent subnormal temperature is injurious to the nerve-centers; (4) in diseases usually characterized by high temperature, it indicates a grave prognosis; and (5) it may result from primary disease or injury to the nerve centers, or from autotoxemia. DR. ROCHESTER remarked that as cases of subnormal temperature are usually marked by a deficient cutaneous circulation, the rational treatment would be to prescribe massage and appropriate exercise rather than to stimulate the myocardium with such drugs as strychnin.

**Dental Pathology in its Relationship to General Health.**—DR. DWIGHT L. HUBBARD, of New York, endeavored to direct the attention of the medical profession to a field that had received but little attention from physicians and too little study from the dentists.

**State Examinations of Milk for Tuberculosis.**—DR. FLORINCE O. DONOHUE, of Syracuse, reviewed what had been done in the direction, more especially by New York State, which, through the pioneer worker in this field, was to-day by no means in advance of other States. He said that of all the animals that are susceptible to tubercular infection, the cow is most to be dreaded by man, as cow's milk is consumed by infants and sick persons whose digestion is so impaired that they fall a ready prey to the tubercle-bacillus. Tubercle-bacilli can always be found in milk from a cow having a tuberculous udder, and they are sometimes detected in milk from animals whose udders are free from the disease. A sufficient impetus to this much-needed work of inspecting the herds and destroying the tuberculous animals can be found in the statistics of the State Board of Health, which show that over 12,000 deaths in the State are caused annually by tuberculosis. Like other reforms the

first step was beset with difficulties, but the "tuberculosis act," passed in 1892, gave the board authority to inspect all cattle in the State, and destroy those found to be tuberculous. The interference with dairy-interests and the pecuniary loss sustained by the owners of condemned cattle soon started an opposition, so that the work was brought to a halt. The law is still operative in New York State, and the commissioners are drawing their salaries, but the lack of adequate appropriations has kept the work practically at a standstill for the past two years. As soon as the board became convinced of the diagnostic value and the harmlessness of the tuberculin-test, it was made use of freely, and it has been abundantly proved a great advance on mere dependence on physical signs. In the course of a year and a half 22,000 head of cattle were inspected, and 700 destroyed. Most of this work was done in the Hudson River district. In most cases, it was possible to trace the disease from herd to herd, and no breed of cattle appeared to be exempt from the ravages of tuberculosis. Tuberculosis in the cow is, as a rule, a chronic disease, and, consequently, animals afflicted with it may yield a fair milk for a considerable time. The fact that milk is practically the sole article of diet of artificially-fed infants, in conjunction with the distribution of the tuberculous lesions in childhood, has aroused the suspicion that tuberculous milk is the source of infection in such children. DR. HIRAM A. POOLER, of New York, said that he had observed a difference between the milk from cows properly fed and that from those kept on brewers' feed, and he has also noted that tuberculosis is more prevalent in districts where cattle are given such unwholesome food. As a result of his arguments in this direction before the legislature, a law was enacted in 1883 prohibiting the use of such unwholesome food for cattle. DR. H. O. MARCY, of Boston, spoke of the interesting experiments that had been recently conducted with a view to eliminating pathogenic bacteria from milk by a process known as refrigeration. The milk is agitated while it is freezing, and this process of ice-crystallization is kept up for several hours. The product is almost free from objectionable bacteria, and, as it contains only about 7% of water, it is a good deal thicker than cream. It is not at all improbable that in the near future it will be possible to so perfect this process, and carry it out on a commercial scale, that solidified milk will become an ordinary article of commerce, just like butter. From what is known of refrigerated milk, as at present prepared, its keeping qualities are excellent. DR. A. T. VAN VRANKEN thought an important link in the evidence adduced regarding the danger to the human race from tuberculous cattle is missing, unless it has been proved that there is a distinct relation between bovine and human tuberculosis in the same localities. DR. S. A. KNOPF, of New York, said that he has become a convert to the view that the chief channel of infection in the human subject is the digestive tract. DR. DONOHUE, in closing the discussion, said that while bovine tuberculosis has been found to be exceedingly prevalent in the eastern part of the State, it is comparatively rare in the western part. Reasoning from analogy, with the evidence furnished by experiments repeatedly made on animals, the missing link referred to by one speaker has been supplied.

**The Treatment of Cases of Pulmonary Tuberculosis that Cannot go Away From Home.**—DR. DELANCEY ROCHESTER, of Buffalo, said that as success in the treatment of pulmonary tuberculosis depends so largely on the treatment of the individual, it is difficult to lay down general rules. A fundamental principle is to keep the patient most of the time in the open air and in a sunny location. Bathing is most important, as one of the objects of treatment is to keep open the avenues of excretion. A tepid or cool sponge-bath should be taken every morning, and be followed by friction of the surface. A hot bath may be taken once or twice a week, and when night-sweats are profuse, it is advisable to induce perspiration. The most desirable articles of diet are rare beef, eggs, baked potato, boiled rice, and boiled young beets, cocoa, chocolate and milk. The last-named should not be taken at the same time as meat. If there is much involvement of the lung, little or no exercise should be taken. For their local action, inhalations of essential oils containing various medicaments are to be preferred. One of the best vehicles for this purpose is essence of peppermint. A cheap and efficient inhaler may be improvised from a cigar-holder packed tightly with absorbent cotton. Five or ten drops of the following mixture



should be placed in this inhaler, and renewed every 2 or 3 hours: Menthol, 1 part; spirit of chloroform, guaiacol, terebene, eucalyptol and thymol, of each 2 parts. In connection with the constitutional treatment of pulmonary tuberculosis, Dr. Rochester said that it is well to bear in mind that guaiacol can be made into a perfect emulsion with milk of magnesia. Balsam of copaiba often acts well, and should be prescribed in an emulsion made with mucilage of acacia and sirup of tolu. If creosote is given, it must be a very pure article, and must always be given after food. The dose should be gradually increased, watching the urine and the tolerance of the stomach, and if it seems wise to diminish the dose, this should always be done gradually. Dr. Rochester has been able to give as much as 2 cu. cm. of creosote three times daily for a considerable time. When there is much bronchial irritation, the cough is best treated by inhalations or with hydrocyanic acid and chloroform-water. For excessive vomiting, dram-doses of cerium oxalate were recommended. Dr. KNOPF urged that the Association should use its influence in securing the establishment of State sanatoria where poor persons afflicted with pulmonary tuberculosis might receive proper care. He quoted statistics to show that the per capita cost in such institutions is less than for the treatment of the same class in the general hospitals in New York City. It is further to be remembered that in the special sanatoria about 28% are restored to usefulness—are practically cured—while in the general hospitals of our cities almost none recover. The management of the cough was considered largely a matter of discipline, as those who have visited the institution at Frankenstein can testify. In using baths great care should be taken to avoid undue shock. For the pleurisy there is nothing better than dry-cups. Dr. JOHN M. FARRINGTON, of Binghamton, said that he has successfully treated profuse pulmonary hemorrhage on several occasions by giving chloroform to the point of unconsciousness, followed by morphin to secure perfect quiet for several hours. Dr. KNOPF said that a ready and efficient means of treating such hemorrhage consists in the application of ligatures to all four extremities. Dr. ROCHESTER, in closing the discussion, said that he would treat pulmonary hemorrhage by giving enough morphin to bring the respirations down to 12, or even less, per minute.

#### Genital Neuralgia and the Genito-Reflex Pains.

—Dr. F. P. HAMMOND, of New York, recited many cases in illustration of the various types commonly met with. He objected to the common use of strychnin for hysterical subjects, believing that it acts upon them as an irritant.

**Clinical Memoranda.**—Dr. H. D. DIDAMA, of Syracuse, read a paper with this title, which is to appear in a future issue of the PHILADELPHIA MEDICAL JOURNAL.

**A Case of Fistulous Opening between the Ileum and Bladder.**—Dr. H. O. MARCY reported a case of this kind in which he had operated.

**Large Abdominal Tumors.**—Dr. F. H. WIGGIN reported two cases in which he had recently removed successfully uterine tumors, one weighing 20 and the other 17 pounds.

**Tuberculosis of the Middle Ear.**—Dr. SEYMOUR OPPENHEIMER, of New York, said that aural tuberculosis is most commonly observed before the age of 12 years. The ear is affected in about 24% of tuberculous individuals. Suppuration of the ear begins without premonitory symptoms, and is attended with a low grade of inflammation and caries of the intratympanic bones. The chief diagnostic features, aside from the presence of tubercle-bacilli in the discharge, are the bluish-white color of the drum, the presence of two distinct perforations, and enlargement of the peri-auricular glands. The prognosis as regards hearing is not good. The best local application is lactic acid.

**Diseases of the Prostate.**—Dr. SAMUEL ALEXANDER, of New York, gave an interesting lantern-slide exhibit of numerous specimens illustrating various diseased conditions of the prostate.

#### Anthropological Rambles in the Island of Java.

—Dr. H. ERNST SCHMID, of White Plains, delivered a lecture on this subject, illustrated by means of the stereopticon.

SECOND DAY—October 19.

**Acute Frontal Sinusitis.**—Dr. HENRY L. SWAIN, of New Haven, said that the probable reason for the invasion of the sinuses is the presence of a lesion that narrows this

outlet, and by causing retention of the secretion, makes the condition favorable for infection. The prognosis, under proper treatment, is good. Much relief is afforded by irrigations with hot saline solution, the use of antiseptic sprays or, when there is much obstruction, the use of a solution of cocain and suprarenal extract. The latter might be safely trusted to the patient, but the cocain should be applied only by the physician.

#### True and False Medical and Other Charities.

—Dr. WICKES WASHBURN, of New York, said that much of the pauperization existing to day could be traced to the medical profession. The recent effort to pass the dispensary-bill developed opposition in unexpected quarters, and it is a significant fact that \$100,000 have been wrongfully taken from New York City during the past year by three institutions. Last winter the State Homeopathic Medical Society was arrayed against the bill, but that part of the opposition has now been removed.

**Some Thoughts on the Rational Treatment of Disease.**—Dr. CHAUNCEY P. BIGGS, of Ithaca, entered a plea for the largest liberty in the selection of remedies and methods consistent with reason, and deprecated the tendency to blind empiricism.

**Medicine Without Drugs.**—Dr. SOLOMON SOLIS-COHEN, of Philadelphia, in an interesting and suggestive address, spoke of the effect on the human organism of habit and environment, and of the therapeutic value of mental emotion, of high altitudes, and of treatment with organic extracts, such as thyroid, thymus, and suprarenal.

**Drugs vs. Cardiac Insufficiency.**—Dr. OLIVER T. OSBORN, of New Haven, recommended the subcutaneous injection of morphin and atropin, with a small dose of nitroglycerin. After compensation has been restored, the best results follow the administration of fluid extract of cactus, in doses of from 10 to 25 drops. Its action is similar to, but stronger and better than that of strophanthus.

**Treatment of Fractured Patella by Open Operation.**—Dr. CHARLES PHELPS, of New York, reviewed his own experience in the operative treatment, comprising 117 cases. Aside from the firm and osseous character of the union, the power of complete flexion is invariably restored, and convalescence is much more rapid than after non-operative treatment.

#### Notes on Neuralgic Affections of the Head.

—Dr. GUSTAVUS ELLIOT, of New Haven, stated that the chief factors in causing these neuralgic conditions are a depraved condition of the blood, and nerve-exhaustion. The neuralgic character is indicated by absence of fever and catarrhal disorders, recurrence of pain at a certain time on successive days, and a tenderness along the course of the affected nerves. After relieving the intense pain with morphin, repeated liberal doses of quinin should be given, together with 15 drops of tincture of gelsemium, every four hours.

**Discussion on Intestinal Obstruction.**—Dr. PARKER SYMS, of New York, said that it is unwise to give cathartics even when only impaction is suspected, and valuable time should not be wasted in medication if non-operative measures do not quickly afford relief.

#### The Causes of Acute Intestinal Obstruction, with a Description of their Mechanism.

—Dr. E. D. FERGUSON, of Troy, divided the mechanical causes as follows: (1) Obstruction from conditions without the bowel; (2) obstruction from condition within the bowel; and (3) obstruction from conditions relating to the wall of the bowel. He then described the role played by the musculature of the bowel in the causation of intussusception. In doubtful cases, the diagnosis of the variety may be made under the doctrine of chances on the following order of occurrence: (1) intussusception; (2) strangulation by bands, etc.; (3) diaphragmatic hernia; (4) obstruction by foreign bodies; (5) stricture; (6) compression by tumors; (7) volvulus; and (8) angular bending.

**The Causes of Chronic Intestinal Obstruction, with a Description of their Mechanism.**—Dr. GEORGE D. STEWART, of New York, said that the more common causes are simple stricture, catarrhal ulcers, and ulcers occurring in connection with dysentery, syphilis, tuberculosis, and typhoid fever. Paresis of the intestinal wall is a frequent cause, and about 18% of all cases of intussusception pursue a chronic course.

#### Intestinal Obstruction Due to Impaction of



**Feces, Foreign Bodies, Gallstones, etc.**—DR. J. W. S. GOUTLEY, of New York, highly commended prolonged irrigation with hot salt-water for the relief of fecal accumulation. After referring to the different varieties of enteroliths, he gave a detailed description of many remarkable and highly interesting cases in which all sorts of foreign bodies had been swallowed.

**The Diagnosis and Indications for Treatment of Acute Intestinal Obstruction.**—DR. J. D. RUSHMORE, of Brooklyn, said that the more important symptoms are pain, nausea, vomiting, tympanites, tumor, visible coils of intestine, and failure to pass either feces or flatus. The hernial orifices should be carefully examined in all cases of suspected intestinal obstruction. Exploratory celiotomy furnishes the only means of exact diagnosis, and ought to be more often resorted to. In competent hands, early celiotomy in these cases should have a mortality of about 20%.

**The Diagnosis and Indications for the Treatment of Chronic Intestinal Obstruction.**—DR. LEROY J. BROOKS, of Norwich, said that, ordinarily, the pain is felt about the navel most keenly if the stoppage be in the small bowel, and occurs usually three or four hours after the ingestion of food, which is not the case if the large bowel is obstructed. Postoperative obstruction usually occurs at the junction of the small and the large intestine. The nearer the obstruction is to the stomach, the earlier will nausea and vomiting be present, and the greater will be their intensity. When the cause of the stoppage is intestinal paresis, the abdominal surface is smooth and the tympanites very extensive.

**Intestinal Obstruction Due to Intussusception and Volvulus.**—DR. JOHN F. ERDMANN, of New York, said that intussusception causes about 30% of all acute obstructions of the bowel, and that the condition is most common between 2 and 5 years of age. Although it is generally stated that marked debility and previous bowel-disease are prominent causes of intussusception, there has certainly not been any special debility in his own cases. Pain was present in all, but vomiting, when present at all, occurred quite late. Tenesmus, bloody stools, and great restlessness are early and important symptoms. The diagnosis of volvulus rests on the sudden onset, the presence of a palpable tumor, and the dull or tympanitic percussion-note. The treatment consists either in the use of enemas or in operation.

(To be concluded.)

#### Operation for Ovarian Cyst in a Girl 11 Years Old.

—R. J. Alexander (*Texas Med. Jour.*, October, 1898) reports the case of a mulatto girl, 11 years of age, whose abdomen had been enlarged for 2 months. The cyst grew rapidly, interfering with respiration by pressing against the diaphragm. A trocar was introduced and about a gallon of fluid was withdrawn. Preparations were then made for operation, and a few days later a multilocular cyst was removed, the solid part of which weighed 8 pounds.

**Medical Reform in France.**—According to the *British Medical Journal*, the Bordeaux syndicate of medical men proposes the following reforms: A medical college should be organized in every department. Each college should elect a medical chamber; the latter body will draw up an annual list of the members of the college: this list is to be sent into the Prefecture in the month of December, and published by the administration. The medical chamber is to be called upon to decide on the registering of the members of the college to watch over the honor of the profession, and to maintain the observance of the principles of honesty and uprightness that form the basis of the professional code of honor; furthermore, to foresee and prevent disputes among medical men, and to effect reconciliation; to observe the same line of conduct when complaints are made by third parties against medical men; to express an opinion concerning the legal responsibilities that may be incurred by medical men in practice. Difficulties arising concerning fees are to be referred to the *Chambre Médicale*, which is also to be the representative in law-courts of the entire college. Punishments will be imposed by the college according to the gravity of the offence. The decisions of the *Chambre Médicale* may be appealed against. The *Conseil d'Appel* will give the final verdict.

## The Latest Literature.

### British Medical Journal.

October 8, 1898. [No. 1971.]

- Recent Advances in Science and their Bearing on Medicine and Surgery. RUDOLF VIRCHOW.
- University Work in Relation to Medicine. MICHAEL FOSTER.
- Modern Universities. ROBERT SAUNDBY.
- The Importance of Personal Character in the Profession of Medicine. CHARLES J. CULLINGWORTH.
- The Pharmacology of the Alkaloids of Aconite (A. Napellus). J. THEODORE CASH.
- Note on the Action of Bromid and Iodid of Strontium on Exophthalmic Goiter in Children. A. LOCKHART GILLESPIE.
- Alcohol in Drugs and Drug-Preparations. NORMAN KERR.
- The Pure-Air Treatment of Consumption. SAMUEL HYDE.
- A Discussion on the Treatment of Chronic Renal Disease. NESTOR TIRARD, C. A. EWALD, JAMES BARR, D. C. MCVAIL, ROBERT SAUNDBY, C. J. MACALLISTER, RALPH STOCKMAN, W. EWART, T. M. ALLSON and W. C. SILLAR.
- The Physiological Action of Hydrastine Hydrochlorate. C. D. F. PHILLIPS and M. S. PEMBERY.
- A Discussion on the Therapeutic Value of Recent Synthetic Analgesics; their Benefits and Attendant Risks. RALPH STOCKMAN, C. D. J. PHILLIPS, A. LOCKHART GILLESPIE, D. J. LEECH, JOHN LIDDELL, J. R. HAMILTON, WILLIAM GORDON, W. S. FREW and J. O. AFFLECK.
- A Note on the New "Pharmacopeia." J. C. MCWALTER.
- A Preliminary Note on the Pharmacological Action of Stipa Viridula. A. LOCKHART GILLESPIE.
- A Preliminary Note on the Pharmacology of the Alkaloids Derived from the Mescal Plant. WALTER E. DIXON.
- A Case of Hemorrhage into the Pons Varolii. LEONARD CANE.
- Congenital Subluxation of the Head of the Fibula. P. CLENNELL FENWICK.
- A Case of Hyperpyrexia. H. ALSTON.
- Sclerema Neonatorum. E. ARTHUR WILKES.
- Multiple Inflammation in Serous Membranes. J. C. MARTIN.
- Epithelioma of Lip in a Youth Eighteen Years of Age. G. JAMESON JOHNSTON.

1.—See this JOURNAL, Vol. II, p. 725.

5.—Cash describes the three alkaloids of aconite—aconitin, benzaconin, and aconin. The investigation was suggested by the fact that the aconitins are so variable in strength. Many of the aconitins, especially those of German manufacture, have consisted to some extent of the two other alkaloids mentioned, and as aconitin is approximately 200 times as toxic as benzaconin and 2000 times as toxic as aconin, the deficiency in strength of some of the so-called aconitins is readily understood. It is further shown that these alkaloids differ in action, not only in degree, but also in kind.

6.—Gillespie has obtained excellent results from the use of strontium bromid and iodid in the treatment of exophthalmic goiter in children. The thyroid swelling quickly diminished, and lost almost all pulsatile movement; the increased force and diminished tension of the pulse and the rapid action of the heart were made more nearly normal; all dyspnea subsided; and the prominence of the eyeballs disappeared. The salts of strontium were used instead of the corresponding sodium or potassium compounds, because the former did not seem to cause so marked constitutional effects. Furthermore, it was thought that salts of a metal not present in the body, except, perhaps, in traces, would exert a more profound effect upon the abnormal condition of the organs and upon pathologic processes than the corresponding salts of metals already abundantly present in the tissues. Only about 36 cases of exophthalmic goiter have been observed in children under 15 years of age. It is much commoner among females than among males.



7.—Kerr protests against the use of **alcohol in drugs and drug-preparations** in the proprietary remedies, and recommends legislative action to protect the proprietary remedies containing alcohol, morphin, cocain, and other strongly poisonous drugs, by securing the open disclosure on their labels.

8.—Hyde believes that in all **climatic treatment of pulmonary tuberculosis** purity of air is an essential factor necessary to successful results. He considers high altitude more beneficent than anything else, and suggests that the disease can be as successfully treated in the higher altitudes of the British Isles by the erection of properly equipped sanatoria as on the Continent. Owing to the nearness of sea-surroundings the climates of the British Isles are probably more tonic and invigorating than climates double their altitude in Switzerland and other Continental countries. A cold temperature and the presence of high winds and heavy rainfalls are not disapproved of, although these are factors of climate that often exercise a counterbalancing influence for good by cooling and purifying the air, moving and changing the atmosphere, thus preventing that stagnation so conducive to an impure climate. A low temperature is of further value, first, because it is unfavorable to micro-organismal life in the air, and it also tends to the destruction of the tubercle bacillus in the lungs. In the second place, the cold improves the appetite and digestion, quickens the respiration, accelerates the circulation, and thus improves the quality of the blood, promoting the general process of nutrition and the repair of the diseased tissues. Sparseness of vegetation is a climatic factor favorable to the treatment of tuberculosis on account of absence of the products of decomposition.

9.—In discussing the **treatment of chronic renal diseases**, Tirard recommends that in chronic nephritis the tendency to the occurrence of subacute attacks should be avoided. This is accomplished by the avoidance of exposure to sudden alterations of temperature. When the patient is unable to change a detrimental occupation or to change his climate, much good may be done by the use of woolen garments and a flannel binder next to the skin. All over-exertion and mental strain should be avoided; although, moderate exercise is beneficial in the early stages. In renal cirrhosis the progress of the disease may be considerably delayed by judicious outdoor exercise. As to the dietary, the wellbeing of the patient may be prejudiced by undue restrictions, as much as by too great liberality. The albuminoids should be permitted in moderation in the earlier stages, the guide to their use being their effect upon the strength and comfort of the patient rather than upon the amount of the albumin lost. As the disease progresses and the tendency to dropsical effusion develops, the diet must be modified so that large quantities of bland, unirritating fluids are taken in order to increase the eliminative work of the kidney. In both chronic conditions the diet must be regulated to suit the tendency to dyspeptic disturbances. If there is an aversion to food, butcher's meat should be restricted, and such patients should be encouraged to take a fairly large proportion of milk. The ordinary habits of the individual with regard to alcohol should not be interfered with, unless these habits lead to excessive consumption of stimulants. Malt liquor should be avoided, and small quantities of pure spirit well diluted allowed, the idea being to counteract depression and assist digestion. The medicinal treatment is almost entirely symptomatic, and is directed to the diminution of urinary secretion, of the albuminuria, and of the dropsy. When the diminution depends upon the subacute attack diuretics must be avoided, and the case be treated as an acute nephritis. If there is no evidence of active engorgement, cardiac tonics, strophanthus, and digitalis, are valuable. Theobromin, caffeine, or diuretin may be used alone or with heart-tonics. Water is the best diuretic and can be given freely, unless the dropsy increases and the elimination of urine shows no change. The work of the kidney is often improved by temporary rest through the administration of saline purgatives. The astringents have obtained most favor for the purpose of reducing the albuminuria. Of these, salts of iron are the best, having the additional advantage of diminishing any existing anemia. Hematuria is best treated with rest, warmth, and diet. After all, it is best to consider the general condition of the patient rather than to concentrate attention upon the

albuminuria, as so many astringents interfere with the digestive powers. The treatment of dropsy consists in the use of diaphoretics, diuretics and hydragogue purgatives. To effect diaphoresis wet packs, vapor-baths, hot-air baths, and hot-water baths have been employed. Their action may be increased by giving in conjunction copious drafts of water. Pilocarpin, if used, should be given tentatively, and it should be regarded only as a means for starting diaphoresis. The value of saline and hydragogue purgatives is well known. In cirrhosis of the kidney persistent headache is the symptom most often requiring relief. Mild purgatives are valuable. More often it is necessary to reduce the arterial tension by the use of nitro-glycerin. Sleeplessness, often associated with persistent headache or pains of a neuralgic character, is sometimes relieved by measures calculated to lower the tension of the cerebral vessels, such as a hot foot-bath on going to bed, wrapping the feet in warm blankets, or applying a hot-water bottle to the feet. The use of drugs is often compulsory, and one must avoid employing any remedy that might interfere with the eliminative work of the kidney. Foremost among such remedies is opium, but Tirard is averse to its employment. Sulphonal and paraldehyd are probably the most useful hypnotics, especially the former. The treatment of dyspepsia is of great importance in the early stages of renal cirrhosis, as prolonged attacks of dyspepsia may favor the onset of this disease. Persons who pass uric concretions are also prone to exhibit indications of marked renal change; so that errors in diet, in habits of life, and in digestion that may favor these concretions, should be corrected. In the treatment of acute uremia vasodilators may be employed during the convulsion. The best is amyl nitrite, which can be administered by inhalation. Inhalations of chloroform may be given to control the attacks, but should be administered with caution. Croton-oil is the best remedy for acute uremia. The action of the skin can be stimulated by the use of the wet pack, or the hot-air or vapor bath. This should be applied with great care, as unless free diaphoresis occurs, there is danger of increasing the frequency of the convulsions. Diuretics should not be used, as very little of the renal structure is capable of doing work. In cases of edema it is possible and desirable to keep the swelling of the legs down by means of a slanting bed, to facilitate drainage of the fluid from the trunk and upper limbs and to remove fluid from the pleural or peritoneal cavity. Ewald approves of punctures for ascites and pleural effusion. The subcutaneous absorption of the fluid is rendered extremely difficult by the pressure exerted upon the bloodvessels and lymph-vessels of the pleura and peritoneum by the presence of the fluid. The endothelium of the serous membranes suffers in time in its nutrition. The organs contained in these cavities are more and more compressed, and their function disturbed. If the effusion recurs puncture is repeated, as often enough fluid has collected. The edema is drained by inserting into the subcutaneous tissue, as far as possible parallel to the skin, needles such as are used for tapping the pleura. The part that projects is covered with layers of salicylic cotton and iodoform-collodium. To the end of the cannula a rubber-tube is attached that hangs down alongside the bed. One or more needles are inserted in each leg, and from 3 to 5 meters of clear, amber-colored fluid are often withdrawn in the course of a day. This is to be preferred to scarification. The amount of albumin removed in this manner may be very large. Careful estimates have shown the ascitic fluid to contain from 0.6 to 0.75% of albumin. There are always circulating in the blood toxic products that should be eliminated by the kidneys; these act directly as irritants or indirectly by augmenting the blood-pressure, and to this end venesection is advised, followed by subcutaneous injection of saline solution.

According to Barr, the albumin and urea excreted are not to be regarded as of importance. McVail does not concur in this opinion, but thinks that the quantity of urea, when large in amount, gives a hopeful aspect to the case, but when small, a more serious aspect. Saundby approves of early tapping in case of renal dropsy, and advocates the use of injections of cold water into the rectum as a means of diminishing the toxic symptoms. Macallister recommends the treatment of uremia by oxygen. When dyspnea and coma intervene, the inhalation of pure oxygen by one nostril and air by the other will relieve the symptoms. A milk-diet for



periods of six months or more is strongly advocated. Macallister does not administer pilocarpin, but morphin and opium for sleeplessness. Hazelin is employed as an astringent, as it does not disorder the digestion.

Stockman disapproves of the administration of oxygen, and objects to an exclusive milk-diet, believing that it causes anemia. Ewart thinks that the albuminuria is given too much consideration, and the patient, as a living organism, too little. Proper feeding is of the first importance as assisting nature in bringing about a cure by her own recuperative forces. The gravitation of the liquid toward the lower extremities is advised, together with incisions for drainage. An exclusive milk-diet may be used for a short time, but should soon be exchanged for a liberal and varied dietary. In favorable cases, long-continued drainage will lead to recovery.

On account of the marked improvement of the renal condition in some cases of myxedema treated with thyroid extract, Allison has used this substance with advantage in some cases of simple kidney-disease. It increases fatty and nitrogenous metabolism, the volume of urine and the amount of urea as indicated by an increased specific gravity. It tends to increase the amount of albumin when this is present, and to deepen the tint of the urine, hence disposing of more coloring matter. It hastens cell-life and development, and in large doses is a general and cardiac depressant.

**10.**—In studying the physiologic action of **hydrastin hydrochlorate** by subcutaneous injection Phillips and Pembrey found that small poisonous doses induced paralysis of the forelimbs of a frog, succeeded in a minute by spasms like those due to strychnin. Larger doses induced convulsions within 15 minutes, and opisthotonos, death occurring within two hours. Some frogs recovered after typical convulsions. Direct application of the drug to the heart suspended action of the vagus; applied to the bloodvessels, the arterioles were contracted chiefly through the nervous system, with some slight local action. The convulsions were of central action. Applied directly to the frog's nerve and muscle the hydrastin appeared to act first upon the nerve-endings and then upon the muscle. In both warm-blooded and cold-blooded animals fatal doses stopped the respiration some time before the cessation of the heart's action. The drug acts as an irritant to the gastro-intestinal tract. It is rapidly excreted by the kidneys. It does not produce contraction of the uterine muscle fiber. Rigor mortis occurs rapidly after death from poisonous doses, the rigidity being very marked. The right side of the heart is found distended. There is congestion of the pia mater, and an abnormally large quantity of bile. Putrefaction is delayed or suspended in poisoned animals.

**11.**—Stockman believes that none of the recent **synthetic analgesics** is without more or less danger in its application. They are all closely related, both chemically and physiologically, to phenol and anilin. They all have substantially the same kind of action on the gray matter of the spinal cord, by virtue of which the conduction of painful impressions from the periphery is rendered more difficult. The perceptive activity of the gray matter of the cerebrum is also slightly depressed, and probably the perception of impressions is lessened. Motor power and conduction are affected at the same time, but to a much less degree, while the brain retains its ordinary acuteness. Acetanilid is especially dangerous; antipyrin is much safer, but phenacetin is equally powerful, and its use is much more likely to be attended with disagreeable consequences. The only other analgesic recommended is lactophenin. Phillips recommends analgen as of value in the treatment of painful conditions in children on account of its tastelessness and harmlessness. Euphorin, although a powerful analgesic, is dangerous. Methylene-blue is useful in functional neuralgias and all kinds of nervous headache. Lactophenin is more active as a sedative to the nervous system than as an analgesic. It is free from risk. Salophen is the best of the recent synthetic analgesics. It causes no gastric irritation, its toxicity is very slight, it produces neither tinnitus nor headache, and it is especially valuable in the neuralgias of children.

**13.**—Gillespie has found experimentally that **stipa viridula** acts as a powerful nervous narcotic, as a diuretic, a sudorific, and as an irritant both of the respiratory and cardiac organs. The behavior of rabbits under the influence of the drug strongly suggests the existence of hallucinations.

**14.**—Dixon finds that the important effects of the **alkaloids of the mescal plant** in therapeutic doses are (1) direct stimulation of the intracardiac ganglia; (2) initial slowing of the heart; (3) elevation of arterial tension; (4) direct stimulation of the brain and motor centers of the cord, as shown by increased reflex excitability.

**15.**—Cane reports the case of a man who had gone to bed drunk and was found comatose, with pupils contracted, countenance livid, and breathing heavy. Death took place within two hours. Postmortem examination disclosed some subarachnoid effusion of bloody serum, and a **clot in the pons varolii** about the size of half a walnut communicating with the floor of the fourth ventricle.

**16.**—Fenwick reports a case of **congenital subluxation of the head of the fibula**, in a child 9 months old, probably due to congenital absence of the tibio-fibular ligaments. When the head of the fibula was thrown out of place it was quite movable and easily reduced.

**17.**—Alston reports the case of an unmarried woman, aged 20 years, who presented symptoms simulating those of acute mania, which had set in with great suddenness. The patient was exceedingly anemic and her temperature when first seen was 97°, and her pulse 120. At the same hour next day the temperature was 97.2°, and the woman was quiet and rational. Shortly afterward, a fresh maniacal attack occurred, and on the following noon the temperature was found to be 106.2°; two hours later it had risen to 108.2°. A slight pleurisy was detected at the base of the left lung, but there were no other symptoms of lung-disease. The temperature declined, but the woman became comatose and died a few hours later. No autopsy was performed.

**18.**—Wilkes reports a case of **sclerema neonatorum** in which the disease was well advanced at birth. The child died after 14 days.

**19.**—Martin reports a case in which symptoms of typhoid fever were present, the patient dying within a few days. A necropsy showed recent pleuritic exudation upon the left lung, while on the right side there was extreme pleurisy, with effusion of thick, green exudation. The abdominal viscera were matted together by greenish purulent exudate. The spleen was small, soft on section, and covered with pus. The pelvis was full of pus, which covered all the organs. The mesenteric glands were large, but not suppurating. The case is considered one of severe **multiple inflammation of the serous membranes**, the pleura and peritoneum being attacked simultaneously or consecutively.

**20.**—Though cases of malignant growth in the young have been recorded, **epithelioma of the lip in a youth of 18 years** is unique. There was no history of mechanical irritation, nor of any carcinomatous disease in the family. The lesion was situated on the left side of the lower lip, presenting all the characteristics of an epithelioma. It was removed by the usual V-shaped incision, and microscopic examination confirmed the clinical diagnosis.

## Lancet.

October 8, 1898. [No. 3919.]

- Recent Advances in Science and their Bearing on Medicine and Surgery. RUDOLPH VIRHOW.
- The Importance of Personal Character in the Profession of Medicine. CHARLES J. CULLINGWORTH.
- The Nature and Function of a University. MICHAEL FOSTER.
- The Value of Medical Work to the Community and its Inadequate Pecuniary Reward. G. R. TURNER.
- Prevention in Medicine: the Need for a Forward Movement. H. A. CALEY.
- A Right Medical Education. ARTHUR VOELCKER.
- The Present Status of the Medical Profession. SIDNEY SPOKES.
- Fashion in Medicine. J. WALTER CARR.
- Poisons and Poison Legislation. JAMES CRICHTON BROWNE.
- Tuberculosis in Cattle. WALTER LONG.
- The Prevention of Tuberculosis. CHARLES EGERTON FITZ-GERALD.
- Method of Administering Nitrous Oxid Gas for the Production of Anesthesia, avoiding the Use of a Closed Mask or Valves. GEORGE FLUX.



13. The Treatment of Ringworm of the Scalp. H. LYLE.
14. A Case of Acute Membranous Laryngitis in a Child requiring Tracheotomy and Intubation; Recovery. (Under the Care of DR. SAINSBURY.)
15. Two Cases of Dislocation of the Lens into the Anterior Chamber of the Eye; Removal. (Under the care of the late DR. GEORGE F. HELM.)

1.—See this JOURNAL, Vol. II, p. 725.

3.—Foster says that the one reason for the existence of a **university** is the encouragement of learning, irrespective of the important benefits of new truths. Its livelihood must be assured by the gifts of friends or the aid of the State. The university must see that the men who are in its service are placed in circumstances favorable for the accomplishment of their best work, to push forward the limits of the known. The worth of the university is measured, not alone by the number or quality of its graduates, but, even more so, by the number and quality of the new truths that emanate from its laboratories and lecture-rooms. By its research-work it will in the end be judged. The teacher should have ample time for research, and be made content with his line, and be placed beyond the temptation of giving up, for the search for gold, the time and energy that ought to be spent in the search for truth. Each branch of learning should be continually in touch with the other branches. The idea of the university is that whosoever comes finds what he wants to learn, whatever that may be.

5.—Caley emphasizes the need of a proper application of means for the **prevention of the various infectious diseases**, dwelling especially upon tuberculosis. He recommends the erection of suitable sanatoria for the treatment of tuberculous conditions where open air and dietetic regime can be carried out under strict medical supervision and under the most favorable hygienic conditions. The same principle of prevention that is applicable to the infectious diseases is capable of widespread and increasing application in the case of affections of toxic or degenerative origin; thus, the diseases of the central nervous system so often secondary to infective or toxic processes having either a direct destructive action on the nerve-tissue or paving the way for premature decay by initiating a slow process of retrogression that terminates in nervous death can in large part be prevented by the timely application of the proper means. In the prevention of disease due importance must be given to the moral as well as the physical agencies. The application of the principle of prevention of diseases of the heart and circulation is not given the consideration justly due it. It is the duty of the medical man to be ever on the lookout for the first warnings of serious tendencies, and to give attention to the earliest manifestations of disease, to those conditions that are on the border-line between the physiologic and the pathologic.

10.—Long believes that the **veterinary profession** can do a great deal toward forwarding the movement for **diminishing tuberculosis** apart from any step that it might be necessary for the Government to take. The Government should provide tuberculin at a comparatively small cost and pay a fee for its employment, in order to secure properly qualified veterinary surgeons to carry it out. A proper application of such measures would eradicate tuberculosis in cattle, and indirectly to a great extent in man.

11.—Fitz Gerald recommends the adoption in England of the **measures adopted against the spread of tuberculosis** by the Board of Health of New York City, namely the compulsory notification of all cases of tuberculosis, with a statement of age, sex, duration of disease, place of residence, gratuitous examination of the sputum; isolation in special hospitals; disinfection of premises previously occupied by tuberculous patients; prompt disinfection or destruction of sputum; and rigid inspection of all meat and milk supplies.

12.—It is not necessary in the administration of **nitrous-oxid gas** that all the oxygen should be cut off. Flux has devised an apparatus consisting of a cup-shaped face-piece completely open at the top, with a stop-cock for regulating the supply of gas. This apparatus has certain advantages over the closed mask that has been used in the past; the extreme tranquillity of the patient during the induction of anesthesia is a strong point in its favor. Furthermore, this apparatus allows the patient's face and color to be under direct observation at all times. By this method the period

of anesthesia will last from 45 to 60 seconds, and the patient recovers therefrom without undue excitement.

13.—Lyle has obtained a great measure of success in the **treatment of ringworm of the scalp with a silver-solution**. After the head is entirely shaved, each patch is scraped with a Volkmann's spoon, and a solution of silver nitrate (1 dram to the ounce) is applied with a swab-stick. This process should be repeated twice a week; the underlying parasitic growth being scraped off on each occasion before repainting with the solution.

14.—That this case was one of non-diphtheric membranous laryngitis was evident by the negative results of the cultures and the absence of albuminuria and paralytic sequels. It became necessary to perform tracheotomy, owing to the embarrassed respiratory efforts. Every attempt to remove the tube bringing on dyspnea and cyanosis, intubation was practised; the tube was allowed to remain for 12 hours, when it was removed without a return of any of the annoying symptoms. It is interesting to note that 8,000 units of diphtheria-antitoxin were employed with apparent harmlessness, before the diagnosis had been absolutely established.

### New York Medical Journal.

October 22, 1898. [Vol. lxviii, No. 17.]

1. Observations on Cardiac Syphilis. I. ADLER.
2. Solid Tumor of the Ovary, attended with Ascites, treated by Preliminary Tappings and Abdominal Section. Recovery. WILLIAM C. WOOD.
3. Hypertrophy of the Pharyngeal Tonsil, and the Importance of its Recognition by the General Practitioner. J. WILKINSON JERVEY.
4. Auto-intoxication. G. W. MCCASKEY.
5. The Transmission of Disease by Certain Insects: Ticks, Bedbugs, Ants, etc. CHARLES F. CRAIG.

1.—Adler reports the results of a study of the **hearts** from a number of **syphilitics** not presenting any well-marked gross anatomic changes, with a view of ascertaining whether minute lesions could not be found sufficient to throw some light on the early development of luetic heart-lesions. He first examined four hearts from babies under four months old that had exhibited unmistakable symptoms of syphilis, but were free from symptoms of cardiac disease. The hearts and large vessels appeared entirely normal to the naked eye. In two of the hearts no lesions attributable to syphilis were found. In one a small branch of the left coronary artery in the outer wall of the left ventricle about half way between the apex and the sulcus coronarius and near the pericardial surface showed a characteristic patch of endarteritis. The adventitia and the muscular coat seemed entirely normal, but on one side of the vessel there was a distinct proliferation of the intima, within and below the elastic membrane. Following the course of this proliferation in serial sections through the artery, the patch of new-formed cell material grew larger, and at its point of greatest development almost entirely occluded the lumen of the vessel. The elastic membrane had entirely lost its characteristic appearance at this point, and could be traced only in threads and filaments of elastic fibers irregularly distributed throughout the proliferating cellular mass. In the immediate neighborhood of this diseased artery a minute area was found in which the interstices between the bundles of muscular fibers appeared rather wider than normal, and somewhat infiltrated with cells. The other baby-heart examined microscopically showed an endarteritis such as was seen in the last case in both arteries and veins. In some places little vessels were affected that were located well within the heart-muscle itself and always nearer to the pericardial surface. The condition was more advanced than in the other case described, and in addition the circumvascular space about the minute arteries and veins within the muscular tissue appeared broader than normal, and more or less completely filled with leukocytes. These vessels radiated out into the surrounding vascular tissue, invading the intermuscular spaces and forcing themselves between the striated fibrils. In another place the circumvascular infiltration had lost its purely cellular character, and consisted of loose and soft connective tissue still rich in cells, and while the muscular fibers in the immediate neighborhood had become separated by wider bands of the same loose and wavy, partly cellular, partly fibrous material,



the connective tissue had, in another place, become more fibrous and contained but few cells. Here and there the nuclei of the muscular fibers had become pale and were stained but little by the hematoxylin. The transverse striation had become indistinct or had disappeared altogether, thus showing the early signs of degeneration. These changes were chiefly through the walls of the left ventricle near its pericardial surface, and to some extent in the interventricular septum. The walls of the right ventricle were normal. There was next examined an adult's heart, which showed no sign of cardiac lesion, either during life or at the postmortem examination. Microscopically, similar conditions of interstitial myocarditis were found as in the baby-hearts, though somewhat more advanced. The early stage of mere cellular infiltration was nowhere seen. There were numerous and large areas of muscular degeneration which were not considered dependent upon the syphilitic lesion. Another heart taken from an adult in whom there has been no clinical symptoms of heart-disease showed on microscopic examination interstitial myocarditis in a still more advanced stage. The areas of firm connective tissue were larger and more extensive. The degeneration and destruction of muscular fibers was so far advanced as to be visible to the naked eye. Beside endarteritis and peri-arteritis there was enormous dilatation of the capillaries and small veins, which were engorged with blood, and extravasations of blood into the perivascular spaces and between the muscular fibers. The last heart examined showed macroscopically, in an exaggerated form, all the typical lesions of cardiac syphilis. The microscopic changes were the same as those found in the foregoing cases, save that they had advanced to a much greater extent. Nowhere could the early stages of endarteritis be seen. These investigations show the vessels to be the primary point of origin of the disease, to which the interstitial myocarditis and subsequent degeneration and destruction of the muscular tissue are secondary. Such conditions may be firmly established before any functional disturbances or gross anatomic changes are evident. The rapidity is emphasized with which simple cellular infiltration is converted into fully organized connective tissue and this interfibrous material. It is to be gathered clinically that when symptoms of this condition are evident the anatomic process has already attained some magnitude. An early correct diagnosis is imperative. Myocarditis, especially when occurring in younger individuals, not clearly attributable to some other causation, should always suggest syphilis. Active syphilitic lesions of other organs would confirm the diagnosis. There are numerous cases, especially in young people with so-called weak or irritable heart, associated with bradycardia or more especially with tachycardia and always with more or less arrhythmia that are often the result of a syphilitic lesion, although there may be none of the graver physical signs of heart-disease, no murmur, no dilatation of the ventricles. In all such cases, even if the diagnosis is doubtful, the patient should be given energetic antisyphilitic treatment. A case of syphilitic angina pectoris, the result of an acute dilatation from myocarditis, is reported, in which rapid relief followed antisyphilitic treatment. In the light of this study syphilis should be given full consideration as an etiologic factor in heart-disease.

2.—Wood reports a case in which he removed a **solid tumor of the left ovary**, which had been associated with ascites. The patient had previously been tapped several times. When the abdominal cavity was opened the tumor lay on the right side of the pelvis, but it was in fact a tumor of the left ovary, which had been displaced. The pedicle was twisted and the blood-supply shut off, causing the tumor to soften and partially break down. The right ovary was diseased and also removed. Convalescence was rapid and uneventful.

3.—In order to emphasize the importance of early recognition and proper treatment of **hypertrophy of the pharyngeal tonsil**, Jervoy gives a somewhat detailed description of this condition, to which, he expresses the belief, the negro is not so prone as is the white. In the matter of treatment, he recommends the removal of the adenoids by grasping and cutting them away with a modification of Curtiss' or Prentice's nasal forceps, after which he cuts away the small remaining portions by means of a Gottstein pharyngeal curet, which should not be too large.

4.—McCaskey defines **autointoxication** as a toxic con-

dition broader than the strict etymology of the word implies by usage and priority of original research, and resulting from the chemic poisons formed either as an incident of tissue-metabolism or as products of bacterial growth in some part of the animal economy. The organism is protected from these self-formed poisons under conditions of health in the following manner: The leukomains are, for the most part, destroyed near their seat of formation by the process of oxidation. In addition there are probably processes of which we have no knowledge, that aid in the conversion of toxic into non-toxic chemic agents. From ptomains the organism is protected, first, through the destructive action of the normal gastric juice upon bacteria, the selective and transforming power of the intestinal epithelial cells, and the destructive action of the liver. After passing through the circulation, these poisons are hurried to the kidneys and rapidly eliminated from the system, keeping the accumulation from reaching the disease-limit. McCaskey recognizes, in addition to leukomains and ptomains, bacterial toxins, the interstitial fluids of the germ-body, and the pyrogenetic proteids described by Buchner as responsible for the majority of cases of auto-intoxication. Apropos of the last-mentioned poison, reference is made to a case of profound anemia, in which the red cells were reduced to a little over a million, without any other changes suggesting pernicious anemia, but with a remarkable increase in the number of leukocytes, the ratio being 1 to 12. The patient showed symptoms of chronic intestinal disorder. Microscopic study of the feces and colon-washings revealed millions of microscopic tenæ that could not be identified, and an intense bacterial infection, in which the colon-bacillus predominated. Considering the leukocytosis, the result of intestinal autointoxication, intestinal disinfection was accomplished, and at the end of three weeks the red cells were augmented to two million, and the white cells were entirely normal in proportion. The conditions in this case are thought to be dependent upon the pyrogenetic or chemotactic proteids of Buchner, or upon some bacterial products absorbed from the intestine and producing the leukocytosis, which disappeared with them. The remarkable regeneration of red cells is thought to demonstrate the destructive influence that these or associated poisons had exerted upon the hematogenetic function. The fatty acids, butyric, lactic, etc., acetone, and similar compounds, are probably responsible for autointoxication at times. The clinical recognition of the toxemias resulting from the poisons referred to and from others is difficult, as the symptomatology is most diverse. Means for their chemic recognition and differentiation must be developed. Through these channels only will they be satisfactorily explained.

### Medical Record.

October 22, 1898. [Vol. liv, No. 17.]

1. How to Avoid Tubercle. TUCKER WISE.
2. Impressions and Conclusions Based upon a Study of 5,000 Skin-cases Treated during the Year. CHARLES WARREN ALLEN.
3. The Medical Aspects of Camp Management at Chickamauga. H. A. HAUBOLD.
4. Antisepsis versus Asepsis in Country-practice. W. B. KONKLE.

1.—Wise gives some general hygienic directions for the **avoidance of tuberculosis**, viz., careful selection of a properly situated dwelling upon which plenty of sunlight falls, which is elevated, but not windswept, and, particularly, one that is not damp. The furnishings should be light, and, when feasible, washable. Servants should not be allowed to "dust," but should wipe the furniture after dampening it, and the carpets should be dampened and then cleaned with a sweeper. Breathing should be through the nose; the clothing should be loose, moderately light, but warm. Sufficient exercise should be taken, and proper diet should be prescribed. The expectoration should be sterilized. Milk and meats should be chosen with great care, excluding, if possible, tuberculous infection. The final point is of importance. It is pointed out that numerous animals used as pets, as well as several domestic animals, are susceptible to tuberculosis, and it is particularly insisted that, among these, canaries and others are frequent subjects of tuberculosis.



2.—Allen makes a general review of the most important diseases that have come under his care in the past year in a **skin-clinic**. Among important matters it is pointed out that in almost none of the cases of erysipelas was a history of preceding nasal affection absent. The treatment that was most successful was intranasal swabbing with 50% watery solution of ichthyol, the application of ichthyol-collodion to the affected area, and sometimes an adhesive band about the forehead. The scalp scarcely ever became involved. Several cases were seen following vaccination. Erythema nodosum is so often noted in young patients who have recently landed from immigrant vessels that the belief is expressed that the hardships of the voyage in the steerage are of importance in causation. One case of herpes zoster was seen in a child 2½ years of age, a remarkable early appearance of the affection. Impetigo seemed to be practically always started by pediculosis capitis. It is notable that 15 cases of prurigo were observed, almost all in children that had been but a short time in this country. Scabies was successfully treated after Sherwell's method, viz.: the use of dry powdered sulphur. Tinea circinata was most successfully treated with strong solutions of formalin, although this gives rise to considerable pain, and unless used with care causes a great deal of irritation. Several points are noted in regard to tinea versicolor. Most cases occurred in young women, natives of Austria, many recurring after seeming cured. In a number of cases, the patches extended up onto the neck and even to the cheek. Faint or imperceptible patches were made distinct by painting the skin with tincture of iodine, taking a much deeper color than the normal skin. Recurrence seemed frequently to be due to a patch hidden by the pubic hair, and which had thus escaped observation and had not been treated. Treatment should be continued after the apparent disappearance of the lesions; otherwise they may reappear. A striking appearance of contagion in the history of many cases of warts was noted.

3.—Haubold believes that the cause of all the illness in the **army-camps** lay in the **evil hygienic conditions**. In Chickamauga, the subsoil is very thin, and a stratum of rock lies but little below the surface, thus dejecta readily infected the water-supply, and the soldiers could not be prevented from drinking the most convenient water, which was usually also much more attractive in appearance than the muddy water that was recommended for them. The cases of typhoid fever undoubtedly arose because of insufficient prophylaxis against infection from individual cases. The epidemic was very virulent, the violence of the disease itself, without complication, killing a great many men. The temperature was high, and the delirium was violent. The treatment could be but very ineffectively carried out. Proper diet could not be obtained in most cases, and cold packs even could not be had as the tap-water was about as warm as the surrounding atmosphere. Ice was a rarity. Milk could not be kept, frequently becoming soured, and could not be retained by the patients. The nursing was all that could have been asked under the circumstances, though the training of the nurses and their number were entirely insufficient. The food furnished the troops in general was badly chosen and much of it indigestible. There was much disturbance of the digestive organs among the men in general. Haubold rejects the statements that medical officers were responsible for a great deal of this. The medical man can but "advise" commanding officers of existing conditions, and the responsibility then falls upon the latter officer.

#### Boston Medical and Surgical Journal.

October 20, 1898. [Vol. cxxxix, No. 16.]

1. A Successful Gastrectomy for Cancer of the Stomach. MAURICE HOWE RICHARDSON.
2. The Restoration of a Lower Eyelid by a New Method. GEORGE H. MONKS.
3. Aleppo Boil. JAMES C. WHITE.
4. Hydroa Æstivale or Vacciniforme. JAMES C. WHITE.
5. Ectopic Gestation—Twins—Operation. C. B. PORTER.
6. Intestinal Resection for Cure of Fecal Fistula Following Operation for Appendicitis. C. B. PORTER.
7. Three Cases of Fracture of Upper End of Humerus with Dislocation of Head. C. B. PORTER.

8. Amputation of Whole Upper Extremity Including Scapula. C. B. PORTER.
9. Acute Pancreatitis. J. W. ELLIOT.
10. Ambulatory Typhoid and Laparotomy for Intestinal Perforation in Typhoid Fever. R. H. FITZ and H. H. A. BEACH.

1.—Richardson reports a third case of **successful gastrectomy for carcinoma of the stomach**. The patient, a woman aged 53 years, presented herself for treatment with a hard, irregular tumor about the region of the umbilicus. There had been no vomiting, but there was continuous loss of weight and strength, with indigestion and discomfort. A provisional diagnosis of malignant tumor of the transverse colon, or of the omentum was made, and an exploratory operation was advised. A median incision showed the mass to be a tumor of the stomach involving practically the whole organ, except a small portion next the esophagus. There was no ascites, and no sign of metastasis. As the tumor was freely movable, and as there was a circular margin of healthy stomach about one inch wide between the esophagus and the tumor, the condition seemed appropriate for the performance of complete gastrectomy. This was proceeded with, and no difficulty was encountered until an attempt was made to approximate the duodenum and the esophagus; the duodenum was held back by its bloodvessels and other attachments, and traction thereon did not allow of the desired elongation. By tying and cutting these restraining attachments it was possible, without dangerous tension, to approximate the divided ends of the bowel. These were united by interrupted Lambert sutures of silk, and sufficient gauze was introduced around the line of sutures to prevent contamination from the escape of bowel-contents. The operation itself was followed by little, if any, shock, and during the succeeding three days the patient was comparatively comfortable. She was sustained during the first three days by nutritive enemata, which were supplemented on the fourth day by small quantities of milk given by the mouth every hour. On the fifth day, owing to rectal irritability, the nutritive enemata were altogether omitted, the patient receiving, with no discomfort or complication, all her nutrition by the mouth. The case proceeded satisfactorily until the eighteenth day, when the temperature, which the day before had about reached normal, rose to 102.5° in the morning. This elevation of temperature continued for several days and caused no little anxiety, but was subsequently accounted for by suppuration at the bottom of the sinus, probably with absorption of putrefactive products, and perhaps by the development of an alveolar abscess. On the twenty-sixth day the temperature and pulse were practically normal, and the patient sat up out of bed for half an hour. On that day the amount of nutrition she received had been 6 oz. of chicken-broth, 16 oz. of milk, 3 oz. of beef juice, 12 oz. of chicken-broth, whites of ten eggs, roast beef and ice-cream. On the thirty-sixth day the patient was dismissed, driving home, a distance of 5 miles, without any apparent fatigue. At this time she was taking a sufficient quantity of food to satisfy her hunger; her digestion was apparently perfect, and her bowels were moving normally. The most important consideration in cases of malignant disease of the stomach like that reported is as to whether radical surgical procedures are or are not justifiable. Richardson contends that the same arguments for and against operation for carcinoma of the breast apply also to operation for carcinoma of the stomach or intestines. If the malignant tumor is limited to the stomach and is freely movable, and if the patient has sufficient strength and vitality, the operation should be regarded as justifiable, after the chances of success or failure have been thoroughly explained. When the tumor is not confined to the stomach-walls, when there is remote metastasis, and when the strength and vitality of the patient are much below par, the operation is distinctly contraindicated. On examination 4 months after the operation the most troublesome symptom was distress after eating; at times there was difficulty in swallowing solid food; though there has been material gain in strength, there has not been any gain in weight; the bowels move without laxatives and the stools are formed.

2.—Monks carried out the following **plastic operation for restoration of a lower eyelid** that had been removed for malignant disease. The new lower eyelid was



dissected from the scalp about the termination of the anterior branch of the temporal artery. The subcutaneous tissues containing the artery and vein were dissected out up to the base of the flap, until they were completely freed from the underlying tissues. Through a point of the temple near the proximal end of the pedicle, a tunnel was made under the skin communicating with the defect left by the removal of the lower lid. The new lid was then drawn by forceps through the tunnel and sutured into position.

3.—White reports the case of a boy suffering from **Aleppo boil**, an infectious disease, occurring especially in children, on the hands or face and appearing first as a small papule that becomes pustular, and is then covered by a crust beneath which the destructive changes continue to spread laterally. The disease may be acquired by inoculation, but the infectious agent has not yet been discovered. The scar produced resembles that of syphilis.

4.—White reports two cases of **hydroa aestivale**, in children, who presented numerous cicatricial pits on the face and extremities. At the age of 8 months, groups of water-blisters appeared on the face and extremities of the one and lasted from December to April, recurring annually at the same period. The other child apparently had the attacks in spring-time. The disease resembles dermatitis herpetiformis, from which it must be distinguished by the presence of a scar. Examination of the blood disclosed an increase in the number of eosinophile cells.

5.—Porter reports a case of **ectopic gestation** in which operation was performed prior to rupture, the peritoneal cavity being opened through the rectus muscle and the sac removed without rupture. Section of the hardened tumor revealed an embryo in each half.

7.—Porter reports **three cases of fracture of the upper end of the humerus with forward dislocation of the head**, treated by excision of the head of the bone. The operation was in each instance performed about two months after the injury had been sustained, and was followed by good results.

8.—Porter reports a case in which amputation of the forearm for malignant disease had previously been required. Owing to recurrence above the elbow and involvement of the axillary glands, **amputation of the whole upper extremity including the scapula** was performed. The patient made an excellent operative recovery.

10.—Fitz and Beach report a case of typhoid fever in which symptoms pointing to peritonitis in the right iliac region developed in the course of the third week. The patient's condition was such that an operation did not seem to be contraindicated. On opening the abdominal cavity a perforation of the small intestine was found a short distance from the cecum. It was closed by fine silk Lembert sutures, and the abdomen was flushed with hot water and closed. The after-history of the case is yet to be reported.

### Medical News.

October 22, 1898. [Vol. lxxiii, No. 17]

1. Ergot in Chronic Malaria. A. JACOBI.
2. The Use of Obstetric Forceps, with Report of Two Cases of Inversion of the Uterus. J. F. COLE.
3. The General Practitioner. JAMES TYSON.
4. Successful Removal of a 125 Pound Ovarian Tumor. Cesarean Section for Deformed Spine and Pelvis. J. G. LYND.

1.—After describing the active principles of **ergot**, Jacobi reports a number of cases of **chronic malaria** treated with this drug, and presents the following conclusions: There are cases of chronic intermittent fever, with large tumefaction of the spleen, that after having resisted the action of quinin, arsenic, methylene-blue, eucalyptus, and piperin, are benefited by ergot. When enlargement of the spleen is not old and not firmly established, the contracting effect of ergot is noticed within a reasonable time. The attacks will disappear before the diminution in the size of the spleen is marked. Though the temperatures remain irregular and be now and then somewhat elevated after the employment of ergot, chills are, as a rule, not noticed. Plasmodia do not seem to disappear from the blood so rapidly after the use of ergot as after that of quinin, when the latter is effective; but even

while some are still present, the patient will feel better, as the attacks are more or less under control. Complicating local pain requires additional treatment with ice, cold douches, or heat; chronic hyperplasia demands potassium iodid or iron iodid. Digestive disorders may indicate, as they often do when quinin is expected to act before the employment of ergot, an emetic, or a purgative, or stomachics. An experience extending over 40 years, in which Jacobi has used ergot in many instances, justifies the assertion that there are many cases of chronic malaria, apparently intractable, that will get well if treated with ergot. There are cases, occasionally, in which the return of elevations of temperature after the successful use of ergot makes the combination of ergot and quinin, or ergot and arsenic, advisable, though quinin and arsenic had not been successful previously. Ergot, like quinin, probably by its sudden contracting effect on the spleen, and by the forcing of large quantities of plasmodia-laden blood into the circulation, is, in chronic malaria when hydremia and splenic tumor are excessive, capable of bringing on the first attack of chills and fever. Recent cases of malaria have got better, or improved under the extensive use of ergot, but many resisted a long time; for this reason acute cases should rather be treated with quinin.

2.—Coles gives the following indications for the use of **forceps in confinement**: (1) A small or irregular-shaped pelvis; (2) a large child and an abnormal presentation; (3) alarming hemorrhage; (4) signs of failing strength or exhaustion; (5) convulsions; (6) fixation of the presenting part in the pelvis, with ineffectual labor-pains; (7) speedy delivery in the interest of mother and child. He reports two cases of **acute inversion of the uterus**, one occurring in his own practice, the other in that of a midwife, in both of which the uterus was replaced and the patient recovered. The production of inversion may be favored by a large relaxed uterus, the result of over-distention, of rapid delivery, or hemorrhage. The immediate cause may reside in pressure exerted from above or in traction from below. The symptoms are shock, hemorrhage, pain, restlessness, pallor of face, a quick pulse, syncope, etc. The treatment consists in pressing the fundus up with the closed fist, counter-pressure being made with the disengaged hand upon the upper border of the funnel-shaped depression; and the after-treatment is the same as in atony of the uterus with post-partum hemorrhage.

4.—Lynds reports the successful removal of an **abdominal multilocular ovarian cyst**, the estimated weight of which was **125 pounds**. The cyst was adherent to the abdominal wall over its entire anterior portion, as well as to the diaphragm, the stomach and the omentum. When the cyst was removed the abdominal wall presented a ragged, bleeding surface, from which hung shreds of peritoneum. The shreds were trimmed off, the hemorrhage stopped by ligature and cautery, and drainage employed. The patient recovered. Lynds reports also a case of **Cesarean section**, necessitated by marked **posterior curvature of the spine**, extending down to the lumbar vertebrae, the lowest ribs resting on the iliac crests. The fundus of the uterus rested in its lowest part on the thighs, and the cervix was pushed high up against the diaphragm. The induction of premature labor was scarcely considered, on account of the unfavorable position of the uterus, which would have rendered the use of forceps, or the practice of version or of embryotomy, questionable. Cesarean section was performed, according to the Porro Müller method, with a successful result.

### Journal of the American Medical Association.

October 15, 1898. [Vol. xxxi, No. 16.]

(Continued)

9.—Relative to the use of the various **tuberculins** in Colorado, Bonney states that he sees no justification for their employment, nor any scientific value to be derived from such observations. He believes that the benefit reported to be derived from their use is more dependent on the favorable influences of climate, the beneficial effects of which have been demonstrated, than upon an agent the value of which is as yet most uncertain.

14.—Waugb lauds highly the **sulpho-carbolates**, be-



lieving them to be of special value in summer-diarrheas, pulmonary tuberculosis and typhoid fever. He states that many cases of typhoid fever may be aborted by their use and that in the initial stage nearly every case is stopped within four days.

17.—With regard to the wounded in the Porto Rican campaign Senn states that bone-injuries were rare and many of the wounds slight. All of the cases tend to confirm previous observations to the effect that the small-caliber bullet of the Mauser rifle causes wounds of the soft parts, which, if left alone under the first dressing, will heal by primary intention in the course of a week or two, unless complicated by serious visceral injuries. The small-caliber bullet does not infect the wound and it seldom carries with it into the tissues clothing or other infectious substances; hence such wounds should be left to heal under the first-aid antiseptic dressing. Evil consequences were seen in a number of cases following unnecessary probing, for such wounds are exceedingly susceptible to secondary infection. For the purpose of calling attention to the humane nature of the modern weapon, and with a view of showing how rapidly wounds inflicted with the small-caliber bullet will heal under the most conservative treatment, the nature of the wounds and results following in the Porto Rican war are briefly given. Only 30 cases are reported, and healing by primary union, or without complications, resulted in the majority. The value and importance of early surgical attention, and the first-aid dressing is apparent in comparing the condition of the wounds, a week after the injuries were received, during the Cuban and Porto Rican campaigns.

19.—The description of the flap-splitting operation is concluded and the steps of Emmet's operation for laceration of the perineum are given in detail.

October 22, 1898. [Vol. xxxi, No. 17.]

1. The Rise, Progress and Present Needs of Pediatrics. J. P. CROZER GRIFFITH.
2. The Limitations of Medicine. FRANK BILLINGS.
3. The Estimation of Uric Acid in Urine. HENRY C. MAISCH.
4. The Pharmacologic Assay of the Heart Tonics. E. M. HOUGHTON.
5. The Great Therapeutic Importance of a Rational Adaptation of Cathartics to the Physiologic Functions of the Gastro-Intestinal System. E. D. McDANIEL.
6. Acetanilid: Its Use as a Preventive Measure in Premature Expulsion of the Ovum. STEPHEN HARNSBERGER.
7. Intestinal Obstructions from Gallstones, with Report of a Case. JOHN PRENTISS LORD.
8. The Use of Electricity by the General Practitioner. CALLEB BROWN.
9. Conservative Treatment of Intestinal Occlusion by Internal Electricity. R. P. JOHNSON.
10. Formative Nutrition. H. W. SCAIFE.
11. Some Thoughts on the Care of Infants and Children. J. A. WORK.
12. Cl propeorrhaphy and the Structures Involved. BYRON ROBINSON. (Concluded.)

1.—See this JOURNAL, Vol. I, p. 1086.

2.—The most important limitations in medicine which man is striving to remove are due to man himself: his vices and irrational habits with regard to eating, drinking, work and rest, are the source of his own undoing. Ideal sanitation would free the world of all diseases due to filth, but it is prevented by ignorance, prejudice, and corrupt politics. Science is gradually overcoming these evils; vivisection, an increased knowledge of pathology, and the excellent work of our best medical schools and State Boards of Health are of great importance. The government maintains a department of agriculture and an interstate commerce commission, but there is just as much, if not more, reason for the existence of a National Commission of Health—a commission with power to regulate the sanitary problems of the country and to adjust matters medical between the States as fully and definitely as the interstate commerce commission performs its duties. The address closes with some considerations as to the possibilities and needs of Rush Medical College.

3.—The advantages and inaccuracies of several methods

of estimating uric acid are discussed quite fully without the addition of any particularly new information.

4.—The importance of carefully assaying heart-tonics is urged. It is thought probable that the strength of heart-tonics can be best determined from their killing power on animals, rather than by experiments with regard to blood-pressure, and such a method is described.

6.—The history of the discovery of acetanilid, its physical properties, physiologic action, are discussed. Harnsberger reports a very favorable experience in its use as a preventive of abortion, and gives brief notes from several cases in which it was successfully used for this purpose.

7.—See this JOURNAL, Vol. I, p. 1084.

10.— " " " I, p. 1094.

11.— " " " I, p. 1086.

12.—The description of Emmet's operation is concluded, and the comparative merits of the various operations are discussed. Whilst acknowledging the value of Emmet's and other denuding operations, Robinson believes that nothing is gained by denuding an area of vagina over retaining that same area intact, for it will contract to its original size shortly after the tension which produced it is removed.

### Glasgow Medical Journal.

August, 1898. [Vol. I, No. 2.]

1. Early Symptoms of Pressure upon the Vagus and Recurrent Laryngeal Nerves. DAVID NEWMAN.
2. A Year's Work at the Glasgow Maternity Hospital. ROBERT JARDINE.
3. Case of Akromegaly—Autopsy—Round-celled Sarcoma of Pituitary Body. JOHN M'C. JOHNSTON and T. K. MONRO.
4. Specimens Illustrating Fractures of the Upper Extremity; also Specimen of Abnormally Thick Ribs from a Case of Chronic Emphysema. GEORGE HENRY EDINGTON.
5. Dentigerous Cysts. GRANT ANDREW.

1.—Newman calls especial attention to the appearance of attacks of sudden paroxysmal dyspnea accompanied by laryngeal stridor. The stridor is most marked during inspiration, but it is the paroxysmal dyspnea that is the most important symptom of early pressure upon the laryngeal or vagus nerves by aneurysm or mediastinal tumor. During intervals, the voice may be slightly altered, and there may be no laryngeal changes visible. The dyspnea is explained either by the sucking in of the flaccid vocal bands, or by accumulation of mucus in the bronchial tubes, owing to partial paralysis of the bands, which makes efficient coughing impossible. The cough of early aneurysm is quite distinctive, in that it is hoarse and imperfect, the latter being the especial quality, and due to the fact that a chink is left in the glottis, so that the proper explosion of the cough does not occur. The cough is often hoarse or brassy, or it may be bovine, like the hoarse grunt of a cow. The speaking-voice is often impure, and the necessity for increased pressure in the chest, in order to produce normal vibration of the bands, leads to ready exhaustion of the voice and of the patient at the same time. Aphonia, too, may be an early symptom.

2.—Jardine reports 40 cases of contracted pelvis in the Glasgow Maternity Hospital during the past year. Cesarean section was performed three times, twice for contracted pelvis and once for obstruction caused by anterior fixation of the uterus. Abdominal section was necessitated in a fourth case by rupture of the uterus. Seven cases of eclampsia were recorded, one of which terminated fatally. Induction of labor was undertaken 15 times, 13 times for contracted pelvis, once for persisting vomiting, and once for pendulous abdomen with sloughing ulcer of the wall. Craniotomy was done 11 times. The Walcher position was used in all the difficult cases, with excellent results, the increase in the conjugate varying from  $\frac{1}{2}$  inch to as much as  $\frac{3}{4}$  inch in one case. The average is about  $\frac{1}{2}$  inch.

3.—Johnston and Monro report the case of a woman, 34 years of age, who presented perfectly typical symptoms of akromegaly, and who finally died from feebleness of the heart's action. Upon postmortem examination the pituitary body was found represented by a red mass, two inches in either diameter, and it weighed nearly an ounce. It was not homogeneous, but in parts it looked like voluntary mus-



cular tissue that had been kept in alcohol, and in other parts like a series of masses, with a smooth free surface that was of paler color. Microscopic sections showed the histologic structure of what was believed to be the **sarcoma**. (The description of the microscopic appearance would, however, tend to leave some doubt in one's mind as to the diagnosis.) The wall of the sella turcica was partly eroded, as was the right crus cerebri, while the left crus was reduced to a thin, gelatinous-looking cord.

4.—Edington gives a careful description with illustrations of a comminuted fracture of the upper end of the humerus; comminuted fracture of the lower end of the radius, with separation of the styloid process of the ulna; a fracture dislocation at the elbow, and resected portions of fifth and sixth ribs from a case of chronic empyema.

5.—Andrew reports the case of a girl, 11 years old, who, had for four months, had a swelling of the left lower jaw extending from the first molar tooth to the symphysis. The growth had caused little discomfort, although occasionally there was toothache-like pain. To touch it seemed solid, but at some points it yielded on firm pressure, giving a characteristic egg shell crackle. A small sinus had existed for some weeks in front and just below the left lateral incisor, and from it a milky-like fluid could be pressed. The dental outline was regular; the permanent incisors and first molar being in their places, but on both sides temporary canine and premolar were present, though carious. An incision was made over the swelling, a part of the bony wall was removed, and a cavity the size of a walnut was exposed which was lined by a delicate membrane and contained the permanent canine and bicuspid. The teeth were removed, the lining membrane was scraped and the cavity was packed. In a few weeks the parts resumed their normal shape and the sinus closed. The literature of dentigerous cysts is discussed.

### Berliner klinische Wochenschrift.

September 12, 1898. [35. Jahrg., No. 37.]

1. Smegma-Bacilli in Human Expectoration. A. PAPPENHEIM.
2. The Significance of Certain Substances from Cell-Nuclei (Nucleoproteids), with Regard to the Oxidative Activity of the Cells. W. SPITZER.
3. Tendon-Transplantation in Cases of Paralysis and Resulting Deformities, Involving the Foot, and Especially the Hand. O. VULPIUS.
4. A Case of Rhinoscleroma. SCHOETZ.
5. The Serum-Therapy Question. KASSOWITZ.

1.—Pappenheim reports the case of a woman, 35 years of age, who presented marked emaciation, without any definite abnormal signs in the thoracic or abdominal viscera. She was put upon treatment for tapeworm, and several specimens of *Bothriocephalus latus* were secured, but she did not improve and constantly lost strength. She subsequently developed cough, and in the sputum were found bacilli that were supposed to be tubercle-bacilli. Death finally occurred from edema of the lungs. At the autopsy there was absolutely no tuberculosis anywhere, and yet in spite of this, bacilli were found in large masses. Cultures of these could not be obtained; nor could bacilli be found in sections that gave the characteristic stain for tubercle-bacilli. As the bacilli discovered were rapidly decolorized by alcohol, it was decided that they were smegma-bacilli or bacilli closely related to these. It is maintained that such a case is of great importance, as similar conditions might result in grave mistakes in diagnosis in cases of suspected tuberculosis. The methods of distinguishing the smegma-bacillus from the tubercle-bacillus by staining are discussed, and finally it is decided that rosolic acid is the best decolorizing agent. Experiments with this show that if the specimen be first stained with carbolfuchsin, then counter-stained in a solution containing 100 parts of absolute alcohol and 1 part of corallin (rosolic acid) and methylene-blue to saturation, adding finally 20 parts of glycerin, the decolorization being accomplished by applying the cover-glass to this solution and then slowly allowing the solution to run off, and repeating this from three to five times, it will be found that tubercle-bacilli are always beautifully stained red, while smegma-bacilli and

other bacteria, as well as the ground-substance, are always blue. This procedure occupies but three minutes, and is, therefore, rather shorter and more satisfactory than the other methods in use.

2.—There are three ways of studying the oxidation-processes as they occur in the living body: (1) The introduction into animal bodies of well-known chemic substances, and investigation of the resulting oxidation-products in the urine; (2) oxidation of the substance in question outside of the body and study of the progress of the chemic changes. The oxidations obtained in this way are absolutely comparable to those occurring in the human body. A mean between these two methods is held by a third, which consists in observing certain oxidation-processes in living or in a so-called **surviving tissues** outside of the organism. This method is based upon the fact that tissues removed from the living body retain for a certain length of time their power of oxidizing certain relatively easily combustible substances. Such organs are capable, in combination with blood perfused through them or even in the form of emulsion, when shaken with the oxygen of the air, to exert an oxidizing action under conditions that are completely identical with those present in the living body. Numerous examples of this oxidizing power of surviving tissues exist, and are peculiar in that the tissues during the oxidation do not sustain any demonstrable alteration, the necessary oxygen being taken from the air or from the blood. The tissues lose their activity permanently on boiling or on prolonged treatment with alcohol, or when subjected to the action of protoplasmic poisons and acids and alkalies. The mode of action of the tissues is comparable with the catalytic phenomena of inorganic chemistry, as for example the oxidation of hydrogen to water when conducted over spongy platinum, etc. To study the influence of the various tissues, Spitzer used  $H_2O_2$ , which, by the action of the former, is oxidized into  $H_2O$  and  $O$ . He found that, in oxidizing activity blood, liver, and spleen stood highest, muscles, brain and ovaries, lowest. The oxidation-power was found connected with some constituents of the cells, which were obtainable from the water or feebly alkaline extracts of living organs; by precipitation; by acids and resolution in weak alkalies; and by repeated precipitation and solution they were secured in the pure state. They were acid combinations of nuclei and albumin, and belonged to the cell-nucleus. They were capable of oxidizing  $H_2O$ , of changing salicylic aldehyd to salicylic acid, arsenous to arsenic acid, and of producing various color-theses. The nucleoproteids of the various organs hold the same relation to each other as the watery extracts from the organs themselves. High temperature acids and alkalies injure the oxidizing power of the nucleoproteids exactly in the same way as they injure that of the organs. The substances contain considerable phosphorus and, what is most interesting, iron. The latter is in such firm organic combination that it is only demonstrable in the ash. As it is thus shown that the oxidation-function of the tissues is dependent on specific cell-constituents, it is not proper to speak of an oxidizing ferment. The decomposition products of the nucleoproteids did not possess the oxidizing power to any great degree. The specific oxidation-power of the products of the nucleus is explained by assuming that these products, by reason of certain definite atomic groups, have the property of rendering active, or energizing, molecular oxygen, and it is probable that the iron-containing atom-complex plays here a prominent role. It is believed that what has been demonstrated for the tissues outside of the body is probably true for the same tissues within the living organism, and that the nucleus is of great importance not alone for development, but also for metabolism.

3.—**Tendon-transplantation** should be undertaken only in cases of partial paralysis, that is where but one muscle or one group of muscles is involved. When there is no evidence of spontaneous restoration of function, the operation should be performed without delay. Upon the lower extremities this procedure has been frequently put to the test, and with the most happy results. Its field of usefulness is more marked, however, in the upper extremity, as here no apparatus can be worn with satisfaction, so that the restoration of function to the afflicted member is of the utmost importance to the individual. The technic is simple, as a rule, once the place of operation is settled upon, which in the case of the upper extremity is oftentimes a difficult problem. Vulpius reports three cases of tendon-transplantation in the



hand and arm; the results obtained, though not brilliant, being at least encouraging.

5.—Kassowitz attacks the value of **diphtheria-serum**. It would seem that theoretic arguments, based upon comparatively small experience with the use of serum, are unworthy of consideration.

### Münchener medicinische Wochenschrift.

September 20, 1898. [45. Jahrg., No. 38.]

1. A Contribution to the Etiology of Poliomyelitis. FR. SCHULTZE.
2. In What Way, and in What Cases of Cholelithiasis Does the Carlsbad Cure Act, and Why do the Views of the Surgeons and the Carlsbad Physician Diverge with Respect to the Prognosis and the Therapy of the Disease? HANS KEHR.
3. Is the So-called Bell's Phenomenon a Pathognomonic Symptom of Paralysis of the Facial Nerve? GEORG KÖSTER.
4. The Etiology and Surgical Treatment (especially the radical operation) of Varicose Veins of the Lower Extremities. CARLOS KRAEMER.
5. Concerning Bromoform-poisoning. MÜLLER.
6. Congenital Laryngeal Stridor. C. STAMM.

1.—Schultze reports a case of **acute poliomyelitis** in a boy, 5 years of age, with paralysis of both arms, diminution of the patellar and Achilles-tendon reflexes on the right, and total absence on the left side. The neck-muscles, instead of being rigid, were paralyzed, so that the head fell backward when the body was raised. Lumbar puncture yielded a considerable quantity of fluid, which issued under high pressure, and in which the diplococcus of Weichselbaum-Jaeger was found. The child improved considerably, but on leaving the hospital it still presented atrophic paralysis in the upper arms. It was evident that the patient had suffered, in addition to poliomyelitis, from meningitis, although the typical symptoms—headache, rigidity of the muscles, and hyperalgesia—were absent; but it is well known that there are cases presenting meningitic symptoms without meningitis, as well as cases of meningitis without meningitic symptoms. If the meningococcus is at times the cause of poliomyelitis, as it seems to have been in this case, it is a fact that may explain the occasional similarity of the clinical picture of cerebro-spinal meningitis and poliomyelitis, namely, the rapid recession of symptoms, the fact that the disease attacks especially children and young adults, and the epidemic occurrence of both affections. Both the latter features are, to be sure, more marked in the case of cerebro-spinal meningitis. The infection-atrism in the case reported could not be determined, but the ears had not been carefully examined. In view of the frequency of the inflammation of the middle ear it is likely that many cases of meningitis have their origin in this condition.

2.—Though living in a town of but 40,000 inhabitants, Kehr has had a remarkable experience with **cholelithiasis**, having performed no less than 364 celiotomies for various forms of this affection. Recently he himself suffered from jaundice due to gallstones and went to Carlsbad for treatment, preferring, as he naively adds, as his attack was a mild one, to operate upon a great many others before submitting himself to operation. In the present paper he discusses the value of Carlsbad in cases of gallstone-diseases, which he admits as undeniable, although just how it acts is not perfectly clear. The restriction in diet, the careful regimen, the exercise, together with the thermal waters, are most beneficial in mild cases. Pains disappear, although gallstones are rarely passed; the disease merely subsides for the time being. In cases with large stones, the Carlsbad waters are of but little avail and operative interference is necessary. Kehr then states in what cases, in his opinion, medical treatment and in what cases surgical treatment is indicated. Internal treatment, especially the Carlsbad cure, is recommended: (1) For acute obstruction of the common duct. If the condition is protracted, if there is fever and acceleration of the pulse, and evidence of cholangitis, operation should be considered. (2) In cases of inflammatory processes involving the gall-bladder, with or without icterus, when they are rare and not too violent. (3) Cases of frequent colic, with the passage of stones at each attack. (4)

In patients suffering from obesity, gout, diabetes, or in whom, on account of affections of the heart, lung, kidney, or liver, narcosis is dangerous. (5) In persons who have been operated upon.

If the stones are in the common duct chologogue remedies (olive-oil, glycerin, sodium salicylate, bile-acids) may be used. If they are, however, yet in the gall-bladder, the endeavor should be to subdue the inflammation, and not to stir up the stones and expel them with a chologogue. Operation is indicated (1) in acute seropurulent cholecystitis and pericholecystitis; (2) when adhesions, the result of such inflammation, have taken place and cause symptoms; (3) for chronic occlusion of the common duct; (4) for chronic occlusion of the cystic duct; (5) in all cases of cholecystitis that begin mildly and despite treatment become progressively more severe; (6) in cases of purulent cholangitis and hepatic abscess; (7) in cases of perforation of the biliary passages and peritonitis; (8) in cases of morphinism resulting from gallstones. Even in cases in which an accurate diagnosis cannot be made, frequent attacks of pain indicate an exploratory incision.

3.—**Bell's Phenomenon** consists in the turning of the eye slightly upward and outward when the lids are closed. By some it has been considered a pathognomonic sign of paralysis of the facial nerve, as it can be readily observed in that disease on account of the non-closure of the eye. Köster, however, points out that it is a perfectly physiologic phenomenon and in no way pathognomonic or facial palsy. In all cases in which the lids are closed the eye turns upward and inward and then slightly outward.

4.—The article is to be concluded.

5.—Müller reports the case of a boy, 2 years of age, who drank about 6 grams of **bromoform**. In a few minutes a state resembling intoxication developed and the child fell into a deep sleep, which at intervals was broken by convulsive attacks. Death finally took place from asphyxia. The autopsy showed that nearly all of the blood was fluid; the kidneys were large and brownish-bluish red. The blood and the various organs smelled strongly of bromoform. In all from 10 to 12 cases of poisoning by the drug are reported. As to its value in whooping-cough opinions differ. In the Munich Poliklinik the results have been favorable.

6.—In 1892 John Thomson described five cases of a disease that he designated **congenital laryngeal stridor, or infantile respiratory spasms**. The condition resembles somewhat laryngismus stridulus, and Stamm, on the basis of a case observed by him in a child 5 weeks of age, points out in what respects the two diseases differ. In the first place, congenital stridor begins at birth, while laryngismus rarely sets in before the period of dentition. In the majority of cases of laryngismus, rickets exist, while this appears not to be the fact with congenital stridor. Laryngismus occurs in more or less violent attacks, with cyanosis, and eventually general convulsions. Congenital stridor accompanies inspiration for weeks and months without cyanosis and without inducing, in the majority of cases, any convulsions. Complete arrest of the respiration, such as is observed in laryngismus, does not occur in congenital stridor. The attacks of the former disease are often provoked or made worse by crying, while those of the latter are improved or entirely suspended. Laryngismus scarcely ever occurs during sleep, although it may set in as the child is awakening. In congenital stridor, the stridulous sound accompanies respiration even during sleep. As to the etiology, it is believed that the disease is a central functional disturbance, probably an arrest of development of certain coordinating centers of respiration, perhaps in the region of the calamus scriptorius. The prognosis is, in general, favorable. If convulsions occur, life may be threatened. Treatment is tonic, while phosphorus and codliver-oil are also useful. Avellis believes the condition due to hypertrophy of the thymus gland, a view not shared by Stamm.

### Centralblatt für Gynäkologie.

September 17, 1898. [22. Jahrg., No. 33.]

1. Two Cases of Advanced Extrauterine Pregnancy. MAXIMILIAN WARSZAWSKI.

1.—Warszawski states that in 4½ years there have appeared in his small clinic 35 cases of **extrauterine preg-**



nancy, and he dwells upon the great frequency of the condition. He reports two cases, one of which occurred in a woman, 33 years of age, married for 13 years and sterile, who menstruated first in her seventh year, and always suffered from dysmenorrhea. She also developed a cervical catarrh, for the relief of which the uterus was dilated and curetted. After a time, menstruation became scanty, and signs of pregnancy developed. Fetal movements were felt for nearly three months. Toward the close of the period colostrum appeared in the breasts, and at its termination labor-pains were felt, but nothing came away. Several weeks later bleeding occurred and lasted two days, and from this time the patient seemed to menstruate regularly. No decidual tissue appeared. After the lapse of five months more, pain in the abdomen returned. Examination disclosed an oval distention of the abdomen, which extended 11 centimeters above the umbilicus. The distance from the umbilicus to the ensiform cartilage was 22 cm., to the symphysis 18 cm. The navel projected from the abdominal surface. There were numerous striae on the abdominal wall; the breasts were enlarged; Montgomery's glands were visible as dark pigmented nails. Neither heart-sounds nor placental bruit could be heard. The vaginal mucosa was soft and wine-colored. In the left vaginal fornix and Douglas' culdesac a soft, elastic tumor was felt, filling the greater part of the pelvic cavity. The size of the tumor exceeded that of the pregnant uterus of eight months. A diagnosis was made of extrauterine pregnancy with over 5 months' retention of the fetus, which had almost reached term. On operation the product of an extrauterine pregnancy was removed; the fetus weighed 2,800 grams and was 55.5 cm. long. The placenta separated without the loss of a drop of blood; it was very hard, but not thicker than 1.5 cm., and it was attached to the anterior wall of the gestation-sac. The tumor sprang from the left tube. The right uterine appendage was normal. The tube had not ruptured. The fetus was but slightly malformed and was covered with vernix caseosa; the epidermis was macerated. The umbilical cord was short and inserted in the margin of the placenta. The patient recovered. The second case occurred in a woman, 30 years of age, who had been married seven years. Six years previously she had had a normal labor and 3 years later had suffered a traumatic abortion at 2 months, due to a kick from her husband. From this time menstruation had been profuse, lasting 5 or 6 days and occurring at intervals of two weeks. The woman stated that she was 10½ months pregnant. Two months later menstruation stopped; and after another month collapse suddenly set in. Fetal movements were felt subsequently for nearly four months, when they ceased and a bloody discharge appeared, with pain in the abdomen like labor-pains. A uterine sound was passed and the cavity was found to measure 9 cm. The patient was anemic and emaciated. The distance from the umbilicus to the sternum measured 18 cm., to the symphysis 19 cm. Colostrum was present in the breasts. The vagina was pigmented. Neither fetal heart-sounds nor placental bruit was audible. The tumor, which was the size of an 8 or 9 months' pregnancy, sprang from the left appendage. A diagnosis was made of 2 months' retention of a 9 months' dead fetus either in the rudimentary horn of a uterus bicornis or in the left tube or perhaps the left intraligamentous space. Operation proved the latter to be correct. The fetus weighed 4½ pounds and was 41 cm. long. The placenta, which was very hard, was attached to the lower and left wall of the sac. Separation of the placenta was not followed by hemorrhage. The patient made a good recovery.

#### Centralblatt für innere Medicin.

September 3, 1898. [19. Jahrg., No. 35.]

- Contributions to the Knowledge of Diabetes Mellitus. The Hypophysis Cerebri and Diabetes Mellitus. M. LOEB.

1.—Loeb calls attention to the fact that before akromegaly was discovered, he had noted the existence of some relation between **tumors of the pituitary body and glycosuria and elevation of temperature**. This was apparently due, not to any peculiar function of the gland itself, but rather to the effect of pressure upon neighboring structures. The occurrence of glycosuria in association with

akromegaly is exceedingly common, and it is well known that in this disease tumor of the hypophysis is almost invariably found. That such tumors produce glycosuria as a result of pressure has not attracted attention, because most observers still believe that the diabetic center is in the medulla oblongata. Cases are not lacking, however, in which tumors that exhibit from time to time variations in size have produced intermittent glycosuria, particularly an angiosarcoma reported by Strümpell. That tumors of the hypophysis do press on the adjacent structures is of course obvious from the effect upon the surrounding bones and the optic nerves, and although it is impossible at present to say just what portion of these structures contains the diabetic center, it seems reasonable to suppose that it includes the neighboring centers.

September 10, 1898. [19. Jahrg., No. 36.]

- The Visibility of the Lower Margin of the Liver, the Liver Shadow. KARL PICHLER.

1.—With a good light, and the patient in a proper attitude, it is possible to see, during deep abdominal respiration, the lower margin of the liver, even when the organ is not enlarged. The notch may also be readily discerned.

September 17, 1898. [19. Jahrg., No. 37.]

- The Treatment of Typhoid Fever with the Blood-Serum of Convalescents. E. WALGER.

1.—Inspired by Weisbecker's publications, Walger treated four cases of **typhoid fever** with **serum** obtained from **convalescents**. The first patient, a woman, 41 years of age, was extremely emaciated and weak. On the eighth day of the disease, 10 cu. cm. of serum were injected. Within ten minutes the severe headache had disappeared. On the following day, the temperature reached 38.3° C., but the subjective symptoms were greatly improved. The spleen continued to enlarge and a profuse roseolous eruption appeared upon the abdomen. The temperature, however, remained low. On the fifteenth day the patient was practically well, although the temperature rose to 38.1° C. three days later. The patient left her bed on the twenty-first day of the disease. The second patient, a feeble woman, 58 years of age, was given an injection of 10 cu. cm. on the eighth day of the disease. A day later, the temperature fell to 37.5° C. and on the next day it was subnormal. On the thirteenth day of the disease, the patient seemed to be well, and was allowed to leave her bed on the fifteenth day. The third patient, a vigorous girl, 21 years old, apparently had a mild attack of typhoid fever, but in the third week of the disease the temperature became higher, and the general condition very much worse. Therefore, on the twenty-fifth day of the disease 10 cu. cm. of serum were injected. No immediate effects were noticed, but in the following week, after a period during which the temperature reached 40.6°, and there occurred a violent attack of vomiting, there was suddenly a profuse sweat, and the patient appeared to be very much better. Three weeks after the injection, the patient appeared to have recovered, and remained without fever for five days, when a typical relapse set in. The attack was mild and no serum was employed. The fourth patient, a poorly nourished woman, 34 years old, was given an injection on the seventh day of the disease, and it was followed by a slight rise of temperature, and then a steady decline by lysis, 37° C. being reached on the thirteenth day. This patient had poor nursing and insufficient and improper nourishment. Her general condition remained good, and the temperature ultimately became normal. Subsequently a typical relapse occurred and a second injection of serum was made. The temperature remained high for the following two days, and then fell by lysis. Recovery was prompt and complete. None of the cases would ordinarily have been looked upon as hopeful. In all, the injection of the serum was followed by a pronounced change in the general condition, and by an unusually early disappearance of the fever. There seems also to have been a beneficial action upon the local process, although Walger hesitates to draw positive conclusions. The fact that relapses occurred in two cases convinces him that both would have been exceedingly severe if they had not been treated with the serum. The Widal reaction was not tried. All the patients exhibited sooner or later the characteristic diazo-reaction.



September 24, 1898. [No. 38.]

## 1. Glycosuria in Association with Biliary Colic. ZINN.

1.—Zinn reports the results of a study of 89 cases of **biliary colic**, with the object of determining the frequency of **glycosuria** as an **associated condition**. Sugar was found in but two cases, and then only in small quantities and at times. (It is noted that in some instances the sugar was found directly after attacks of colic, but it is not possible to say, from the clinical notes given, whether it was found only then.)

## Revue de Médecine.

September 10, 1898. [Vol. xviii, No. 9.]

## 1. A Contribution to the Study of Dysenteric Arthritis. PAUL REMLINGER.

## 2. A Contribution to the Study of Functional Disturbances of the Vascular System. L. THÉRÈSE.

## 3. The Value of Urea in the Treatment of Ascites in the Course of Atrophic Cirrhosis. J. SABRAZÈS and O. DION.

## 4. Some Remarks on a Recent Hypothesis Regarding the Pathogenesis and Treatment of Hysterical Paralysis. L. GUINARD.

1.—Remlinger reports two cases of **dysentery** that were followed by **swelling of various joints**. The first patient had almost recovered from the intestinal condition when, on the fifteenth day from the commencement of the attack, he was suddenly seized with dull pain in the right knee. On the next day the joint was swollen enormously and movement was seriously impeded, although the subjective symptoms were slight. The internal organs appeared to be perfectly normal and the temperature was not elevated. The knee continued to swell and was the seat of a feeling of painful distention. Two days later an exploratory puncture was made and 20 cu. cm. of a white glairy liquid were withdrawn. On the fourth day of the attack swelling was noticed in the left tibiotarsal joint. The right knee continued to swell, and, finally, twenty-three days after the first symptoms, 65 cu. cm. of a thick viscid liquid were evacuated by puncture. Improvement followed, and seven weeks later the patient left the hospital, absolutely well in every respect and capable of performing his duties as a soldier. Examination of the liquid showed the presence of leukocytes and more or less degenerated endothelial cells. Neither bacteria nor amebæ were found by any method, and inoculations into animals were unattended with result. The fluid contained about 0.3% of spontaneously coagulating fibrin, had a specific gravity of 1017, and contained 5.75% of albumin. The principal salt present was sodium chloride. The second patient suffered from typical acute dysentery. On the ninth day of the disease he was seized with pain in the right wrist, followed by pain in the right shoulder, then in the left tibiotarsal joint, the affected parts being swollen and very painful. The joints gradually improved, although others became slightly involved, until the thirty-fifth day of the disease, when both knees became painful and rapidly increased in size. Ten days later, as there seemed to be no tendency to absorption of the liquid, the fluid in both knee-joints was evacuated. The patient improved rapidly, and in the course of three weeks was able to leave the hospital, completely restored to health. Chemic and bactericidal examination of the liquid yielded the same results as in the other case. Remlinger considers these cases as instances of **pseudo-rheumatism complicating benign dysentery**. As the fluid was absolutely sterile, the articular disturbances are probably due to the absorption of some toxin that acts upon the synovial membranes. The characteristics of the disease are the persistence of the effusion and its fibrinous character. With one exception these are the first cases treated, as far as is known, by evacuation of the fluid.

2.—Thérèse discusses **inflammation of the blood-vessels**, which is always due to either a poison or an infection, and is necessarily attended with disturbance of the whole organism. Vessels of caliber sufficiently large to have vasa vasorum in their walls react somewhat differently from those of smaller caliber, for the obliteration of the minute vascular vessels may occur without the formation of thrombi. This occurs through the proliferation of the connective tissue and subsequent contraction. In cases of infection a cellular exudate often occurs in the perivascular lymphatic

spaces, in consequence of the absorption of the toxic products by the lymph-channels, and it is probably the primary cause of the vascular lesions. Recent investigations indicate also the occurrence of changes in the veins. The nervous system also may have some influence by causing alternate constriction and dilatation of the small vessels, thus giving rise to a condition favorable to escape of the leukocytes.

3.—Sabrazès and Dion report several cases of **ascites** in which **urea** was employed as a **diuretic**. The first was in a man, 60 years old, who had suffered from alcoholism, malaria, and saturnism. Two years before admission to the hospital he commenced to suffer from malaise and from pain in the hypochondriac regions. He began to emaciate, and at the same time he noticed distention of the abdomen. Physical examination disclosed the presence of fluid in the abdomen, slight increase in the size of the spleen, and apparent decrease in the size of the liver. The man was placed upon a rigid diet, and the urine was carefully analyzed. The amount of urea was somewhat diminished, but otherwise there was no abnormality. For one month this diet was continued, when 5 g. of urea were administered daily, the dose being gradually increased until 20 gr. were given. The amount of urine excreted increased rapidly to 3 liters a day. The urea was then discontinued, and there was a considerable decrease in the quantity of urine. The drug was given again, with marked increase in the amount of urine and rapid improvement in the ascites. The second patient, a man 71 years old, had been perfectly healthy, but had been an habitual consumer of alcohol. Nine months before coming under observation he had had a severe "cold" and commenced to emaciate. From this time his abdomen began to swell and it was found enormously distended, 13 liters of fluid being withdrawn. He was placed upon a rigid diet and two days later it was necessary to puncture the abdomen again, 12 liters of fluid being now withdrawn. Urea was administered and caused an immediate increase in the amount of urine, from 600 to 3000 cu. cm. per day. Then, in spite of the continuance of the medication, the urine decreased to about 800 cu. cm. Nevertheless, there was considerable improvement in the man's condition. The third patient, a man 51 years old, had been an habitual drunkard. Some time before coming under observation heart-disease had been diagnosed, and later there was distention of the abdomen. The man was placed upon a restricted diet, but it was impossible to obtain physiologic equilibrium. A considerable quantity of ascitic fluid was withdrawn, containing a large proportion of urea. Urea was then administered by the mouth, but, although it caused a slight increase in the daily quantity of urine and a considerable increase in the daily excretion of urea, it did not act as a satisfactory diuretic, even when given hypodermically, the only indication of its efficiency being a decrease in the daily amount of urine when it was discontinued. The fourth patient, a man 47 years old, suffering from some kidney disease, was given urea in addition to a restricted diet. Immediately the quantity of urine increased markedly. The increase, however, was not permanent, considerable oscillation taking place in the curve. Of the four cases reported, pronounced therapeutic effects were produced by urea only in the first. In the second there was slight improvement. The last two cases were not benefited in the least. It is concluded, therefore, that urea is only effective in benign forms of atrophic cirrhosis; that when the oliguria is persistent and does not yield to ordinary diuretics, urea will be of no value; and that any sign of imperfect elimination on the part of the kidneys indicates that urea will be of no service. The action of urea is to increase the tension of the blood, and, therefore, renal activity.

4.—Guinard discusses the various theories that have been suggested to explain the manifestations of **hysteria**, particularly comparing those of Gerest and Branley, who believe that hysterical paralysis is due to a physico-mechanical disturbance consisting in an interruption of the transmission of nervous currents. This interruption is, according to Gerest, who bases his work upon that of Lépine, due to disturbance in the continuity of the protoplasmic processes of the ganglion-cells; while, according to Branley, it is due to an increase in the resistance between two unaltered immovable conductors. Guinard believes that the present state of knowledge renders the hypothesis of Gerest the more probable, although satisfactory demonstration of movements in the ganglion-cells has never been made.



## Original Articles.

### MODERN VIEWS ON CERTAIN SYMPTOMS AND CAUSES OF RENAL DISEASE.

The Carpenter Lecture of the New York Academy of Medicine. Delivered October 20, 1898.

BY C. A. HERTER, M.D.,

Visiting Physician to the City Hospital.

MORE than seventy years have passed since Richard Bright sought to demonstrate to an incredulous profession that an intimate relation exists between dropsy and the presence of albumin in the urine on the one hand, and certain pathologic alterations in the kidney on the other. During this period, investigators all over the world have convinced themselves of the accuracy of Bright's teachings with regard to this relation. For many years those who followed in the path of the distinguished physician did little more than to amplify his descriptions of renal disease. But it would have been singular, indeed, had renal pathology received no illumination from the newly directed and intense activities of the past twenty years in the domain of scientific medicine. The study of bacteriology and of pathologic chemistry, the growth of experimental pathology, and the greater accuracy of clinicians in recording their observations, have all contributed to increase materially the sum of our knowledge of the symptoms and causes of renal disease.

It is my purpose this evening to touch on some of the more modern and important problems of renal pathology—a domain which affords such an abundance of material for the modern commentator that there is some danger of an *embarrass de richesse*.

The presence of albumin in the urine was, for many years, looked upon as pointing almost unmistakably to the presence of Bright's disease of the kidneys, and it cannot be doubted that the generation of physicians who lived in the middle of this century was in general inclined to attach too serious a prognosis to the mere presence of this symptom. In the past ten years there has been a wave of reaction, which, like most reactionary movements, has overstepped the bounds of moderation. To-day we find a voluminous literature, indicating that the presence of albumin in small amount occurs not only in a variety of trivial affections, in which there is no reason to think that the kidney is the seat of lesions, but also in a considerable proportion of apparently healthy people. Indeed, there is a small but influential school of clinicians, of which Senator is the central figure, which contends that the urine in health is always a weakly albuminous fluid.

Can we safely accept these views, which lead inevitably to the important practical conclusion that slight grades of albuminuria may have no pathologic meaning—are in fact "physiologic"? I think there are serious obstacles to adopting them. In many instances the methods used by the supporters of the doctrine of physiologic albuminuria have not been beyond criticism. It is claimed that some of these methods enable us to recognize albumin when vulgar tests, like that by heat or by cold nitric acid, fail to detect it. This is probably true of Millard's test and some others. The difficulty with these refined tests is that some of them react with substances which certainly are not ordinary albumin, *i. e.*, the serum-albumin and serum-globulin of the blood. Thus both mucin and nuclealbumin, a phosphorus-containing body derived from the nuclei of cells, such as the epithelial cells of the urinary tract, are readily confounded with true albumin.

It is not possible to enter here upon a discussion of the reactions of nuclealbumin. What I wish to emphasize is that when we employ certain delicate tests for albumin we run the serious danger of calling substances albumin that have an entirely different origin and significance. Even the cold nitric and potassium ferrocyanide tests are not entirely free from this objection, but used in conjunction with the heat-test they seem to me the most practicable means for the recognition of albumin. I believe that when we are unable to find albumin in the urine by the use of the heat-test, the cold nitric acid test, and the potassium ferrocyanide-test, but do find it by means of other reagents, we can safely

assure our patient that he has no albuminuria. Probably it is not strictly true to say that such a urine never contains albumin, but I am convinced that albuminurias that cannot be recognized by the three tests mentioned are only important as material for erroneous practical conclusions and have no interest for the practitioner.

It is probable that most of the "physiologic" albuminurias have been of this apocryphal character. Leaving aside these cases, there is an important group of patients in whom small quantities of true albumin appear in the urine regularly, or frequently, but whose health continues unimpaired. Some of these patients give a history of scarlet fever or of some other severe infectious disease, which many years before was complicated by nephritis, and we frequently can only regard these slight albuminurias as expressions of residual nephritic states, even where the specific gravity of the urine remains normal and we are unable to find casts. In other instances there is no history of nephritis. How are we to look on these albuminurias? Are they due to trivial nutritional alterations in the glomerular capillaries which do not entail histologic changes, or to the finer histologic alterations of actual nephritis?

We are not yet in a position to decide this question. It is clear that a kidney which permits the escape of albumin is different from the majority of normal kidneys. It is possible that it will one day be shown that there are "functional" albuminurias, but I strongly incline to the view that slight glomerular or epithelial lesions are present in all instances of true albuminuria. Practically, however, it is no very important matter whether we have to do with nutritional alterations or with slight structural changes. The important fact is that such patients as we are considering usually live many years without showing indications of serious renal disease. But it is certainly a mistake to say that the kidneys of these persons are normal. I think that the view of the older generation of physicians, that albuminous urine from the kidney points to nephritis, is nearer the truth than that albuminuria is often physiologic. The mistake of the older school is in the failure to recognize that patients frequently live in good health for ten or twenty years with slight nephritis.

The recurrence of albuminuria at particular times of the day, that is, its cyclical character, is sometimes regarded as a sign that the affection is functional. This is an erroneous inference. I have records of numerous cases of unquestionable nephritis in which the albuminuria was cyclical.

Several important practical facts relating to albuminuria have forced themselves on the minds of physicians within recent years. One is that there is no satisfactory evidence that the degree of albuminuria is controllable by medication. Another is that the nitrogenous or non-nitrogenous character of the food appears to exert little or no influence on the quantity of albumin. This is not equivalent to saying that the character of the food as regards its content of nitrogen, is of no importance in the treatment of Bright's disease; the statement refers merely to the direct influence of food upon the quantity of albumin that escapes from the kidney. Many patients have been harmed by having their proteid food cut down in the hope of influencing albuminuria. When the loss of albumin is large, amounting to eight or ten grains daily, an unusually rich nitrogenous diet is required to protect the organism from the loss of its nitrogen. Another fact of practical import is that in cases of slight albuminuria the posture of the body very frequently exerts a distinct influence upon the amount of albumin in the urine. Numerous observations have convinced me that the erect posture often favors the escape of albumin, while the horizontal posture hinders it. The bearing of this fact upon the treatment of chronic nephritis is obvious. One other point concerning the temporary absence of albuminuria in chronic nephritis deserves mention. Not only do we meet patients with nephritis whose urine is free from albumin at certain times in the day; there are instances in which the urine fails during several days to give a definite response to the test for albumin. Although this has come to be well known to physicians in recent years, its relation to the diagnosis of renal disease is so important that it seems worthy of special emphasis.

Modern investigations have shed light on another symptom of renal disease, which, if not so regular an accompani-

I some writers refer a portion of these albuminurias to an altered blood state. I believe there is no satisfactory evidence that a pathologic blood state ever causes albuminuria without first affecting the structure of the kidney.



ment of nephritis as albuminuria, is still an object of much interest both to practitioners and pathologists. This symptom is dropsy, the dropsy that distinguishes renal disease in the absence of cardiac lesions competent to account for the symptom. It was the view of Bright that renal dropsy is due to the hydremia which follows the protracted loss of albumin in nephritis. Grainger Stewart and Bartels saw that this cannot be regarded as a satisfactory explanation of most cases of renal dropsy, because dropsy often occurs in acute disease of the kidney before there has been much loss of albumin, and, on the other hand, fails to develop in some patients who have long been the subjects of pronounced losses of albumin. Bartels, watching his cases closely during considerable periods of time, came to the conclusion that there is a rough correspondence between the ability of a nephritic patient to excrete water and his freedom from dropsy. Failure to excrete enough water was followed by dropsy. Reestablishment of the flow of urine was apt to be followed by disappearance or diminution of the edema. The accumulation of water in the organism, producing the so-called "hydremic plethora," was thus thought to be an essential factor in the causation of dropsy, and this view is still held by many physicians. The impartial student of renal disease is forced to admit that there are important clinical facts which cannot be reconciled with the doctrine of the hydremic origin of dropsy. Thus it is necessary to account for the entire absence of dropsy in some cases of acute nephritis with suppression lasting for several days. Perhaps the most convincing proof that the "hydremic plethora" doctrine is inadequate, is to be found in those cases of prolonged anuria from impaction of calculi in the ureter. Patients observed since the days of Bartels have gone more than a week without passing urine and without becoming dropsical. Yet we cannot imagine a condition more favorable to the production of hydremic plethora. Then, again, one sometimes meets with renal dropsy in which there is no evidence that the blood is hydremic. I have in several instances found the specific gravity of the blood-serum to be normal in persons with nephritic edema.

Is there any hypothesis which by explaining the clinical facts relating to renal dropsy, is fitted to displace those just mentioned? I believe that the view which attributes renal dropsy to alterations in the walls of the smallest bloodvessels is the one which we shall ultimately accept. Cohnheim was the first to advance this hypothesis, basing the idea mainly on theoretic grounds. Recent studies in the pathologic histology of the kidney give important support to the contention that renal dropsy is closely connected with vascular lesions. The facts which stand out most significantly are, first, that a very large proportion of cases of acute and subacute renal dropsy are associated with well-defined glomerular lesions in the kidney; and, secondly, that very many though by no means all cases of acute and subacute glomerular nephritis are associated with dropsy. By glomerular nephritis is meant a condition of the kidney in which certain lesions of the vascular tufts are prominent or preponderating. These lesions are chiefly of two kinds, which may exist separately, but are often combined. One variety (intracapillary glomerulitis—Welch) is distinguished chiefly by proliferation of the endothelial cells of the vascular tufts. This is the more common form. The other variety is characterized mainly by proliferation of the capsular epithelium and accumulation of cells in the capsular spaces (desquamative glomerulitis).

These glomerular alterations are probably dependent on the action of toxic substances or pathogenic organisms which reach the kidney by the blood-stream. That this is the case may safely be inferred from the conditions under which acute and subacute glomerulonephritis are generally encountered. It is in pathologic states such as scarlet fever, malignant endocarditis, erysipelas, acute articular rheumatism, and severe malaria that glomerulonephritis is most often encountered, that is, states unquestionably of infectious origin. Thus in the occurrence of glomerular lesions we have an indication of a pathologic blood-state capable of damaging vascular structures. It would be singular if this damage were limited to the vascular apparatus of the kidney. We do not possess anatomic proof that there is damage to the vessels of the skin in cases in which there is renal dropsy and glomerulitis, but structural alterations must be considered very probable. According to this hypothesis certain poisons in the blood are capable of producing both glomerular

lesions and changes in the vessels of the skin which permit the transudation of serous fluid. That the alterations in question are capable of leading to the transudation of serous fluid is shown in the case of the renal tufts by the presence of albumin in the urine. This albumin, which is usually abundant, can be shown by appropriate methods of studying the kidney to come at least in part from the glomeruli. How are we to account for the circumstance that some cases of glomerulonephritis are not accompanied with edema? We must recall in this connection that the tufts of the kidney possess physiologic peculiarities which render their vascular loops especially vulnerable. The high pressure under which the blood passes into these loops and the slow progress of the blood through them serve to bring the blood into intimate contact with the capillaries. This affords a favorable opportunity for the injurious action of toxic substances in the blood. The same toxic agents, acting upon vessels like those of the skin, might require a larger period of time to injure them sufficiently to permit transudation, or might fail altogether to lead to transudation unless present in greater concentration.

While the vascular hypothesis of dropsy is by far the most satisfactory one for the edemas of acute and subacute nephritis, it does not seem so generally applicable in its simple form to the dropsies of chronic nephritis. In such cases there are often other elements to be considered. Thus an increase in the water of the blood, such as occurs in many patients with chronic nephritis and which by itself would not cause transudation, may perhaps suffice to bring on a leakage of serous fluid from vessels already damaged, but not enough altered to permit an abnormal escape of serous fluid from blood of normal specific gravity.

In chronic nephritis, again, the altered nutrition, not merely of the vessel-walls but also of the connective tissues about the vessels, may perhaps favor the production of edema. Another element which certainly plays a part in bringing on the dropsy in many instances of nephritis is the high venous pressure and low arterial pressure which is present when there is considerable cardiac weakness. It is often impossible to estimate the influence of cardiac weakness, especially when the deranged circulation is myocardial and not valvular in origin.

I have collected the autopsy-records of a large number of patients who died with renal lesions, and have analyzed them with a view to seeing in what kind of kidneys the so-called renal edema is most frequent. Roughly classifying the kidneys according to size, it was found that dropsy was almost twice as frequent among the patients with kidneys of large size (weighing above 6 oz.) than among the patients with contracted kidneys (weighing less than 4 oz. each). The number of cases of renal dropsy was also much greater in patients with large kidneys than in those with medium-sized kidneys (weighing between 4 and 6 oz. each). This greater frequency of renal edema among patients with large kidneys seems closely connected with the fact that acute and subacute glomerular lesions are much more common among the large kidneys than among the other classes.

If we accept the view that edema and the lesions of glomerulitis are very frequently dependent on the same cause, namely, a toxic blood-state, we feel the necessity for caution in using the expression renal edema in the sense that edema is caused by nephritis. We cannot safely assume that edema is the result of nephritis until it is clear that the failure of the kidney to do its duty in excreting water or toxic materials is actually competent to induce serous transudations from the vessels of the skin and subcutaneous tissues.

We may pass now to the consideration of two symptoms, or rather accompaniments, of renal disease, which possess a considerable degree of practical interest, though they have as yet received little study. These are delayed excretion and bacteriuria.

Delayed renal excretion may be defined as the postponement of the work of the kidney in ridding the blood of its excretory solids owing to renal disease. The postponed work consists either of the normal work of the kidney in excreting urea, salts, etc., or of unusual excretory work imposed on the kidneys in the course of disease, or for the purpose of testing its activity. The substance most often employed in making this test is methylene blue.

Delayed excretion of urea occurs in a variety of pathologic states of the kidney, in acute and chronic nephritis, renal



tuberculosis, amyloid kidney, etc. The delay is expressed in the fact that the urea formed in a given time within the body and normally excreted in a given period requires a longer time for its removal than in health. Thus kidneys which have for a considerable period averaged a daily excretion of 30 gm. of urea may suddenly take two days to do this task, while the demand on them continues as before. In such a case there would be a well-defined delay in the excretion of nitrogen. In acute diseases of the kidney the delay may be much greater than in the instance above supposed. Under such conditions the work of one day may be prolonged over 3, 4, 5 or 6 days. Similar delays frequently arise in the course of chronic nephritis. During such a delay the urea of the blood is increased. If the delay is short, the accumulation of urea in the blood is trivial; but if the delay extends over a long period, the increase in nitrogen of the blood may become distinctly pathologic. When the percentage of urea rises to about 0.3% in the blood, that is, to about ten times the normal content, the patient has either developed unmistakable symptoms of uremia, or is in imminent danger of doing so. I have elsewhere insisted on the practical value of knowing the percentage of urea in the blood of nephritic subjects. This knowledge, which can be readily obtained from an ounce of blood, is probably of more definite significance for the outlook of a patient with chronic nephritis than any information as to delayed excretion. Very often, however, there is hesitation about bleeding, and then a knowledge of whether there is delayed or normally rapid excretion may be very desirable.

In practice it is not feasible to study the excretion of urea with a view to discovering whether it is delayed. This is owing to technical difficulties which need only be referred to here. In place of a study of the nitrogenous excretion, the kidney may be interrogated by means of the methylene-blue or potassium-iodid test. When methylene-blue is introduced into the body of a normal person by injection into a muscle (*e. g.*, the vastus internus), it appears in the urine after a few minutes (10 to 30). If the dose be moderate, say, one grain in ten minims of water, the dye continues to color the urine for a period lasting from 15 to 48 hours in different persons. In most normal individuals the coloration disappears in the course of 36 hours.<sup>2</sup>

When methylene-blue (in the dose mentioned) is injected into the muscle of a patient suffering from nephritis the color appears in the urine, usually as promptly as in health, sometimes after a delay of a few hours. The time required for the disappearance of the blue color varies much in different cases of nephritis. In many instances of unquestionable renal disease associated with albumin and casts in the urine, the dye disappears in the course of 36 or 48 hours, as in persons with normal kidneys. In other patients there is a distinct delay in the disappearance of the methylene-blue from the urine. Instead of quitting the urine in less than 3 days the coloration persists 4, 5, 6, or even 7 days and longer. It is this delay in the disappearance of the dye from the urine that is of interest to the practitioner. As already mentioned there is sometimes a delay in the appearance of the blue-green color. Some writers have attached importance to this, but we do not know enough about the sign to use it in diagnosis. It is certainly true that there are cases of chronic nephritis in which there is delay in the disappearance of the blue-green color without any delay in its appearance.

The elimination of methylene-blue in different forms of nephritis has been studied by Bard and Bonnet. These writers reach the conclusion that in patients with interstitial nephritis the permeability of the kidney by methylene-blue is diminished, that is, delay occurs, while in epithelial (parenchymatous) nephritis the permeability is increased; that is, there occurs an acceleration of the normal excretion. This conclusion is based on clinical rather than anatomic grounds. It does not correspond with the unpublished results obtained by Dr. J. W. Connors and myself in the wards of the City Hospital. We employed the methylene-blue test in 98 different patients with and without nephritis in order to determine the clinical significance of a delayed excretion of the methylene-blue. Autopsies were obtained upon only

a very small number of these patients, and our results, like those of Bard and Bonnet, were based on clinical observations without anatomic confirmation.

In many instances the test was employed twice in the same patient. There were among our patients several in whom the diagnosis of parenchymatous nephritis seemed justified, but we obtained no evidence that the kidneys in such cases are ever more permeable to methylene-blue than is normal. In fact, delays were noted in some of them. We found nothing to indicate a likelihood that it is possible to distinguish one variety of nephritis from another by the methylene-blue test. Even in the same person, the ability to excrete the blue was found to vary at different times. Thus an elderly woman took at least eight days to rid herself of the usual injection of one grain of methylene-blue, while she was in a uremic state with convulsions. One month later, when she was sitting up in the ward, it took less than three days to excrete an equal dose. Among our patients were seven with chronic endocarditis. Some of these had signs of chronic congestion of the kidney. In no instance was any delay noted.

Certain conclusions with reference to the methylene-blue test seem warranted. 1. A distinct delay in excretion is evidence of the inability of the kidney to do its normal excretory work on time, owing to structural alterations, or perhaps temporary disturbances in renal innervation. 2. Such a delay, when prolonged (four days or more) and repeated, is probably associated with an increase in the urea of the blood, and, like such an increase, is to be taken as a sign of latent uremia, even though definite uremic symptoms be absent. 3. Periods of delayed excretion may alternate with periods in which there is no delay. 4. The prompt disappearance of the dye, *i. e.*, within 36 hours, may probably be taken as an indication that the kidneys are normally ridding the blood of urea, salts, and other urinary constituents, even though the urine contains albumin and casts.

The use of injections of methylene-blue as a diagnostic measure in renal disease is not entirely free from danger in some cases in which the kidney is the seat of advanced lesions. In acute nephritis with partial suppression, and in chronic nephritis with impending uremia, it may do harm by imposing additional work on organs already overburdened. Well-defined, unmistakable uremic symptoms forbid the use of the injections. In a very great majority of cases of chronic nephritis there is no objection to their use. When it seems undesirable to administer the methylene-blue by injection, it can be given by mouth. There appears to be no danger from the internal administration of one grain of the dye, except possibly in some outspoken acute uremias. Normally the blue is eliminated more rapidly when given by mouth than when injected, the usual period being from 18 to 40 hours. The rapidity of absorption influences the time at which the dye appears in the urine and possibly also affects somewhat the time of disappearance. The method is therefore less reliable than the method by injection. Nevertheless it is useful, and a delay of 3, 4, or 5 days in the elimination of the dose is to be interpreted in the same way as if it had been injected.

Potassium iodid also can be given by mouth for the purpose of testing the activity of the kidneys. In normal adults under fifty, a dose of 10 gr. is followed by the presence of the salt in the urine for a period varying from 24 to 36 hours. A delay of more than 40 hours probably indicates some degree of renal inadequacy. Further studies of the behavior of pathologic kidneys towards this salt are needed.

Bacteriuria, or the presence of bacteria in the urine, is, of course, no proof that the microorganisms have reached the urine from general circulation, by way of the kidneys. Often, however, bacteria do find their way into the urine in this manner. Frequently renal lesions are set up during the transit of the microorganisms through the kidneys. When this is the case, the bacteriuria becomes an important accompaniment of renal disease in that it may yield information as to the etiology of the affection.

Although this subject is still in an undeveloped state, enough has been learned in very recent years to render desirable some mention of it here. But before considering the different types of bacteriuria known to us it is necessary to refer to certain conditions surrounding the passage of bacteria through the kidneys.

So long ago as 1869 Ponfick, Hofmann, and other observers

<sup>2</sup> In some instances the coloring-matter continues to be excreted for a time in the form of a colorless chromogen. The addition of dilute acetic acid then colors the urine green. Sometimes the excretion is wholly in the form of the chromogen.



found that finely divided particles of cinnabar introduced experimentally into the venous circulation pass into the interstitial connective tissue of the kidney or escape from the glomerular capillaries. As the study of infectious diseases was extended it became a matter of interest to learn whether microorganisms as well as unorganized particles are capable of passing through the normal capillary walls of kidneys. Grawitz, the first student of this question, found that the spores of molds introduced intravenously are removed from the blood by the kidney without causing hemorrhage or any evidence of damage to the capillaries. The view that bacteria traverse renal capillaries without doing them injury was soon vigorously contested by Wissikowitsch and others. For a time it looked as though we must regard the passage of bacteria from the blood into the urine as a process necessarily attended by pathologic alterations in the kidney. Then evidence began to accumulate which showed the original contention of Grawitz to be correct. To-day it is conceded that bacteria can pass readily through the kidney in considerable numbers without leaving behind any demonstrable changes. The evidence, though incomplete, indicates that the glomerular capillaries are a highly important path for the egress of bacteria. The nature of the process by which the transit occurs is unknown, but it may perhaps be compared with the phenomenon of diapedesis of blood-cells. It is, of course, not to be inferred that the passage of bacteria through the kidney is always accomplished without injury to the organ. If their number be large and they are virulent in character the capillaries may be injured so that they permit the escape of blood-cells and of albumin.

The rapidity with which bacteria injected into the venous system make their appearance in the urine has been variously estimated by different observers at from five minutes to several hours. It is on the whole likely that when considerable numbers of bacteria enter the circulation the kidney begins active elimination within half an hour or an hour. The careful experiments of Biedl and Kraus and of Klecki show that the work of elimination does not proceed with equal rapidity on the part of the two kidneys, but that first one organ and then the other is more actively engaged—an observation entirely in harmony with what is known of the fluctuations that occur in the normal excretion of urine. Biedl and Kraus found that conditions which increased the flow of urine favored the escape of bacteria, but Klecki was unable to confirm this observation. The latter observer found that the use of caffeine, diuretics, etc., were without effect in hastening the rapidity of the bacterial escape. These negative results from diuretic agents are of considerable interest from the standpoint of the therapist who deals with septicemic conditions, although they do not perhaps justify the conclusion that diuretics in man are never of service as eliminative agents for microorganisms. It is a fact of much practical importance that bacteria may be found in the blood when their presence in the urine cannot be demonstrated. This appears from the experiments of Klecki to be due to the inability of the kidney to remove microorganisms when their number in the blood falls to some point at which they are very few. Why a certain number of bacteria in the blood may fail to come within the range of the activity of the kidney is far from being clear; other physical conditions are probably involved. The fact of practical interest which stands out prominently is that while the normal kidney is exceedingly active in freeing the blood of microorganisms it is incapable of removing them all. Pathogenic organisms may thus circulate in small numbers for a time before being destroyed or eliminated by other organs.

Several forms of bacteriuria are now recognized as accompaniments of renal disease. In none of these types of bacteriuria is the presence of a particular microorganism in the urine of itself a sign of renal disease. But if we leave aside, first, the cases in which bacteria enter the urine through some other portal than the kidney; and second, the cases in which bacteria traverse the kidney without damaging its structure, there remains a considerable class of cases in which the passage of bacteria through the kidney is a symptom of injury to renal structures. Thus, a tubercle-bacillus bacteriuria is no rare expression of renal tuberculosis which has arisen from the deposit in the kidney of tubercle-bacilli from the blood-stream. Probably about 25% of patients with typhoid fever have typhoid-bacilli in the urine at some

period of the disease. Albuminuria appears to be a regular accompaniment of such a bacteriuria. The acute degenerative nephritis of typhoid fever probably depends more on the action of bacterial products than on the microorganisms themselves, but it is questionable whether such a nephritis is ever absent when typhoid bacilli occur in the urine. In rare instances a typhoid-bacillus bacteriuria is responsible for a serious renal complication—suppurative pyelitis. Again, pyogenic streptococci and pyogenic staphylococci have been found in the urine in various forms of acute nephritis, in the course of erysipelas, malignant endocarditis, osteomyelitis, scarlet fever, etc. These organisms have also been found in the urine in cases of perirenal abscess, pyelonephritis, suppurative nephritis, etc. Here the bacteria found in the urine have stood in a causative relation to the renal lesions. In the case of acute nephritis, however, it does not necessarily follow that the streptococci or staphylococci found in the urine have been the cause of the renal lesions. Thus in scarlet fever, it is in the highest degree likely that the peculiar glomerular lesions often found in this disease are due to unknown poisons rather than to any of the bacteria found in the kidney or its products.

There is some evidence that the urine of acute nephritis at times contains pathogenic cocci differing from the ordinary pyogenic cocci. Thus Mannaberg found in 11 cases of acute nephritis a microorganism possessing peculiar cultural character. When the nephritis cleared up, these organisms could no longer be found in the urine. Another observer, Engel, claims to have found a hitherto undescribed pathogenic coccus in 17 out of 31 cases of nephritis, acute and chronic, selected at random. In acute cases the staphylococcus pyogenes aureus and the staphylococcus pyogenes albus were frequently found in association with this new coccus. The significance of these two sets of observations remains to be settled through further work.

The importance of bacteriuria for renal pathology is not limited to those forms in which the microorganisms enter the urine by way of the kidney. The damage which may be done the kidney by the ascent of the gonococcus and of the tubercle-bacillus from the bladder or urethra is now well recognized. It is perhaps not so well understood that even bacteria which merely decompose the urine with the liberation of ammonia, such as the bacteriuria and micrococcus ureæ, are a threat to the integrity of the kidney by their ability to set up a severe pyelitis or convert a slight suppurative process into one that menaces life.

What is perhaps the most remarkable form of bacteriuria remains to be mentioned. This is the variety characterized by the presence of a larger number of colon-bacilli in the urine. The urine in this condition is slightly turbid, even when first passed, and this turbidity does not clear up on standing. Sometimes a moderately abundant whitish sediment appears after a short time. The reaction is acid. Frequently the urine has an indescribable unpleasant odor, and it is often this that causes the patient to consult his physician. Albumin is absent unless there be some associated pathologic state. Microscopic examination of the sediment fails to disclose the presence of pus-cells, or such cells are present in small numbers only. On the other hand, short rod-shaped bacteria are found in large numbers. In all the cases that have been studied these bacteria have developed the cultural characters of colon-bacilli.

Patients with colon-bacillus bacteriuria frequently do not complain of any definite or characteristic symptoms. Sometimes fever is present for a time. Intestinal disorders appear to be common; probably some intestinal disturbance occurs in all cases, though well-defined symptoms may be lacking.

Although this form of bacteriuria sometimes occurs without further clinical signs than those just referred to, it is very common for the condition to be associated with some morbid process in the genito-urinary tract, such as nephritis, pyelitis, cystitis, prostatic disease, etc. Whether colon-bacillus bacteriuria is ever the cause of nephritis is a question which cannot at present be answered. It is certainly responsible for numerous instances of pyelitis, the colon-bacillus being especially effective in setting up catarrhal inflammation where the mucous membrane has already been injured by the action of concretions in the renal pelvis.

The earlier writers upon this condition thought that the urinary tract became infected from the exterior, through the



introduction of contaminated catheters, through wounds connecting with the bladder or urethra, and in similar ways. Recent studies, especially those of Rösing, make it clear that this is by no means the chief avenue of invasion. The evidence points unmistakably to the conclusion that the microorganisms reach the urine from the blood-stream through the kidney, in that considerable number of cases in which urethral infection can be excluded. How the bacteria enter the blood stream is not positively known, but the probability is strong that they come from the intestinal tract through some breach in the continuity of its mucous membrane. The clinical associations of colon-bacillus bacteriuria speak for this interpretation. Habitual constipation, intestinal catarrh, intestinal hemorrhage, carcinoma of the intestine, and typhoid fever are among the obtrusive pathologic states of the intestine with which bacteriuria has occurred. The relationship of bacteriuria to the gut opens a fruitful field for experimental study.

The prognosis in cases of colon bacteriuria is usually good. Patients may for years pass large numbers of colon-bacilli with the urine, either continuously or periodically, without failing in general health, and without developing local disease in the urinary tract referable to the action of the bacteria. On the other hand, it sometimes happens that a pyelitis or other local inflammation in the urinary tract can be reasonably referred to the action of the swarm of bacteria which constantly pass over a part lowered in vitality by slight traumatism from calculi. Colon-bacillus bacteriuria often resists treatment stubbornly. The internal use of moderate doses of salol, combined with the free drinking of water, has been found helpful. Those who desire further information upon the subject of colon-bacillus bacteriuria are referred to the recent admirable work of Rösing on infectious diseases of the urinary organs.

Let us now consider some of the additions to our knowledge of the causes of renal disease that have come to us in recent years. The element in the causation of lesions of the kidney that now stands out more prominently than any other is infection. There is no longer any mystery about the lesions of renal tuberculosis, of pyelitis, or of suppurative nephritis. Bacteriology has made plain the role of the tubercle-bacillus, of the common pyogenic bacteria, of the gonococcus, of the colon-bacillus, etc., in the production of most of the local diseases of the kidney. Important as are these accessions to our knowledge of the etiology of renal disease they are not those which I wish to emphasize here. I desire especially to refer to the role which infection plays in the causation of the group of renal lesions that constitute Bright's disease. One of the objects of investigation is to determine whether there are any definite relations between types of infection and anatomic types of nephritis. In this we have hitherto met with only partial success, but there are unmistakable indications that our understanding of these relations will in time be greatly broadened. That definite knowledge we have relates especially to the various acute forms of nephritis. We have learned that there are many kinds of infection that are capable of producing an acute degenerative nephritis. Experimental as well as clinical studies show that this lesion may follow infection by the staphylococcus pyogenes aureus, the Klebs-Löffler bacillus, the cholera bacillus, etc. If, however, the pathogenic properties of the staphylococcus pyogenes and of the diphtheria-bacilli are more intense the alterations in the kidney may not remain confined to its epithelium, as in acute degenerative nephritis, but may lead also to an infiltration of the connective tissue with lymphoid and allied cells—thus setting up an acute interstitial nephritis. Both in diphtheria and in scarlet fever we meet with those alterations in the tufts of the kidney which characterize an acute glomerular nephritis. Thus the infection of diphtheria may be associated with an acute degenerative nephritis, an acute glomerular nephritis, or an acute interstitial nonsuppurative nephritis. I say "associated with" rather than "caused by" because, in the case of the human subject, it is not yet quite clear that other infections besides that of diphtheria may not have been responsible for these lesions. The evidence, however, strongly favors the view that in some instances the same species of microorganisms is capable of setting up different histologic lesions in the kidney, according as it varies in pathogenic properties. Whether there are certain kinds of infections that invariably lead to the production of a particular type of acute lesion in

the kidney, and never to any other, is not yet clear. We have learned that the lesions of acute nephritis can be set up without the agency of the bacteria themselves, through the action of their secretions. It has been shown by Welch and Flexner, in the case of diphtheria, that "the lesions in the tissues produced by the bacilli and toxic principle on the one hand, and the toxic principle alone on the other, are in perfect correspondence with each other."

There is every reason to believe that the acute nephritis that accompanies diphtheria is set up by the action of the soluble products of the Klebs Löffler bacillus rather than by the bacteria themselves. In the case of the staphylococcus pyogenes aureus it has been demonstrated experimentally by Morse that interstitial lesions can be set up in the kidney through the injection of the filtrate from this organism. These experimental results, together with certain bacteriologic studies of human kidneys, make it probable that many histologic alterations in acute nephritis in human subjects are due mainly to the soluble products of pathogenic bacteria.

In many instances the lesions of acute nephritis are the result of combined infections, and the damage done by such a combination may be greater than that referable to either element singly. Thus Flexner's experimental observations lead him to infer that in their action upon the tissue-elements, including those of the kidneys, the combined toxins of the bacillus-diphtheriae and the streptococcus pyogenes are more potent than either toxin alone.

A large proportion of all cases of acute nephritis in its different anatomic forms can be referred to a few common varieties of pathogenic organisms. The pneumococcus, the pyogenic streptococci and staphylococci, the bacilli of diphtheria and of typhoid fever, and the plasmodia of malaria, separately and in various combinations, are responsible directly or through their secretions for many cases of acute nephritis. If we add to these the renal lesions caused by infectious diseases of unknown nature, such as scarlet fever, measles, syphilis and influenza, the number of acute cases unaccounted for is by no means large. It is true that there are acute and subacute cases, many of them presenting glomerular lesions, which have the clinical aspect of primary nephritis, or seem to be due to exposure to cold. There is reason to think that these, too, are really the result of infection, though this has not yet been proved. Then there is the acute form of nephritis, which depends on metallic or other non-bacterial irritant poisons. The cases in this group are not numerous. Those due to metallic poisoning show merely the lesions of acute degenerative nephritis and congestion. I have made repeated efforts with different metallic poisons to experimentally induce glomerular and interstitial lesions in rabbits and dogs, but have regularly failed.

The difficulty in determining the relation between types of infection and types of nephritis is much greater in the case of chronic processes than in those which are acute. This is partly because of the multiplicity of influences which may play a part in the production of chronic nephritis and partly because many of these influences operate gradually and through long periods of time. The experimental observations of Morse, already referred to, indicate that the toxins of the staphylococcus pyogenes aureus are capable of initiating those proliferative changes in the interstitial connective tissue of the kidney which constitute so prominent a lesion of chronic diffuse nephritis. It is probable that the toxic products of numerous forms of pathogenic bacteria are capable of inducing such connective-tissue changes. Clinical observations make it well-nigh certain that scarlet fever is often followed by chronic nephritis; a sequence which cannot be accounted for except through the relation of cause and effect. Certain isolated cases, like the one reported by Eisenlohr, make it exceedingly probable that the infection of typhoid fever is competent at times to set up the lesions of chronic nephritis through the mediation of an originally acute process. As recently pointed out by Thayer, there is very good evidence that chronic nephritis is not infrequently a consequence of the severer forms of malarial infection. Although there are many clinical reasons for thinking that the granular kidney may be a sequel of other forms of infection, for example that of pneumonia, influenza and measles, the positive proofs are probably lacking. At present scarlet fever is the disease which we must hold most often responsible for chronic diffuse nephritis with contracted kidneys.



The form of chronic nephritis known as amyloid kidney has long been a highly interesting enigma to clinicians and pathologists. Three etiological associations of this condition have come to be generally recognized—prolonged suppuration, tuberculosis, syphilis. It is one of the achievements of experimental pathology to have shed some light on the nature of the underlying cause of amyloid degeneration. Recent experimental studies by Cracow, Maximoff, Davidsohn, Nowak, and Lubarsh, make it clear that the filtrate of cultures of the golden staphylococcus is capable of inducing amyloid degeneration, especially in the spleen and liver, but also in the kidney. By means of repeated injections the amyloid change was readily produced in the hen and somewhat less regularly in the rabbit. The amyloid material thus produced corresponds closely with that found in man. It seems certain that the long-continued action of staphylococcus toxins on the human kidney is capable of inducing amyloid changes in it. These observations give us a satisfactory explanation of the influence of prolonged suppuration. It is not known whether the amyloid alterations found in syphilis and in tuberculosis are due to the peculiar poisons of these diseases or to the part played by the staphylococcus in cases where there is mixed infection. It is not impossible that products of other bacteria than the staphylococcus lead to the amyloid change.

Although the time is still distant when it will be possible to write a satisfactory account of the agency of derangements of metabolism in the production of renal disease, there are facts which indicate that such derangements stand in an important etiological relation to pathologic changes in the kidney. Thus it is certain that an acute degenerative nephritis sometimes follows severe entero-colitis in children under such conditions that the renal alterations can only be interpreted to result in some way from the morbid process in the enteric tract. Similarly, but more rarely, albumin and casts have been observed in the urine of adults during acute enteritis. It can hardly be doubted that the explanation of this relationship between gut and kidney is to be sought in the occurrence of pathologic bacterial activity in the intestine. Not only does the colon bacillus sometimes take on distinctly pathogenic qualities—the intestine may be infected by the streptococcus pyogenes, the proteus vulgaris, etc. To what extent and under what conditions these and other microorganisms may be concerned in producing nephritis, directly or through their soluble toxic products, cannot now be stated.

That chronic lesions of the kidney result from a combination of acute and chronic disorders of digestion is more difficult to prove than that acute lesions sometimes follow acute disorders. This is owing to the fact that it is rarely possible to exclude other causes of chronic nephritis. Careful clinical observations, however, lead me to think that a general arteriosclerosis in rare instances has its beginning in a series of acute seizures of gastroenteritis, which leave behind them marked impairment of intestinal digestion. When this occurs in persons under 25 years of age, whose accessible arteries have previously been healthy and who have had none of the infectious diseases that are known to dispose to arteriosclerosis, there can be little question that the gastroenteritis stands in a causal relation to the alterations in the vessels and to the simultaneous changes in the kidney.

Whether it is possible to induce chronic diffuse nephritis in the human kidney merely through increasing for a long time the normal work of the kidney in the elimination of urea and other nitrogenous extractives, must be regarded, I think, as questionable. Time does not permit me to discuss this question as I could wish. I may perhaps be permitted to refer to what is only a clinical impression in this connection. It is that the normal kidney is capable of doing an abnormally large amount of work for a long time without developing chronic vascular lesions, so long as this work remains normal in character. When, however, the quality of the work becomes abnormal through chronic derangements of digestion, the likelihood of arteriosclerosis seems to be materially increased.

In concluding these unsystematic observations on the causes of renal disease, I wish to speak of a much discussed theme—the influence of excess in alcohol. While some writers have looked on alcoholic excesses as an important cause of the small granular kidney, others, including Dickinson, Austin, Flint, and Lancereaux, have brought this opin-

ion into question. In the hope of obtaining some information on this subject, I have analyzed a considerable number of autopsies with reference to the weight of the kidneys, in three groups of adult patients: first, those giving a distinct history of excess in alcohol; second, those giving a history of a moderate use of alcohol, and third, those in which there was no history of the use of alcohol. Those three groups yielded 468 autopsies in which the weights of the kidneys were recorded. Looking at the cases in which each of the two kidneys weighed less than 4 oz., that is to say, in which the organs belonged to the contracted type of chronic diffuse nephritis, it was found that there were about 13% of the small kidneys in the non-alcoholic group, 8% of the moderately alcoholic group, and less than 6% in the markedly alcoholic group. These figures certainly lend no support to the idea that small granular kidneys are caused by alcoholic excess. Looking at the autopsy records with reference to the distribution of the large kidneys (that is, those weighing more than 6 oz. each), it is found that there are 29% of these in the nonalcoholic group, 45% in the moderately alcoholic group, and nearly 40% in the markedly alcoholic group. It is difficult to resist the inference that alcohol is influential in the production of nephritis with large kidneys rather than nephritis with small kidneys. There are two facts which speak in favor of this view. One is that the kidneys of drunkards dying of acute alcoholic intoxication often show the large congested and edematous kidneys which were described by Formad as the pigback kidney. The other fact is that a chronic albuminous and fatty degeneration can be induced experimentally in the kidney of the pig by means of chronic alcoholic intoxication. I have succeeded in bringing about this change in young pigs kept for ten weeks almost continuously under the influence of alcohol—from two to four ounces being given daily. The kidneys were large and pale, the tubules distended, the epithelium granular and fatty. There were no interstitial changes. Alcoholic gastritis was also found.

On the whole, I think the evidence points strongly, if not conclusively, to the view that the early lesions of nephritis from alcohol lead to enlargement of the kidney. It is extremely unlikely that these large fatty kidneys ultimately contract. The belief that the small granular kidney is one of the sequels of alcoholic excess rests on a very insecure foundation.

In the last fifteen years, by the addition of one observation to another, we have quietly accustomed our minds to a conception of the etiology of nephritis that is nothing short of revolutionary. Instead of looking at nephritis as a primary disease of the kidneys due to exposure to cold, or "idiopathic" in nature, we have come to see in the different anatomic types the evidence of different reactions on the part of the renal, vascular, epithelial, and connective tissue-cells towards toxic substances or microorganisms brought by the blood-stream. To-day we accept this idea as a matter of course, but it is nevertheless a novel conception of the origin of nephritis. It gives us a wholly different view of the position of the kidney in human pathology. It explains why it is that in persons more than 20 years of age it is exceptional to find at the autopsy-table kidneys that are wholly normal. It opens our eyes to the fact that we should never be satisfied with a mere diagnosis of nephritis, but should always look for enlightenment to the pathologic process or processes to which the renal lesions are secondary. In chronic lesions this is often beyond our power; in acute lesions of the kidney we have already won a considerable though partial measure of success in tracing the pathologic antecedents.

The broader outlook which we have reached through the modern study of the etiology of disease helps us greatly to understand the important lesions so frequently associated with those of nephritis. How often the liver and spleen suffer from the same influences that lead to nephritis is now well understood, though many important correlations remain to be worked out. The relation between the widespread vascular lesions that so commonly go hand-in-hand with the vascular changes in the kidney has to-day become the subject of commonplace discussion, but the conception is modern and is not perfected even now. One other relation of the diseased kidney to the organism at large remains to be noted. The kidney which is no longer adequate to bear the entire burden of its normal work becomes a source of danger to other tissues. We do not yet know the nature



and full extent of the pathologic consequences to the organism that arise through such inadequacy, but we recognize the grave disturbances of nervous function that are the clinical manifestation of this condition of uremia.

These different considerations impress us as clinicians with the necessity of looking on nephritic lesions as processes intimately related to other parts of the organism and not as local diseases. If we overlook these manifold relations in formulating the prognosis and treatment of nephritis, we are losing the fruits of modern investigation.

It may be questioned whether our views of the origin of renal disease will ever undergo so radical a change as that which the past twenty years has witnessed. This enlightening change we owe not to a narrow specialism in the study of the kidney, but to that development of scientific methods in the domain of general pathology which marks the progress of medicine as a department of biology.

I am under especial obligations to Dr. John S. Thatcher for the use of numerous histological preparations from the Pathological Department of the Presbyterian Hospital. I desire also to acknowledge the courtesy of Dr. A. H. Smith, Dr. Kenincutt, Dr. Thompson, Dr. James, and Dr. Northrup in permitting me to refer to certain medical histories of patients in their care.

## THE SCOPE AND LIMITATIONS OF HOSPITALS FOR INFANTS.<sup>1</sup>

By L. EMMETT HOLT, M.D.,

of New York.

OUR meeting this year completes the first decade of the Society. From the small beginning made by a little group in Washington in September, 1888, we have grown to an organization with 54 active members and have done, as a Society, work that has made our name known on both sides of the Atlantic and has reflected honor upon American medicine.

In the evolution of this comparatively new specialty, the American Pediatric Society has done much to mold medical opinion. To this body of men, made up largely of the teachers of pediatrics in America, the profession here still looks to work out many of the difficult problems presented by disease in early life. Something we have done, but how little in comparison with the great work yet to be accomplished.

Since our last meeting two of our most distinguished members, both of whom have filled the office of President of the Society, have died. Dr. J. Lewis Smith was one of the pioneers in this department, and his book has probably been more widely read than any book on pediatrics in the English language. Dr. Smith passed away in the fulness of his years, in the midst of the arduous work with which his life had been filled. And how can we express our loss in the death of Dr. Joseph O'Dwyer? Where shall another be found to find his place? In his modest manner, his rare judgment, his mental balance, and his straightforward method of attacking a single problem and patiently working out its solution to the minutest detail, he was indeed an example to all of us. We miss his genial face among us to-day, and cannot but feel that our Society has met with an irreparable loss.

And now may I ask your attention for a few minutes to a subject that has for me the deepest interest and which must be of vital importance to every pediatricist, viz.:

### THE SCOPE AND LIMITATIONS OF HOSPITALS FOR INFANTS.

As the past thirteen years of my life have been intimately connected with such institutions, I have thought that nothing that I could bring before you would be of more interest than some of the questions connected with their medical management. It has always been true in the history of medicine that special hospitals have followed the development of new departments, these hospitals being at once a cause and a result of such scientific interest. Europe has had its children's hospitals for nearly half a century, and now almost every continental city may boast of a well-equipped one. In America, however, hospitals for children are still few, and in many of them the greater part of the service has been given over to the department of orthopedic surgery or to wards for contagious disease; while little room has been left for general medical cases and usually none at all for children under two years old. Provision for the hospital-treatment of sick infants has been the last to come, but it is coming fast, both in the organization of separate hospitals and in the addition to many of our general hospitals of a ward for infants.

The claim of pediatrics to be recognized as a special department of medicine must rest upon the fact that it is devoted to the problems connected with disease in the first years of life. I venture the prediction that the pediatricist of the future will not be he whose interest lies in whooping-cough, scarlet fever, diphtheria, measles, and other diseases that simply occur more frequently in early life than later, but he who devotes himself to diseases and conditions peculiar to the first three years of life. The hospital of the pediatricist, therefore, is not the hospital for contagious diseases; nor yet one where only children over four years are received, but the hospital for infants and very young children.

Hospitals are needed in this department, in the first place, as places of research. The question of the saving of infant-life is fast becoming a vital one in social economics. In New York City the mortality among infants under one year has been during the past eight years 86,738, being about one-fourth of the total death-rate, and very nearly the same proportion as is maintained in the cities of Europe. But it is interesting to note that in New York, with increasing knowledge and better sanitation, there has been during the last few years, a very decided reduction in this mortality. The year 1897 showed a death-rate under one year nearly one thousand less than that of any recent year. These are actual mortality figures, it should be remembered, not

<sup>1</sup> The Presidential Address before the American Pediatric Society, at Cincinnati, June 1, 1898.

percentages, and this reduction has been brought about in spite of a steady increase both in the population and in the number of births reported. These facts are certainly most encouraging and should stimulate all of us to do our utmost to improve city sanitation and to spread knowledge upon all subjects relating to infant-feeding and care.

But still more encouraging are the results now obtained in private practice among the better classes. Of 151 children who during the past eight years have been under my care through practically their entire infancy, not one died before reaching the end of the second year. This is still more significant when we consider how they were fed: only 30 of the number were breast-fed, either by the mother or by wet-nurses, through the greater part of the first year; 33 were partly nursed and partly fed, nursing being usually continued for two or three months alone, after which the bottle was added; 90 were entirely bottle-fed. This certainly makes a good showing for artificial feeding and indicates very clearly that among the class of people with whom artificial feeding can be properly done, it is extremely satisfactory.

During the past eight years, while I have been practising almost exclusively among children, I have had among my own patients but six deaths in children under two years; one from marasmus and a cerebral malformation; one from acute inanition, under observation but ten days; one each from general tuberculosis, intussusception, entero-colitis and pneumonia. I do not think these are exceptional results; for on inquiry I have learned from six professional friends in New York, all of whom practise largely among children, that their experience in the same class of patients was almost identical with my own. From the facts thus collected I judge that in the well-to-do classes, with the best care, the mortality from all causes during infancy does not exceed 2 or 3%, as against a general mortality for this period among all classes of about 20%. These are most hopeful signs and show the possibility of a very great reduction in infant-mortality everywhere with a better understanding of all the conditions, but especially of infant-feeding.

Referring again to the death-rate in the city of New York, we find that 34% of the entire number of deaths occur in children under 2 years of age, and only 12% in children from 2 to 15 years; or, in other words, as it is well known that morbidity and mortality figures correspond very nearly, three times as much serious sickness occurs in infants under two years of age as among all the other patients coming under the care of the specialist. Conditions hereinafter to be considered make it undesirable, and in fact forever impossible, that any large percentage of these shall be treated in hospitals, although there are those who look forward to the time when most adult patients shall be treated in institutions, both obstetric, medical, and surgical cases.

But it is none the less true that only in hospitals can any great advance be made in the solution of many of the problems connected with infantile disease. Let it be clearly understood, then, from the outset, that hospitals for infants serve perhaps their highest function when they can determine from careful study and observation of the few what is the best treatment for the many.

As places for research, hospitals must be well equipped with pathological, bacteriological, and, if possible, chemical laboratories, in order to work out in the fullest and best way the problems constantly arising in the treatment of acute illness. The State spends, without grudging, large sums of money every year in the experiment-stations of the agricultural department, to determine the best conditions under which hogs, cattle, fruits, etc., shall be raised; why shall it not devote at least as much of its energy toward the solution of the problem of how infants may best be reared, and how the great sacrifice of infant-life that now goes on may be diminished.

Hospitals are needed, in the second place, for the teaching of physicians and students. One of the greatest deficiencies in the curriculum of the medical schools of the day is the insignificant attention paid to subjects connected with infancy. In order to give students an opportunity for study, hospitals are absolutely necessary. Every hospital should be a teaching-hospital. This work interferes in no way with its function of caring for the sick, and has a far wider value in philanthropy than the caring for the children in the wards. The selfishness of those hospital-physicians in America who are content to enjoy for themselves the peculiar privileges and opportunities that their positions carry with them, with no thought of their obligation to advance the science of medicine, is unworthy of our profession.

Thirdly, hospitals are needed for the training of nurses. It is just as impossible for nurses as for physicians to learn how to take care of sick infants in the wards of a general hospital, and trained nurses are quite as important for the well-being of the public at large as are trained physicians.

Fourthly, hospitals are needed for the care of such cases as can be better treated in institutions than at home. Of this more will be said later.

The question naturally arises whether a department for infants in a general hospital may not be more advantageous than an institution specially established for this work. My own belief is in favor of special hospitals, and for the following reasons: It is hard to rouse in the average house-physician proper interest in the nutrition and diseases of infancy, while he sees around him on every side the brilliant counter-attractions of surgical work and an acute medical service among adults. It is only after the young physician has begun his private practice that he appreciates the value of a



knowledge of diseases of infants. Again, it is usually the case that the attending physicians pass over the ward for infants with very scant attention. This may be remedied, of course, and always should be by the appointment of a special attending physician to the wards for infants. But perhaps the chief difficulty is with hospital-boards; it being difficult or impossible to make them appreciate the fact that the requirements in the hospital-treatment of infants are very different from those for adults.

Hospital-work for infants has its discouraging features; the first years of every such institution are sure to reveal many of these. One of the most prominent is the very high mortality—something that was not previously expected and which, as compared with the mortality of ordinary hospitals for adults, seems simply awful. This has often so discouraged boards of managers as almost to induce them to give up the enterprise altogether. It is difficult to determine what a reasonable mortality in hospitals for infants should be, on account of the many different conditions that affect different institutions. It must be remembered that the mortality among infants under one year of age is high in all cities, even outside of hospitals; and that in institutions to which chiefly cases of serious illness are brought, it must of necessity be very high. Among 1,217 children under one year old admitted to the Babies' Hospital in seven years, there were 548 deaths, a mortality of 45%; and if we should add those removed by friends when a fatal result was inevitable, in order that they might have the consolation of the children dying at home, the mortality would run up to fully 50%. The reasons for this high mortality are to be found in a study of the class that make up the bulk of patients that are sent to hospitals for infants. These are:

(1) Cases of marasmus, the majority being in children under 6 months old, whose mothers are dead, or sick in hospitals, in asylums, or intemperate. Often they are in the children of wet-nurses who have been boarded out. Whatever their origin they have been neglected and badly fed and have gone steadily down until as a last resort they are sent to a hospital.

(2) Cases of acute starvation, usually in infants under 3 months old, that often on account of extreme poverty or destitution have had no shelter and no food but tea or beer for days. Many of these at last find refuge in a hospital and live a few days or perhaps but a few hours.

(3) Cases of neglect in which systematic and regular drugging has been continued, usually by opium in some form.

(4) Cases of acute pulmonary or intestinal disease in children that have been sick for some time and have grown alarmingly worse at home. These are sometimes brought by friends as a last resort and are sometimes sent in by physicians when they see that a fatal result is probable.

(5) Cases of disease that are almost certainly fatal, such as tuberculosis, all forms of acute meningitis, hydrocephalus, serious malformations like those of the intestines, intussusception, etc.

Regarding cases that are hopeless on admission, like most of those just enumerated, one must admit that they have the same right to hospital care and shelter as have cases of carcinoma or of advanced tuberculosis in adults. They will terminate fatally whether they are admitted to a hospital or not, but no institution that claims to be charitable or philanthropic can refuse to take its fair share of these hopeless cases. However, the fact that their proportion is so large is what raises the mortality-figures of an infants' hospital so high. But to judge of the usefulness of an institution by its death-rate when such material is received is manifestly unfair, nor can the rate in any way be compared with the mortality in hospitals for adults.

Another discouraging factor to many hospital-managers is the expense involved. This results largely from the care and nursing, as the cost of food and supplies plays but a minor part. Our lowest expense in the Babies' Hospital has been about \$1.20 a day *per capita*, and as the work has been better done the expense has risen until it is now about \$1.50 a day. It is hard to make hospital-managers appreciate the fact that the value of work consists not in its amount but in its quality.

There are some peculiar conditions in infants' hospitals that must be considered; those that affect the nutrition of the patients are of the highest importance in modifying the results obtained and are in fact paramount to every other consideration. In private practice the outcome of every acute illness among infants is determined chiefly by two factors, one of these is the patient's previous nutrition. While we do see infants, previously robust, who succumb to acute attacks of pneumonia or intestinal disease, by far the greater number of those who die perish because they were previously feeble or delicate. The second factor is how well the patient's nutrition can be maintained during the acute attack. This relates not merely to food and feeding, but to all conditions affecting the nutrition—air, bathing, clothing, and general care. It often happens that the disturbance of the patient's general nutrition is more profound and more serious than the local effects of the disease. Thus, a child may have an acute attack of pneumonia, which runs its usual course, the lungs clear up, the cough disappears, but the infant does not recover its previous health. Before this disturbance it was sufficiently vigorous, not only to maintain existence, but to increase in weight; now, however, the balance is against it. It seems unable to make progress, no matter what is done. Little by little it continues to lose in weight until it finally dies from marasmus. Not only do such results follow serious acute diseases, but attacks of bronchitis, or of indigestion that are not

very severe, and even sometimes of such a mild disorders as tonsillitis.

Another striking thing seen in hospitals is the frequency with which one attack of an acute disease is followed by a second and perhaps this by a third until the child is finally worn out. I have seen as many as six distinct attacks of pneumonia in a child in the course of 3 or 4 months—the lungs between the attacks clearing entirely in some instances, as shown by the signs, and in others great improvement taking place, but never quite evidences of local recovery appearing. To be sure, one sometimes sees these things in private practice, but they are seldom encountered unless hospital conditions are approached, both as to the surroundings and the previous condition of the patient.

In adults, the prognosis in most acute infections depends upon the severity of the attack and the integrity of the important viscera, kidneys, heart, liver, etc., but in infants it depends upon the nutrition of the patient even more than upon the severity of the attack, as in a child with feeble resistance even the slightest attack may set in operation processes that go on to a fatal termination.

We come, therefore, to the conclusion that the first condition of success in hospitals for infants is a solution of this problem of nutrition, difficult in health often even under the most favorable surroundings, much more difficult in disease, but in disease and under unfavorable surroundings well nigh insoluble. The things to be considered as affecting nutrition are mainly four—air-space, ventilation and airing, nursing and care, and feeding.

*Air-space*—In most hospitals for infants the maximum allowance is only 600 or 700 cubic feet for each bed. At the Randall's Island Hospital, New York, it is in many wards much less than this; in one of the diphtheria-wards it was but 400 cubic feet. At the Nursery and Child's Hospital 650 cubic feet have been set by the Board of Health as the allowance. At the Babies' Hospital we began with this space, but found it to be totally inadequate. For the last three years the allowance per bed has been 800 cubic feet, and it is now 1,000 cubic feet. With less than this I am sure the results will always be unsatisfactory with children under one year. For those who are beyond this age a little less may suffice, except in cases of very acute illness. Our experience may be stated somewhat as follows: Two infants in a ward of a given size do well; three may do fairly; four are sure to do badly, and, if the number is increased beyond this point, all will fail rapidly and some will soon die. In the old Emigrant Hospital on Ward's Island, Dr. A. M. Thomas found that infant-feeding could be conducted almost as satisfactorily in the ward of an institution as in private practice, but his experiment was conducted with an allowance of 2,500 cubic feet of air for each child.

The question of *ventilation* is a difficult one and it

must be considered with that of *airing* infants. No matter how good the ventilation of the ward, infants must be taken from it once or twice a day to an apartment where an entire change of atmosphere is secured. Separate rooms for airing, protected balconies or sun-gardens must form a part of the equipment of every hospital if good results are to be obtained. Some provision, however, must be made for sending infants out of their habitual atmosphere. The youngest and those most acutely ill need the change most, and should have at least two or three hours of it a day, thorough airing and ventilation of the wards they have left being effected meanwhile. Nothing is quite so fatal to infants as overcrowding in close, superheated rooms. The time of airing and the change of temperature allowed should be carefully regulated by the physician and be made a distinct part of the child's treatment. In the wards, ventilation should be as perfect as possible, and there should be open fires whenever these can be secured. These things are often carefully looked after during the day, but entirely neglected at night.

*Cleanliness* in its minutest details should be secured at whatever cost. Under the artificial conditions of hospital-life purity of the atmosphere is absolutely necessary. Nothing should be permitted to contaminate the air of the ward. Soiled napkins should be immediately removed. Every ward should have its ante-room, where napkins can be changed. No gas should be used at night; but, if not electricity, the wax night-lamp of the nursery. Frequent fumigation of the rooms with formalin or sulphur should be practised when cases of acute illness are continually treated. The floors should be wiped daily with cloths wrung out of antiseptic solutions. All of these matters, of course, greatly increase the labor of hospital-work, and consequently the expense. It costs to keep clean, but the surgeons have demonstrated to us that it pays. The essential hygienic conditions belonging to a well-appointed nursery are indispensable to good hospital-work.

The *temperature* of the different wards should be suited to the nature of the cases treated. Thus 75° F. may be necessary for premature, very feeble and some marantic infants; from 68° to 70° F. for ordinary cases of acute illness; from 66° to 68° F. for those not acutely ill and for most children over one year old. For convalescent children provision should be made for additional outings on balconies, piazzas, and in hammocks, and perambulators about the grounds whenever the weather will permit.

*Nursing and Care*.—These are no less important than the matters already mentioned. Infants require fully four times as much care as any other class of hospital-patients. No good results can be expected when a ward with twenty babies is given into the care of three or four nurses, however intelligent and industrious. It has been my experience that even in the case of infants



who are not acutely ill, not more than three can be well cared for by a single nurse, and for those who are seriously ill one nurse to every two children is the minimum. This nursing must be constant, and it does not consist simply in the administration of food and medicines, and the application of clean diapers; infants must be taken from their beds, held, given opportunities for change of position, and in most cases for a certain amount of exercise.

*Feeding.*—To obtain the best results a hospital for infants should have command of every method of feeding; not only the most approved methods of artificial feeding, such as can be furnished by a milk-laboratory in the hospital, but with wet-nurses for certain special cases. Nothing is more discouraging than the great difficulties in the way of artificial feeding in institutions in children under six months old. For those wasted specimens admitted with chronic indigestion and malnutrition practically nothing can be done by any method of artificial feeding that I have ever tried.

The greatest difficulties in the hospital-treatment of infants are encountered with patients under one year. After this age the conditions of nutrition are usually not so hard to control, and the proportion of those children who do well is very much larger. The dangers of "hospitalism" are therefore inversely proportionate to the age of the patient. In a very young infant, whose organism has not yet acquired stability, resistance is so feeble that it can not long be subjected to hospital-conditions without serious injury. In such patients it seems to be impossible to combat at the same time the effects of acute disease and a depreciated nutrition. But with every month of advancing age the problem becomes easier, and when their nutrition may be said to be established, they can withstand the deleterious influences of hospital-life, and most diseases can be successfully treated.

According to my experience, the diseases and conditions during the first year that are especially suited to hospital-treatment are acute pneumonia, empyema, acute forms of gastro-intestinal disease, otitis and its complications, ophthalmia, acute surgical cases and most cases of eczema in children over six months old. In all cases of acute disease it is unwise to retain the infant in the hospital after the acute stage of the disease is past, unless the hospital is in the country; and even here, the baneful effects of hospitalism are frequently apparent in a few weeks. The retention during the whole period of convalescence is fraught with great danger and is very frequently followed by secondary attacks. In a large number of cases already referred to the condition is somewhat like this: The disease can be cured, provided the child is sufficiently strong and old enough to stand the strain of life in a hospital. This is a question to be considered in every disease that requires a prolonged stay. One of the most striking limitations that one encounters in the treatment of in-

fants in hospitals is in the management of cases of chronic nutritive disorders. Complete restoration to health and vigor of such children in a hospital, although not impossible, is not to be expected. Perhaps the most that can be done for them is to keep them long enough to decide the question of the method of feeding best suited to their needs and then care for them as out-patients.

During the second and third years, the results in the treatment of all diseases are much more satisfactory. Not only may all the diseases enumerated in speaking of the first year be successfully managed, but also many chronic nutritive disturbances, such as simple malnutrition, chronic indigestion, rickets, scurvy, cretinism, some chronic surgical cases, and, under certain circumstances, some of the contagious diseases, provided the hospital has facilities for their isolation. With reference to the admission of contagious diseases during infancy, however, great dangers and very bad results are usually seen from grouping many children together, particularly those suffering from measles, diphtheria and whooping-cough, among whom the tendency is so great to the development of broncho-pneumonia amid such surroundings. Many of the bad results attributed to the use of antitoxin in infants are simply the effects of hospitalism, and were seen years before antitoxin was known. In a recent epidemic of measles seen in the Nursery and Child's Hospital, over one-third of all the cases were complicated by pneumonia, and in some wards almost every child with measles developed pneumonia. Dr. Crandall tells me that of 13 cases of measles in one crowded ward in the Randall's Island Hospital 12 were fatal, all from pneumonia. Results in measles and diphtheria during the first two years are, I believe, much worse in crowded hospitals than when children are treated separately in tenement-houses even under very bad surroundings. One of the reasons why cases like those already mentioned are not suited to hospital-treatment is the prolonged stay that convalescence from infectious diseases requires. Under such conditions, complications like late pneumonia, entero-colitis, etc., are almost certain to develop, and to these many patients, who escape the acute disease, succumb.

Several peculiar phases of disease are seen in infant-hospitals. One of the most striking of these is hospital-marasmus. While it occurs most frequently in children already suffering from malnutrition, or in those that have previously suffered from acute disease, it is at times seen in others that were perfectly well on admission. After gaining perhaps for a week or two, such children begin, as a result of hospital-surroundings, to lose appetite and color; they show stationary weight; then a loss of a few ounces; then vomiting begins, and a more rapid loss continues until a condition of marasmus is reached. Some of these children show no evident signs of indigestion, and may continue to have good,

well-digested movements from the bowels. Gradually they become more and more anemic; frequently there is general edema; and at last they succumb to marasmus. Toward the end there may be an intercurrent attack of some acute process like bronchitis, acute diarrhea, possibly broncho-pneumonia, but death often occurs without any of these, the autopsy showing no lesion to explain the fatal result. Hospital-marasmus is rarely seen except in infants under eight months old, and it occurs most frequently in those under four months old. It demonstrates, beyond any question, how injurious to infant-life is the atmosphere of a hospital. As already stated, one-third of the deaths in children under one year old who are admitted have been, in my experience in the Babies' Hospital, due to marasmus.

A most distressing thing is the frequency with which children admitted for simple malnutrition, or some slight ailment, develop some serious forms of acute disease while in a hospital. I need not dwell upon how often the contagious diseases are contracted amid such surroundings; this is well known and fully appreciated. I wish especially to refer now to other diseases, particularly pneumonia and acute intestinal diseases. The hospital-records show that during the last ten years no less than thirty children admitted for minor ailments developed primary pneumonia; and many more, inflammations of the gastro-intestinal tract. While, without doubt, the opportunities for infection from without are very great in a hospital, it is my belief that most of these attacks are to be regarded as examples of auto-infection, and are due to the fact that the child is placed under conditions that greatly diminish its resistance. Few things are more discouraging than to see a child, admitted in tolerably good condition, develop, after a stay of a week or two in the hospital, an acute pneumonia or entero-colitis, which proves fatal.

From what has been said, the inference is to be drawn that infants should not be sent to hospitals for minor ailments and be kept there a long time; also that the effect of associating sick and well children in the same ward has a most injurious effect upon the latter; and, further, that after every form of acute illness, children should be removed as soon as possible from the hospital-atmosphere.

The ideal infants' hospital is, in my opinion, not a large one. The general hospital, with its 200 or 300 beds, cannot be imitated here. The greater the degree to which infants are massed and crowded together, the more unnatural are the conditions under which they are placed, the worse are the results of treatment and the less valuable does the study of disease under such conditions become as a guide to practice elsewhere. As an illustration of this last point let one study the statistics of the large foundling-asylums of Europe. A hospital of 50 or 60 beds is, in my opinion, greatly

to be preferred to one of double or treble the size; but it should be provided with every appliance known for the relief of sick infants, and its work should be done under the most approved conditions for achieving the best results. The hygienic surroundings should be more carefully considered and watched than those of a well-appointed nursery. Small wards containing from 4 to 6 patients are greatly to be preferred to those for 15 or 20, if for no other reason than to avoid the danger of contracting contagious disease. So far as work in large cities like New York is concerned, hospital-work during the summer should be conducted in the country. With diarrheal diseases, I believe, the results obtained in close hospital-wards in the city are quite as bad as in the tenements.

A reduction in hospital-mortality is to be secured, not simply by improving our methods of feeding, although this has been the aspect of the subject that has so far attracted most attention, I regret to say to the neglect of the other phases of the question. This is not all the problem; nor, to my mind, even the most important feature of it. Between ordinary methods of feeding and the best methods, the difference in results in institutions is not great, indicating very clearly that this is not the factor of chief importance. It is a familiar experience to see an infant, who, in a hospital, has been losing in weight and showing all the signs of perverted nutrition, begin to improve at once and gain steadily when removed from the hospital-ward, sometimes upon the identical food that it was receiving, and not infrequently when both the food and the manner of feeding have been greatly inferior. In hospitals not only the feeding but all the other conditions mentioned must receive due consideration as well—air-space, ventilation, airing, temperature, nursing, and care. When all these are attended to, I believe that the results obtained will fully justify the existence of separate hospitals for infants in bringing about a more accurate and wider knowledge of infantile diseases and their treatment.

Hospitals for infants are necessary, as I have already shown, but they must be conducted with a very definite knowledge of what can be done in them and what should not be attempted. By recognizing fully their limitations, as well as their advantages, they may be made of the greatest possible benefit to the profession and the public. The conditions of success are difficult and the discouragements are many. Those with experience will not say, I am sure, that I have overstated the facts. The work must be well done to be of any value either to the patients treated or to medical science, and unless circumstances will admit of its being done well it should not be attempted at all.

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**Shades of William!**—With characteristic accuracy *The Medical Press and Circular* commences an editorial article as follows: "The attempt to open the grave of the famous John Penn, the founder of Pennsylvania, has roused," etc.



CEREBRAL CONTUSION.<sup>1</sup>

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of Chicago, Ill.,

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My object in selecting the subject of cerebral concussion has been threefold: (1) Traumatism of the head are common and are so generally followed by cerebral symptoms; (2) the practice of classifying all cerebral lesions following injury into cerebral concussion or compression is inconsistent and usually most unsatisfactory; and (3) the etiology, pathology, and symptomatology of a large proportion of the cerebral lesions are so nearly identical with those of contusions in other parts of the body that contusion of the brain should be recognized as a distinct lesion of frequent occurrence.

It is commonly taught in the schools and in the text-books that the two conditions of the brain following trauma of the head are cerebral concussion and cerebral compression. One is struck by the variety of conditions and symptom-groups that have been and in most instances are now collected and presented under the general term cerebral concussion, in the various text-books on the subject.

A moment's calm reflection should convince any surgeon that the mild, transitory, dazed condition following a slight blow on the head, the condition of profound shock supervening upon the reception of a more severe injury to the head, and the prolonged unconsciousness, mental aberration, muscular incoordination, spasm or paralysis, etc., that sometimes follows injury to the head, do not present enough elements in common to warrant their being classed together under the term of cerebral concussion.

By again referring to our text-books we find that while the unsatisfactory features of such a classification are becoming generally recognized, in only a single instance, so far as I know, has the old classification been discarded. Most writers now include under the head of "concussion" a statement to the effect that many cases are attended with more or less laceration of the brain-tissue, with minute visceral or meningeal hemorrhages and symptoms varying with the degree of laceration. This condition of laceration of tissue and extravasation of blood, attended with symptoms of more or less permanency, is the identical condition to which I desire to call attention, and to urge that it be recognized as "cerebral contusion," as advocated in Park's *Surgery*.

The researches of the pathologist enable us to readily distinguish between the various conditions that have been improperly classed under the head of the least serious of all of them.

The term cerebral concussion should be limited to those phenomena presented when the function of the brain has been disturbed by trauma, without the production of any gross mechanical lesion. We recognize two conditions under this general heading; the first is the sudden and transitory disturbance of the circulation and fluid equilibrium of the cerebrum caused by violent shaking or sudden jarring of the head as evidenced by what the laity term "stunning." The condition is in reality but a momentary disturbance of the fluid-equilibrium of the brain, and as soon as the normal equilibrium is restored the patient is perfectly well. There is no possibility of any cerebral sequelae to such an injury. The second condition is also one of disturbance of the circulation, but it differs from the first in that the injury has been of sufficient severity to cause reflex vasomotor spasm and to give rise to the symptoms commonly grouped as evidence of cerebral concussion; complete or partial unconsciousness, rapid, feeble pulse, pallor of the skin, copious perspiration, dilated but equal and reacting pupils, shallow respiration, muscular incoordination, with occasionally vomiting and loss of sphincter-control.

It will be noted that these symptoms and signs are identical with and undistinguishable from those of "shock," and under the proper treatment for shock they disappear as in that condition. While the shock incident to trauma of the head is not due to any gross lesion of the brain, it is barely possible that it may be of sufficient severity in isolated cases to cause death; but this must be exceedingly rare.

By recalling the anatomy of the membranes of the brain we can readily appreciate why injuries to the head cause temporary disturbance of the equilibrium of the fluid-distribution. The cerebral subarachnoid space is confined by the rigid bony cranial walls, while that of the spinal cord is surrounded by a large plexus of vessels, which admits of its expansion. The free communication between these spaces enables the vessels to serve as a governor or regulator of tension in the cranium. The size of the brain varies with every respiration and every heart-beat, but its tension is equalized by this elastic prolongation surrounding the spinal cord.

The fact is that patients suffering from cerebral concussion of either the first or the second degree mentioned, in its pure and uncomplicated type, recover promptly and completely as soon as the equilibrium of the fluids of the brain is restored.

In contradistinction to the foregoing conditions, which are practically never fatal, a large number of cases of head-trauma have proved fatal. In these cases post-mortem examination reveals hyperemia of the brain and possibly of meninges, usually with more or less exudate and extravasation of blood caused by the rupture of minute vessels, occasionally thrombosis of veins, and not infrequently in the more serious cases positive

<sup>1</sup> Read at the Eleventh Annual Convention of the International Association of Railway Surgeons, held at Toronto, Ont., July 6, 7, and 8, 1898.

lacerations, with small distinct localized cerebral hemorrhages are detected.

While these are most commonly found at a point corresponding to the site of the trauma, the peculiar anatomic construction of the calvarium and the intimate relationship with it of the membranes and the brain render injury to the bloodvessels and even the brain at the opposite end of the pole of exceedingly common occurrence. Hemorrhages of punctate character are liable to be overlooked unless the sections of the brain are numerous and carefully made. When they cause the fatal issue their location will usually be in and about the medulla.

It will have been noted that these lesions are identical with those of contusions of the soft parts in other parts of the body, and, therefore, in at least a pathologic sense we are justified in considering cerebral contusion as a definite lesion. The term "cerebral compression" indicates a mechanical disturbance of the cerebral circulation caused by an increase in the intracranial pressure, which may be the result of hemorrhage, depressed fracture, tumors, or inflammatory exudates.

In addition to the identity of the lesions produced by all contusions, we find that the symptoms correspond with the behavior of such lesions generally, being modified only by peculiarities of the organ's structure and function and its encasement in unyielding walls. The symptoms of shock are first noted; but, instead of disappearing, some of them persist, and others are changed; while in many instances new and variable symptoms develop, demonstrating positively that all of the conditions did not arise at the moment of injury, but that the occurrence of hemorrhage or exudation has produced new symptoms. The pallor of the skin and the profuse perspiration disappear, the pulse becomes slower and fuller, the respiration slower and deeper, the degree of unconsciousness may become less or it may give way to a condition of stupor or of actual mania; in addition to muscular incoordination there may be muscular spasm, which may, in turn, be followed by paralysis. These symptoms are of great importance in determining the occurrence of cortical hemorrhage or exudation, and, should it be localized, they will serve a good purpose in locating the area for surgical treatment should the symptoms persist. The symptoms usually disappear in the course of from a few days to weeks, but as there are definite lesions that may have destroyed certain foci, or that require cicatrization, the resultant symptoms may persist and even become permanent. If pronounced hemorrhages occur, symptoms of cerebral compression will manifest themselves.

In making a diagnosis of cerebral contusion it is necessary to exclude alcoholic and uremic coma, meningitis and non-traumatic apoplexy. Examination of the breath, urine, temperature and bloodvessels will usually render this easy, although a combination of two or more of the conditions might render it diffi-

cult and in some cases impossible. An alcoholic breath, with subnormal temperature, is characteristic of alcoholic coma; high temperature, with a bounding pulse, signal the presence of meningitis; while the presence of albumin and casts in the urine, and edema, with an absence of trauma, etc., would cause one to suspect uremia, and, likewise, the presence of a non-traumatic apoplexy should be suspected if, in an atheromatous subject, there was sudden paralysis, without any evidence of contusion, and especially if the temperature was first subnormal and later became normal.

The prognosis of cerebral contusion, like contusion in other parts of the body, depends upon the location, character and degree of the lesion and the presence or absence of infection. Unless some vital center is involved, or the hemorrhage and extravasation cause marked compression, or infection with inflammation supervene, the case will probably pursue a favorable course, and after a variable time result in a practical cure. Frequently, some slight muscular action or mental function is permanently disturbed; unfortunately these conditions occasionally persist permanently to a marked degree.

The treatment of cerebral contusion is like that of contusion elsewhere. If diffuse and non-productive of focal symptoms it should be treated symptomatically and special attention be given to the securing of asepticity of any wound that may be present, and to the establishment and maintenance of good excretion, with the additional precaution to use diffusible cerebral stimulants cautiously, if at all. The maintenance of physical and mental rest is essential. Cold is as serviceable here as in other parts of the body, and its use should be more strongly advised. If there are evidences of local extravasation, to the extent of interfering with the nutrition or the function of the part, producing cerebral compression, etc., the cranium is to be opened and the tension relieved, just as if the contusion was of the forearm. This is also indicated when the symptoms are focal in character and especially when they are progressive; *e. g.* multiple, diffuse punctate hemorrhages in the motor region would usually cause muscular contractions and spasms, and later paralysis might result. Such a sequence would indicate distinct hemorrhage if of early occurrence, or exudation if later, of sufficient amount to admit of its possible removal or relief of tension caused thereby by trephining. When symptoms persist potassium iodid is as strongly indicated for the absorption of the exudate as in other parts of the body.

The following brief reports of a few cases present evidences that have distinct bearing upon this subject:

CASE I.—Several years ago, when I first entered upon railway-work, Mr. G., 42 years of age, and in perfect health, was supervising the work of retracking a derailed car, when the chain in use broke, the end striking him in the back of the head near the midline above the superior curved line of the occipital bone, inflicting a scalp-wound 2 inches long. The



man became immediately unconscious and was taken to the hospital. I saw him in less than half an hour, when he presented the ordinary evidences of shock. The skin was pale and moist, respiration was sighing and at times Cheyne-Stokes in type, the pupils were slightly dilated but equal and active, involuntary evacuations from bowels and bladder took place, the pulse was rapid but of fair quality, and no evidence of paralysis or of fracture was present. I had the good fortune to have received my surgical teachings under the celebrated Gunn and the distinguished Parkes, and their admonition to administer cerebral stimulants cautiously, if at all, after an injury to the head came to my mind as being especially applicable in that case. There was nothing to indicate the use of stimulants save the unconsciousness, and I well remember how severely my do-nothing policy was criticised by the relatives and friends of the patient. An elderly surgeon was called in consultation, and after a thorough explanation of what had been done and the reasons therefore he fortunately agreed with the waiting policy. I remained with the patient for fully 2 hours, watching his pulse and general condition carefully, lest neglect should be charged, as I was not giving anything to the patient. During the next few hours, when reaction was taking place, I was amply rewarded for what I had or rather had not done. Heat was the only measure employed in combating the shock. When reaction began, it came on with a rush; the face became flushed, the pulse bounding, and the temperature rose rapidly. There had been from the first considerable uneasiness, but as reaction progressed the man became quite violent in the use of his limbs. The prognosis seemed exceedingly bad at this time; a fatal termination appeared inevitable. The knowledge that I had not contributed to the cerebral hypercongestion by the administration of undirected circulatory stimulants was indeed exceedingly comforting.

The patient remained completely unconscious for nearly 2 weeks and then began to show some signs of intelligence, and in the course of 6 weeks his mind became clear; only a slight deficiency of acuteness of vision and a slight but noticeable hesitation in talking remained as relics of the disaster.

During convalescence he was at times delirious, at others foolish, and occasionally he manifested symptoms of acute insanity. In the absence of focal or general evidences of cerebral compression we naturally called the case one of "concussion with delayed recovery," and did not deem operative treatment advisable.

The diagnosis did not satisfy me then, and in more recent years, since I have had opportunity for more observation, I have considered this case as having been one of cerebral contusion, with probably considerable laceration of the brain and extravasation of blood in the cortex and membranes in both the occipital and frontal regions. I believe the symptoms first presented to have been those of shock, pure and simple, but as extravasation and exudation occurred in the contused and probably lacerated areas the evidences of irritation of the cortex became manifested in the constant and at times general use of the muscles of the whole body, with the delirium. The intellect, vision and the cortical functions generally became clear as the extravasations become absorbed or condensed, until after a few months the man was completely cured. Certain it is that the usual evidences of cerebral compression were not present here, and equally certain it is that something more than a simple concussion or shaking of the brain was sustained.

CASE II.—About 3 years ago I was called to a wreck of the "limited" express and found a fireman who had sustained a most extensive wound of the forehead and a fracture of the frontal bone, and presenting marked evidence of shock. The

fragments were greatly depressed and some had been driven into the brain-substance which was oozing from the wound.

I disinfected the wound thoroughly and as soon as possible brought the man to the city and elevated the fragments to their normal position and supported them on a framework of crossed catgut. There were no focal symptoms, excepting marked Cheyne-Stokes respiration. The patient was exceedingly restless and threw his limbs about constantly. He died in about 8 hours; and upon postmortem examination, minute hemorrhages were discovered in and about the medulla. There was no other lesion detected except the laceration, with extravasations in the frontal lobe.

This case illustrates that extensive depression of the skull may be present without presenting the clinical evidences of compression, providing a special focus is not involved and the wound is open and so situated that increase of intracranial tension does not occur; that multiple extravasations can be produced at the opposite side from the injury; that, as in most fatal cases, the minute hemorrhages were in and about the medulla, and that all the lesions were identical with contusions and lacerations of soft parts in other parts of the body, their special importance here being due to the specialized function of minute areas and tracts of the brain.

Since that time I have seen a number of cases in which recovery from shock was exceedingly slow, and some of which did not present any evidence of cerebral compression, while others did. I have selected 2 cases as illustrations.

CASE III.—On December 25, 1897, a man, 46 years old, was found unconscious on the street. Examination at the time of his admission to the hospital revealed a pulse-rate of over 100, a temperature of 99°, and respirations of 28. No atheroma was detectable, and no edema. The pupils were equal. Unconsciousness was nearly complete. There were evidences of a slight contusion, 1½ inches long, over the left temple, and a slight diffuse contusion over the right temporal region. Upon entrance there was spastic paralysis of the muscles of the left leg and arm, with total paralysis of the left side of the face. The scalp was incised by the house-surgeon and the absence of a fracture demonstrated.

I saw the patient on the second day, when the paralysis of the left side was complete. Pulse, temperature and respiration showed slight increase, while unconsciousness persisted.

The diagnosis of a diffuse cortical hemorrhage in the right Rolandic area was made, and an exploratory operation decided upon. An oblong button of bone was removed, readily exposing the high motor region. The meninges were greatly congested. An infinite number of punctate hemorrhages were detected over an area about 1½ inches in diameter, in which the brain-substance was pulvified. The finger was readily pressed into the disorganized brain-substance for over an inch, with practically no resistance. The brain presented the appearance of being filled with grains of powder. Careful exploration with probe, aspirator and finger was made without detecting any large hemorrhage. The opening of the dura relieved the cerebral tension noticeably, and immediately the pulse became regular and the respiration slower and easier. The dura was closed, the button of bone replaced and a capillary drain was inserted. The patient gradually became weaker and more deeply comatose, and died on the fifth day.

In this case we were able to positively demonstrate the ordinary appearances and lesions of contusion, with disintegration of brain-tissue, without fracture, which terminated fatally, even after relief of cerebral tension by aseptic trephining. The presence of pro-

gressive focal symptoms indicated a local gradual compression or destruction. The operation demonstrated positively the nature of the lesion and enabled us to treat it intelligently, although, in this particular case, unsuccessfully. Postmortem examination would probably have revealed numerous basilar and medullary punctate extravasations.

CASE IV. On March 27, 1898, Mr. A. M. was admitted to my service in the Cook County Hospital, having been found unconscious on the railroad tracks. He was unconscious; his pulse was rapid and fairly full, his respiration labored, his pupils equal and slightly contracted and reactive. The surface of the body was dry and of normal appearance, and there was no paralysis of the sphincters or of other muscles. There had been slight hemorrhage from the nose. A contused, lacerated wound of scalp on the vertex posteriorly and a slight abrasion of the face were noted. No fracture was detected upon exploration.

The treatment consisted in thorough disinfection of the whole head and careful closure of the scalp by sutures. Shortly after admission it was noticed that the patient threw his arms about considerably. This uneasiness increased and in the course of two or three days there were distinct jerking of all the extremities. The man was in almost constant motion. He was absolutely indifferent to everything and everybody during the greater part of four weeks. Liquid nourishment was given him from a spoon for a number of days. The bowel-movements became involuntary. The temperature was never above normal, while the pulse-rate varied from 72 to 90, and the respirations from 18 to 24. There was at no time any focal symptom. About the eighth day the patient began to manifest some intelligence and would answer questions intelligently. For two weeks he exhibited some improvement; moments of lucidity would appear between longer intervals of wandering delirium.

During the fourth week the man became somewhat stubborn at times and on the thirtieth day he developed acute mania. At last accounts he was under treatment in the county insane asylum.

There was but slight evidence of concussion or shock in this case, and there were certainly no clinical evidences of "cerebral compression" at any time. The symptoms were due to the extravasation of blood and later the occurrence of exudation as the result of the contusion of the brain and the membranes.

I maintain that all of the foregoing cases were instances of cerebral contusion, and that the varied results were dependent upon the degree, extent and location of the lesions characteristic of contusions. From the consideration of these cases and the facts already mentioned I believe we are justified in making the following deductions:

1. The term "cerebral concussion," as generally employed, is indefinite and unsatisfactory, and inconsistent with modern ideas of pathology and precision.
2. The term "cerebral concussion" should be limited to those phenomena resulting from disturbance of the function of the brain by trauma, without the production of gross mechanical lesions of the brain.
3. The slightest manifestation of concussion is due to disturbance of the fluid equilibrium of the brain and is always of momentary duration and effect.
4. More severe concussion produces spasm of the vasomotor system and results in the production of signs and symptoms that are identical with and undis-

tinguishable from those of shock, and which persist until the circulatory equilibrium is restored and not thereafter.

5. The gross mechanical lesions of the brain produced by trauma, with or without fracture of the skull, are identical with those of contusion elsewhere.

6. The clinical history corresponds with what we should naturally expect from a contusion of tissues of such delicate structure and of such specialized function with such anatomic relations.

7. The treatment of contusion of the brain is the same as that of contusion elsewhere, with the special demand for the early treatment of complications.

8. The term "cerebral compression" indicates a mechanical disturbance of the circulation of the brain by any lesion that materially increases intracranial tension.

### CASSARIPE: A NEW REMEDY FOR THE TREATMENT OF CORNEAL ULCERS AND OTHER INFECTIOUS DISEASES OF THE EYE.<sup>1</sup>

By S. D. RISLEY, A.M., M.D.,  
of Philadelphia.

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THROUGH the courtesy of Dr. H. B. Chandler, of Boston, my attention was called to "cassaripe" in a conversation at Washington last year during the meeting of this Society. He subsequently sent to me a supply of the preparation, a 10% ointment, which I have used with most gratifying results in a large series of cases of ulcers of the cornea, and in a large group of cases of purulent disease of the conjunctiva. The following letter from Dr. Chandler gives the information he had gained about the drug, and explains his reasons for its employment. To him belongs the credit for calling attention to what promises to be a useful addition to our means of treating those dangerous and often rebellious forms of disease.

After employing the drug, as noted, and recognizing its value, I wrote to Dr. Chandler for further information about it, as I could find no satisfactory account of it, except a mere mention of the name *cassariep* or *cassaripe* in the *Century Dictionary*, as the juice of the black cassava. Dr. Chandler wrote me as follows:

In reply to your letter regarding cassaripe, I would say that it is obtained from the bitter cassava-plant. The natives, in making cassava-bread, grate the root, and a milky juice exudes. This is acid, and is supposed to be very poisonous. The juice is concentrated to a semisolid known as cassaripe, heat destroying its poisonous qualities. Its use by me was suggested while in the tropics by learning that it was used commonly as a preservative, a solution poured over meat seeming to preserve it indefinitely. Theodore Metcalf & Co. imported some for me two or three years ago, as none could be found in this country. In using it I often incorporate atropin or pilocarpin with happy results. In large, sloughing corneal ulcers in old persons, it has given more satisfaction to me than anything I have ever used. I have written nothing regarding it.

<sup>1</sup> Read before the American Ophthalmological Society, July, 1898.



Later, in conversation with my friend, Dr. J. T. Rothrock, Commissioner of Forestry for Pennsylvania, he kindly consented to look up the matter from the standpoint of botany. I am indebted to him for the following facts: Cassareep is the inspissated juice of the cassava, which is highly antiseptic, and forms the basis of the West India pepper-pot. The cassava belongs to the Euphorbiaceæ or Spurge family, and is extensively cultivated in tropical America and the West Indies for the large fleshy root, which contains an abundance of farina. Two principal varieties are cultivated, the Manioc, or *Manihot utilitissima*, or bitter cassava, and the *Manihot aipi*, or sweet cassava. The former contains a juice of a highly poisonous nature, while the latter is wholesome and used as a vegetable. While both produce a large quantity of farina, the *utilitissima* is more productive, and is therefore more extensively cultivated. The farina is obtained by grating the root to a pulp, after which the poisonous juice is expelled by pressure and washing. The mass is then pounded into a coarse meal resembling bread-crumbs, which are made into cakes and subjected to heat, which drives off or destroys what may remain of the poisonous juice. This forms the cassava-bread, which is an important article of food throughout tropical America.

There seems to be not a little confusion regarding the botanic features of different species of the Euphorbiaceæ, which contain many poisonous varieties, even the natives often mistaking the poisonous for the innocent species in preparing their food.

The genus *Manihot* is shrubby or herbaceous, or shrubby below and herbaceous above. Male and female flowers are distinct, though on the same plant. The seed-vessels are three-celled and three-seeded. There are no petals, but the calyx of the male flowers is often colored. The flowers are in racemes, each under a bract. Muller<sup>2</sup> considers *Manihot aipi*, or sweet *Manihot*, as merely a variety of *Manihot palmata*, and says that the leaves are usually five-parted, with the lobes obovate lanceolate or elliptic lanceolate, and more or less covered with a whitish bloom on the lower surface. He adds that this species differs from the *Manihot utilitissima* or bitter *Manihot*, the poisonous species, not only in the reddish non-poisonous root, but also in its ovaries, capsules and stipules; also that the leaves of the *utilitissima* are deeply palmated, with from three-parted to five-parted divisions about 10 or 15 cm. long, and from 1 to 5 cm. broad, covered with glaucous bloom beneath and brownish above.

Griseback,<sup>3</sup> however, regards the forms mentioned as belonging to the same species and adds that the tubers, both sweet and bitter, are found, but that this difference is not characterized by trustworthy specific characters. Dr. Rothrock agrees with this statement and adds "that the plants are so much alike that even in the

tropics deaths occur from eating the wrong plant by mistake." He himself witnessed a death from this cause in 1890. Lindley<sup>4</sup> says "*M. utilitissima* is a shrub about 8 feet high, cultivated for food all over the tropical parts of the world. Of this plant the large root, weighing as much as 30 pounds, is full of a venomous juice, which, if taken internally, produces death." An intoxicating beverage is made from it, called Piwarrie, which is prepared by women chewing the cassava-cakes, and ejecting the masticated substance into a wooden bowl, where it is allowed to ferment for some days, and is then boiled. It is a common drink with the natives, and is said to have an agreeable taste. The mode of preparation, however, is repugnant to Europeans; notwithstanding this, one who drank it reports thus: "In my opinion it is very agreeable and wholesome, for I drank it in large quantities at the different Indian settlements I visited."

In preparing the cassava, as already stated, the poisonous expressed juice is put into water; the starch that it contains falls to the bottom; the water is poured off and the starch is placed on hot plates; this causes the starch-grains to swell and burst, forming the tapioca or Brazilian arrowroot of the shops. It is this poisonous juice or waste-product from which the cassaripe is prepared, its poisonous properties being destroyed by the heat employed in its preparation. In preparing the cassaripe used for cooking purposes, especially in preserving meat, the coolies mix red pepper and spices with the cassava-juice, which they boil to the thickness of sirup. It is then cooled, bottled, and a quantity is exported. It is this cassaripe that makes the renowned West India pepper-pot. A teaspoonful of it put into a vessel containing a number of pounds of mixed meats and boiled, will preserve the meat for an indefinite time, notwithstanding the perpetual summer of those tropical climes.

A few points with regard to the employment of cassaripe need to be emphasized. I have at no time used it stronger than in a 10% ointment. It causes no irritation, however, and I see no objection to employing it in much stronger preparations. The ointment was applied freely between the lids, and the eye subjected to massage so as to distribute it thoroughly into the retrotarsal folds, and, in the corneal cases, a protecting bandage was applied. When the patients were in the hospital, this was repeated three times daily; in the outdoor cases, morning and evening. No other treatment was employed except the use of atropin, and a wash of boric acid. In a few minutes after the application of the ointment in new cases, the discomfort was much diminished, and the improvement was usually rapid, as compared with other modes of treatment. In a case of ophthalmia neonatorum, the eye was thoroughly cleansed, the ointment of cassaripe applied, and a supply given to be used three times daily at home, after

<sup>2</sup> De Candoles Prod., Vol. 15, Part 2, p. 1062. — Flora of the British West India Islands, p. 37.

<sup>4</sup> Vegetable Kingdom, p. 280.

the usual wash. In two days the purulent discharge had entirely ceased. My observation seems to show cassaripe to be a powerful vegetable antiseptic, which promises to be a useful addition to our means of treating infectious forms of ocular disease.

## GASTRO-ENTEROSTOMY, WITH REPORT OF A CASE.

By JOHN A. HAWKINS, M.D.,  
of Pittsburg, Pa.

THE following report may prove of interest in its diagnostic suggestions:

On December 30, 1897, I first saw F. H., a German, aged 54 years, who then weighed 100 pounds, while his weight when in health was 168 pounds. For ten years the patient had had many attacks of vomiting, but the attack in which I saw him was the most severe of all, having lasted for more than a year. He had always been constipated, sometimes not evacuating the bowels for more than a week. He vomited frequently, always about an hour after taking food, and feeling much better after the stomach had been emptied. Pain was always present, but it was most severe after eating and least after vomiting. Lying on the right side would provoke an attack of vomiting. The vomit was of a dark-snuff color at times. At others it was clear and contained portions of undigested food. The vomit yielded a free-acid reaction, but there was a constant absence of HCl. Palpation in the epigastrium and left hypochondrium elicited no sensation of tumor. After dilating the stomach with gas, a tumor was found in the left hypochondrium, midway between the median and the left mammary line, seemingly about the size of a fist, its ascending and descending movement with respiration being easily discerned by palpation.<sup>1</sup>

A diagnosis of carcinoma of the stomach was made and from the situation of the tumor it was supposed that the growth occupied a position near the center of the greater curvature. Consent to an operation was not obtained until the middle of January, although the patient was rapidly losing strength.

On January 24, 1898, an incision was made in the median line extending from the ensiform appendix to the umbilicus. Through this incision the stomach could be felt and upon attempting its withdrawal it was found fixed by adhesions, some of which bound it to the diaphragm. The tumor was located about half-way between the center of the greater curvature and the pylorus. The mass was exceedingly hard and by its contraction had caused stenosis of this portion of the viscus. It was decided to perform gastro-enterostomy, and a portion of the jejunum, about 20 inches from the pylorus, was brought up and attached to the posterior wall of the stomach by means of the Murphy button applied in the usual manner. No sutures were used. The patient's condition was poor from the beginning, and the operation was done with the foot of the table elevated. Chloroform was used as the anesthetic. The abdomen was closed with silk-worm-gut, the stitches passing through skin, fascia, muscle, and peritoneum all together. No drainage was provided and there was no flushing of the abdominal cavity.

The patient's temperature immediately preceding the operation was 98.6° F., the pulse 104, the respiration 24. Immediately after the operation the temperature was 95.4°, the pulse 120, the respiration 24. Hot bottles were placed around the patient, and he was given a hypodermic injection of  $\frac{1}{160}$  gr. of atropin sulphate and an enema of  $\frac{1}{2}$  ounce of whisky in 4 ounces of beef-tea with 1 pint of hot normal salt-solution. At the expiration of 35 minutes the temperature was 96°, the pulse 118, and the respirations 22. After a further half-hour the temperature was 97.2°, the pulse 100, and the respirations 22. Two hours after the operation the temperature was 98.6°, the pulse 100, and the respirations 22.

<sup>1</sup> The method I use for dilating the stomach is to give the patient, in separate glasses, the contents of the blue and white papers of a Sedlitz powder, each mixed with about two or three ounces of water, the contents of each glass being swallowed quickly. This liberates sufficient gas to dilate an ordinary-sized stomach without creating distress. The gas may be quickly expelled by having the patient assume the upright position.

At no time did the temperature go above 100.8°. After the operation the patient received during 24 hours enemas of whisky and beef-tea at intervals of every 3 hours; also, for the first 8 hours after the operation, at intervals of every 2 hours, enemas of hot saline solution, each containing one pint; and every 4 hours strychnin sulphate,  $\frac{1}{40}$  gr., and occasionally codein sulphate,  $\frac{1}{2}$  gr., when restless or suffering from pain.

The patient recovered nicely from the operation. When he could be persuaded to take food it caused him no pain. Two days after the operation he was given liquid nourishment by the mouth. During the first 48 hours he vomited occasionally, but after that vomiting occurred very seldom and then only when the patient was overfed. The bowels were moved first during the second day after the operation. The man objected greatly to taking food, fearing that it would start up the vomiting from which he had suffered so much prior to the operation, and it became necessary to continue feeding him by enemas of peptonized milk and eggs, with whisky and beef-tea as needed. On the eighth day I concluded to remove one of the sutures, as a little redness could be seen around it. On the ninth day, as the wound looked well healed, I removed the remaining stitches and applied a supporting bandage. On the next day, when the wound was examined, it was found that the entire line of incision had separated down to and into the peritoneal cavity, protrusion of the intestines being prevented only by the transverse colon, which was adherent to the lips of the wound. The man was given a little chloroform and the wound was again closed and the sutures left in for 10 days more, and when removed the wound was found to be firmly united.

The only cause I can assign for the reopening of the wound is the fact that the patient was extraordinarily weak and wasted, and that the vital powers were incapable of repairing the wound in the usual time.

As the patient would take little or no food it was only a matter of time until the bowel would become so irritable as to refuse all nourishment by that route. This happened about the fourth week. At the end of the sixth week the patient died. During this time he had suffered but little and vomited seldom. Prior to the operation he had suffered continually, and vomit-



FIG. 1. Saw wing portion of greater curvature of stomach with jejunum and its mesenteric attachment. All that portion shown on left of photograph was cancerous. Ligature at the lower right corner is on distal part of jejunum.





FIG. 2.—Shows interior of greater curvature of stomach with opening in posterior part. The opening is shown in center of photograph, and was larger than the Murphy button which was found in stomach at autopsy.

ing followed the ingestion of any article either of food or drink.

At the autopsy an incision was made parallel with the original incision and some adhesions between the line of original incision and abdominal contents were found. Upon opening the stomach the button was seen, the plating being almost gone and the brass attacked. Union was perfect and the opening between the stomach and the bowel at the point of anastomosis was expanded rather than contracted. The strictured portion of the stomach was found tightly contracted. The accompanying illustrations show (Fig. 1) a portion of the stomach, with the anastomosed intestine, partly covered by omentum; also the opening (Fig. 2) made in the posterior wall of the stomach by the Murphy button. Microscopic examination showed the growth to be a scirrhous carcinoma.

## ONE HUNDRED CASES OF LABOR AT VARIOUS STAGES—WITH NOTES.

By R. H. EDMONDSON, M.D.,  
of Gallup, New Mexico.

In the 100 cases attended, 24 of the patients were Mexicans, 2 negroes, and 74 white. The youngest mother was a negro girl, 11 years and 2 months old; the oldest primipara was 45. In 10 cases the presentation was R. O. A.; in 6 it was the breech; in 1 a footling; and in the remainder, L. O. A.

Forceps were required in 5 cases, 1 of which was twins.

Eclampsia occurred in 4 labors of term, adherent placenta in 3, hour-glass contraction in 2, and septic infection in 2. In 1 case, seen several days after labor, phlebitis of the left leg existed. The 100 cases include 14 abortions occurring: 5 at 3 months, 2 at 4 months, 2 at 5 months, 2 at 6 months, 2 at 2 months, 1 at 7 months. The remaining 59 were normal. In 1 case

aborting by accident at 6 months, the entire contents of the womb were expelled en masse, no rupture of the membrane having occurred, a very severe hemorrhage preceding the mishap. The heaviest child delivered was 12½, the lightest, 3 lbs. The mortality in children at term was 3, 1 resulting from breech presentation, 1 from footling presentation in which there was cessation of pains when the head was at the os and before coming down on the perineum, and 1 was still-born; this was due to lack of nourishment, as the mother was nursing a child 9 months old, so the last impregnation must have occurred within a month of her first delivery. Ophthalmia of the newborn developed in 5 cases. One child was born with 5 fingers; another had curvature of the fibula and tibia due to rickets. Partial rupture of the perineum occurred 6 times in primiparas.

In a large per cent. of first labors the termination was from 10 days to 2 weeks earlier than expected by the mother's count. One case ran 8 months, another 11 months, both resulting in normal labor. Mastitis was never severe, no breast ever requiring lancing, etc., to relieve engorgement. It will be noted that the mortality in the mothers is nil, though some were confronted by serious complications. The treatment followed is given below.

To my mind the most serious complication of pregnancy and labor is eclampsia, due to uremic poisoning. In Dorhen's collection of 747 cases the death-rate reached 29%. In 104 cases collected by Hofmeier the mortality was 32.4%. Braun reports from Vienna in 10 years, 73 cases, with 20 deaths, 26%. (Lusk.)

From these reports it is seen that the mortality is high, even among eminent men of the profession. The treatment followed in my four cases is that laid down by Lusk. I deliver as quickly as possible and give two drops of croton-oil on sugar, which produces watery discharge from the bowel. I then fill 6 beer-bottles with hot water, wrap them to prevent burning the patient's legs and body, and put them in the bed, under the cover. These produce sweating in a short time and relieve the kidneys. To control the convulsions, I first give ¼ grain morphin hypodermically; in 30 minutes I give 30 grains each potassium bromid and chloral by the rectum, repeated in 2 hours. Chloroform in my hands has little or no effect in controlling the paroxysms. When the child is delivered and the spasms controlled, careful nursing and good nourishment will bring the patient through a severe illness. This is heroic treatment, but one is dealing with a grave condition calling for active and effective treatment.

Next in point of seriousness is septic infection, which in my two cases was the result of adherent placenta. Davis in his recent work says: "If the uterus has become infected during prolonged labor it is best so to perform delivery that the uterus shall be removed

with the child. Hysterectomy, or total extirpation of the uterus, tubes, and ovaries, will give the patient the best chance for recovery ;"—this seems to a conservative mind extreme advice and procedure, especially in the face of Munde's latest expression in the July *American Journal of Obstetrics*, in regard to puerperal sepsis, in which he says :

"Three forms are recognized. (1) Sepsimia, or the variety in which the septic focus remains localized, and the microbe or germ, the staphylococcus, does not enter the general circulation. This form produces its systemic results not through transmigration of its germs into the general system, but through the local irritation that causes a general elevation of temperature and acceleration of pulse, precisely as a local inflammation or an abscess in any part of the body may do. (2) Septicemia, in which the germs (streptococci) find their way into the general system, and by invading the blood produce general systemic infection. While in the septic form the products of decomposition are usually putrid and their odor is exceedingly characteristic and offensive, in septicemia there ordinarily is no distinctive odor and not necessarily any peculiar pathognomonic discharge from the genital organs. (3) Pyemia, or the variety of septicemia in which deposits of streptococci take place in different distant portions of the body and these produce decomposition and abscesses. The first two varieties are by far the most common, pyemia being comparatively rare, etc., etc."

The first indication for treatment is the removal of all deleterious matter, using a dull curet if necessary, except in cases in which extreme inflammatory hypertrophy exists. Intrauterine injections of 1:10,000 bichlorid should be used 2 to 3 days, from 4 to 6 hours apart, till the fever, pains, chill, and sweating are diminished or relieved;  $\frac{1}{50}$  gr. strychnin may be given hypodermically and egg-nogg every hour to stimulate and keep up the patient's strength.

The fourchet is frequently torn and requires but little attention save cleanliness. But a torn perineum is different. It requires surgical attention at once; palliation by tying the legs together will not heal a tear over which flows the lochia; it matters not if it comes from an antiseptically clean womb, of which I doubt the existence, constantly, after labor.

Abortions, 14 of which are included in this report, are becoming alarmingly great in the West. The physician should endeavor to prevent them if possible, but is at times justified in producing them, especially when the mother's health and life are endangered. When a woman calls you who has been flowing some, and has severe bearing-down pain, and one fails to check these manifestations by the use of aconite or morphin, the best thing to do is to prepare for the inevitable by packing the vagina with sublimated gauze or cotton, which controls hemorrhage, stimulates pain, and facilitates the expulsion of the entire mass of the uterine contents. The after-treatment is simple; cleanliness, rest, and good nourishment being the most important. Routine cureting is, I believe, harmful.

**University of Berlin.**—Dr. Alfred Goldscheider has been appointed professor of internal medicine, and Dr. Karl Horstmann professor of ophthalmology.

## THE RELATION BETWEEN PHYSICIAN AND PATIENT.

By W. B. CONWAY, M.D.,

of Athens, Ga.

THERE has of late years been a wonderful change in the character of professional men as a class, and of necessity changes must continue as time goes on. New conditions arising, new means are found to meet them. And if, as we take it, the progress of the world is trending towards some far-off perfection, such changes are desirable. Yet there are some features of by-gone days which we watch disappear with a sigh, not only because they are seen through the enchantment of a distant vista, and are surrounded by the familiarity that makes them dear, but because the need for them is still apparent. The country doctor of half a century ago was a jovial, self-important man of middle age, who had won, not only the esteem and confidence of the people among whom he practised, but who had made himself counselor and advisor of every man, woman, and child in the neighborhood. He was one to be consulted, not only on the laws of health, but on all the affairs of life, and whose visits were heralded as important events in a family. He probably had not consulted a medical work since his college days, but jogged along complacently with a pair of saddle-bags thrown across his horse, containing all the medicines (especially rhubarb, calomel, and jalap) necessary to cure all the ills he met with. The unfortunates whom such remedies did not relieve, died, in the Providence of God. The people of those days did not have new diseases for which names had to be coined. As for new theories, our doctor would have scorned to consider them. The lance and the old antiphlogistic treatment were to him *sine qua non*. He knew nothing of germs; the only specimens of the animal kingdom foreign to the human system with which he was familiar were those which a little calomel and santolin would readily expel.

With the remedies and theories of the past, the old-time physician has disappeared, to be replaced by the wide-awake, progressive medical man of to-day, and as much as we honor his memory we cannot regret this fact. Still, he possessed at least one quality which we would fain lay hold on as an undying legacy for the profession—the beautiful human relation which he sustained towards his patients. There are vast opportunities in the physician's world for exercising Christian virtues, and one who thinks that he is prepared for his work when he has mastered the theory of medicine, without taking into consideration those calls which will be made on him for sympathy and kind understanding, has but a low estimate of his profession. In no other calling, except of course that of a minister of the Gospel, does this intercourse of soul enter in so much as a business-consideration, and it cannot be overlooked; and it must be either used or vastly abused. The



politic schemer realizes this, and takes these grand God-given opportunities in satisfying his own selfish desires. But the large-souled doctor, who has given himself to the work of lessening human suffering with no ignoble motive, also recognizes such chances for usefulness and holds no mean place among those who make life worth living. Into many homes the doctor brings the only refinement and culture that its inmates ever come in contact with. They recognize it, just as do even dumb animals, and it must have an elevating effect, if only a temporary one. His quiet air of composure, and that reserved force which education and culture set up in a man, appeal to poor fallen wretches as something worthy of admiration, even if they have not the strength remaining to care to strive toward it. To many the physician may be the means of showing life in an entirely new and more attractive guise, and many a slumbering spirit who has been drugged with sin may awake under his influence to full free purposes and aspirations. But more frequent than these are the doctor's opportunities for saying kind words and doing little everyday acts of courtesy, that are the real sunshine which keeps alive the social world. Even a pleasant "good morning" sometimes will change the face of the day for one, and we cannot estimate the influence exerted by one impulse of real warmth of feeling showing itself in the simplest way. There are times, too, when the greatest tact is required and the greatest delicacy to be shown.

There are operations to be performed which, owing to the present state of civilization, will call a blush to his patient's cheek, and he must see that no look or movement of his own adds to this mortification. There are times, many of them, alas, when with fingers vainly striving to feel the pulsations in the small wrist he holds, he must look up from it to meet the questioning eyes of those about the bedside and acknowledge that the foe he fights is victor. Let him see to it that a glance of true sympathy go out with that sentence.

Far more than most men, a physician should remember that the beings he tries to help are fellow-travelers with him on the same journey, are brothers in the great family of humanity, and not the tools by which he learns his trade. In the rush and stress of the present time, business considerations are in danger of usurping others which we must hold to be greater, for surely the profession must, and does, consider the alleviation of suffering to be its chief end. The modern physician studying disease in the abstract overlooks the relation which he should hold to his patients. He is ambitious to be well-informed on the latest operations and technic in modern surgery and antiseptic medication in the general practice of medicine, and thus disposed to neglect a part of his duty that is just as important. Our city hospitals are crowded. One by one the patients are operated upon and dismissed, and none ask whence they come, where they go, or

what they are. They are often looked upon merely as experiments. This condition of things is to a large extent unavoidable, but it is to be regretted as to the student, who is to go out from there to represent the profession at large, it does not tend to give a higher ideal of his relations with his patients.

The physician must keep constantly before him a high standard; for he has many sources of discouragements to meet, and it is not always easy to meet them courageously. So many petty faults and littlenesses of human nature come out in this close contact. Physical illness is sometimes a great generator of moral illness, and a remembrance of this fact should save the physician from cynicism and make him a healer of mind as well as body.

No noble nature has any place in it for jealousy; so, when on some bright morning the doctor is received at a patient's door with the announcement that his services are no longer needed, and that a brother physician has taken his place, if he is true to himself and loyal to the courtesies of the profession, he will walk away, with heart and lips tightly closed against any ill feeling. Until he has risen above envy and jealousy, he has yet to come into that condition of mind which will ensure his greatest usefulness.

As our distinguished Meigs would have us, let us look upon the profession of medicine not as a business, but as a great morality; not as a trade, but as a mission appointed by an all-wise Being for the benefit of humanity.

## HOT MUSTARD FOOT-BATH IN TYPHOID FEVER.

By R. P. McREYNOLDS, M.D., AND A. E. BLACKBURN, M.D.,

of Philadelphia

THE following observations are taken from the records of some of the typhoid-fever cases treated in the Presbyterian Hospital of Philadelphia, while we were interns there.

In order to reduce the number of cold tubs to a minimum, the following plan was adopted in a number of cases:

*Series A.*—An ordinary foot-tub, containing hot water, with one or two ounces of mustard added, was placed at the foot of the bed, and into it the patient's feet and legs were placed, and gently rubbed for 20 minutes. This was tried in 30 cases, each case receiving on an average four foot-baths. The average fall of temperature immediately after the bath was  $0.4^{\circ}$ ; half an hour later it was  $0.46^{\circ}$ .

*Series B.*—The foot-bath was given as described, and at the same time the body of the patient was sponged with cold water. This was tried in 15 cases on an average of five times with each patient. The average fall of temperature immediately after bath was  $1.57^{\circ}$ ; half an hour later it was  $1.42^{\circ}$ . In some of the cases there

was a rise in temperature after the bath; consequently the average fall is small. The greatest reduction in temperature (from  $1^{\circ}$  to  $3^{\circ}$ ) occurred in those cases in the second or third week of the disease, in which there was a high temperature by mouth, while the extremities were cold, clammy and cyanosed. The foot-bath equalized the blood-pressure by relieving the stagnation in the peripheral bloodvessels of the extremities.

In the third or fourth week of the disease, when for some slight cause the temperature rose suddenly, it often yielded promptly to a foot-bath. At a later stage we think it especially cruel to subject a patient to the tortures of the cold tub, as is often done in hospital-work, when the attending physician leaves instructions for patients to be tubbed when the temperature reaches some fixed point.

We noticed that patients were more comfortable and rested better after receiving a foot-bath; they generally perspired freely and thus the system was freed of certain poisonous substances, and the heat-elimination being increased there was a diminution in total body-heat.

The liability to intestinal hemorrhage is lessened, first, because the patient is not disturbed so much; and, second, by relieving the stagnation in the peripheral bloodvessels of the extremities the congestion of the viscera is diminished.

It would be absurd to advocate the treatment of typhoid fever by the foot-bath alone; but we think that at times it is most beneficial, and can be used with success in hospital as well as in private practice.

**One Thousand Litholapaxies.**—In discussing the causes of stone in the bladder, W. H. Henderson (*Indian Med. Gaz.*, July, 1898) expresses the belief that the never-varying diet of millet in Hyderabad is a factor of importance in the etiology of stone in the bladder, for in regions in which rice is the staple diet stone is rare. Of the 1,000 cases reported, 354 were in children, some of whom were so young that it is believed that the condition began in utero. The mortality in the total number of cases was 1.5%. In case of stricture or a very tight urethra Henderson prefers to crush through a perineal incision. In 110 cases operated upon in this way, there was no deaths among adults, and a mortality of 3.09% in children.

**Ankylostoma Duodenale as a Cause of Chronic Intestinal Inflammation.**—J. Mathias (*South African Med. Jour.*, Sept., 1898) reports an epidemic of ankylostomiasis among the European miners at Kimberly, South Africa. The parasite is said to be found in almost all localities in the temperate zones, but it is believed to be indigenous to South Africa. The ova of the nematode probably find their way into the body through the miners eating with unwashed hands after working in muddy tunnels, and multiplication takes place in the intestine; the worm causing chronic intestinal irritation and hemorrhage and symptoms that result therefrom, such as anemia, palpitation, epigastric pain, dyspepsia and diarrhea. The ova are almost invariably found in the feces on the first microscopic examination. Thyanol has been found the most effective drug in the expulsion of the worm, being given in four doses of 30 grains each at intervals of  $1\frac{1}{2}$  hours, and the treatment has often to be repeated on several occasions. Mathias believes that the condition has been endemic in Kimberly for 7 or 8 years and that a large proportion of the miners working in the muddy tunnels are affected. Personally he has treated 30 cases, with 2 deaths probably from this cause.

## Selection.

### THE FORAMEN OF WINSLOW.

DESIROUS of aiding, as far as possible, all medical students who are now about undergoing the severe trials of memory known as first and second-year examinations in anatomy, we publish the following poetic and at the same time accurate description of an important and difficult anatomical region, one in fact which may be described as the central point about which abdominal anatomy is grouped, or as the key to the situation. With regard to this fact, the following dictum has been attributed to Hippocrates: "The way to learn anatomy is to begin at the foramen of Winslow (*Oitovrilis*) and work outward."

Combining, as they do, accurate anatomical description with the true lyric touch, these verses, which have lately been discovered unsigned among some old papers, have by some been attributed to our own poet and anatomist, OLIVER WENDELL HOLMES, although this theory of their authorship has not been fully confirmed:

#### THE FORAMEN'S LAMENT.

I'm a poor abused foramen,  
After Winslow I am named,  
As a sticker and a poser  
I am most unjustly famed,  
For the students all neglecting,  
Often fail in their detecting,  
While my owner they're dissecting,  
Then most roundly am I blamed.

I'm a poor abused foramen;  
And in front of me is tucked,  
The communis choledochus, which  
Is nothing but a duct,  
Farther front the duodenum—  
Hepatic artery between 'em—  
And the portal vein, you've seen 'em—  
But if not, you're surely plucked.

I'm a poor abused foramen;  
And I'm bounded on the back  
By the lower vena cava,  
For I'm just before its track.  
The right crus of the diaphragm  
Then helps show you where I am  
As I guide you from the greater,  
Over to the lesser sac.

I'm but a poor foramen,  
And the lobe Spigelii  
Is kind enough to locate so's  
To form the top of me;  
The vessel that I've named before  
Is kind enough to form the floor,  
Just he alone and nothing more  
Hepatic artery is he.

Now gentle reader listen,  
Have I not good cause for sadness?  
My descriptions never tally, and  
They drive me most to madness  
As I read the verbal photographs  
That pass from book to book,  
And make me out the darndest thing  
That ever looked a look.  
I know I don't deserve it,  
I'm a simple little hole,  
And the thought of these descriptions  
Hurrows up my very soul — [*Indian Med. Jour.*]

**Suture of the Pericardium and Pleura.**—H. C. Wyman (*Physician and Surgeon*, October, 1898) reports the case of a man, aged 38, who had been injured by the bursting of a circular saw, which had torn away  $1\frac{1}{2}$  inches of the fifth costal cartilage on the left side together with 2 inches of the rib. The apex of the heart was protruding and there was a ragged hole in the pleura. The wounds in the pericardium and pleura were closed by continuous catgut-sutures, the lacerated muscles were brought into apposition and 10 days after the injury the man was in excellent condition.



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**The Lawyers' Way and the Doctors' Way.**—When a boss politician seeks to coerce judicial action and punish judicial independence, the professional body of his fellows, in recognition of the insult to the guild and to the public, quickly get together and put in effect a clear-cut machinery to punish the impertinence and prevent the public mischief. When a medical school acts as a diploma-mill; when bogus diplomas are offered for sale in numerous public advertisements; when nepotism and yellow journalism try to scapegoat their sins on medical men; when newspaper doctors exploit their own fame in the daily papers; when the laws of our country are dictated or disobeyed by multi-millionaire nostrum-syndicates—what does the medical profession do? Nothing!

**Good Work of Coroners' Juries.**—Last week a coroner's jury in London found a faith-curist guilty of the manslaughter of his son, eight months old. The child's life could have been saved by a physician. The same family had lost seven out of their twelve children. The testimony of the Mrs. Mills who "treated" Harold Frederic showed that she was the subject of delusions, and ignorant, of course, of every scientific fact of physiology and medicine. In Bellefonte, Pa., recently, a coroner's jury finds the suicide of a woman was due to unsoundness of mind caused by the influence of a faith-curist. These results are late and sporadic, but they are all the more welcome. It is time that communities recognized the public duty laid upon them. The coroner's jury is the proper and effective method of curing the "cure."

**The Sanatory Club of Buffalo, N. Y.,** the officers of which are: H. R. Hopkins, president; F. H. Loverin, vice-president; Thos. B. Carpenter, secretary, with a topic committee composed of Ernest Wende, chairman, W. H. Heath, and Dean Wilson, have issued the following circular:

The interest felt by the country in the alleged unsanitary condition of some of the camps in the recent war finds expression in this section in the desire for a meeting of sanitarians and others—experts in their lines—to present the details of establishing camps of instruction constructed upon strictly hygienic principles—asphalted floors and streets, water-system, sewerage. The various phases of the subject will be briefly considered from economic, military, and sanatory aspects, and the consensus of the whole presented with the idea of creating a public demand for such camps. It is not intended that any criticism be introduced in any manner

whatever concerning the recent war, but merely to discuss the feasibility of permanent camps of instruction, to be maintained ready for use at any time desired by the general or local government. An expression upon the desirability of such military equipment is particularly desired. Any opinion, however conservative, will be highly appreciated.

We consider this a most excellent plan, and there is no one better fitted to make it effective and useful than Dr. Wende, to whom Buffalo and sanatory science generally are so deeply indebted.

**Establishment of a State-Laboratory by Vermont.**—We chronicle with much pleasure the fact that the State Legislature of Vermont has just passed an act providing for the equipment and maintenance of a State-laboratory which shall include in its work "the chemical and bacteriological examination of water-supplies, milk and all food-products, and the examination of cases, and suspected cases, of diphtheria, typhoid fever, tuberculosis, malaria, and other infectious and contagious diseases." The sum of \$5,000 has been appropriated for the establishment of the laboratory, and \$8,000 per year voted for running expenses. In notifying us of this important news-item the Director of the Bacteriologic Laboratory, Dr. J. H. Linsley, expresses his appreciation of the PHILADELPHIA MEDICAL JOURNAL, and encloses a copy of a pamphlet reproducing an editorial (based upon a paper by Dr. H. D. Bergy, in our issue of May 21, 1898) upon "the establishment of hygienic laboratories by the local boards of health of towns and boroughs, and the importance of such laboratories to the public health and to the physicians of the community." This pamphlet has been widely distributed in Vermont. We wish it could be as extensively scattered in every State, because it advocates a measure of tremendous importance to the entire people. It is a sad confession that only three States, if we are correctly informed, in our country have and support such laboratories as the one just voted in Vermont. To Michigan belongs the honor of being the first; Massachusetts followed, and lastly New York. Which one of the great States of Pennsylvania, and Ohio, and all the rest, will be the fifth in the roll of honor? A year or two ago the Legislature of the State of Ohio voted money to test Keeleyism, and every year Pennsylvania gives enough money to hospitals to establish and carry on a hundred laboratories.

**Antivaccination in England.**—When we first commented in our columns on the stupid concession to ignorance known as the conscience-clause in the new English Vaccination Act, we made bold to prophesy that the peace for which such a sacrifice of principle was being made would not be a permanent one. A communication which we have just received from a well-informed correspondent has justified our prognosis entirely. "The National Antivaccination League (of Great Britain) have," he writes, "just issued a manifesto in which it is stated that they decline to receive the new Act on vaccination as a settlement of the great question of the right of the legislature to enforce a medical nostrum or experiment involving personal injury and interference with parental care. The new Act, says the manifesto, offers a grudging form of exemption which is surrounded by obstacles, and the ignorant, illegal behavior of many justices shows the concession to be of little avail. Your prognostications have been exactly fulfilled. The ignorant and illegal behavior to which the manifesto alludes is, of course, the demand that some magistrates make for the people desiring to be relieved from the onus of having their children vaccinated, that they should formulate the ground upon which their conscientious objections are based. The manifesto of the antivaccinators will probably stir up all the old resentment against the legislature, and in English medical circles it is confidently predicted that before many months the Government will find that the pressure put upon them to alter their conscience-clause is as heavy as that put upon them to insert it." Such are the consequences of paltering with conviction and shaping medical legislation to political ends.

**The Advancement of Surgery.**—In an address delivered at the 70th annual Congress of "*Deutsche Naturforscher und Ärzte*," held at Düsseldorf from September 19th to 24th, Hermann Tillmanns, professor of surgery at the University of Leipzig, gave an address on surgery, in which he sketched its history from early times, called attention to the great discoveries which have produced such wonderful advances in the surgery of modern times, and indicated the lines along which he believes future progress will be made. The three factors which Tillmanns considers of greatest importance in the development of modern surgery are: the introduction of anesthesia; the introduction of the principles of antiseptic surgery; and the application to surgical practice of the knowledge gained in other branches of medical study, particularly physiology, pathology, and bacteriology, and of that gained from allied biologic studies. The further advancement of surgery in the future depends to a great extent on the advances made in these allied branches and sciences. With pride we all remember that two of these great discoveries were made by Anglo-Saxons—an American

and an Englishman; also the great stimulus which has come to biologic study from Darwin's immortal work. If we accept Tillmanns's opinion with regard to the future progress of surgery (it is equally true of medicine as a whole), we must realize the importance of more active effort here in America to promote research in medicine and biology. Germany certainly leads the march to-day, and however distasteful the extreme German imperialism may be to the Anglo-Saxon mind, we cannot question the wisdom of the paternalism which has so fostered scientific research that the best students of all lands have flocked to German universities to learn from the profound erudition of their patient, plodding, persevering investigators. All that is needed to bring about similar results in this country is sufficient endowment of scholarships in our best schools and universities to make it possible for our students to devote their best efforts to research instead of to earning a living. That there are plenty of trained men eager to do such work, but without sufficient means to undertake costly experimental work at their own expense, is well known to the professors of our best schools. Whether such money comes from the State or the private individual matters little. Are there not some wealthy men who wish to establish for themselves a permanent and noble memorial by such bequests?

**How Shall We Deal with the Stump of the Appendix?**—If one considers minor details, there have been in more or less general use not less than twenty different methods of treating the stump after appendicectomy. All of these are, however, more or less modified forms of three general methods of procedure: the stump may be left in its normal position; it may be buried by infolding and suturing the wall of the cecum over it; or it may be completely excised, in which case we treat the place where the stump was, rather than the stump itself. Perhaps the simplest method is that described by Floderus, of Lennander's clinic at the University of Upsala, in which a hemostatic forceps is left clamped on the appendix for three or four days and then removed without further ado. It is stated that fecal fistula sometimes results, but that it usually closes spontaneously. We believe that it will seem strange to many surgeons that fistula does not generally, instead of sometimes, follow. Some operators consider it sufficient to divide the appendix between two ligatures and cauterize or disinfect the stump with pure carbolic acid; others suture or tie over the stump thus prepared a cuff of peritoneum, or a cuff which includes both serous and muscular coats, as suggested by Baker, of London. In case the stump is buried it usually receives the treatment just described, in greater or less detail, as a preliminary; and then it is covered in by Lembert sutures. This is the general plan followed by Keen, Maurice Richardson, Czerny, and many others.



Dawbarn divides the appendix without tying, leaving a long stump which he inverts and buries by means of a purse-string suture. Van Hook's method is the same, with the exception that he uses Lembert sutures instead of a purse-string suture. The third plan, that of excising the appendix and closing the hole in the cecum with Lembert sutures, has given Deaver excellent results. As to the comparative merits of these various methods, it would seem that the application of a ligature before cutting off the appendix might lessen the danger of infection; that the certain disinfection of the stump, in case it is left, could at least do no harm; and that the apposition of serous surfaces would be attended with less danger of fistula than if the first of the methods mentioned were selected. However, an acquaintance with the practice of a number of reliable surgeons has demonstrated to us that almost any of these methods will give perfectly satisfactory results.

#### **The Dangers of the Bacteriologic Laboratory.**—

The recent epidemic of plague that has occurred at Vienna, insignificant as it apparently is, nevertheless indicates the absolute necessity of precautions, carried even to the point of exaggeration, in the bacteriologic laboratory. In the early days of bacteriology, when anthrax was almost the only pathogenic germ at the disposal of the experimenters, several deaths were caused by accidental inoculation; but as technic was perfected, in spite of the multiplication of virulent microorganisms in the laboratory, and thereby the greater chance of the escape of some, infection became more and more infrequent, and it may be said that in laboratories, such as that of the Pasteur Institute or the Hygienic Institute of Berlin, accidental infection leading to death has never occurred. Only last year, in the city of Philadelphia, a distinguished bacteriologist, who was experimenting with virulent cultures of bubonic plague, became so worried at the possibility of their accidental escape that rather than run any chances he destroyed them all. Of course we know nothing of the mode of infection in Vienna, and it is perhaps unjust to criticise the man in charge, without further details; but we nevertheless feel confident that greater precautions should, in view of the well-known rapid spread of this disease, have been employed. Clinicians in general should avoid handling virulent microorganisms. Nothnagel is a pure clinician, and it is to be supposed that his assistants are equally unskilled in bacteriologic research. It therefore behooved them to avoid dangerous experiments, and even although Herr Barisch sacrificed his own life, we are not justified in regarding him for that reason with more leniency, if he is the responsible person. A similar case occurred during the cholera epidemic in Hamburg, but fortunately was less serious than the present one. Cultures of virulent microorganisms are so common in the laboratory, and are handled with

such apparent indifference by bacteriologists, that others necessarily come to regard them with a certain degree of indifference. Bacteriologists, however, in spite of their familiarity, always possess a wholesome dread of these microorganisms, and adopt precautions that seem almost puerile in their elaboration, and it would be well for others either to learn the methods employed or to avoid too close a contact with pathogenic germs. Antivivisectionists are usually anti-scientists, and disbelievers in the germ-theory of disease, and yet we confidently expect to find them soon berating the profession on one page of their journals for carelessly scattering the germs, and on another page denying that germs are concerned in the etiology of disease. This fact, of course, should not lessen our professional self-criticism for the Vienna blunder.

**The Death of Colonel Waring.**—By one of those grim fatalities that sometimes mark the progress of medical and sanitary science, the profession of medicine is called upon to mourn the loss, and to pay tribute to the merits, of George E. Waring. His death, following hard upon the tragedies of war, was in itself one of the tragedies of science and philanthropy.

Colonel Waring had but recently returned from Havana, whither he had been sent by the United States Government as a special commissioner to ascertain the exact sanitary conditions of that city, and to formulate a plan for putting the place in a proper sanitary state. He returned to New York on the steamer *Yucatan*, which reached port on Tuesday of last week. The disease must have developed in the patient on the voyage. He complained of feeling ill on the day of his arrival, but apparently did not suspect the truth, for he said that he hoped to proceed to Washington on the following day in order to lay before the President a mass of information that he had collected. Yellow fever, however, developed rapidly; early on Saturday morning black vomit began and the patient died a few hours later.

Col. Waring has long been known as one of the leading sanitary experts of the United States. To him, more perhaps than to any other man in this country, is due the credit of elevating sanitation, and especially the drainage of towns and cities, to the dignity of a science and an engineering art. He had had practical acquaintance with the needs of some of the worst centers of yellow fever, especially in Memphis and New Orleans, and he was naturally the man to whom the Government would turn for assistance in the case of Havana and the other coast-towns of Cuba. Of recent years he has had charge of the street-cleaning department of New York City and had brought this department to a state of discipline and efficiency unknown before either in New York or in any other American city. Space will not permit us to enumerate here all the achievements of a long and varied career, but it is

enough to say that, like the Grecian statesman of old, he could make it his boast that his greatest service had been that he had taught his countrymen how to clean their cities. In this connection there is a lesson in his life-work that all Americans need to take to heart, the lesson that it is only knowledge and conscience that are capable of doing effective scientific and hygienic work. Every city in the land needs a Waring; and yet when Tammany came into power, instead of retaining him, the machine turned him out of office!

If anything were wanting to emphasize the imperative need which Havana presents to the civilized world for rejuvenation and reformation, it is certainly found in this lamentable death of the sanitary engineer who had gone to her assistance. Colonel Waring's death brings home with telling force to the minds of the American people the fact that they have had a constant menace on their borders in a city that is loaded with the filth and decay of three centuries. No argument surely is needed to spur and to justify a people in such a sanitary conflict of self-defence. Not territorial aggrandizement, but a natural sanitary instinct, would lead any civilized people to clean out a pest-hole that constantly threatens their own country; and no one, we suppose, would have subscribed to this view more promptly than the lamented sanitary engineer who has just given his life in an effort to bring about such a result.

"The Jugglery of Statistics—a Reply to an Absurd Editorial" is the title of an article in the *Journal of the American Medical Association* of October 29th, and written by Dr. Charles Smart, Deputy Surgeon-General of the U. S. Army. The writer is very scornful and contemptuous of the statistics of medical men in general, and of the PHILADELPHIA MEDICAL JOURNAL in particular, viewing all of us from the lofty point of view of an expert dealing with ignoramuses. He admits the accuracy of the figures given in our editorial, namely, that in the Civil War 66.6% of deaths were from disease, and in the Spanish War, 88.1%. It was this difference that we thought needed explanation, and with all deference to our cynical critic we still think demands it. This is the way we are disposed of:

"The absurdity of this may be well illustrated by adding to the statistics and ratios given above those derived from the reports of the engagement of Admiral Dewey's fleet on May 1, 1898, at Manila. Dewey's fight lasted only one day. The figures given for the Spanish War covered a period of five months, and those for the Civil War a period of five years and two months; but as the element of time does not enter into the calculations of the ratios criticised, this element need not be considered in the engagement at Manila. Here we find that no man was killed, no man died of wounds received, but that one man, an engineer officer, succumbed to heat-exhaustion or insolation. Stating these figures as percentages of the total mortality, we find: Killed, 0%; died of wounds, 0%; died of disease, 100%, as compared with 88.1% in the Spanish War and with 66.6% in the War of the Rebellion. If it is needful for the Honorable Sirs to give such high consideration to the greater death-rate from disease as compared with the deaths from wounds and deaths

on the battle-field in the Spanish War considered as a whole, how serious is the consideration they ought to give to this frightful rate of mortality from disease as compared with that from battle casualties in the Bay of Manila."

Now, is there a schoolboy of ten years of age who could not see the "absurdity of this?" If so, he should be whipped and put to his "arithmetics" again. What right has Dr. Smart to say that the "element of time does not enter into the calculation?" It is precisely this element of time that gives the subject any intelligibility whatever. The figures are for the entire periods of the two wars. Were there not a great many days during the Civil War when, no battles occurring, there were no deaths whatever from battle or from wounds, but in which large numbers died from disease? Will not our critic kindly spare us from the necessity of replying to such utter nonsense in future? And will he not also spare us the discourtesy of applying his contemptuous remarks to himself? The death from the heat-exhaustion at Manila, by the way, did not occur during, but some time after, the battle. The "element of time" being excluded, the percentages of deaths during the entire Spanish-American War were therefore as follows: Killed, 0%; died from wounds, 0%; died from disease, 0%. Q. E. D.

We add as a postscript to the above two thoughts which, as it occurs to us, have not heretofore been sufficiently emphasized: 1. The Civil War was longer and therefore the number of deaths from disease would necessarily be enormously greater, relatively, than in a war of short duration.

2. The figures quoted of the deaths from disease in our recent war were made up some time ago, but since then additional deaths have been occurring every day, and the end is not yet reached. The percentage given of deaths from disease in the late war is consequently far too low. Such considerations of course will have no weight with expert statisticians who think that "the element of time does not enter into the calculations."

We have no desire whatever to make the case against the War Department unjustly severe or to juggle with statistics. Every study of the facts, however, proves that disease and death from disease have been higher in the late war than they should have been, and there seem to us few or no proofs that this has been the fault of the Surgeon-General's department.

**An Incident of Sanitary Work.**—In one of our big western cities, there occurred recently an incident which well illustrates the difficulties of sanitary work, and the appreciation bestowed upon it by those most interested. A certain practitioner of medicine, "legally licensed under the laws of the State," attended a case of laryngeal obstruction for three days, and was then dismissed, and another physician called, who recognized the case as one of laryngeal diphtheria, demanding the use of antitoxin and intubation of the larynx; under this treatment the little patient recovered,



though, for a time, in a serious condition. The "legally licensed" practitioner then had a case of sore throat develop in the person of his own child; his disease he called "tonsillitis," and said as little as possible about it. His next-door neighbor's child came in, and played with the child of the "legally licensed" practitioner, and developed diphtheria (verified by bacteriologic examination).

In the meantime, the "legally licensed" practitioner carried on some office-practice at his residence, and, among other patients, came two children, a brother and sister, to be vaccinated. After they had been vaccinated, the little girl's arm became very sore indeed, and a white sloughy mass developed; the little boy's vaccination did not seem to take, but he shortly developed a large sore on his wrist, and the surface of this sore was covered by a white or gray membrane; he also had a sore throat; an older boy, in the same family, developed a nasal discharge, which excoriated the lip. When the little girl who had been vaccinated died, and the "legally licensed" practitioner wrote a death-certificate, giving the cause of death as "vaccination and septic poisoning."

The family arranged for a big funeral; there were to be little girl pall-bearers, all dressed in white; the school-children were invited to come *en masse*; it was to be a great occasion. An intelligent school-principal asked the "meddlesome health-officer" if it was safe for young children to act as pall-bearers for a body that had died of blood-poison and vaccination; and the "meddlesome health-officer," after a little inquiry said that it was not safe; then he sent and had cultures taken from the arm and throat of the dead child and from the arm and throat of the living child; the undertaker had used a solution of formaldehyd on the dead child and there were no growths from the specimens taken from the dead child; but from the living child there were two pure cultures of the Klebs-Löffler bacillus, one culture from the throat and the other from the membrane on the arm. Then the "meddlesome health-officer" had a blue-uniformed inspector put a diphtheria-sign on the house, and he notified the family and undertaker to have a private funeral and sent two other big inspectors in blue uniforms to see that his orders were obeyed.

The net results of the investigation of this case are:

1. An angry "legally licensed practitioner," who feels that his certificate of the cause of death has been disregarded and his reputation attacked.
2. An unhappy neighborhood, the residents of which feel that the "meddlesome health-officer" has "spoiled the funeral" when the little girls had gone to the trouble of having white dresses made for it."
3. An injured father, who feels that the health-officer is derelict because he cannot revoke the license of the "legally licensed practitioner."
4. An annoyed school-board, who feel that the "med-

dlesome health-officer" attaches too much importance to germs as a cause of diphtheria, when in their opinion it is largely due to sitting in a draft and may be obviated by keeping windows closed.

5. A disgusted "meddlesome health-officer," who feels that he may get his reward in the next world, but is very doubtful as to whether sanitary work pays the man who has to do the hard work and take all the hard knocks.

**The Comparative Etiology of Diphtheria.**—In the whole domain of a comparative pathology there is no section of greater importance than that which deals with the interchange of diseases between man and the lower animals. Of the diseases, the comparative etiology of which has been the subject of careful and painstaking investigation of recent years, there is none possessed of more practical moment to the community at large than is diphtheria. For some time the question of the occurrence of the Klebs-Löffler bacillus in the lower animals was much debated, but evidence was soon adduced to show that affections, at least resembling diphtheria in the human being, occurred with considerable frequency in the lower animals. Klein, in a *Report to the Medical Officer of the Local Government Board*, 1889, stated that not only were cats liable to contract diphtheria in houses in which the disease exists or had existed, but that a similar infectious disease exists naturally among them. He further detailed the results of his experiments, which showed that a disease, similar in clinical and anatomic features to the natural disease, might be provoked in cats by the inoculation of cultures of the Klebs-Löffler bacillus. Other observers, in addition, reported that cats might suffer from the disease in a chronic form, which might be associated with emaciation, bronchitis, pneumonia, nephritis, etc. It was then shown that an affection common among pigeons, poultry, and calves presented some features resembling those of diphtheria, but it was soon made clear that this disease was totally distinct from human diphtheria. These latter, or so-called diphtheritic affections, are now more properly designated pseudo-diphtheritic, in contradistinction to genuine diphtheria. In this connection a series of observations recently collected by the French Conseil superieur d'Hygiene, and quoted in the *Journal de Clinique et de Therapeutique Infantiles*, of September 22d, and in the *Lancet* of October 8th, is of such interest that we reproduce the observations of the latter journal.

"From this report it appears that the cat is especially liable to contract diphtheria, and that it is also necessarily a ready medium of its propagation. Other animals, however, are also liable to it. Thus Gerhardt relates the case of a number of fowls imported into a village near Baden, which on arrival developed signs of a disease resembling diphtheria, half of them dying from it. Four cats which lived among them died from the same disease, and four out of six attendants at the poultry-farm suffered severely in like manner. No case occurred in the village itself. Another case is mentioned by Dr. R. Jacobi, in which five children had diphthe-

ria, and three kittens which had played with them during their illness died with false membrane on the pharynx. In another instance, recorded by Dr. Bruce Low, a cat appeared to have carried diphtheria to children. It is noteworthy that the bacillus of Klebs and Löffler, cultivated by these observers in the rabbit, has given rise to the usual signs of diphtheria, including the subsequent paralysis, and that the observations of Klein on the cat have confirmed their results. Such facts as these are certainly not without meaning when we consider to how large an extent the lives and habits of children are associated with those of their various domestic pets. They may also serve to explain the occurrence of some sporadic cases of diphtheria for which no recognizable cause can be found, but where it is learnt after a time that a sick rabbit or cat was being nursed for a time before the child's illness appeared. It would seem also that in some cases a connection exists between the yards or kennels in which animals are housed and the occurrence of tonsillar sore-throat in adjacent dwellings."

To these observations we may add the additional one of Klein, confirmatory of the suspicion that the cow may be the source of certain diphtheria-epidemics through the medium of an infected milk-supply. Truly some epidemics which seem due to an infected milk-supply are doubtless the result of contamination from a human source; but as explanatory of other epidemics, Klein was able by inoculation to produce a papular and vesicular eruption of the udders and teats of the cow, attended by local swelling and fever. From the contents of vesicles the Klebs-Löffler bacillus was obtained, and from the milk also on the fifth day, but not at any other time. The cows having died at from two to four weeks after inoculation, the diphtheria-bacilli were found in the local lesions. These observations certainly merit the careful attention of practitioners of medicine and sanitary authorities, not only because of their great importance as regards diphtheria, but also because by analogy we may infer that what is true as regards one infectious disease, upon adequate investigation, may not unlikely be found the case with regard to others.

**To Reform Medical Education.**—Some of the interior States of this country have, we believe, as many as thirteen medical colleges apiece, hence the scheme to have in each State a central Board of Examination, to act as a sort of censor or monitor to these colleges, is an excellent one. The powers of such a board should be in some ways quite supreme, and if they were justly and intelligently used would be for the great good of both the public and the profession. The board should have the right to impose certain conditions on these numerous medical colleges even though these schools are chartered institutions. In one State, in fact, the highest Court has decided that the board has such a right.

Among these conditions it is suggested that a rigid entrance-examination should be required for all students who propose to study medicine. The college doors are no longer to be wide open to any and every young man who may be seeking a trade and thinks the trade of medicine is what he wants. But an examination for admission to a course of study in a

medical college, if it is to be effective, should be conducted, say the advocates of this plan, by disinterested men not in any way connected with the medical schools, and who should be appointed by the State board. It is urged in favor of this plan that it would remove the temptation from the schools of admitting applicants with the mere object of swelling the classes. The competition for students, it is intimated, is as keen among the medical colleges of some States as it is for customers in any other flourishing trade. This, in the opinion of some critics, is the gist of the whole matter, and the opposition represents merely the interests of the college-syndicates. It is claimed that such an impartial entrance-examination, even if it were to reduce the number of students, would bear equally on all the colleges, and hence would be unjust to none. The opposition claim, however, that it would be unwise to debar physicians from serving on such an examining board, merely because they were members of some college faculty, and in this they seem to have reason on their side.

We confess that such a proposition seems very radical to us; and we suppose it would raise a cry in some States that it was an effort to give a few men the power to say who should and who should not study medicine. It seeks to concentrate this power in the hands of a central State examining board, who would be supposed to act without prejudice or favor, instead of leaving it, as at present, in the hands of a number of irresponsible medical faculties who are said to be angling for students. While it might be an ideal plan, still, in the present state of public opinion in this country, which views with suspicion a tendency to paternalism and concentration of power, it may be as yet premature. Power must be lodged somewhere, and if our medical schools are to fulfil their functions, one would think that it were not too much power to let them judge for themselves of the material they are to use and mold into shape. Later, it would be for a central State examining board to determine whether the product sent out is really a finished product and worthy of acceptance.

We believe, in the main, however, that the effort being made in some States to increase the authority and strengthen the hands of a State board is in the line of advancing sound and honest medical education. Differences of opinion are largely as to details. As a sort of supreme court of medical opinion and authority, such a board, if properly constituted and appointed, would be a boon to every State. If it could not regulate every detail of medical education in the schools (and we believe it could not do so without great danger of mere intermeddling), it could at least fulfil a yet higher function, which is to reject without mercy the untrained or badly trained candidates for license to practise who are sent out in shoals from too many of our medical colleges year after year.



A common infamy of medical education in this country is the resort to sham entrance and sham exit examinations. We know of instances of professors being disciplined by their board of trustees for insisting on conducting an honest and rigid examination, and this simply because such an examination had the effect of driving students to a rival college. A determined State board could end such abuses; but until every State has such a board, the evil is likely to continue. It is certain, however, that the States that continue to refuse to have an examining board will publish themselves to the world as the nurseries of a sham medical education.

#### The Journal and its Readers: No. 1. Letters to the Editor.

—We propose to indulge in an occasional word in a perfectly frank way addressed directly to our subscribers as to the relations of editor and reader, and even as to medical journalism and the profession generally. We would like to feel that we hold a somewhat more friendly relation with many, and perhaps with all of our subscribers, than has heretofore usually been the case in medical journalism, and the hundreds of assurances of the fact we have received in the past ten months by means of letters from a few we personally knew, and from many we had never met, lead us to think that the desire has met with a remarkably cordial response. An editor, it is true, is sometimes a very busy man, and the fact must sometimes prevent him from answering personal letters as fully and sympathetically as he would wish, and yet, however overwhelmed with work he may be, he must always prize most highly the letters of inquiry, criticism, encouragement, and advice, which may come to him, springing spontaneously from the feelings of his readers. It is only in this way that those who conduct a journal can learn what mistakes they have made, what sins of commission and of omission have been done, and the feelings and needs of the subscribers generally. There is only a single sort of letters that is not pleasant, and that is the anonymous class. One who has not the manliness to sign his name thereby confesses his deep doubt as to himself and the point raised in his letter. "Justice" is usually unjust, and "Veritas" untruthful. However, we have received but very few such communications, and even these may unconsciously have yielded some little truth and justice in an indirect way. We should all be willing to learn from our enemies. One disadvantage of the unsigned letter is that the poor criticised one cannot send any reply by which the criticiser would perhaps learn a fact that would set him right, and make both feel better and more justly to one another. It has, for example, often occurred that signed letters of protest or anger, having been truthfully and frankly answered, quickly bring a second letter acknowledging a natural error, and the hasty correspondent becomes all the more friendly as a sort of unconscious reparation. We shall therefore always be glad to have our readers write us personal letters whenever they think any good may thereby result, and if as full an answer as desired does not find its way back, we trust the will may be taken for the deed; and rest assured that the suggestion or advice will be seriously weighed, and will have its effect according to careful judgment, either later or in some other manner than was expected. Not all hints can be acted upon, of course, because two correspondents may advise opposite things, or because of many reasons which it would

be almost impracticable to state. We have repeatedly shown, for instance, that our intent is to make our journal progressively better, so far and so fast as professional appreciation (of a substantial kind) will permit. Hence, if you wish a certain kind of articles, other departments established, more of this and less of that, we would like to know your wishes, but it not seldom comes back to you as the responsible person, because it is to you we look to increase our subscription list by "compelling" your friends to come in and to accept our invitation. We have, we think, proved our perfect willingness to give you and these friends of yours their money's worth—a fact not always so very patent in medical journalism—and have also fulfilled our promise to conduct our (and your) journal after strictly professional ideals and limits. If this is so, we frankly say, *This is your matter, to accept or reject, to help or discourage.* If you believe in our work we shall be glad to have you tell us so, but it is still more important that you also tell your neighbors and friends. Certainly, hundreds of subscribers have been thus secured by enthusiastic friends who have believed that they were thereby not only benefiting their individual friends, but that they were encouraging a movement of great professional uses and importance. There are a thousand evils that disgrace American medicine and hinder professional unity and progress, which can only be outrooted by means of a powerful, a fearless, and a strictly professional medical press. We ask you in entire frankness and honesty to help us in a serious attempt to actualize this ideal.

Three Quotations from the *Medical Record* of October 29, 1898, are herewith produced:

"The *Atlantic Medical Weekly*, formerly published in Providence R. I., has ceased to exist. Its good will has been secured by a Philadelphia paper, which undoubtedly needs it."

"The trustees of the Cincinnati City Hospital have adopted a rule that the physicians in the hospital shall not be permitted to prescribe any remedies not included in the United States Pharmacopeia, all proprietary and secret remedies and such as are advertised at half-rates in the *Philadelphia Journal of Hypocrisy* being thereby shut out."

"And yet here we perceive a strong voice of a physician for the retention of the midwife, a voice doubly strong because it appears on the pages of the most important medical publication in this country [*i. e.*, the *Medical Record*, October 15, 1898], which is supposed to voice the most advanced scientific medical thought."

**Blood-Cyst of the Sciatic Nerve.**—W. K. Hatch (*Indian Med. Gaz.*, Sept., 1898) reports the case of a man, aged 40, who had for ten years had a tumor on the back of his left thigh. There had been no injury to the part and, when first noticed, the tumor was small and gave rise to no pain or inconvenience. It increased in size slowly and became painful, particularly on movement, about one month before the patient came under observation. The swelling was globular, firm, smooth, slightly elastic, movable from side to side but not up and down, and the skin over it was healthy but shining. On dissecting the tumor out, its surface was found to be slightly lobulated and of bluish color, and it was connected with the sciatic nerve. A few nerve-fibers were carefully dissected off and the sac was opened and then removed from the nerve. The sac was thin-walled and contained pure blood, hematoidin-crystals and a little fibrin. The wound healed readily and no alteration of sensation or motion resulted.

## Reviews.

**Records of Urinary Examinations.** Arranged by HARRY MORELL, M.D., C.M., Trinity University, Toronto. Hartford, Conn.: J. B. Burr & Co., 1898.

This is described as "a convenient, practical method for keeping records of urinary examinations for future reference in hospital or general practice," and such it is. It consists of a sufficient number of detachable sheets in book-form, in alternation with undetachable duplicate pages for carbon impressions, and it is provided with an index that makes easy reference to the results of examinations as recorded. Provision is made for chemic (including physical characteristics and physiologic and pathologic constituents in solution), microscopic and bacteriologic examination. The utility and the convenience of these "records" must be manifest and their mechanical preparation leaves nothing to be desired.

**The Treatment of Skin Cancers.** By W. S. GOTTHEIL, M.D., Professor of Dermatology at the New York School of Clinical Medicine, Dermatologist to the Lebanon Hospital, the Northwestern and West Side German Dispensaries, etc. 67 pages. New York: The International Journal of Surgery Co. Price, \$1.00.

Although the title would indicate that this book was devoted to the treatment of carcinoma alone, chapters are also given on its causes, forms, and diagnosis, thus making the book a quite adequate compendium on the subject. The chapters on the forms and diagnosis of skin carcinoma deal with the subjects briefly but clearly and accurately, and there are a number of excellent illustrations. In the chapter on treatment, excision, curetment, the cautery, and caustics are all discussed, but decided preference is expressed for the use of caustics, preferably arsenious acid in the form of Marsden's paste. Whilst practically all surgeons and many dermatologists will disagree with the author's statement that "cutaneous carcinoma is preferably treated, in the great majority of cases, by caustics," all admit that this form of treatment should have at least a limited application, and the careful directions which are given with regard to the manner of preparation and use of the various pastes will be useful to those desiring to adopt this form of treatment.

**The Care of the Baby.** A Manual for Mothers and Nurses. Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Second Edition, Revised. Philadelphia: W. B. Saunders, 1898.

Dr. Griffith has succeeded in the not simple task of writing a book for mothers and nurses that shall convey the desired information in interesting narrative and intelligible language, and he has exercised a discriminating judgment in what he has included and omitted. He lays down clearly the lines that the parent or nurse may follow in the care of the child with safety and without usurpation of the place of the physician with its duties, rights, and responsibilities; and a proper dissemination of the knowledge contained in this book would often lead to medical consultation in instances in which it is now neglected through ignorance or indifference. The subject proper is considered in 10 chapters, which are preceded by a judicious epitomization of the care and conduct of the mother during pregnancy. The topics then discussed consecutively are the baby itself, its growth, toilet, feeding, sleep, exercise, and training, nurses, rooms, and illnesses. An appendix contains information with regard to the dietary, to remedies for local use and for internal administration, and upon miscellaneous subjects. The book is altogether a useful and most commendable one, not alone for mothers and nurses, but for medical students and practitioners as well.

**The Refraction of the Eye.** A manual for students. By GUSTAVUS HARTRIDGE, F.R.C.S. 104 illustrations. Ninth edition. J. and A. Churchill, London. Philadelphia: P. Blakiston's Son & Co.

When a book has reached its ninth edition, it may be set down as a fact that the author has not only had a message for the student, but has put that message in such a way as to win the hearts of his readers. Nor is it difficult to see why Dr. Hartridge's book has taken such firm hold on our guild. To him it has been given in unusual degree to instinctively foresee the needs of the student, and to set before him in admirable arrangement all the useful facts about the refraction of the eye that are assimilable by the beginner in ophthalmology. This edition seems to show the influence of our own Dr. Jackson's (and Thorington's) persistent advocacy of retinoscopy as practised at one meter with the plane mirror, for the author says: "I have recently used the plane mirror almost entirely, and find it works well." It is also evident that in objective refraction the ophthalmometer finds no great favor in the author's sight. The volume has been brought right up to date, and may fairly be said to be the best presentation of the subject of refraction that is offered the student to-day. Type, paper, and illustrations are excellent.

**Practical Exercises in Comparative Physiology and Urine-Analysis.** By PIERRE A. FISH, D.Sc., Assistant Professor of Comparative Physiology and Pharmacology, New York State Veterinary College, Cornell University. Pp. 71. Published by the Author. Ithaca, 1898.

This little manual has been designed, especially, to meet the needs of those students who desire to become physicians or teachers of science. . . . It has been the aim to explain clearly the essential steps of the experiments and the reasons for them; but, at the same time, to leave opportunities for observation on the part of the students themselves, and to have them record their own inferences of the phenomena observed."

The subject is considered in 25 sections and the topics dealt with are as follows: Preparation of reagents, albumins, peptones, globulins, albuminates, albuminoids, carbohydrates, ventral fats, bone, salivary, gastric and pancreatic digestion, bile, milk, extracts of nervous, muscular and hepatic tissues, blood, examination of urine, circulation, heart, cilia, inflammation, and nervous system. The descriptions are concise, yet clear and adequate, and the booklet can be depended upon to subserve the purposes of its creation. It makes an admirable laboratory-companion to the large didactic works on the same subjects.

**Essentials of Materia Medica, Therapeutics, and Prescription-Writing.** Arranged in the Form of Questions and Answers, Prepared Especially for Students of Medicine. By HENRY MORRIS, M.D., Fellow of the College of Physicians of Philadelphia; etc. Fifth Edition, Revised and Enlarged. 8vo, pp. 288. Philadelphia: W. B. Saunders, 1898. Price, \$1.00.

The popularity of this book, as attested by the demand for successive editions, shows that it fulfils a certain need. Dr. Morris was wise in not attempting to replace with it the larger text-books in materia medica. Used in conjunction with these, however, as a reminder, and not as the primary or sole source of information, it is capable of rendering good service. The present edition has undergone considerable alteration to make it uniform with the last revision of the U.S. Pharmacopœia (including the use of the metric system), and to bring it in line with recent advances in materia medica and therapeutics. Following brief sections dealing successively with definitions, weights and measures, prescription-writing, influences that modify the effects of medicines and the administration of medicines, the various drugs are considered in two groups: Systemic and topical, each of which is further subdivided into classes and orders, in accordance with their therapeutic effects. The book thus contains, well presented, a good deal of information in compact and condensed form.



## Correspondence.

### A FRENCH JOURNAL'S ERROR.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

I ENCLOSE you the translation of an item which I found in the *Presse Médicale*, of Paris. It contains an insult not only to an honorable physician of New York, but to President McKinley himself. I wrote the enclosed answer to the editor of the *Presse*, and I beg you to insert it.

Yours truly,

ALBERT S. ASHMEAD.

From *La Presse Médicale*, Paris, October 12, 1898.

"Everybody knows how deplorable has been the management of the War Department of Washington, during the last war with Spain, and what incompetence the sanitary service especially has shown. The American troops have been decimated by disease, and the disease continued, and continues still, its ravages after the return of the troops. One of the corps which have been most afflicted is that stationed at Chickamauga. But who will be astonished at that when he hears that the chief physician of this troop offers for all guarantees the diploma of . . . a veterinarian. Questioned on the subject of this singular nomination, Mr. Sternberg, physician-in-chief of the army, and organizer of the service, declared that he had proposed Mr. R. S. Huidekoper only to be division physician, and that his promotion had been made without his assent.

"The thing has been explained since Mr. R. S. Huidekoper has had the good fortune to restore to health the spaniel of Mrs. McKinley. The soldiers have profited less by his care."

NEW YORK, October 28, 1898.

To the Editor of *La Presse Médicale*.

Sir:—In your number of the 12th October you have a few words to say of Dr. Rush Shippen Huidekoper, whom you call a veterinarian. I have the honor of informing you that Dr. Huidekoper is a graduate of the medical department of the University of Pennsylvania, 1877. After practising in Philadelphia for several years, in the most exclusive families, he, at the request of Prof. Wm. Pepper, went to France to get his degree from Alfort, upon the promise of Mr. Pepper, that on his return a Veterinary School would be instituted as a department of the University, and Dr. Huidekoper put in charge of it. This was done. At that time the standing of the veterinarian or horse-doctor, as he was called here, was considered a very lowly one, and it was Dr. Pepper's intention to elevate that standing. Thus it came to pass, that he sent to Alfort a gentleman who, by character, wealth and descent gave respectability to a despised profession; this gentleman was also a graduate physician of the oldest medical school in America. He was for several years a successful director of the newly founded school. I cannot say for what reason he left that position, but it is my impression that Dr. Huidekoper came to feel that instead of elevating the veterinary profession, he had lost caste in Philadelphia. He left his school of exclusive Philadelphia to live in democratic New York. He is now a member of the New York County Medical Association, the only medical society in New York City that is in affiliation with the American Medical Association.

As to the outbreak of typhoid fever at Chickamauga, Mr. Huidekoper was no more responsible, as division-surgeon, than I am, and than you are, Mr. Editor.

As to the joke (did you perceive that it was a joke?) about Mrs. McKinley's spaniel, you understand that I am not such a child, or such a fool, as to consider it seriously.

Very respectfully,

ALBERT S. ASHMEAD, M.D.

New York, October 28, 1898.

### DISINFECTION OF AN AUXILIARY CRUISER.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

THE great ocean steamer *St. Paul*, one of the largest vessels afloat, after being in the Government service as an auxiliary cruiser and transport, was recently returned to the International Navigation Company. Before resuming her former vocation a thorough renovation and disinfection was necessary. To comprehend the magnitude of this work, statement should be made of her dimensions. The *St. Paul* is 554 feet long, 63 feet wide, 42 feet deep, and has over four decks, in other words, she is four stories high. She contains apartments and state-rooms on three decks sufficient to accommodate 800 first-class and second-class passengers. The berths on the lower deck are ample to accommodate 900 steerage passengers and her crew of 400, including the stewards. The vessel is divided into 17 water-tight compartments. To ensure the most thorough disinfection possible, these compartments were subdivided into numerous sections by temporary bulkheads, or partitions, placed in passage-ways and at the landings of the stairways. Beginning with the first compartment, carpenters erected the temporary bulkheads while a corps of pasters followed, securely closing all chinks, ventilators, air-flues, portholes, etc., with strips of paper, thus making the sections as nearly air-tight as possible. When the first section was ready, the work of filling each with formaldehyd-gas was begun. Thus pasters followed carpenters, and the disinfectors followed the pasters till the last section of the last compartment was treated. The bilge was flushed and subsequently scrubbed out with a strong solution of mercuric chlorid.

The formaldehyd-gas employed was liberated from the commercial 40% aqueous solution, and two car-boys of the solution, aggregating 275 pounds, were consumed in the work. The gas was liberated by means of the sanitary formaldehyd-regenerator, and seven machines were employed. In filling the different apartments, from one to six machines were used at the same time, according to the capacity of the section, the gas being introduced through holes bored into the bulkheads. The machines were operated continuously for two hours and the sections kept closed for 12 hours after the requisite quantity of the gas had been introduced. No effort was made to employ any fixed quantity per 1,000 cubic feet of the contents, but rather to saturate the air with the gas. The exact cubic contents would have been difficult to ascertain, therefore I preferred to draw upon my experience with the capacity of this apparatus, the time the apparatus was in action, and the quantity of solution consumed, in proportioning the volume of gas utilized in each section.

The superiority of formaldehyd over other agents employed in gaseous disinfection is quite generally recognized. The agent which would have been utilized in part or all of this work in former years is sulphur dioxid. To ensure thoroughness of work the requisite quantity of the agent would have been enormous and the labor of properly applying the gas very considerable. The cost of the work would have been great, yet very little compared with the damage done to upholstery and other perishable objects.

The fact that formaldehyd-gas does not damage any articles which may be exposed, that it is a uniform aerial disinfectant and a most searching surface disinfectant, that the gas if speedily liberated is quite easily confined for a sufficient length of time in any ordinary apartment, and that expert engineering skill is not essential when the commercial solution is employed, are elements in the use of this agent meriting particular mention. The commercial solution is comparatively inexpensive and the apparatus here employed quite easily operated. It is important, however, in formaldehyd-disinfection to make the room as tight as possible and to use a liberal quantity of the solution.

The failures reported in the early use of this agent are now known to have been due to the failure to use enough of the gas. The quantity of the commercial solution employed should probably never be less than 8 oz. per 1,000 cubic feet of apartment-contents, and in extreme cases need not exceed 16 oz. This can be regulated according to the nature of the apartment to be disinfected and the number and character of the articles present requiring disinfection. A bedroom, with bare floor and few furnishings, and in which an infective disease has not recently appeared, may safely be presumed to require less gas than the adjoining room in which such fever-patient lay, a hospital ward, a nursery, a schoolroom, or an apartment in an auxiliary cruiser recently returned from fever-stricken Santiago.

Speaking of schoolrooms, had I the authority, I would require every one to be filled with formaldehyd-gas at least once a week, especially when epidemics are prevalent. This, in my opinion, would materially lessen the number of cases of measles, scarlet fever, and diphtheria, reported during the progress of our elementary schools.

The test of these instruments was the most extreme in its nature conceivable. Beginning at 7.30 A.M. they were operated to their fullest capacity till 8 P.M. each day for 5½ days, stopping only long enough to change place or recharge the apparatus.

The test demonstrated the efficiency of this method of disinfection and the durability of the apparatus, the latter at the close being in a good working condition. It is easily handled and operated, speedily set to work, and almost instantly stopped at will, durable and effective, admirably adapted to all apartment-disinfection, whether in private dwellings, hospitals, institutions, sailing vessels, etc.

(Signed)

J. R. CALDWELL, M.D.,

Deputy Quarantine Physician State Quarantine Station,  
Marcus Hook, Pa.

#### Recurrent Sarcoma of the Serratus Magnus.—

A. MacCormick (*Australasian Medical Gazette*, July 20, 1898) reports the case of a man, aged 56, in which the scapula, together with the serratus magnus muscle, was removed for sarcoma. About a year and ten months later a second operation was performed for the removal of a recurrent growth in the axilla, which had evidently originated in the upper part of the muscle. A third operation was undertaken after an interval of about eleven months for a recurrence corresponding in position to the first three digitations of the serratus. Nearly eight years have elapsed since the last operation and no recurrence has yet shown itself. Primary sarcoma of muscle is one of the rarest of tumors, and this case is of especial interest as showing the importance of removal of the whole of any organ affected with malignant disease.

## Society Proceedings.

### NEW YORK STATE MEDICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Mott Memorial Hall,  
New York, October 18, 19, and 20, 1898.

Continued from p. 887

THIRD DAY—October 20th.

**The Technic of Operative Treatment of Intestinal Obstruction.**—DR. FREDERICK HOLME WIGGIN, of New York, stated that when there is but little time for preparation, he advises removing the movable furniture from the room selected for the operation, and covering the carpet with sheets wet with either a strong solution of carbolic acid or of mercuric chlorid. The instruments are sterilized by boiling for 10 minutes in a 2% solution of sodium carbonate, and the towels are likewise sterilized by boiling. There should be at hand a supply of water sterilized by boiling, and also a large quantity of saline solution, made by adding a teaspoonful of common salt to each quart of sterilized water. If the patient is much prostrated it is sometimes well to inject one or two pints of saline solution into the veins prior to operating. Dr. Wiggin prefers, as a general rule, to make the incision through the right rectus muscle, unless the obstruction can be definitely located. Great distention of the cecum is an indication that the colon is the seat of the obstruction. When volvulus occurs in the small bowel, it is recommended that the gut be drawn out and systematically examined. This is a safe procedure if care be taken to wrap the bowel in hot, soft towels moistened with saline solution. When it is necessary to effect an end-to-end anastomosis, Dr. Wiggin now prefers to operate by his modification of Maunsell's method, in which both the invagination and the slit are eliminated. In inserting the sutures, the needle is passed from within the gut through all coats, then back through the peritoneal, muscular, and mucous coats to the interior of the other segment of bowel, and the ends are tied in the bowel. The last one or two sutures are of the Lembert variety. If properly inserted, and tied tightly enough, the peritoneum will be turned in and the stitches will be hidden. The most important point in connection with these operations is that the prognosis depends chiefly upon the promptness with which operation is resorted to. DR. H. O. MARCY, of Boston, spoke of the great importance in these abdominal operations of reconstructing the peritoneal planes and leaving no abraded surfaces exposed.

**The Passing of Alcohol.**—DR. J. M. FARRINGTON, of Binghamton, said that alcohol is neither a food nor a stimulant, and that recent physiologic experiments show that it interferes seriously with normal cell-growth. He attributes the great accuracy of our gunners in the recent naval engagements to the exclusion of grog, which was in marked contrast with the custom in the Spanish navy. Great Britain has given to the world an important object-lesson in this direction, for, as the result of certain observations made at the command of Lord Wolseley, it has been shown that the regiments that were not allowed any grog had greater staying powers than those receiving the usual rations. Additional emphasis had been given to these results by their practical enforcement in the Soudan campaign, where the innovation had already been fully justified. DR. E. R. SQUIBB, of Brooklyn, called attention to the fact that pharmacists had discovered that it is entirely practicable to do away with the use of alcohol as a menstruum in exhausting drugs. An efficient substitute had been found in acetic acid, usually in 10% solution. DR. H. D. DIDAMA, of Syracuse, said that although he formerly used alcohol in his practice, he has not in the past four years given the equivalent of a teaspoonful of alcohol to all of his patients put together, and he has been thoroughly satisfied with this change. DR. WICKES WASHBURN, of New York, extolled the use of alcohol and morphin in the critical stage of pneumonia. DR. HIRAM A. POOLER, of New York, said that while he does not see how the physician can get along well without alcohol in the treatment of disease in those long habituated to its use, the profession should not look lightly on its responsibility in this



matter. Sir Benjamin W. Richardson has reported, as the result of careful investigation, that alcohol is a deadly poison to the human system from its ingestion to its elimination.

**Eye-Lesions in Some Diseases of the Kidney.**—DR. H. S. OPPENHEIMER, of New York, said that one of the most commonly observed lesions in the course of kidney-disease is albuminuric retinitis. According to a report made in 1886, by Dr. C. S. Bull, on 103 cases, 57 of this number died in the first year, and 18 in the second year. Uremic amblyopia is ordinarily associated with the nephritis occurring during the course of the exanthemata or of pregnancy. The patient suddenly becomes almost, or even quite, blind; and, though unconscious, there is often observed a reaction to light. This proves the blindness to be of central origin. It differs from albuminuric retinitis in coming on suddenly, and in showing no lesion on ophthalmoscopic examination.

**Some Observations of General Interest Regarding the Course and Management of Cataract.**—DR. J. H. WOODWARD, of New York, called attention to the following facts: (1) That many cases of senile cataract do not show a progressive loss of vision; (2) that complete senile cataractous degeneration often requires years for its consummation; and (3) that improvement is often observed. Efforts should be directed to the maintenance of a high state of nutrition and the guarding of the patient from all sources of eye-strain.

**The Coccyx.**—DR. J. E. WALKER, of Hornellsville, discussed the various causes of coccygodynia, and the treatment, both nonoperative and operative. The former is appropriate in the milder cases, or in those depending upon a constitutional condition; the latter—excision of the coccyx—when there is deformity or other local lesion.

**Insanity Following Surgical Operations.**—DR. W. D. GRANGER, of Bronxville, said that insanity has been known to follow the simplest operation and to occur in persons varying in age from 10 to 65 years. It is especially liable to follow operations on the genito-urinary organs, and also, though less frequently, operations on the abdominal viscera, the breast, and the eye. It has even followed extraction of teeth. The mental disorder does not usually make its appearance for a week or two after the operation. DR. C. C. FREDERICK, of Buffalo, said that one of his patients developed acute mania a few days after a curetment and an Alexander operation, but she recovered entirely after about six months. It was learned subsequently that once before in her lifetime the woman had become maniacal after an operation. DR. F. H. WIGGIN also reported a case of mania developing after an operation on a diseased ovary and appendix, complicated during convalescence with laryngeal diphtheria. Recovery took place in two months.

**Use of Catgut in Surgery.**—DR. C. C. FREDERICK, of Buffalo, spoke of the disadvantages of nonabsorbable sutures and ligatures, and of the absorbable ones as prepared in the past, and asserted that all the objections to the latter could be removed by preparing catgut by the formaldehyd-process, which was described in detail.

**What to do to be Saved—being the Conclusion of the Inquiry into the Abuse of Medical Charity.**—DR. THOMAS J. HILLIS, of New York, addressed himself more particularly to a consideration of the avaricious, overreaching conduct of the average hospital-governor, and its effect on the visiting-staff, the general medical profession, and the community at large; and he incidentally propounded some interesting and pertinent questions.

**Senility.**—DR. F. W. HIGGINS, of Cortland, pointed out that old age begins in the primary cell-elements, and produces lesions closely resembling those found in chronic alcoholism. It is the function of the physician to avert premature senility.

**Technic and Use of Saline Infusions.**—DR. THOMAS F. REILLY, of New York, advised isolating the vein from its bed by a tenaculum inserted under it, and the use of a blunt cannula. Rarely more than two pints are injected at one time, but the operation is often repeated with advantage. It is useful: (1) In severe hemorrhage, whether external or internal; (2) in shock; (3) in all toxicemic conditions after a preliminary venesection; (4) in cases of vegetable and mineral poisoning, and (5) in any pathologic state attended with greatly lessened blood-pressure.

## American News and Notes.

**Dr. Roswell Park**, of Buffalo, N. Y., has just been unanimously elected a member of the Italian Society of Surgery.

**Died at Sea from the Plague.**—Two of the crew of the French bark *Duchess Ann*, from Hong Kong to San Francisco, October 29th, died of the plague while at sea.

**Abram Jacobi, M.D., LL.D.**—The honorary degree of Doctor of Laws was conferred upon Dr. Abram Jacobi, of New York, at the recent commencement of the University of Michigan.

**Dr. L. Bazet**, of San Francisco, and a graduate of Jefferson Medical College, was elected a corresponding member of the French Association of Urology at the Congress held in Paris in September last.

**Death at the Age of 125 Years.**—Pardo Lucero, whose age, as shown by the records of the missions of Los Angeles and Soleda, was 125 years, died at the county hospital, San Francisco, October 25th.

**Crozer Home for Incurables.**—The corner-stone of the Crozer Home for Incurables, at Upland, Pa., was laid October 29th, with appropriate ceremonies. The structure when completed will have cost about \$60,000.

**Protestant Hospital of East St. Louis, Mo.**—The corner-stone of a new edifice was laid with appropriate ceremonies, October 22d. The building, when completed, will be a three-story structure, and will cost about \$20,000.

**Hospital for Tuberculous Patients**, Dunning, Chicago, Ill.—The following appointments to the staff of the hospital have been made: Drs. William A. Evans, William A. Butler, John B. Murphy, Homer Thomas, Harold N. Moyer, and Florence Hunt.

**To Examine Acting Assistant Surgeons, U. S. A.**—An order has been issued by the War Department directing the Surgeon-General to convene a board of medical officers to examine Acting Assistant Surgeons now in the service and candidates for appointments.

**Detroit Academy of Medicine.**—At the annual meeting, held October 13th, the following officers were elected for the ensuing year: President, Dr. F. W. Robbins; vice-president, Dr. George Duffield; secretary and treasurer, Dr. H. D. Jenks; trustee, Dr. J. E. Emerson.

**Johns Hopkins Medical School.**—Dr. William Sydney Thayer, who has been for some years assistant, has severed his connection with the medical clinic, to enter upon private practice. He will retain his position as associate professor of medicine. Dr. T. B. Fletcher will succeed to the first assistantship at the clinic.

**The Vital Statistics of the Novelist.**—The annual births, in fiction, to deaths, are as 1 to 796. At this rate the story-tellers will depopulate the earth in 11 years, figured out mathematically. Dickens is the only author that ever lived who tried to hold the balance true. For every undertaker that he brings on the scene he introduces a midwife. In a book by Marion Crawford that I have just read there are 91 deaths, 7 marriages, and 2 cases of obstetrics, while in Anthony Hope's "Prisoner of Zenda," there are on an average 5 deaths to a chapter, with not a birth in the whole book—  
[The Philistine.]

**Epilepsy versus Matrimony.**—Marriage between epileptics is forbidden by the laws of Texas and Massachusetts. In the latter State syphilitics and alcoholics are also prohibited from indulging in matrimony.

**An epidemic of nervous unrest** is reported among a large number of the people of Denver. They describe the feeling as one of impending calamity. It has been variously explained as due to the excitement attending the preparations for their carnival, to the forest-fires that are raging in the mountains, and to atmospheric conditions.

**Chicago Gynecological Society.**—At the annual meeting, held October 24th, the following officers were elected for the ensuing year: President, Dr. Nicholas Senn; first vice-president, Dr. T. J. Watkins; second vice-president, Dr. Reuben Peterson; pathologist, Dr. M. L. Harris; treasurer, Dr. Addison Foster; secretary, Dr. William H. Rumpf.

**The John Blair Gibbs General Hospital.**—By direction of the President, the General Field Hospital at Camp Hamilton, Lexington, Ky., has been designated as John Blair Gibbs, United States Army, General Hospital, in honor of Assistant Surgeon John Blair Gibbs, United States Navy, who died June 12, 1898, from wounds received in an engagement with Spanish Infantry at Guantanamo.

**Control of the Milk-supply of Washington, D. C.**—A plan has been proposed for the consolidation of the milk-business of the District of Columbia. A central station is to be furnished with a cold-storage plant, with various modern facilities for handling the milk and keeping it sweet and pure. The milk brought to the city will be bought by the syndicate and distributed throughout the city over the routes now managed by the local dealers.

**Vital Statistics of Washington, D. C.**—According to the report of the health-officer of the District of Columbia, there occurred during the fiscal year ended June 30, 1898, 5,415 deaths, 322 less than during the preceding year. Of the whole number, 2,973 were among whites, and 2,442 among the colored. The mortality-rate among the former was therefore 15.53 per 1,000; among the latter 27.51; and the total mortality-rate was 19.32 per 1,000, the lowest since 1875-76, when the collection of the vital statistics was begun. The rate for the preceding year was 20.71 per 1,000.

**The Associated Health-Authorities of New Jersey** met in annual session at Mullica Hill, N. J., October 24th. Among the subjects discussed were the following: Diseases—The Methods Employed to Prevent Their Spread and the Necessity for Health-Boards in Every Community, by the president, Dr. Luther M. Halsey; Pure Water—Its Necessity as a Preventive of Disease; How to Obtain it and How to Keep it so, by Dr. William B. Atkinson; The History and the Object of this Organization and a Retrospect of the Work Already Done, by the secretary, Dr. T. E. Parker; The Powers and Duties of Health-Boards, by Dr. William M. Carter.

**New York County Medical Society.**—At the meeting held October 24th the following officers were elected: President, Dr. S. O. Van Der Poel; first vice-president, Dr. Henry C. Coe; second vice-president, Dr. J. Clifton Edgar; secretary, Dr. William E. Bullard; assistant secretary, Dr. John V. D. Young; treasurer, Dr. John S. Warren; censors, Drs. Edward B. Bronson, John A. Fordyce, Eugene Fuller, Horace T. Hanks and Walter Lester Carr. The contest over the election was a lively one in view of the fact that the two opposing factions are considered to represent, in a general

way, the party in favor of restricting the dispensary abuse, and the party which is desirous of attaining its own selfish ends without regard to the rights of others. The latter was victorious.

### **The Agricultural Department and Hog-cholera.**

—Dr. D. E. Salmon, chief of the Bureau of Animal Industry of the Department of Agriculture, has recently issued a report dealing with the serum-treatment of hog-cholera. It appears that the annual losses to the farmers of the United States from the ravages of this disease are excessive, being estimated at \$15,000,000 in Iowa alone. During the past year experiments have been conducted in Page County, Iowa, with a loss of but 20% of the affected droves—a result in marked contrast to previous statistics, which show that about 80% of affected animals die. Of 922 hogs treated, 170 died, a mortality-rate of 19%. Of 1,107 animals in other droves observed, but not subjected to the serum-treatment, 879 died, a mortality-rate of 79.8%.

**“Therapeutics of Diphtheria, by C. M. Boger, M.D., Parkersburg, W. Va.** This little work of 82 pages is divided into two parts: Indications of sixty different remedies, with characteristics presented in bold-face type, and space left after each remedy for the insertion of additional symptoms which have been proven of value in the hands of the individual practitioner; and an admirable repertory of the same remedies. The book is small enough to be carried in the hand-bag, and bears the stamp of thorough and conscientious compiling, and will be prized by all who believe in the superiority of remedies selected according to the law of similia over that of all other expedients combined.”—[Quoted from the Book Review in *The Hahnemannian Advocate*, September 15, 1898.]

**For a National Quarantine-Law.**—A convention has been called to meet in Memphis, Tenn., November 17th, 18th and 19th, to consider ways and means of securing a proper national quarantine-law. The call was issued by the Cotton Exchange and Merchants' Exchange, with the co-operation of the railroads and other corporations, the city councils and the Board of Health. All towns in the yellow-fever district with a population of 2,000 and over, will be invited to send delegates, and probably also the Governor of each State will be asked to send a representative to give the meeting some political weight. The promoters assert that this is not a Mobile fiasco, to discuss quarantine, but a convention to devise a way of securing national quarantine.

**Obituary.**—DR. ROBERT LOWRY SIBBETT, one of the organizers of the American Academy of Medicine, and vice-president of the section on obstetrics of the Ninth International Congress of Medicine held in Washington, D. C., in 1887, at Fairfield, Pa., October 31st, aged 65 years.—DR. R. WIGGINTON, Waukesha, Wis., October 16th, aged 60 years.—DR. EDWARD CRANE MULLER, professor of anatomy in the Northwestern University Medical School, Chicago, October 23d.—DR. CHARLES J. MILLIKEN, Cherryfield, Me., October 15th, aged 55 years.—DR. EDMUND WALSH, East Cambridge, Mass., October 19th.—DR. C. S. ARTHUR, Portland, Ind., October 17th.—DR. HENRY M. BOYERS, Grafton, W. Va., October 14th, aged 27 years.—DR. JOHN B. FARES, Romeo, Mich., October 14th, aged 69 years.—DR. PETER A. RIVARD, Rochester, N. Y., October 19th, aged 46 years.—DR. W. N. PLANK, Deer Creek, Ind., October 11th, aged 45 years.—DR. J. RICHMOND BARRS, Malden, Mass., October 25th, aged 49 years.—DR. G. W. MILLS, Sedalia, Mo., October 16th, aged 46 years.—DR. A. P. SNOW, Winthrop, Mass., October 25th, aged 72



years.—DR. LOUIS C. HORN, Baltimore, Md., October 16th, aged 58 years.—DR. H. O. AUSTIN, Albermarle County, Va.—DR. J. B. CRANE, Waynesboro, Augusta County, Va.—DR. HEZEKIAH STARR, Baltimore, Md., October 20th, aged 82 years.—DR. WILLIAM T. PLANT, Syracuse, N. Y., October 7th, aged 62 years.—DR. FRANCIS L. HAYNES, October 18th, at Los Angeles. He was a graduate of the University of Pennsylvania and subsequently a resident physician in the Episcopal Hospital, Philadelphia. He had been professor of gynecology in the University of Southern California.

**Memphis Pathological Society.**—At a meeting held October 15th, DR. WILLIAM KRAUSS presented three pathologic brains, the first exhibiting a large hemorrhagic focus involving the internal capsule and the optic thalamus; the second, a large cyst in the right hemisphere, communicating with the right lateral ventricle; the third, general syphilitic meningo-encephalitis, with softening. The president, DR. EDWARD C. ELLETT, presented three spindle-cell sarcomas of the choroid; a melanotic sarcoma of the choroid; a specimen of anthracosis of the lung, another of anthracosis of a lymph-gland; a melanotic sarcoma of the axilla; and an alveolar sarcoma of the breast. DR. M. GOLTMAN presented specimens of blood from a baby born with malaria. The mother was ill with malaria, and the baby was born prematurely and was markedly jaundiced. On the following day the baby was cross and fretful, and its temperature 102.2° F. Examination of the mother's blood showed the presence of malarial plasmodia. The baby's blood was not examined, but under treatment with quinin the fretfulness and fever almost disappeared, only to return 21 days later, when examination of its blood disclosed malarial organisms in profusion. Improvement followed administration of quinin and urea hypodermically.

**Memphis Medical Society.**—At a meeting held October 4th, DR. E. C. ELLETT presented a patient from whom he had removed the ear-ossicles for chronic suppuration with good effect.

DR. M. GOLTMAN read a paper on **superheated air in the treatment of disease**. The indications for its employment were briefly outlined, its use being advocated for ankylosis following fractures, for sprains, and for joint effusions. The more acute the condition, the better the results to be expected.

DR. G. G. BUFFORD reported a case of **hysteria simulating tabes dorsalis**, occurring in a woman, aged 21 years.

DR. GOLTMAN reported a case of **malaria** occurring in a woman before, during, and after parturition, and affecting also the newly born child. The diagnosis in both cases was confirmed by the discovery of malarial plasmodia.

DR. RICHMOND MCKINNEY reported a case of **foreign body** (a piece of charcoal) in the nose, which had been present for 8 or 9 months and had given rise to profuse nasal discharge.

DR. B. G. HENNING reported a case of **typhoid fever** in a young woman, which began with a distinct chill without prodromes. Intestinal hemorrhage occurred on the sixth day and recurred on each of the four succeeding days.

DR. S. E. RICE reported a case of **malarial hematemeses**, and DR. GOLTMAN and DR. HENNING reported similar cases. DR. ERSKINE reported a fatal case of **congestive malaria**.

**New York Academy of Medicine—Section on Laryngology and Rhinology.**—At the meeting on October 26th, DR. ROBERT C. MYLES reported a case of **angioma of**

**the septum**. The patient was about 50, and the clinical appearance was that of a fungating mass attached solidly to the anterior part of the septum.

DR. WENDELL C. PHILLIPS presented a young man with **syphilitic exostosis of the superior maxilla**. The appearance suggested antral disease, but there were no symptoms of it and transillumination was negative.

DR. WOLFF FREUDENTHAL reported a **case of chronic urticaria of the larynx**, occurring in a man of nearly 60, who had 3 attacks of severe general urticaria in the course of about 40 years. There was a diffused redness of the epiglottis and a localized edema, which was probably the counterpart of the ordinary urticarial wheal.

DR. FRANK A. BOTTOME presented a woman of 50 with **laryngeal carcinoma**, and raised the question of its operative treatment by quoting Dr. Charles McBurney as opposed to operation in these cases because he believed they were made worse by it.

DRS. MYLES and QUINLAN spoke of the unreliability of an early microscopic diagnosis in these cases. DR. PHILLIPS thought they should be looked upon as inoperable unless in those exceptional instances in which the diagnosis is made so very early that a partial resection of the larynx will be sufficient. DR. M. D. LEDERMAN thought if the growth were large enough to be visible the probability was that it was beyond the operable stage. DR. JONATHAN WRIGHT, on the other hand, insisted that these operations had yielded exceptionally brilliant results.

DR. M. D. LEDERMAN described **the Gleason operation for deflected septum**. He stated that Gleason first cuts below the angle of deflection, then makes a transverse incision, and finally completes it as a U-shaped incision. He claims good results in 80% of the cases. In the discussion, DR. MILES said that in the dozen cases in which he had used this operation he had been well pleased with it. It could be done in two minutes.

DR. BEAMAN DOUGLASS read a paper on **true papilloma of the nasal septum**, in which he reported one case, with photomicrographs.

**Denver Clinical and Pathological Society.**—At a regular meeting held October 14th, DR. I. B. PERKINS reported a case of **gall-stones** in which the differentiation from renal disease was extremely difficult. The physical signs pointed to the kidney, and pus was found in the urine. On incision, bile, pus and 38 gall-stones were evacuated, the patient making a good recovery. DR. VAN ZANT called attention to the examination of the urine for sugar in such cases, its presence pointing to involvement of the gall-bladder.

DRS. ROBERT LEVY and LEONARD FREEMAN exhibited a boy who had had a hard **tumor of the right nares and naso-pharyngeal vault**, with a foul-smelling, ulcerated condition, there being no obtainable history of syphilis, and antisyphilitic treatment producing no effect. Attempts at removal with the snare failed. Dr. Freeman operated through the superior maxillary bone and found the tumor occupying the upper part of the nares, the sphenomaxillary fossa, and attached to the basilar process of the occipital bone. The patient recovered, with a slight cicatrix.

DR. J. M. BLAINE reported a case of **exfoliative dermatitis**, due to the use of chrysarobin in the treatment of psoriasis. The patient was kept in a water-bath for 39 days and recovered, the psoriasis not returning. Dr. Blaine reported also a case of **sclerema of the newborn**.

DR. J. N. HALL reported a case of **syphilis** due to carelessness in fitting artificial teeth; and a case of **sudden**

**death from gunshot-wound of the anterior surface of the neck**, the external carotid being severed, but no hemorrhage appearing externally. The autopsy showed that the bullet had cut the tip of the right pleura, and the right pleural cavity was full of blood.

DR. H. T. PERSHING reported the case of a boy, 4 years old, well in the forenoon, who became suddenly ill after noon and died at 9 P.M., in the sequence of vomiting, delirium, coma, diverging strabismus, equal pupils, rapid pulse and respiration, and a mottled skin-eruption. No exudate was found on the surface of the brain, but the ventricles were distended with fluid. The case was probably one of **cerebro-spinal meningitis**, with death from toxemia.

DR. H. B. WHITNEY reported a case of **persistent cyclic vomiting** in a child, 8 years old, the paroxysms recurring every 3 months, lasting about 3 days, with the pulse 180, the temperature 102° or 103°, and blood appearing in the vomited matter.

**Chicago Medical Society.**—At the meeting of October 26th, DR. BROWER introduced a set of resolutions condemning Dr. Behring's patent on diphtheria-antitoxin and urging professional discrimination against his preparations.

DR. HENRY GRADLE read a paper entitled **Clinical Comments on Scrofulous Ophthalmia**.

DR. HAROLD N. MOYER presented a case of **Dumbness or Congenital Aphasia of a Family-type, without Deafness or Obvious Mental Defect**. He reported the case of a boy, 9 years of age, otherwise bright and intelligent, who understood all that was said to him, but who had spoken only one word, "mamma," until his eighth year. It could not be learned at what time of life he acquired this word. Inquiry into the family-history showed that the father had been totally aphasic until he was 6 years of age, and that two brothers and one sister were similarly affected, none of the latter speaking until the age of 4 years. A paternal uncle and cousin were affected with lalling all their lives. The two brothers of the patient grew up and occupied positions in life above that of the parents. The father and two grown sons had an excellent command of language, free from all defects of articulation.

Dr. Moyer referred to the several classic examples of sudden speech in those who had been previously dumb, *e. g.*, the son of Croesus and the Saurian athlete. The extreme rarity of the affection was mentioned, an examination of 4,485 mutes showing this condition in only 7, and many of these were more defective as to general mentality than those described. The explanation of Bastian was referred to, according to which language is considered as to a certain extent instinctive. In the cases under consideration there is some barrier to the emission of speech, which under the influence of strong emotion is swept aside and speech follows. One of the patients coming under observation did not speak until the fourth year. Then speech suddenly began, at first imperfect, but in three months the child spoke as well as the average child of his age.

DR. CHAS. H. MILLER discussed **The Proteolytic Value of Malt-Extracts**, detailing the results of a course of experiments to determine the effect of one of the enzymes present in malt-extract—peptase—on proteid food. The results show that well-prepared, light-colored malt-extracts of high amylolytic power possess also positive proteolytic value; that 2% lactic acid and 0.5% sodium carbonate are the best acid and alkaline media for obtaining a maximum amount of peptone from native proteids. The relative value of peptase, as compared with the other proteolytic ferments,

pepsin and trypsin, is certainly very much less, though practically this is not of great importance, as malt-extracts are habitually given in comparatively large doses.

**Denver and Arapahoe Medical Society.**—At a meeting held October 25th, DR. J. N. HALL read a paper on **Acute Pneumonia**, giving a report of 69 cases of acute lobar pneumonia seen in private practice in the non-mountainous regions of Colorado. All cases of broncho-pneumonia, tuberculous pneumonia, typhoid and hypostatic pneumonia, and pneumonia from gunshot and other wounds and contusions were carefully excluded. Of the whole number 42 patients were males, 20 females, while in 7 infants the sex was not noted. In 41 cases the right lung was involved, in 25 the left lung, in 2 cases both lungs, and in 1 the side was not mentioned. The whole right lung was involved twice, the whole left lung 3 times; the right lower lobe alone and with the middle lobe 31 times; the left upper lobe 5 times; the left lower lobe 17 times; both lower lobes once; the entire right lung and the lower left lobe once. Fifteen cases, or 21.7% proved fatal, 9 dying on the 6th or 7th day; 5 from the 3d to the 5th day, and one on the 9th day. In two cases the disease was aborted, one in a man of 70 years, the other in a boy of 7. Three patients were free users of alcohol, and all died. One chronic insane person died. One man had profuse expectoration of clear blood for one or two days, but recovered. There were 9 cases during first 5 years of life, with 1 death, and 8 during the second 5 years, with 1 death. In the second decade there were 8 cases, all recovering; in the third 14 cases, with 4 deaths; in the fourth 10 cases with 2 deaths; in the fifth 8 cases, with 4 deaths; in the sixth 5 cases, with 2 deaths; in the seventh 2 cases, with 1 death; in the eighth 4 cases, with no death; in the ninth 1 case, with recovery. The highest recorded temperature was 106.4°, death resulting; the highest, with recovery, was 105.9°. In each of two families 3 cases appeared in succession, and one other patient had nursed a fatal case of pneumonia the preceding week. The janitor of a schoolhouse suffered from two attacks 6 months apart, and a boy of 15, who swept a schoolhouse, contracted the disease. These suggest the infectious nature of the disease and the presence of the pneumococcus in dust. There is no reason to believe that the course of the disease differs materially on the great Western plateau from that in any region between there and the Atlantic.

DR. C. K. FLEMING read a paper entitled **The Abuse of the Mechanical Treatment of Uterine Disease**. The reply to the question, Why does there seem to be more pelvic disease in women than formerly? is that the increase is due, in a large measure, to the abuse of mechanical treatment of uterine disease. The vaginal speculum should be scrupulously sterilized, as should all other instruments used, and either lubricated with sterilized glycerin put up in compressible tubes, or simply wet with sterilized warm water. The blades should not be separated farther than is absolutely necessary, on account of the danger of injury to the bladder or urethra. The uterine sound should not be found in the armamentarium of the general practitioner. He who finds it necessary to the diagnosis of disease of the uterus is not qualified to do gynecologic work. Its use as a repositor should be condemned. Its only use is to locate exactly a pedunculated or submucous fibroid at the time of operation. Intra-uterine applicators are unnecessary and harmful. All dilators except those by which rapid dilatation can be effected should be abandoned. The patient should be carefully prepared, anesthetized and kept in bed for from 4 days to a week. The curet is useful for diagnostic purposes, in hyper-



rophic endometritis, retained membranes and placenta, salpingitis, and preparatory to celiotomy. It should never be used in atrophic endometritis or in acute gonorrheal endometritis. In acute septic endometritis the decomposing membranes or placenta should be removed, but attempts to curet the cavity add to the danger. Curettage should never be done in the office and seldom at home; but the patient should be sent to a hospital and the strictest asepsis observed. Pessaries are only useful for palliation, their usefulness being limited to retrodisplacements when operation is refused. Much harm comes from their abuse. In all manipulations of the vagina or uterus, manual or instrumental, the strictest surgical asepsis is essential.

**New York Academy of Medicine—Section on Obstetrics and Gynecology.**—At the meeting held October 27th, DR. S. MARX, reported a case of **fatal hemorrhage from a lacerated cervix**. The woman was delivered in a hospital, and as there was slight but steady bleeding after delivery, the house-surgeon packed the uterus with gauze. The removal of this gauze-packing on the third day was followed by a profuse hemorrhage and the death of the patient. The fatal termination might have been averted had the house-surgeon quickly sutured the torn cervix. The autopsy showed, in addition to the laceration of the cervix, an extensive subperitoneal hemorrhage. The speaker said that while he did not approve of suturing the cervix immediately after delivery, under ordinary conditions, it was a desirable method of treatment when the cervical hemorrhage was not controlled by manual flexion of the uterus or by packing. The diagnosis of cervical hemorrhage was not always easy. In the discussion, DR. FRANCIS H. STUART said that the only case in which he had sutured the cervix immediately after parturition was in one characterized by very severe hemorrhage from a torn cervix. Although in this case the union was excellent, he did not favor this practice except for the control of cervical hemorrhage. In his opinion, it was better to determine the exact source of the bleeding by inspection of the parts than to insert blindly a gauze-packing. DR. PHILANDER A. HARRIS, of Paterson, said that an excellent method of quickly controlling this form of hemorrhage was by seizing the bleeding portion of the lacerated cervix with a long clamp. The clamp should be allowed to remain *in situ* for two days, and although there was slight necrosis of the tissues included in the grasp of the instrument, he looked upon the procedure as harmless. DR. JOHN POLAK remarked that if the gauze-packing were allowed to remain in the uterus as long as three days, it would be likely to produce an atonic condition of the uterus, which might give rise to very serious hemorrhage on the removal of the gauze. This danger was not fanciful, as he had known such a hemorrhage to prove fatal in one instance.

DR. H. J. GARRIGUES presented a **fibroid uterus** which he had removed by vaginal hysterectomy from a woman, 58 years of age. It had been necessary to remove 9 fibroids before the uterus was sufficiently reduced in size to allow of its removal. The patient had long been a sufferer from chronic bronchitis, and although she rallied well from the operation, pneumonia developed after a few days, and was proved, at autopsy, to have been the cause of death.

Dr. Garrigues also presented the fluid and cyst-wall from what was supposed to be a case of **blighted ovum**. The woman had consulted him thinking herself four or five months advanced in pregnancy, but vaginal examination showed the presence of a fluctuating cyst, and a speculum-examination showed that this cyst had a thin outer wall, and

a thicker and fibrous inner wall. Between the two was some clear fluid, and within the cyst proper was a large quantity of thick, brownish fluid. The cyst itself had not been examined microscopically, but the microscope had failed to show in the dark fluid the presence of either blood-corpuscles or echinococcal hooklets.

DR. BROOKS H. WELLS reported a case of **fibro-cyst of the uterus**. The patient was an unmarried woman who was 32 years of age at the time she consulted him. Her general health had been good, and there was nothing abnormal about her menstrual history. She made the interesting statement, however, that ever since the age of 15 her abdomen had been unnaturally large and hard, but not tender. Last May she struck her abdomen forcibly against a piece of furniture, and then suffered from nausea, vomiting, and abdominal pain for a time. At the time of coming under observation, July 21st, a large fluctuating, rounded tumor could easily be detected in the abdomen, and it was thought to be a multilocular cyst of the ovary. She would not consent to an operation at that time. On September 19th, while stooping over for something, she was suddenly seized with violent abdominal pain, and this was associated with symptoms of shock. Dr. Wells was not called to see her until the 21st, and then there was every evidence that the cyst had ruptured. Even then the patient insisted upon postponing the operation, and it was not until five days later that it was performed. The condition was found to be one of cystic uterus with fibroids, the cyst having ruptured and discharged its contents into the peritoneal cavity. Although the tumor could have been easily enucleated without sacrificing the uterus, the presence of a small nodule in the fundus of the latter had led the operator to perform supravaginal amputation of the uterus. Although the contents of the cyst had remained in the peritoneal cavity for a number of days, there was no peritonitis present. If, as seemed probable from the history, this patient had had a fibroid at the age of 15, the case was a rare one. In the discussion, DR. H. J. BOLDT remarked that he had met with one case of fibroid tumor occurring in a girl of 18.

**Operative Gynecology, or the Temptation of Skill.**—DR. EUGENE C. SAVIDGE rapidly reviewed the field of operative gynecology in order to show the debt that woman owed to man's surgical audacity, and that while certain operations should at present be placed in the list of debatable ones, they constituted, in his opinion, only a small percentage of the whole. Among the latter class he placed the operations now done for the correction of retrodeviations, and predicted that these operations would be almost unknown to the next generation. In the discussion, DR. E. W. PEET, speaking from a large dispensary experience, stated that he had seen about an equal number of cases of fibroids treated by operation and without operation, and from his observation of these he was of the opinion that those not operated upon were more comfortable. He then referred to the unfortunate mental condition of many women whose tubes and ovaries have been removed for suppurative disease and said that while they were better physically, this was often more than counterbalanced by their wretched mental state. Vaginal puncture would often preserve the function of these organs, yet it must be admitted that it was rarely curative. He had not met with a single case in which an Alexander's operation had been completely successful. DR. A. E. GALLANT spoke of his discouraging experience with the obstinate sinuses left after vaginal puncture, and of the large proportion of retrodeviations that he had met with in

a gynecologic dispensary service, *i. e.*, 45%. He was yet undecided as to the best treatment for this latter class. He agreed with the reader of the paper that a large part of the pelvic pain experienced by women was due to passive congestion, and attributed this condition of the circulation in great measure to the almost universal lack of muscular tone in the women of the present day. DR. G. W. JARMAN said that according to his experience most of those who continue to complain after operations on the pelvic organs have been subjected to incomplete operations. He had noticed that there was far more nervous disturbance after the incomplete than the complete removal of the uterine appendages, and also that when the tubes and ovaries were completely removed, women under 27 suffer more than those over 30. DR. BOLDT said that he had more than once seen "the simple operation of curettage" followed by the formation of pus in the tubes. When there were succulated pus-tubes, the only hope of cure was to be found in the extirpation of the diseased organs.

DR. HIRAN N. VINEBERG read a paper on "The Diagnosis and Treatment of the more Common Bladder-Affections in Women by Means of Kelly's Method." He said that this work could be done satisfactorily with instruments not exceeding the No. 12 in size, and that therefore there was no occasion for excessive dilatation of the urethra. By the light of modern investigation that common condition formerly described as "irritable bladder" had been shown to be a local hyperemia, usually affecting the trigone; 6 applications of a 5 or 10% solution of silver nitrate would usually effect a cure. In the treatment of tubercular cystitis, he had obtained the best results from local applications of strong solutions of silver nitrate, together with a 25% solution of ichthyol in glycerin. In the discussion, DR. P. A. HARRIS suggested the removal of the obturator of the cystoscope would be less likely to cause traumatism of the bladder, as Kelly claims it almost invariably does, if an air-vent were provided, and if care were taken to expel all sterilized water from the instrument before introducing into the bladder. These precautions would greatly diminish the suction-power.

#### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 7 Days Ended October 27, 1895.

Passed Asst. Surgeon W. P. McINTOSH to rejoin station at Louisville, Ky. Oct. 26.  
Passed Asst. Surgeon J. B. SUMNER to rejoin station at Buffalo, N. Y. Oct. 27.  
Passed Asst. Surgeon H. D. GEDDINGS to await orders at Lenoir, N. C. Oct. 27.  
Passed Asst. Surgeon G. B. YOUNG to rejoin station at Delaware Breakwater Quarantine, Lewes, Del. Oct. 24.  
Passed Asst. Surgeon W. G. STIMPSON to assume temporary command of service at Memphis, Tenn. Oct. 26.  
Passed Asst. Surgeon J. M. EAGER to inspect ports of Brownsville and Corpus Christi, Tex. Oct. 24. To proceed to Laredo, Tex., for special temporary duty. Oct. 26.  
Passed Asst. Surgeon C. H. GARDNER to rejoin station at Baltimore Md. Oct. 27.  
Passed Asst. Surgeon J. H. OAKLEY to proceed to Chattanooga, Tenn., for special temporary duty. Oct. 22. Upon completion of duties at Chattanooga, Tenn., to rejoin station at Evansville, Ind. Oct. 27.  
Asst. Surgeon L. E. COFER to proceed to San Diego Quarantine, Cal., as inspector. Oct. 27.  
Asst. Surgeon H. S. CUMMING to rejoin station at New York, N. Y. Oct. 27.  
Asst. Surgeon C. H. LAVINDER to proceed to Egmont, Ky., via St. Petersburg, Fla., for temporary duty. Oct. 27.  
Asst. Surgeon H. B. PARKER assigned to duty as sanitary inspector on the U. S. transport "Minnewaska." Oct. 24.  
Asst. Surgeon R. H. VOX EZDORF granted leave of absence for 15 days on account of sickness. Oct. 27.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon M. S. SIMPSON, honorably discharged Oct. 22.  
Passed Asst. Surgeon P. MCGILL, from the "Resolute" to home.  
Passed Asst. Surgeon A. W. DUNBAR, order detaching him from the "San Francisco" and ordering to the "Franklin," modified so as when detached from the "San Francisco" he will report to the "Resolute."  
Surgeon J. D. GATEWOOD, to Naval Museum of Hygiene.  
Surgeon H. SMITH, retired, from the "Michigan" to home.  
Asst. Surgeon W. M. GARDNER, from the "Vermont" to the "Supply."  
Surgeon O. DIEHL, to the "Michigan."  
Asst. Surgeon B. L. WRIGHT, from the "Supply" to the "Vermont."  
Asst. Surgeon HOLTON C. CURT, appointed Oct. 14 to Naval Station, Richmond.  
Asst. Surgeon G. F. FREEMAN, from the "Eagle" to the "Arethusa."  
Asst. Surgeon R. O. MARCOUR, from the "Arethusa" to the "Pompey."  
Asst. Surgeon W. S. THOMAS, from the "Vixen" to the "Franklin."  
Asst. Surgeon D. B. KERR, from the "Pensacola" and to Washington and report to Navy Department.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon BRUCE FOULKES is assigned to duty at the Division Field-Hospital, the Presidio.  
Acting Asst. Surgeon LOUIS A. NELSON will proceed to Fort Snelling for duty.  
Acting Asst. Surgeon IRA B. LADD is assigned to duty with the 3d Battalion, 23d Infantry, en route to Manila, P. I.  
Acting Asst. Surgeons SHADWORTH O. BEASLEY and A. H. GIANNINI are assigned to duty at the Division Field-Hospital, the Presidio.  
On the return of Troop H, 4th Cavalry, from the camp at Lower Geyser Basin to Fort Yellowstone, Wyo., Acting Asst. Surgeon C. W. HACK will report for annulment of contract.  
Acting Asst. Surgeon A. J. PEDLAR is assigned to duty at the Division Field-Hospital, the Presidio.  
Acting Asst. Surgeon EDWARD C. WEBB, is relieved from duty at Angel Island, and assigned to duty at Artillery-Camp near Fort Winfield Scott, Cal., relieving Acting Asst. Surgeon JOHN F. MIXER, who will proceed to Angel Island for duty.  
Major EZEQUIEL DE LA CALLE, brigade-surgeon, will proceed from New York City to Jacksonville, Fla., for duty in the 7th Army Corps.  
Major WALTER REED, surgeon, will proceed to Natural Bridge, Va., on business pertaining to the Medical Department.  
Major LEWIS SCHOOLER, chief surgeon, is honorably discharged. Oct. 19.  
Lieutenant Col. ROBERT M. O'REILLY, chief surgeon, will report to Major-General JAMES F. WADE, for duty as chief surgeon on his staff, with station in Havana, Cuba.  
Par. 69, S. O. 243, Oct. 14, this office, relating to Major AARON H. APPEL, surgeon, is amended so as to direct him to proceed from Pueblo Beach, Fla., to Philadelphia, Pa., New York City and Buffalo, N. Y., on business pertaining to the Medical Department of the Army, and on completion of this duty will proceed to Fort Grant.  
Major GEORGE W. CRILE, brigade-surgeon, is honorably discharged. Oct. 21.  
Leave on surgeon's certificate of disability granted Major SCHUYLER C. GRAVES, brigade-surgeon, is extended one month on account of sickness. Oct. 20.  
Major SCHUYLER C. GRAVES, brigade-surgeon, is honorably discharged to take effect Nov. 15. Oct. 20.  
Major SAMUEL W. KELLY, brigade-surgeon, is honorably discharged to take effect Oct. 20.  
Acting Asst. Surgeon ARTHUR JORDAN will proceed to Richmond, Va., for duty pertaining to the muster-out of Virginia volunteers.  
Acting Asst. Surgeon J. CARLISLE D. VRIES will proceed from New York City to Washington, D. C., and report to the Surgeon-General of the Army.  
Acting Asst. Surgeon THADDEUS WALKER is relieved from further duty at the Leiter U. S. General Hospital, Chickamauga, Ga., and will proceed to Fort Wayne for duty.  
Lieutenant Col. ALBERT HARTSUFF, chief surgeon of the department, will proceed to Forts Brady and Wayne to inspect affairs of the Medical Department.  
The following changes in the stations of officers are made: Major FRANCIS J. IVES, brigade-surgeon, is relieved from temporary duty at Willets Point, N. Y., and will proceed to Fort Hamilton for temporary duty to relieve Major OGDEN RAFFERTY, brigade-surgeon. Major RAFFERTY will return to his proper station, Willets Point, N. Y.  
Major ADRIAN S. POLHEMUS, brigade-surgeon, is relieved from further duty at Knoxville, Tenn., and will proceed to St. Francis Barracks for duty.  
Captain CHAMPE C. McCULLOCH, JR., A. S., now at West Tampa Hospital, Fla., is relieved from further duty with the 4th Army Corps and will return to his proper station, Fort Barrancas.



Captain Wm. F. LITTLE, JR., A. S., on the expiration of his present sick leave, is relieved from duty at Fort Leavenworth and will proceed to Washington Barracks for duty.

Captain NORTON STRONG, A. S., on the expiration of his present sick leave, is relieved from further duty at Chicago, Ill., and will report at Columbus Barracks for duty.

First Lieutenant JAMES M. KENNEDY, A. S., on the expiration of his present leave will proceed to Griffin, Ga., for duty pertaining to the muster-out of Georgia volunteers.

First Lieutenant THOMAS J. KIRKPATRICK, JR., A. S., on the expiration of his present sick leave, is relieved from duty at Fort Douglas and will proceed to Fort Leavenworth for duty.

Leave granted First Lieutenant CHARLES F. POLLARD, A. S. (now major and surgeon), 5th U. S. Vol. Inf., on surgeon's certificate of disability, is extended one month on account of sickness.

Acting Asst. Surgeon P. S. FIELD is relieved from duty at Huntsville, Ala., and will proceed to Baltimore, Md., and report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon HAMILTON P. JONES will proceed from Montauk Point to New Orleans, La., and report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon J. R. TUCKER will proceed from New York City to Mobile, Ala., and on arrival there will report by letter to the Surgeon-General of the Army.

Leave heretofore granted Acting Asst. Surgeon LLEWELLYN P. WILLIAMSON is extended one month. Oct. 21.

Acting Hospital Steward W. B. BASSELL will be sent to Huntsville, Ala., for duty.

Acting Asst. Surgeon THOMAS S. LOWE will proceed from Fort Apache to Jefferson Barracks for duty.

Major HENRY F. HOYT, chief surgeon, on completion of his attendance before the commission to investigate the conduct of the War Department in the war with Spain, is relieved from further duty at Anniston, Ala., and will proceed to Manila, Philippine Islands.

Major JUNIUS L. POWELL, surgeon, will proceed to Augusta, Ga., and assume duties of superintending the construction of the division-hospital to be erected at that place.

Leave granted Major HENRY J. RAYMOND, brigade-surgeon, is extended one month and five days on surgeon's certificate of disability. Oct. 24.

Major TIMOTHY E. WILCOX, surgeon, is relieved from duty at Fort Schuyler, and from further duty in New York City pertaining to the muster-out of New York Volunteers, and will proceed to Macon, Ga., for duty as chief surgeon of the 1st Army Corps.

Captain MERRITT W. IRELAND, A. S., on expiration of his present leave will report in person to the Surgeon-General of the Army for orders.

Par. 9, S. O. 249, Oct. 21, this office, relating to Captain CHAMPE C. McCULLOCH, JR., is revoked.

Par. 83, S. O. 246, Oct. 18, this office, is amended so as to direct Captain HENRY R. STILES, A. S., to report to Captain Robert M. Roberts, 2d Art., chief mustering officer for Maine, at Augusta.

Captain NORTON STRONG, A. S., will report upon the expiration of his present sick leave to Col. Dallas Bache, A. S. G., president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination as to his fitness for promotion.

Captain FRANCIS A. WINTER, A. S., on completion of his duties pertaining to the muster-out of Connecticut Volunteers, will return to his proper station, Jefferson Barracks.

The following changes in the stations of officers are made: First Lieutenant WILLIAM H. WILSON, A. S., is relieved from duty at Fort Bayard and from temporary duty at Jefferson Barracks, and, on the completion of his examination for promotion, will report for assignment to duty in charge of the hospital recently established on Bedloes Island, N. Y., to relieve First Lieutenant LOUIS P. SMITH, A. S. Lieutenant Smith will return to his proper station, Fort D. A. Russell.

Acting Asst. Surgeon THOMAS C. AVARY will proceed from New York City to Atlanta, Ga., and on arrival there will report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon JOHN R. DEVEREUX is relieved from further duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, and will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon JAMES S. KENNEDY will proceed from Chambersburg, Pa., to Columbus Barracks, for duty.

Acting Asst. Surgeon CHARLES J. KENWORTHY will proceed from Huntsville, Ala., to Jacksonville, Fla.

Acting Asst. Surgeon CHARLES C. MARBRY, on completion of his duties pertaining to the closing of the Leiter U. S. General Hospital, Chickamauga, Ga., will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon FRANK ROBERTS, will accompany Battery I, 2d U. S. Art., when that battery proceeds to Porto Rico or Cuba. Leave for one month on account of sickness is granted Acting Asst. Surgeon CHARLES S. SPERN.

Acting Asst. Surgeon JAMES H. WALKER, is relieved from duty at Camp Meade, and will proceed to Philadelphia, Pa., for duty pertaining to the medical supervision of sick soldiers in the Philadelphia hospitals.

Extension of leave granted Major CALVIN H. ENGLISH, brigade-surgeon, is further extended to include Nov. 3, on account of sickness. Oct. 26.

Par. 63, S. O. 239, Oct. 10, this office, relating to Captain CHARLES WILCOX, A. S., is revoked. Captain Willcox will remain on duty with the 5th U. S. Cavalry.

So much of S. O. 234, Oct. 4, this office, as directs First Lieutenant WILLIAM W. QUINTON, A. S., to report to Col. Dallas Bache, A. S. G., president of the examining board to meet at the Army Medical Museum Building, Washington, D. C., for examination as to his fitness for promotion, is revoked.

First Lieutenant WILLIAM W. QUINTON, A. S., will report to Major SAMUEL Q. ROBINSON, surgeon, president of the examining board at Santiago, Cuba, for examination for promotion.

Acting Asst. Surgeon ROBERT W. GRILLER will proceed to Savannah, Ga., for duty with the 7th Army Corps.

Hospital Steward HERMAN HARBERS, now at Leiter General Hospital, Chickamauga Park, Ga., will, as soon as his services are no longer needed there, be sent to Washington Barracks.

Acting Hospital Steward MARTIN J. CAVANAGH, now at field hospital, 2d Div., 4th Army Corps, Huntsville, Ala., will be discharged.

Acting Hospital Steward R. P. HALE, now at Sternberg General Hospital, Chickamauga Park, will be discharged.

## Foreign News and Notes.

**University of Rostock.**—A special clinic for diseases of the throat and ear is being erected.

**The Woman's Medical College of St. Petersburg** accepts no students without written permission from parents or husband.

**A bust to the memory of the late Professor Johann Ludwig Casper** has been erected at the University of Berlin.

**University of Lausanne.**—Professor Bourget has been appointed director of the medical clinic, and Professor Rabow professor of therapeutics.

**University of Madrid.**—Dr. Amalio Jimeno, of Cabanas, has been appointed professor of pathology, to succeed Dr. Antonio Alonso Cortes, resigned.

**University of Munich.**—A dental clinic is being erected and will be under the direction of Professor P. J. Berten, until lately privat-docent at the University of Würzburg.

**University of Vienna.**—Professor Knoll, of the German University of Prague, has been appointed professor of experimental pathology, in succession of the late lamented Professor Stricker.

**The third International Congress of Gynecology and Obstetrics** will be held at Amsterdam, August 8-12, 1899, and the United States Government has been invited to send representatives.

**Another Vienna Victim of the Plague.**—The death is announced of Fräulein Pecha, one of the nurses who attended the late Herr Barisch, of Professor Nothnagel's laboratory, the first victim of the plague.

**Mr. C. W. Mansell-Moullin**, who has been elected president of the British Society for the Study of the Roentgen Rays, is a surgeon to the London Hospital, and the author of a first-class treatise on surgery.

**Ventilation of Warships.**—With a view to improve the ventilation of lower-deck spaces of modern vessels, the British Admiralty have decided on a program of experiments with electric fans at Devonport dockyard.

**Mr. Rider Haggard**, to whom we owe "She" and "King Solomon's Mines," whose output as a novelist has lately been small, is announced as the author of a work shortly to appear under the title of "Dr. Thorne," which will deal with the disastrous results to the community of the conscience clause in the new Vaccination Act.

**The monument to the memory of Pasteur** at the University of Lille, France, was unveiled with appropriate ceremonies on November 5th. Addresses were delivered by M. Liard, director of public instruction, and M. Roux, sub-director of the Pasteur Institute of Paris.

The impending retirement is announced of **Mr. Frederick Treves** from the staff of the London Hospital. Mr. Treves is the most successful operator in English surgery at the present time, and his retirement is due simply to the enormous pressure that his private practice puts upon his time. He is only 45 years old, and many people think he would have been wiser to give up some of his private practice than all his hospital duties.

**Obituary.**—**DR. HEINRICH SPÖNDLI**, formerly professor of gynecology and obstetrics at the University of Zurich, in Baden, aged 74 years.—**THEODOR GSELL-FELS**, doctor of philosophy, of theology, and of medicine, in Munich, October 12th, aged 80 years.—**DR. HEYDENREICH**, dean of the Faculty of Medicine at Nancy, France, and professor of clinical surgery.—**MR. JOHN FALLOWS, L.S.A., L.R.C.S. Edin.**, on the ill-fated Atlantic liner *Mohegan*.

**Sanitarium for Anemic Girls.**—**M. Ruel**, Municipal Councillor of Paris, has just caused to be converted into a sanitarium a property of his at Cannes. He proposes that poor girls, between the ages of 15 and 22 years, suffering with anemia, shall be provided with gratuitous lodging and medical attention during at least six months of the year. The patients are to be examined in Paris and then given free transportation to Cannes.

**Plague-Commission for India.**—The Indian Government has decided to appoint a special commission, to consist of five members, to conduct investigations regarding plague in India. The specific duty of the commission will be to inquire into the origin of the various outbreaks of plague, and the manner in which the disease is spread. An official statement also is asked as to the efficacy of the serum-treatment, and the prevention of plague by means of inoculation.

**The late Dr. T. M. Vincent Prendergast.**—**Dr. Vincent Prendergast**, whose sudden death is announced from Paris, at the age of 42, was well known to all the Anglo-American colony in the French capital. He was formerly in the British Army Medical Service, but retired early in his career, at the time when the grievances in that service were just coming to a head, and went to Paris as house-surgeon to the British or Hertford Hospital, and special correspondent of the *Lancet*. An able, smart man, thoroughly competent to do his work, and yet with the appearance of a man of fashion, Dr. Prendergast took his degree of M.D., Paris, with ease, and soon got round him an extensive practice, and at the time of his death, though only comparatively young, he was thoroughly established as a successful man.

**Ligation of a Ruptured Mesenteric Artery.**—One of the rarest lesions in a "buffer accident" is rupture of a branch of one of the mesenteric arteries. Such an accident occurred recently to a railway porter who was found in a state of collapse. As the collapse seemed to diminish, operation was temporarily postponed, but later, as it was again increasing, it was decided to operate. The abdomen was opened and it was found that one of the vasa intestini tenuis had been torn through about 1 inch from its origin. The distal end was bleeding freely and both ends were tied. The peritoneal cavity contained much blood and the collapse

was so extreme that saline transfusion was resorted to during the operation. At the time of the report, ten days later, the patient had done well, and it was expected that he would recover.—[*Lancet*]

**A Military Sanatorium** is to be established by the King of Belgium on the Canary Islands, in order to provide a place of safe retreat in case of illness for his soldiers engaged in the expansion of the Congo State. It has been found that the soldiers in the West of Africa are liable to suffer from the effect of the deadly climate, and the fever-stricken troops cannot be satisfactorily nursed to health in that country. As a consequence, if they remain at their posts, they are likely to die, whereas if they are sent home, the sudden transition from the warm climate of Africa to the much colder one of Belgium is likely to be attended with equally serious consequences. A commission of medical men has left Antwerp for Las Palmas to choose a site for the sanatorium, for the erection of which the King has already subscribed \$5,000. It is hoped that when completed it will afford a retreat at once easy of access, salubrious, and free from malaria.

**The London water-supply** has recently received a welcome addition, inasmuch as the long spell of drought has at last been broken, and the end of October has proved wet. The directors of the East London Water-Company, the breakdown in whose supply has been the subject of frequent comment in the columns of the JOURNAL, met on October 20th, and announced that the total fall in their catchment-area had, up to that date, amounted to 1½ of an inch, a fall which, to the disgust of the neighborhood, the directors did not consider sufficient to allow of the constant supply being restored to the houses in the company's area. If the weather had remained hot, it is quite probable that their prolonged inability to discharge their contracts would have led to some violent manifestation of indignation against the company, but with the rain has come a great fall of temperature, and the East ender is no longer so thirsty, while the thorough flushing of the sewers has removed all particular danger of an epidemic, and has allayed the apprehensions of the medical men.

**The Influence of Flowers on the Human Organism.**—According to the *Lancet*, the *Bullettino della Reale Società Toscana di Orticultura*, a monthly organ of fruit and flower culture published in Florence, has just brought to a close a series of interesting and instructive papers on "L'Influenza dei Fiori sull' Organismo Umano," from the highly competent pen of Dr. Ruggero Montelucci. The author's conclusions may thus be summarized: (1) That flowers not only constitute one of the best and most delicate medicaments of the excitant order of which modern therapeutics can boast, but that, for many individuals at least, they have established a claim to be classed with those of restorative or reinvigorating media, which contribute to the opportune, if temporary, rehabilitation of the organism. (2) That flowers have a distinct and potent function as purifiers of the air; that they are true and inexhaustible sources of disinfection, probably more active than the ordinary antiseptic substances; and that they operate with greater effect than may be supposed in counterbalancing the miasmata and the evil exhalations in general which are the inevitable concomitants of nature's evolution. Of special interest are Dr. Montelucci's illustrations, from experiments with flowers, of the law as stated by Dr. Mantovani, of the University of Pisa, in his recently published *Psicologia Fisiologica*—the law that "every pleasurable impression produces an augmentation in volume of the arm to which Mosso's 'pletismograph' is applied,



together with a greater fullness in the arterial pulsations and a greater depth in the inspirations, that is to say, in the thoracic movements by which the air is admitted to the lungs."

**University College, Liverpool.**—The good fortune of this flourishing institution is making the authorities of other university colleges envious. Only a week or two ago we recorded the fact that a citizen of Liverpool, the Rev. S. A. Thompson-Yates, had given £28,000 to build laboratories for the study of physiology and pathology. The principal of the college, Mr. Glazebrook, in announcing the extent of Mr. Thompson-Yates' liberality to an audience of Liverpool citizens, said that the college still wanted a physical laboratory and a new anatomical school. Almost immediately afterwards, at a meeting of the governors of the college, the Earl of Derby, the president of the college, said that he would give £5,000 of the £20,000 required for the physical laboratory and that he had much pleasure in announcing that Mr. Ralph Brocklebank would give £2,000 of the £15,000 required for the anatomical school. With such a start is almost certain that a few months will see the college in a position to instruct an architect to prepare plans.

**Sexual Dimorphism in Man.**—D. G. Brinton quotes, in *Science*, a pamphlet of about forty pages by Prof. Dr. Giuseppe Marina (*Studi Anthropologici sugli Adulti*. Torino, 1897. Fratelli Bocca) the results of measurements of 22,755 adults, Italians, Slavs, and Germans, whose studies tend to diminish the value of the skull-form as a criterion and to cast doubt on the "criminal type." The most novel of his results relate, however, to the relation of the sexual characteristics in general to the pelvic diameters. He formulates the law that in proportion as the pelvic index in the one sex approaches that of the other, this similarity will be correlated to a cranial form and capacity, and to a number of traits, physical and mental, which belong to the other sex. Feminism in the male, for example, is displayed by the length of the iliac crests, the shortness of the inferior extremities, a wider pubic angle, ampler cotyloid cavities, greater distance of the umbilicus from the pubis, development of the mammæ, etc. Marina points out that these traits are racial, sexual dimorphism being much more marked in some than in other stocks.

**Syphilitic Phlebitis.**—Barbe (*La France Medicale*, August 12th) states that syphilitic phlebitis is not often decribed, perhaps because it is imperfectly known and passes unnoticed. Sometimes the lesion is localized (venous gumma); sometimes it affects a certain extent of the vein. Langenbeck was one of the first who drew attention to syphilis of the veins. In 1881 he extirpated as a carcinoma a tumor in the neck, growing from the external coat of the jugular vein. The microscope, and ulcerations in the mouth and throat that followed showed it to be a gumma. In another case a similar diagnosis was made and a gumma of the femoral vein was removed, but the patient died from pyemia. In 1872 Gosselin observed in a syphilitic woman, 65 years old, a painful and tender swelling in the upper part of the calf beneath and not adherent to the skin. Palpation revealed a cord 4 cm. long and 1 cm. broad. There were no varices. Gumma in the external coat of the external saphenous vein was diagnosed, and under specific treatment the patient was relieved in 15 days. Gosselin further observed in a case of secondary syphilis precocious gummata in the cellular tissue and in both internal saphenous veins. Dr. Heuzard (*Thèse de Paris*, 1898) has described secondary

and tertiary phlebitis; in the former several veins are affected together or one after the other; in the latter the phlebitis may be circumscribed (gumma) or diffuse. Secondary phlebitis affects principally the saphenous veins. It manifests itself at first by congestion, which may take the form of red lines corresponding to the course of the veins. Palpation reveals tender, cord-like induration of the veins and edema of the leg. Specific treatment is rapidly successful; sometimes there is a relapse. The veins usually remain patulous. In tertiary phlebitis the veins are sometimes obliterated, sometimes varicose and elongated. Recovery is not always complete; sometimes induration remains.

#### Students at the Medical Schools in England.—

Through the courtesy of the deans, wardens, or other officers of various schools, the *British Medical Journal* has secured particulars with regard to the number of students who have entered in England this session for the whole curriculum, and of those who have joined for the various special courses. Under the agreement whereby joint cards are issued to the clinical instruction of the following hospitals and schools of medicine—Charing Cross, Guy's, King's College, Middlesex, St. George's, St. Mary's, St. Thomas', University College, and Westminster—42 qualified men have entered since May 1st of this year, namely, 15 from the United Kingdom, 12 from the colonies, and 15 from foreign countries. In the return from St. George's Hospital the entries for instruction in tropical medicine are not included.

	A	B	C	D
St. Bartholomew's Hospital	100	75	1	10
Charing Cross Hospital	21	30	21	6
St. George's Hospital	30	1	—	—
Guy's Hospital	81	21	6	19
King's College	28	190	—	12
London Hospital	60	47	—	11
St. Mary's Hospital	64	117	—	—
Middlesex Hospital	26	29	14	—
St. Thomas' Hospital	62	16	—	8
University College	51	19	—	11
Westminster Hospital	12	3	—	3
London School of Medicine for Women	16	2	—	—
Cambridge University	127	—	—	—
Oxford University	—	—	—	—
University of Durham College of Medicine	30	1	2	—
Bristol University College	12	1	6	4
Owens College, Manchester	66	62	18	71
University College, Liverpool	79	8	18	25
Yorkshire College, Leeds	21	9	—	19
Mason College, Birmingham	—	—	—	—
University College, Sheffield	9	—	—	4
University College of South Wales, Cardiff	—	—	—	—
London School of Dental Surgery	—	—	39	—
National Dental Hospital	—	—	12	—

A. Number of students who have joined for the full curriculum.

B. Number of students who have joined for special courses.

C. Number of dental students.

D. Number of students who have joined classes for preliminary instruction.

The total number of students newly entered for the full curriculum at medical schools in the metropolis (excluding London School of Medicine for Women) is thus 535, as compared with 502 in 1897, and 478 in 1896.

**Fatal Diarrhea due to Round-Worms.**—R. E. Wrafter (*Indian Medical Record*, September 16, 1898) reports the case of a girl, 10 years of age, suffering from diarrhea, appearing exceedingly ill, with thready pulse and sunken eyes. Four or five watery stools were passed shortly after the child came under observation, together with a large round-worm. A stimulant was administered, and, in the belief that the condition might be set up by worms, santonin was given, with the result that during the following eight days 111 worms were passed. The bowels were kept under control by the administration of suitable astringents, but the patient grew gradually worse and died after another week.

## Philadelphia News and Notes.

**Mr. Wm. S. Leffman**, for many years clerk to the dean of Jefferson Medical College, and for the past few years clerk to the Faculty of the Philadelphia Polyclinic, died October 13th, at the age of 62 years, of chronic nephritis. Mr. Leffman was held in warm esteem by those with whom his official duties brought him in contact, and his death will be learned of with regret by large numbers of the graduates of the institutions with which he was so long connected.

**Medico-Legal Society of Philadelphia.**—At the annual meeting held October 25th, the following officers were elected for the ensuing year: President, Dr. E. B. Wheeler; first vice-president, Dr. A. M. Eaton; second vice-president, Dr. L. H. Adler, Jr.; treasurer, Dr. I. M. D. Peltz; secretary, Dr. C. H. Clewell, and librarian, Dr. J. S. Rosh. Censors: Drs. A., R. Rainear, C. L. Feldt and J. Mecaskey. Auditing Committee: Drs. F. F. Thomson, J. D. Moore and J. I. McGuigan.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending November 12, 1898:

Monday, November 7—Philadelphia Academy of Surgery.

Tuesday, November 8—Philadelphia Pediatric Society.

Wednesday, November 9—Philadelphia County Medical Society.

Thursday, November 10—Pathological Society of Philadelphia.

Friday, November 11—College of Physicians of Philadelphia—Section on General Surgery.

**Vital Statistics of Philadelphia** for the week ending October 29, 1898:

Total mortality .....		348
Children under 5 years of age.....		87
Diseases.	Cases.	Deaths.
Pulmonary tuberculosis .....		34
Pneumonia .....		34
Diphtheria .....	113	30
Heart-disease .....		26
Senility .....		25
Nephritis .....		26
Marasmus .....		16
Typhoid fever.....	138	12
Apoplexy .....		11
Casualties.....		10
Scarlet fever .....	22	1

**Philadelphia County Medical Society.**—At the meeting held October 26th, Dr. MORDECAI PRICE reported a case of **gallstones occurring in an abscess of the liver**. The patient was a woman who presented signs suggestive of some tumor of the kidney, but no positive clinical diagnosis was possible. At operation the kidney was found normal and the gall-bladder empty. A large projecting tumor of the liver extended to the brim of the pelvis, which on incision was found to contain pus and 24 gallstones. The only explanation for the presence of the stones in the abscess-cavity is that ulceration took place in an overdistended gall-bladder, leading to the formation of an abscess of the liver, by the enlargement of which the stones were forced from the gall-bladder into the liver. The patient made a good recovery. Dr. Price reported also a case of **Porro operation at term**, in which parturition was hindered by the presence of a large fibroid tumor in the birth-canal. The operation was a complete success, both mother and child surviving. Dr. Price reported also a case of **ventral fixation complicating pregnancy**.

Dr. ERNEST LAPLACE demonstrated **intestinal anastomosis by means of a new forceps**. (The forceps and their indications are detailed in this JOURNAL, Vol. I, page 1120.)

**Pathological Society of Philadelphia.**—At the meeting held October 27th, Dr. H. L. WILLIAMS reported two cases of **accessory thyroid at the base of the tongue**. The first occurred in a woman, aged 50 years, who had noticed for 8 or 10 years a growth at the base of her tongue, which latterly had increased in size and given rise to dyspnea and some interference with speech. The second case was that of a girl, aged 16 years, who had noticed the growth for 5 years, which had recently increased in size and caused some difficulty in swallowing. The growth in both cases was situated in the median line. Each was removed by operation, and exhibited, upon microscopic examination, the typical structure of the thyroid gland. The origin of these growths was referred to errors of development occurring during embryonal life, and their rarity was commented upon. Dr. A. O. J. KELLY pointed out that in a recent paper on hypernephromas of the kidney he had drawn an analogy between the thyroid gland and the suprarenal body. Both are unprovided with a duct, both possess functions of which little is in reality known, and the tumors of both are prone to develop from abnormally situated "rests" of tissue.

Dr. GEORGE A. MUEHLECK presented specimens of **pyo-nephrosis**. The clinical diagnosis in the case had been typhoid fever, lobar pneumonia, and enlargement of the liver. The Widal reaction had been positive. At the necropsy there was no evidence of typhoid fever, nor was the liver enlarged. Both kidneys were enlarged and contained numerous cavities with smooth lining membranes, and filled with pus.

Dr. J. D. STEELE presented two specimens of **tuberculosis of the kidney**. Both were from women between the ages of 30 and 40 years, and had been removed by operation. The patients had done well since the operation, in one case a period of three years having already elapsed. It was considered that the tuberculosis was primary in the kidneys. Dr. H. L. WILLIAMS asked for statistics as to the frequency of implication of the second kidney when one is the seat of primary tuberculosis, and Dr. H. D. BEYEA for statistics as to the subsequent history of patients operated upon for presumed primary tuberculosis of the kidney. Dr. DAVID RIESMAN spoke of a case of pyuria in which the urine was acid in reaction and contained tubercle-bacilli, and asserted that the patient had recovered without operation, and was still well after a period of three years. He emphasized the importance of an acid reaction of urine containing pus in the diagnosis of tuberculosis of the kidney. Dr. ALFRED STENGEL mentioned a case of massive hematogenous renal tuberculosis. He asserted that the kidney is one of the organs in which tuberculosis is likely to become extensive and caseous early, and is thus likely to be considered primary when in reality it is secondary to some other lesion, perhaps undiscovered. He thought that cases of ascending tuberculosis of the kidney are not so very uncommon. Dr. STEELE said that he had no statistics bearing upon the questions asked. He thought that cases of ascending tuberculosis must be rather rare, as to his knowledge but one case of experimental infection has been demonstrated.

Dr. H. R. M. LANDIS exhibited specimens of **ulcerative colitis, and tuberculosis of the lungs** from a case of suspected Addison's disease.



DR. A. A. ESHNER exhibited a specimen of **ulcerative colitis** and one of **multiple amebic abscess of the liver**.

**Philadelphia Neurological Society.**—At the meeting held October 24th, DR. ELIZABETH R. BUNDY reported a case of **tetany** occurring in a man who had lived in Vienna 18 months previously. The attacks were somewhat atypical; the hands being clenched. DR. W. G. SPILLER emphasized some of the symptoms of the case. DR. JOSEPH SAILER reported a case that developed in a girl aged 10 years, 2 years after she had left Vienna. The symptoms were exceedingly mild, but all were present. DR. J. C. WILSON and DR. D. RIESMAN also spoke of cases that they had seen, and the latter called attention to the occurrence of tetany after experimental thyroidectomy.

DR. F. X. DERCUM exhibited a case of **ataxia limited to the right arm**. The patient was a woman, 26 years of age, who, until 6 months ago, had been perfectly well. Then she developed slight rigidity of the neck and extreme ataxia of the right arm, without loss of sensation. There was slight ataxia of the left arm also. It was doubtful whether the lesion was situated in the membranes of the cervical enlargement of the spinal cord, or in the brain. DR. C. K. MILLS suggested that the lesion was situated in the post-pyramidal region of the cortex or, at least, just below this area. DR. C. W. BURR reported a case in which the only symptom had been absolute loss of stereognosis in the left hand. This symptom had followed a blow upon the head, and was explained as being caused by a loss of position-sense. DR. A. A. ESHNER suggested that it might be due to loss of the sense of peripheral localization. In closing the discussion DR. DERCUM suggested that the stiffness of the neck might probably be an old condition.

DR. J. L. NICHOLSON reported a case of **brain-tumor**, confirmed by autopsy. The symptoms had been characteristic. An operation was urged, but refused by the patient. DR. C. K. MILLS believed that an operation would have been useful. DR. W. G. SPILLER called attention to the existence in this case of disturbance of the muscular sense, and its diagnostic significance.

DRS. C. W. BURR and D. RIESMAN reported a case of **tumor at the base of the brain**, apparently springing from the infundibulum. The patient was a woman who had been blind 5 years from postneuritic atrophy. There were no motor symptoms of moment, and sensation was normal; albuminuria and glycosuria were absent. The psychic state was peculiar. At first there was mental depression; this was followed by a period lasting until death, during which the woman was garrulous and lewd and obscenely jocose. Whether this was due to involvement by pressure of the prefrontal lobe was not known. At the autopsy a large tumor was found springing from the infundibulum, and occupying the pituitary fossa and pressing against the brain. The olfactory and optic nerves could not be discovered. On careful examination, a small portion of the pituitary body was found, and the absence of akromegalic symptoms was explained as being due to partial preservation of the hypophysis. The ground was taken that akromegaly is due to disease of the pituitary body. In all autopsies in cases of akromegaly the pituitary body has been found diseased. The reason that with tumors of the gland akromegaly does not always occur, was explained as being due, as in the case reported, to preservation of a portion of the pituitary body sufficient to prevent akromegalic changes. DR. SPILLER, in the discussion, spoke of a case of akromegaly in which he had found

sarcoma of the pituitary body. DR. F. X. DERCUM thought that the conclusions from the case reported were negative, and he could not see how the case strengthened the pituitary theory of akromegaly. Experimental destruction of the pituitary body has also failed to produce akromegalic changes. DR. RIESMAN believed that the case reported had a distinct bearing upon the subject of akromegaly, as it was the absence of akromegaly with some tumors of the pituitary body that has been used as an argument against the pituitary theory of the disease. It has been shown that the pituitary body was diseased in all cases of akromegaly that came to autopsy, and if in the case of pituitary tumor without akromegaly part of the hypophysis was still intact, the argument in favor of the view that akromegaly is due to disease of the pituitary body is certainly very strong. A failure to produce akromegaly experimentally could not be counted against the theory, as the results of such experiments would not necessarily apply to man. It is impossible to produce myxedema in dogs by thyroidectomy, yet that disease is certainly connected in man with absence or degeneration of the thyroid gland. DR. RIESMAN believed that that which is called the law of growth, and according to which an individual attains a certain stature and according to which each tissue has a definite development, depends upon chemic and physical conditions. The bones, for example, stop growing at a certain period, not because of anything inherent in them, but because their growth is checked by some inhibitory influence. This is true of all the other tissues. The inhibitory influence for the bones may be presumed to be supplied by a secretion from the pituitary body, which keeps in check further development of the skeleton. In akromegaly, the pituitary body being destroyed, the bones especially, by virtue of their natural tendency, undergo hyperplasia. That this only occurs in the peripheral bones is somewhat peculiar, but could be explained. DR. C. W. BURR believed also that the case reported gave support to the pituitary theory of akromegaly. In all cases of pituitary tumor without akromegaly the neoplasm should be carefully examined for hypophyseal remains.

DR. C. K. MILLS reported a case of **isolated paralysis of the ulnar nerve**. There was complete atrophy of every muscle supplied by this nerve, with anesthesia and trophic disturbances. The condition was probably due to a neuritis.

DR. WILLIAM G. SPILLER detailed the history of a boy who had been in the Pennsylvania Training-School for Feeble-minded Children, and had never had convulsions. He was active, and not especially noisy, and could read and count. His chirography was peculiar. After a time coordination became impaired; there was loss of power and atrophy in the legs and arms, with rigidity, and eventually loss of speech, contractures, exaggeration of reflexes, optic atrophy, and bedsores. Altogether the degeneration extended over a period of 8 years. At the autopsy lesions of the cord were found resembling those of amyotrophic lateral sclerosis. It was assumed that there was sclerosis of the brain also, but the organ had not been examined. The condition was believed to correspond with the cases of **pseudo-sclerosis of Westphal and Strümpell**. DR. H. A. HARE inquired regarding the details of the autopsy-findings. DR. F. X. DERCUM thought the case bore some similarity to amaurotic family-idiocy. DR. SPILLER believed that the distinctions were too finely drawn between these diseases, and thought that there was a similarity between them.



## The Latest Literature.

### British Medical Journal.

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1. The Use and Abuse of Internal Remedies in the Treatment of Skin Diseases. MALCOLM MORRIS.
2. The Library and the Work of the Medical Society of London. EDMUND OWEN.
3. The Nature of the Antagonism between Toxins and Antitoxins. C. J. MARTIN and THOMAS CHERRY.
4. Case of Excision of a Mass of Enlarged Cervical Glands (Tuberculous), with a Portion of the Internal Jugular Vein. GEORGE THOMAS BEATSON.
5. Chronic Dilatation of the Stomach, Associated with Chronic Gastric Catarrh. EDWARD F. MAYNARD.
6. Observations on Sanatoria for Consumptives. F. RUFENACHT WALTERS.
7. A Discussion on the Treatment of Spinal Caries. VICTOR HORSLEY, ROBERT JONES, R. W. MURRAY, NOBLE SMITH, A. H. TUBBY, W. THOMAS, FREDERICK CHURCHILL, L. S. LUCKHAM and H. G. DYER.
8. A Discussion on Rheumatic Heart-Disease in Children. D. B. LEES, WILLIAM OSLER, WILLIAM H. BROADBENT, WILLIAM EWART, ADOLF BAGINSKY, JAMES FINLAYSON, THEODORE FISHER, FREDERICK JOHN POYNTON, JOHN LINDSAY STEVEN, D. W. SANWAYS and G. F. STILL.
9. The Treatment of Club Foot. R. W. MURRAY.
10. On the Occurrence of a Pad on the Dorsum of the Foot in Rickets. A. H. TUBBY.
11. Dislocation of the Hip-Joint Arising in Connection with Acute Fevers. H. STANFIELD COLLIER.
12. On Tendon-Grafting or "Function-Transference" in the Treatment of Infantile Paralysis. FREDERIC EVE.
13. Note on the Operation for Mastoid Disease in Infants and Young Children. HAROLD J. STILES.
14. The Radical Cure of Spina Bifida. JAS. H. NICOLL.
15. Harelip and Cleft Palate. R. W. MURRAY.
16. Remarks on Harelip. I. MOSSOP.
17. Clinical Types of Infantile Pneumonia. JAMES CARMICHAEL.
18. Notes of a Case of "Apparent" Supernumerary Testicle. J. K. TOMORY.
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1.—In discussing the treatment of skin-diseases Morris vigorously condemns irrational polypharmacy, and then describes the action of certain remedies. Arsenic is to be used only in chronic cases, and it should not be administered for too long a time, on account of the danger of causing excessive pigmentation of the skin and, perhaps, local hypertrophies. A case of sarcoma is mentioned that was cured by its use. It should not be regarded as a specific. Antimony is particularly valuable in acute conditions, especially when there is high arterial tension. Among other drugs mentioned are thyroid extract, which has given little satisfaction; ichthyol, which has proved valuable in conditions caused by excessive gastric or intestinal fermentation, and tuberculin, which seems to be useless.

2.—Owen calls attention to the existence in the library of the Medical Society of the diary of the Rev. John Ward, Vicar and medical practitioner, at Stratford-on-Avon. It contains two interesting allusions to Shakespeare and some curious medical facts.

3.—Martin and Cherry quote a number of experiments that favor the view that the action of antitoxin is direct, and others that indicate that it is indirect, that is to say, it occurs only in the body. They experimented with diphtheria-toxin and with cobra-venom that had been heated to 90°, a temperature that destroys the poisonous constituents, excepting those against which Calmette's anti-venene has a decided effect. As diphtheria toxin passes through a Chamberland filter, and the anti-toxin does not, it is obvious that the reaction occurs only in the body. A neutralized mixture of the two would be toxic. If, however, the mixture were allowed to remain two hours at a temperature of 30°, and were then filtered, the toxin was destroyed. Antivenene is destroyed at 68° C., a temperature that does not affect the active constituents of snake-poison. When a mixture of the two was made, allowed to stand for 15 minutes, and then heated to 68°, it was found that the toxic properties were destroyed. Experiments to determine the time for this reaction showed that 15 minutes constituted the period if the toxin was in excess; the time being shorter when the proportion was altered. Diphtheria-toxin filtered through gelatin lost a certain amount of its power. Anti-toxin, however, failed to pass. It is believed that the experiments related confirm the chemical theory of the action of anti-toxin.

4.—In those forms of **tuberculous cervical lymphadenitis** in which there is a large mass of glands matted together and embedded in dense fibrous tissue, nothing short of radical removal will ensure the patient against the risks of tuberculous infection of other structures. The S-shaped incision of Senn affords the best access to the glands, in both the anterior and the posterior triangle. It is advisable to follow the suggestion of Watson Cheyne in these dissections, namely, to excise any portion of the internal jugular vein involved in the swelling. Beatson performed the operation on these lines, upon a 17-year old girl, removing a mass of glands 6 inches long and several inches of the internal jugular vein. For thoroughness of removal, ligature of the vein seems necessary, while it undoubtedly simplifies the dissection and prevents venous hemorrhage. The resultant scar from the S-shaped incision is not so disfiguring as that following the usual vertical incision.

5.—Maynard has found **chronic dilatation of the stomach** in 19 of 87 cases of **chronic gastric catarrh**. Dilatation is considered present if the greater curvature descends within one inch of the umbilicus, if there is a distinct splash over the organ on palpation, and if the tympanitic percussion-note extends beyond the normal stomach-area. Vomiting is uncommon, a sense of fulness and weight at the lower end of the sternum being the usual complaint. The most important element in treatment is the restriction of liquids by the mouth.

6.—Walters believes that there are many regions in England suitable for the erection of **sanatoria for tuberculous patients**, which should have fresh air and light, and control a considerable area in the surrounding country for excursions.

7.—The treatment of **spinal caries** involves dealing with a tuberculous osteitis of the vertebra and with the deformities resulting from destruction of the vertebral bodies. Horsley contends that a tuberculous osteitis in the vertebra should be treated precisely as if situated in other bones, namely by operation which is unattended with any risk that contraindicates its performance. By early operation numerous sequels will be avoided. The existence of an abscess may be satisfactorily determined by observing the degree of collapse of the vertebral bodies, as marked angular deformity would necessarily imply the obstruction of one or more bodies, entailing the coexistence of an abscess. A post-pharyngeal abscess should never be approached through the posterior wall of the pharynx, but through an incision in the neck as for ligature of the internal carotid artery. Abscesses, complicating caries of the dorsal region, should be approached by performing simple laminectomy, the pedicles of the nearest inter vertebral foramen being removed for drainage if necessary. Horsley likens Calot's operation with that of osteoclasia, as being a rather brutal



way of reducing deformity; and it has the further disadvantage of offering no means of treating abscesses or ensuring resolution of the tuberculous process. If fixation is desired in the treatment of spinal caries this is best attained by counter-extension from the ankles and head and axillæ; and it is much to be preferred to the plaster corset or the spinal brace. Robert Jones disagreed with the views expressed as to the best means of extension and the operative treatment of caries, contending as to the latter that it is almost impossible to remove all the diseased bone and that many early cases might be operated upon that should be let alone, while others are too far advanced to benefit from operations. In the discussion that followed, the prevailing opinion favored treatment by mechanical appliances rather than by operation or by Horsley's mode of extension. The Calot method of reducing angular deformity is still *subjudice*. The consistency of the pad varies from semi-fluid to hard and resistant, according to the age of the child. Not only the skin and subcutaneous tissues are involved, but also the periosteum and the epiphysis. At a period of from 18 to 36 months after the onset of the disease the pad disappears concurrently with the general flabbiness and undue pallor of the skin, and leaves the bony changes well apparent to the touch.

8.—In the discussion of **rheumatic heart-disease in children**, Lees expressed the belief that acute rheumatism is one of the chief factors in the mortality among children, and that it acted through the influence of the rheumatic poison upon the heart. Endocarditis is not often the cause of death, as the lesions are usually slight. Pericarditis is a much more striking postmortem condition than endocarditis in the rheumatic heart-disease of childhood, and is a much more common cause of death. Pericardial effusion of any extent is uncommon in these cases. Pericarditis causes death through its influence upon the cardiac muscular wall. Postmortem records have shown disease of the myocardium in a large percentage of cases. In some the muscle-wall is soft and pale, in others fatty, in still others, tough and fibroid. Microscopic examination will probably show less evident changes in all cases. There results from this muscular weakening dilatation of the heart; and this may in turn lead to compensatory hypertrophy. Cardiac dilatation is more or less present in rheumatic attacks in which there is no proof of either pericarditis or endocarditis. Dilatation seems in these cases due to the toxic action of the rheumatic poison on the heart-muscle. Such dilatation may remain when the attack is over, gradually producing symptoms of increasing heart-failure, and death after a few years. The toxin producing this condition is probably the product of microbic growth. In determining the presence of pericardial effusion Sanson's sign is considered of great value, namely, a considerable extension of dullness in the third and second intercostal spaces. The fibro-serous inflammatory product of early rheumatic pericarditis is most abundant at the base of the heart, around the great vessels. Simple adhesion of two pericardial surfaces tends to render permanent an acute dilatation and to hinder its diminution. A large part of the dilatation observed in chronic heart-disease resulting from acute rheumatism is probably due not to a co-existent mitral regurgitation, but to the fact that both the dilatation and the regurgitation are effects of the acute attack, the former due to the poisonous attack on the heart-muscle, the latter to the accompanying endocarditis. The meaning and importance of a presystolic murmur in a child requires careful consideration. The first indication of endocarditis is always the appearance of a systolic murmur at the apex, the second sound being still audible. Often this latter becomes doubled after a time, the doubling being heard only in the apex-region, and being therefore different from the duplicated pulmonary sound of advanced mitral stenosis. The first of these two sounds is the normal second sound, caused by the sudden extra strain thrown on the already closed valves and on the aorta and pulmonary artery by the diastolic expansion of the ventricles. The second of the two sounds is caused by the tension of the inflamed and stiffened mitral flaps, produced by the same rapid expansion of the ventricle. The first element of the double sound always remains a sharp, short sound as long as it is audible at all. The second element may be substituted by a short, blowing murmur, an early diastolic, or mid-diastolic murmur. This is caused by a slight vibration of the stiffened mitral flaps, by the inrush of blood from the auricle, resulting from

the suction-action of the rapid ventricular expansion. At a later stage there may be at the apex a systolic murmur, followed by a short early diastolic murmur, or a short presystolic followed by a longer and louder systolic. This presystolic murmur is blowing in character and usually short and is common in children after a rheumatic attack. It is usually accompanied by evidences of great dilatation of the heart. A presystolic murmur may end sharply with the systole, or it may be prolonged backward to occupy the greater part of the diastole. It has rarely the loud, rough, churning character of the presystolic murmur of marked mitral stenosis. The narrowing of the orifice is of slow process. Care should be taken not to consider a soft, double sound at the base an evidence of commencing aortic disease. It is often the first indication of pericarditis. The prognosis in rheumatic heart-disease is not based upon a consideration of the valvular lesion, except in rare cases of advanced mitral stenosis, but chiefly upon the amount of cardiac dilatation, the presence or absence of pericarditis, and the evidence of a fresh rheumatic toxemia. In the discussion, Osler suggested that in the prognosis of any case of rheumatic heart-disease the two influencing factors should be the presence of widespread pericardial adhesions and the persistent recurrence of rheumatic manifestations. He approved of Rotch's sign of increased dullness in the first right space. Broadbent has on two occasions excluded pericardial effusion when there was an increase in dullness on the right side of the sternum by inserting a hypodermic needle. Baginsky considers pericarditis much more dangerous than endocarditis in these cases. The patients often die after two or three attacks at the age of puberty. The first sign of mischief is often irregularity of the pulse and the heart-impulse. Finlayson thought that mechanical valvular defects are often responsible for the perpetuation and aggravation of a heart-disorder. He suggested that too much reliability should not be placed upon percussion, as no part of physical diagnosis is less certain. Fisher thought that rheumatic disease of the heart in children should be considered a toxemia of which pericarditis and endocarditis are pathologic manifestations, and that poisoning of the heart-muscle could be present without these. Dr. Poynton thought that the researches of Achalone resulting in the discovery of an anaerobic bacillus and the production of great edema and swelling of the cellular tissue, with dilatation of the arterioles and necrosis of the muscle from the inoculation of his cultures into animals, should be given great consideration. Steven thought that heart-disease in children, apart from chorea and rheumatism, is not a frequent condition. He considers all true chorea in childhood as of rheumatic origin, and therefore a cardiac lesion in the course of chorea is of necessity a rheumatic lesion. Marked reduplication and accentuation of the second sound, chiefly the pulmonic, is the precursor of the characteristic valvular murmur. Occasionally the murmurs observed over a period of months disappear. The immediate prognosis in rheumatic heart-disease in children is good, the remote prognosis always grave, the end occurring in youth or early adult life. Samways thought that in cases in which pericarditis occurred with rheumatic heart-disease it was better that cardiac dilatation should be present, as adhesions forming around the dilated heart are less likely in the future to prevent a sufficient cardiac diastole than if the pericardium tightened on a heart of normal size. Still suggested that further confirmation of the view that the dilatation of the heart in rheumatism is of toxic origin is to be found in the conditions attending pericarditis due to other diseases; thus, in pericarditis associated with pneumonia or tuberculosis, there is often a striking absence of dilatation, suggesting that there is some other factor in the case of rheumatic dilatation with pericarditis than the mere inflammation of the pericardium, probably a rheumatic toxemia.

9.—Murray treats severe cases of **talipes equinovarus** by division of all the resisting structures on the inner border of the foot down to and including the astragale-scapoid capsule, the latter structure playing a most important part in maintaining the deformity. Of the various methods employed in cases encountered in children who have already walked, preference is given to cuneiform osteotomy, care being taken to remove a large enough section of bone and to take every precaution to prevent suppuration.

10.—Tubby describes a peculiar pad that is found on the



dorsum of the foot in rachitic children. This swelling is either a flattened elevation or is dime-shaped, and over it the skin is waxy in appearance and of a yellowish tint.

**12.**—Eve reports four cases of **tendon-grafting**. In one all the muscles supplied by the external popliteal nerve were paralyzed. The tendon of the tibialis posticus was attached to the tendons of the extensor longus digitorum and a portion of the tendo Achillis to the peroneus longus. A second patient presented extreme equinovarus, the result of infantile paralysis. The tendon of the tibialis anticus was attached to the peroneus brevis and the tibialis posticus to the extensor longus digitorum. In the third case there was paralysis of extensor longus digitorum and of the tibialis anticus. The tendon of the tibialis posticus was attached to the tibialis anticus, and that of peroneus brevis to the extensor longus digitorum. The fourth case was one of equinovalgus. The tendon of the peroneus longus was attached to the extensor longus digitorum, and that of the peroneus brevis to the tibialis anticus. The improvement that followed in each instance was gratifying.

**14.**—The **treatment of spina bifida by the open operation** has displaced the older method of injection. Nicoll has, himself, performed 30 such operations, concerning which he has made some interesting observations. Seven of the 30 cases operated upon died within one month, but this is not an unenviable record, and throws no discredit upon the operation, as every case, without exception, that was brought was operated upon. If those cases were rejected, in which the sac had burst, or was sloughing, or with which hydrocephalus was associated, the mortality following the operation would compare favorably with that for the radical cure of inguinal hernia. As to the technic, the following points are of interest. No attempt is made to prevent the escape of cerebrospinal fluid during the operation; in fact, this is rather encouraged, if the patient is a hydrocephalic. If the sac be small, a ligature suffices to close it, or, if large, a row of catgut-sutures. Should the sac contain nerve-cords, such portions of it as are free from nerve-tissue are excised, while the remainder is cut into ribbons by incisions from the interior, parallel with the nerve-cords, the sac being then replaced in the spinal canal. The flaps are purposely left long; the margins of the mesoblastic flap, composed of muscle, fascia, and sometimes bone, "are piled up into a median ridge turned inwards," by means of several rows of catgut-sutures, while the redundant margins of the skin-flaps are "similarly piled up into a ridge, but curled outwards." By this method, the escape of cerebrospinal fluid or the entrance of sepsis is rendered more difficult. As to the prognosis in cases of paraplegia, Nicoll is unprepared to claim that the operation will afford relief; if the method, as outlined, is followed out, there should be little likelihood of paraplegia from injury to the nerve-trunks. As for hydrocephalus, the operation may be the means of relieving, or even curing it. In this connection, certain measures are suggested, that are under trial, and may effect a cure, such as the establishment of drainage between the vertebral canal and the peritoneal cavity, drainage of the cerebral ventricles, either externally, or into the meninges, and the application of certain solutions to the interior of the ventricles.

**15.**—From his experience in 195 operations for **harelip and cleft palate**, Murray is convinced that the operation for harelip should be performed about the fourth week, and that for cleft palate about the twelfth month—*i. e.*, before the child has begun to talk. To prevent the falling away of the nose that often accompanies an otherwise good operative result, a button suture is introduced, approximating the ala of the nose to the nasal septum. In cases of double harelip the removal of the intermaxillary bone is advocated, and the flattening of the upper lip that is likely to follow this procedure can, to a large extent, be obviated by removing the bone subperiosteally.

**17.**—Carmichael recognizes four clinical types of **infantile pneumonia**: (a) complete consolidation of lobar distribution, without signs of bronchial catarrh; (b) with no sign of consolidation, bronchial catarrh being generally distributed over one or, frequently, both lungs; (c) with bronchial catarrh and some areas of incomplete consolidation of lobular distribution; (d) with bronchial catarrh and larger areas of incomplete consolidation of lobar distribution. The differentiation of the last three types depends to a greater or less extent upon the degree of accompanying consolidation.

The acute pneumonia of infancy and early childhood is a bronchial-pneumonia in the majority of cases. This is owing to the fact that infection attacks the most vulnerable tissues, those possessing, in other words, the least immunity. It is not until the fourth or fifth year of extra-uterine life that the delicate tissues constituting the alveoli of the lungs become completely developed. Up to this time the air-cells are relatively smaller than in the adult, their walls thicker and the interstitial tissue larger in amount. The blood-vessels of the alveolar walls are also abundant. The connective-tissue cells in the stroma and also the epithelial cells are numerous and proliferate readily. Such being the anatomic conditions met with in the infantile minute bronchial tubes, alveoli and interstitial tissues, the presumption is that these growing and immature tissues possess less immunity to the inroads of infective microorganisms than the fully developed adult structures.

**19.**—Hutchinson states that the information regarding **congenital syphilis** that he has collected during the past 25 years has been of rather a negative than a positive nature. He devotes himself particularly to the relative frequency of late manifestations. Regarding diseases of bone in hereditary syphilis he has seen many cases resembling somewhat osteitis deformans, characterized by great enlargements and bending of the bones. The simultaneous affection of joints always occurred in young patients, never in those over 20 years of age. Neither does deafness occur at a late period. Gummata and other syphilitic affections of the tongue were also exceedingly rare, although a typical example was seen in a woman of 33. Affections of the nervous system, such as degenerative changes, occur late in adolescent life. With the exception of phagedenic lupus, there is no reason to attribute to congenital syphilis forms of chronic skin-disease occurring after infancy. Regarding marriage of subjects of hereditary taint, the evidence is so strongly against transmission to the third generation that such individuals are justified in believing it to be impossible. As to the time of marriage for syphilitics, two years is a sufficient interval; a period of longer waiting might produce more unhappy results than it would prevent. It is true that congenital syphilis was transmitted after two years in some cases, but if the eldest child suffered, the younger children usually escaped; the taint usually died out, even when both parents were affected. Many cases of congenital syphilis, so-called, are undoubtedly instances of mistaken diagnosis. No diagnosis should be made solely on the character of the skin-eruption; there must be some other corroborative evidence. In discussing the brain-lesions of hereditary syphilis in early life, Ashby considers (1) fetal syphilis, (2) infantile syphilis, including relapses, and (3) tertiary syphilis, which occurs before or about the period of puberty. No definite lesion of syphilis has been demonstrated as occurring in utero. Microcephalic idiots have been born of syphilitic parents, and Ashby records such a case. Infantile syphilis occurs in a fairly large number of cases. The common lesion is an endarteritis, and the consequent softening, accompanied perhaps by marked meningitis. In rare cases gummata are found situated on the sheaths of some of the cerebral nerves and giving rise to paresis. In some cases the brain has been found adherent to the dura mater by a sort of gelatinous membrane covering the convexity of the base, with some patches of sclerosis in the area of the Sylvian fissure. Eclampsia of the Jacksonian type occurring in infants or young children and followed by paresis is suggestive of a syphilitic lesion of the brain. Ashby does not believe that the virus of syphilis has any marked effect in producing epileptic attacks apart from brain-lesions. He has never seen a typical case of posterior basal meningitis associated with a syphilitic history, nor does he believe that syphilis plays a prominent part in the production of infantile hemiplegia. This condition is more often due to hemorrhage from convulsions. Chronic hydrocephalus has in a large number of cases nothing to do with syphilis. Ashby has never seen the association, although some unquestionable cases have been recorded. As to tertiary syphilis, a well-marked group is formed by those cases of inherited syphilis in which brain-symptoms make their appearance at or just before puberty. In the majority of these cases the patients give evidence in their teeth and nose, in the form of scars, of having suffered from infantile syphilis. These cases grow persistently worse, eventually become demented and utterly helpless. On postmortem examination they show



marked meningeal syphilis, with atrophy of the brain and thickening of the dura mater and of the bones of the skull. There is also usually endarteritis. Emphasis is placed upon the fact that such cases sometimes occur independently of syphilis. Baginsky referred to a case of spastic paralysis due to chronic pachymeningitis of syphilitic origin and terminating in idiocy. He does not believe in the transmission of syphilis to the third generation. Comby thinks that in the early diagnosis of syphilis of the newborn the facies is a sign of considerable value. The complexion is pale, the skin and mucous membranes washed out, anemia is present, and, above all, in the neighborhood of the natural orifices, eyes, nose, and mouth, there is a dull, earthy brownish coloration of irregular and ill-defined extent. The immediate treatment of these cases with mercury in the form of frictions is advocated. When cutaneous eruptions exist a bath of mercuric chlorid, one part in ten thousand, should be given twice a day. This treatment should be continued two or three years, being suspended for one month in every three. After the second year potassium iodid should be added and be suspended from time to time. Telford-Smith thinks the percentage of syphilitic idiots extremely low, at least later than six years of age and found in the asylums. He believes that the majority of children born with a sufficiently strong syphilitic taint to produce congenital idiocy would die in infancy or in early childhood, and consequently not be found in the asylums. Hereditary syphilis has an important influence on infantile mortality. It is probable that in many cases of congenital idiocy for which no adequate cause can be assigned an unacknowledged or untraceable history of syphilis exists. The influence of congenital syphilis in the production of idiocy is much greater than the present incomplete statistics would suggest. Still maintains that the rarity of gummatous infection of the spleen contrasts curiously with the frequency of clinical enlargement of that organ. Enlargement of the lymphatic glands is probably more common as the result of congenital syphilis than is generally supposed. Hutchinson thinks that many cases of congenital syphilis escape any symptoms whatever throughout their lives, though born tainted; the consequences are far less inevitable than one is accustomed to think. He does not believe in a routine specific treatment, but rather in treating the symptoms as they arise and keeping the child alive. He, therefore, does not think it particularly important to diagnosticate and treat doubtful cases. Mercury does not check the symptoms in young children, and it is impossible to give a course of mercury to an infant without producing malformation of the teeth. Hutchinson has never given potassium iodid to a child or man if he could help it, and never to an infant. Ashby contended that mercury is of value in the acute stage, although it does not prevent symptoms. Potassium iodid is valuable in sloughing of the hard palate and similar acute conditions.

**20.**—Comby considers **movable kidney** common at all ages. He has observed it in infants of one and of three months. Of 18 cases that he has observed in children 2 were in boys and 16 in girls, the same proportion as in adult life. In 14 cases the condition was associated with dyspepsia and dilatation of the stomach. In nearly every case it was latent. In two it had been mistaken for chronic appendicitis, and in two cases it had been recognized and treated. As to the etiology, nearly all the patients were dyspeptic, having more or less gastro-intestinal distention. In two cases dying of hereditary syphilis the postmortem examination showed none of these conditions and these are regarded as congenital. The female sex is more liable than the male, doubtless as the result of some difference in the conformation of the abdomen. The symptoms are variable. Dyspepsia or constipation is often present. The diagnosis is more difficult the younger the child. The condition often goes undiscovered, owing to the absence of symptoms. When the affection is latent or well borne, rest and an abdominal belt may suffice to relieve the symptoms. A flannel bandage wound several times around the body and supporting the abdomen is the best means of immobilization that can be devised. Dyspepsia and constipation should receive careful treatment. In the event of persistent unbearable pains, peritonitis and hydronephrosis from twisting of the ureter, an operation should be performed, fixing the kidney to the posterior abdominal wall.

**21.**—Sutherland and Cheyne point out that at postmor-

tem examinations in cases of **hydrocephalus** the brain is frequently found absolutely normal, the only pathologic condition being the dilatation of the ventricles. The treatment must be directed to the relief of the hydrocephalus, which, although secondary, is the real cause of the grave symptoms. It may be assumed that in chronic hydrocephalus there is a closure of some part of the channel through which the fluid secreted in the lateral ventricles naturally passes to reach the subarachnoid space outside the foramen of Magendie. In consequence the ventricular fluid increases in amount, gradually distending the ventricles, compressing the brain-tissue already formed, and preventing normal growth of this tissue in early life. This mechanical view has formed the basis of a mode of treatment in which an attempt is made to create an outlet for the ventricular fluid into the meningeal spaces, with the idea that it would be readily absorbed by the veins until the cerebral venous pressure and the cerebral spinal pressure were again equalized. To accomplish this an opening is made through the cortex cerebri, and a drain is introduced into the ventricle, allowing, for some time, of the free passage of fluid from the ventricle into the subdural space. This plan was employed in two cases. The distention disappeared and there was a steady diminution in the size of the cranium. The external wound healed in a few days, leaving no channel open to the fluid except through the meninges. The head diminished in size gradually, without any sudden alterations in the intracranial conditions. It is believed that if a permanent opening can be made through the cortex cerebri in hydrocephalus, nature will remove the fluid and prevent the recurrence of any injurious intracranial pressure. There are two difficulties suggested in connection with establishing drainage: (1) The brain-tissue between the membranes and ventricle may be so thick as to close in around the catgut-drain and prevent the passage of fluid; (2) the inflammation set up by the wounds in the dura mater and cortex cerebri may lead to the formation of adhesions around the artificial outlet which seal it up. On account of the possibility of obstruction to the communication between the lateral ventricles through the foramen of Monro, to ensure equal and symmetrical relief of the hydrocephalic condition, two operations are recommended simultaneously or with a short interval, one on each side of the head. If the hydrocephalus has developed in infancy and there is failure of mental power, loss of sight, hearing, etc., a time is soon reached after which complete recovery is impossible. An early diagnosis is therefore important, and treatment should be adopted as soon as it is made. Stiles, who has employed this method for relief, thinks that but little benefit can be expected from it, save possibly in cases of simple inflammation, with adhesions.

**22.**—Still believes that **simple posterior basic meningitis** is a specific disease. He divides the cases into three groups: (1) Those fatal within 6 weeks; that is, during the acute or inflammatory stage; (2) those fatal at the end of 3 or 4 months, during the chronic or hydrocephalic stage; (3) those in which recovery occurs. In the first, there is found postmortem much lymph over the base of the brain and in the spinal cord. In the last this may have disappeared entirely, leaving only thickening and opacity of the pia-arachnoid, with adhesions, especially between the medulla and the cerebellum. Almost invariably no lesion is found in the viscera, making possible differentiation from the secondary forms of meningitis. Still has found a diplococcus that he considers specific. It is constant in the earlier stages, but is often absent in the long-standing cases. It has been demonstrated by lumbar puncture. It sometimes appears to be in the cells of the exudation, but more often it is outside of them. The two cocci composing it have their opposed surfaces more or less flattened, and they often closely resemble gonococci. They occur frequently in pairs side by side. Their growth is rapid on agar-agar, or glycerin-agar, and reaches its maximum after about 36 hours. There is no growth at ordinary room-temperature, nor on gelatin, and growth on blood-serum is scanty. The organism grows well in milk or broth, and it is stained easily by methylene-blue, but it does not stain by Gram's method. An important feature is its long vitality, often extending beyond 30 days on agar-agar or glycerin-agar. This differentiates it from the diplococcus intracellularis of Weichselbaum. It is non-pathogenic for mice, rabbits, and guinea-pigs by subcutaneous



injection. Intraperitoneal injection is sometimes fatal. This microorganism is smaller than the pneumococcus. It is never lanceolate, and is thicker and more opaque. Its vitality is far greater, and it does not stain by Gram's method. It is considered a modification, by a process of natural variation, of the diplococcus intracellularis. This modification may account in some degree for the clinical differences between the simple posterior basic meningitis of infants and the epidemic cerebrospinal meningitis of which the diplococcus intracellularis is probably the cause.

**23.**—Leighton records a case of **poisoning** following the handling of some plants of the **primula obconica**. There was tremendous edema of the right hand, with well-marked lymphangitis of the right arm and tenderness in the axillary glands; profuse serous discharge from several points on the back of the hand and between the second and third fingers; excessive pain in the joints; and slight fever. The patient was treated with a carbolie poultice locally and a solution of ferric chlorid internally, and recovery was prompt. A second milder attack occurred without exposure 8 months later, and a third, still milder attack, 16 months after the second. In the absence of exposure the later attacks were attributed to a retention of the original poison.

**24.**—Murray-Aynsley reports a case of **pneumonia** in a boy 9 years old, which was induced by the entrance accidentally of the claw of a small crayfish into the larynx and thence into the lung. The portion of the claw was coughed up in the midst of the pneumonia, which developed almost a month after the accident. The patient recovered.

**25.**—Lowe relates some cases of **tender heel due to exostosis of the os calcis** in which he made some radiographs. These showed a ring of bony growth surrounding the posterior end of the os calcis and giving it a hammer-headed appearance. In all cases but one the pain occurred suddenly in one foot. There was no rheumatic history or constitutional complication. There was no pain when the foot was at rest, but pressure on the part of the heel over the posterior tuberosities on the inner surface of the os calcis near the ligamentous attachments caused considerable tenderness. The pain is of a pricking nature and penetrates to the bone.

**26.**—Saxby reports a case of poisoning from two teaspoonfuls of tincture of **cannabis indica**. The patient was perfectly well at 9.15 o'clock. At 10 o'clock his pulse was weak and irregular, and the heart-sounds faint. The whole body was bathed in perspiration and cold, the limbs flaccid and the plantar reflex absent. The pupils were widely dilated, contracting slightly when a candle was placed near the eye. The patient could not be roused and the conjunctival reflex was absent. The injection hypodermically of gr.  $\frac{1}{16}$  of strychnin sulphate was followed by prompt response. The patient opened his eyes, understood what was said to him, but was unable, at first, to speak. He was given gr.  $\frac{1}{16}$  of apomorphin hypodermically, after which he vomited promptly and profusely, and he then recovered rapidly.

### Lancet.

October 15, 1898. [No. 3920.]

1. Varix: its Causes and Treatment, with especial Reference to Thrombosis. WILLIAM H. BENNETT.
2. Modern Universities. ROBERT SAUNDY.
3. A Case of Hysterical Contraction of the Forearm Successfully Treated by Suggestion. SARAT K. MULLICK.
4. Perforative Appendicitis; Diffused Peritonitis Double Laparotomy. ARTHUR MAUDE.
5. A Contribution to the Pathology of Beriberi. W. GILMORE ELLIS.
6. Uterine Hemorrhage as Affected by the Climate of Altitudes. SEPTIMUS SUNDERLAND.
7. Some Further Notes on the Use of Bromid of Strontium in Epilepsy. ANTHONY ROCHE.
8. The X-rays in Disease of the Chest. HUGH WALSHAM.
9. Nasal Obstruction and Ear Affections. MAYO COLLIER.
10. A Case of Hydatid Cyst of the Lung. (Under the care of F. G. PENROSE and T. H. KELLOCK.)
11. A Case of Cesarean Section; Recovery. (Under the care of T. B. LUSCOMBE.)

**1.**—While there exists an element of uncertainty as to the etiology and pathology of varicose veins, enough

may be ascertained from long-continued observation to confirm certain well-defined views pertaining thereto. For practical purposes, as far as their causation is concerned, varicose veins may be divided into four classes: (1) Congenital cases. These form a large percentage of the cases usually encountered, and they occur in two varieties, those connected with the subcutaneous veins only, and those having a direct and gross communication with the deep venous trunks. Heredity plays an important part in this class. (2) Cases due to obstruction of the blood-current by external or internal pressure. (3) Cases caused by strain. There is no question that, other things being equal, the veins of young persons, subjected to abnormal or sudden strain tend to become varicose more than the veins of those persons not subjected to such strain. Bennett has seen not a few instances of this variety, and suggests that there probably exists some inherent defect in the veins themselves. (4) Cases due to **thrombosis**. The importance of thrombosis as an etiological factor in varix is not usually dwelt upon. In fact, many instances no doubt occur, in which the formation of a thrombus, prior to the development of varix, has been unnoticed. Examples of this may be found, in which, after a severe strain of the leg, primary dilatation of the saphenous vein ensues, following, undoubtedly, thrombosis of the venæ comites of the posterior tibial artery. The general disregard of the possibility of thrombosis accounts for the prevailing opinion that varicose veins of the lower extremities are not dangerous to life. Apart from the danger of fatal hemorrhage, the possibility of thrombosis leading to fatal embolism should not be overlooked. This is especially true of varicose veins in the thigh or at the knee, where a recent clot is always a serious and sometimes a fatal complication. There are certain conditions that predispose to thrombosis in varix, such as acute bends or cysts in greatly dilated vessels; situations continually subject to mobility, as at the knee, and traumatism. For certain well-defined reasons, the portion of the inner half of the circumference of the lower limb, from the middle of the thigh to a point three inches below the line of the knee-joint, should be regarded as the dangerous region in varix. In this region cysts of great size are common, and huge dilated vessels, valveless and with abrupt bends, are frequent; in this region, too, the veins are especially liable to traumatism and they are constantly subjected to movements produced by flexion and extension of the joint. Thrombosis may have a beneficial influence as well. If the clot becomes organized, spontaneous disappearance of the varix may ensue. The most complete example of spontaneous cure is seen in varicocele, in which occasionally a perfect cure will follow thrombosis, which in such cases is usually of traumatic origin, or in subjects with gouty tendencies. As regards the palliative treatment of varix the indiscriminate employment of elastic support is strenuously objected to. Massage, discriminately employed, moderate exercise, and elevation of the limb for an hour or so each day, are all that will be required in the early stage. Operative interference is clearly indicated in certain cases, but, as a rule, too often the patient is assured that a cure will be thereby effected. The most that can be achieved by operation is the relief of certain discomforts, the arrest of progress, the prevention of subsequent complications. When the varicose condition is local, that is with well-defined limits, the isolated dilatations or cysts should undoubtedly be removed. If the disease be confined to the leg operation is sometimes harmful, as it can accomplish no more than moderate elastic support, which might still be necessary. Exception to this rule may be taken when a very tortuous and thin-walled vessel passes obliquely across the shin where it is especially subject to traumatism. Finally, when the saphena of the thigh is involved no operation should be performed that does not include removal of the vein from a little below the knee, where the two venous trunks form the leg join, to a point a little above the lowest third of the thigh. Any operation that, under these conditions, limits itself to the leg is useless.

**3.**—Mullick reports the case of a girl, 9 years of age, with mitral disease, who had previously suffered from an attack of paralysis on the left side and presented contracture of the forearm. There was evident reason to suspect embolism; the electric reactions were normal; both arm and leg were affected, the former the more severely; the contraction was



chiefly of the extensor muscles and the hand was thrown back at right angles to the forearm; tremor was absent. Suggestion was followed by cure after the failure of galvanism. Hyperesthesia and anesthesia were absent, and no other stigmata of hysteria are mentioned. (The diagnosis seems to be based solely upon the effect of suggestion, and it seems impossible to state that there was not some organic as well as functional basis for the condition.)

5.—Ellis states that **beriberi** has been endemic in the Singapore Asylum, and that it has resisted all attempts to stamp it out; 60% of the total deaths in 1897 having been due to this disease, which is most prevalent during the rainy season. Most of the cases are of the so-called moist variety, i. e., without tenderness, anesthesia, or muscular atrophy, but with marked general or local edema, weakness, and loss of knee-jerks. The patients improved, only to relapse; this going on for perhaps a year, when finally they died of either heart-failure, effusion into the pericardium, or edema of the lungs, or sometimes from grave vomiting. The extent of the edema bore no relation to the gravity of the attack. The usual degenerations of the nerves of the extremities were not found, but the nature of the disease was determined by examination of the nerves of the sympathetic system. In many cases the peripheral nerves were found entirely healthy, while there was degeneration of the phrenic, the cardiac, the pulmonary plexuses, or of the mesenteric or vasomotor branches, or of the aortic, renal, splenic, and tibial arteries; in no fatal case was degeneration of the phrenic, the pneumogastric or branches of the cardiac plexus absent. In many specimens very fine fibers were found that are believed to be degenerated Remack's fibers, the sheath only remaining. In some of the cases there were slightly coarser fibers among nerves that showed marked degeneration. These were probably collapsed Schwann's sheaths. In one case a new fiber was found passing through an old sheath that showed degeneration that had ceased, and was being followed by recovery; and in one case a patient began to walk after paraplegia of over a year's duration. In no instance has the bacillus of Pechelhäring and Winkler been found, nor did bacteriologic investigation yield any positive result. The red blood-corpuscles were found about normal in each case, while the hemoglobin was from 15% to 20% below that of healthy persons living under the same conditions. The heart was found in the fatal cases to be nearly 4½ ounces heavier than the average in persons who had died from other causes. The spleen averaged nearly 3 ounces more in weight than the average in subjects of other diseases. Edema of the lungs was found in 78, and pericardial effusion (dropsical) in 87 of 125 cases. The stomach was intensely congested in more than half the cases, particularly on the summits of the rugæ. Ellis believes that the degeneration of the peripheral nerves is responsible for the symptoms in the ordinary cases, degeneration of the sympathetic, the phrenic, and the vasomotor nerves in the moist cases. Recovery is possible so long as the pneumogastric, the phrenic, and the branches from the sympathetic in the neck are unaffected. When any or all of these become affected, death can be expected.

6.—Sunderland reports 3 cases of **obstinate menorrhagia**, exhibiting strikingly beneficial effects from **high altitude**. He thinks that possibly the diminution in the weight of the superimposed column of air on the surface of the abdomen and in the lungs may act by lessening the pressure on the internal abdominal organs and large veins, thus allowing a more free flow of blood through the large veins and the portal system and diminishing uterine congestion. He concludes that (1) a high, dry climate is beneficial in certain cases of chronic uterine hemorrhage that do not respond to ordinary treatment. If practicable, a residence at a high altitude should be tried for as long a period as possible in cases in which operation is not absolutely necessary or is inadvisable from various reasons, or would prove unusually dangerous. (2) That a high altitude would probably be found useful in certain hemorrhages and congestions other than pulmonary or uterine. (3) That in addition to other causes that diminish uterine bleeding at a high altitude the lessened air-pressure is an important aid.

7.—Roche renews his recommendation of **strontium bromid** in the treatment of **epilepsy**, and states that he has not seen any case in which it will not diminish the number of attacks if given properly, and that it does not cause

the depression that sometimes attends the use of potassium bromid. In cases in which the aura is sufficiently prolonged, the patient should take 30 grains at once, and repeat the dose every hour if required. In this way the attacks are frequently warded off. Many patients take a dram daily for long periods without ill-effects.

8.—Walsham presents a skiagraph showing that cavities diagnosticated by physical examination as quite extensive were really small. The use of the X-rays has enabled him to determine the existence of tuberculous lesions at the apex, when they were not discoverable by ordinary methods; to diagnosticate pleural effusions; and to suspect at least the existence of consolidations or pleural adhesions elsewhere. It is not thought that they show any difference between consolidation of the lower lobe and a pleural effusion; nor is there special hope that the X-rays will help much in the examination of the heart, as it is possible already to discover enlargement of that organ by other means, and the X-rays can do little more.

9.—In many affections of the middle ear associated with deafness, tinnitus, or chronic discharges, the primary lesion is some form of **nasal obstruction**, leading to catarrhal swelling and obstruction of the orifice of the Eustachian tube. Unless this is recognized and treatment is directed toward relief of the obstruction, many unsatisfactory results may be expected from attempts to afford relief.

10.—After referring to the comparative rarity of **hydatid cyst of the lung** in England, Penrose and Kellock report the case of an anemic girl, 5 years old, who had had, 7 weeks prior to coming under observation, an attack of influenza. Physical examination revealed an area of dulness over the lower part of the lung, with impairment of vocal resonance, feeble tactile fremitus, and weak breath-sounds. A needle inserted in this situation gave exit to hydatid fluid. At a formal operation an hydatid cyst, the size of an orange, was discovered and evacuated. During the period of convalescence there was a discharge from the anus first of hydatid fluid, then of pus, which suggested the existence of a second cyst in the intestinal tract. The prognosis in cases of hydatid cyst of the lung not operated upon is so grave that surgical intervention is regarded as the only appropriate form of treatment.

11.—Luscombe reports a case of Cesarean section for the removal of the head from the uterus after the rest of the fetus had been delivered by the vagina and decapitation had been performed. Ineffectual efforts had been made to deliver the head, and Cesarean section was considered as attended with less risk than attempts at perforation and cephalotripsy; and it was thought that the danger of lacerating the uterine or vaginal mucous membrane would be avoided. The patient recovered.

### New York Medical Journal.

October 29, 1898. [Vol. lxxviii, No. 18.]

1. Report of a Case of Fibrolipoma of the Larynx. FRANK WHITEHILL HINKEL.
2. Report of a Death, Following Immediately an Operation for Nasopharyngeal Adenoids under Chloroform, with Remarks on Chloroform-Anesthesia in this Operation. FRANK WHITEHILL HINKEL.
3. The Recurrence of Nasopharyngeal Adenoids after Operations for Excision. ARTHUR AMES BLISS.
4. Present Methods for the Operative Treatment of Pharyngeal Adenoids. D. BRYSON DELAVAN.
5. The Prevention and Treatment of Trachoma at the House of Refuge. W. WHITEHEAD GILFILLAN.
6. A Case of Occupation-Neurosis. ABRAHAM GOLTSMAN.
7. Indications for the Application of the Obstetrical Forceps at the Pelvic Outlet. ELIZA H. ROOT.
8. Bacteriology in the Progress of Medicine. A Few Notes from Current History. FRANKLIN STAPLES.

1.—Hinkel reports a case of **fibrolipoma of the larynx**, which is interesting, not only on account of its rarity, but also on account of the persistent recurrence of the growth and gradual infiltration of the adjacent tissues. Additional interest is attached to the pathologic reports, which show a transformation of the character of the growths, that have recurred after the removal of the lipomatous tumors. The original growth was composed principally of fat-cells, while



the last one removed was made up almost exclusively of curling elastic fibers.

2.—Statistics show an exceptionally high mortality from the use of **chloroform-anesthesia for the removal of nasopharyngeal adenoids**. Furthermore, the Vienna pathologists have shown that patients with adenoids frequently belong to a constitutional type, peculiarly susceptible to chloroform-narcosis. It would, therefore, seem unjustifiable, in face of the adverse reports, to employ chloroform-anesthesia for this operation. In the fatal case recorded by Hinkel, the operation was just completed when the patient, whose condition had up to this time given no cause for anxiety, suddenly collapsed, and all attempts at resuscitation proved futile.

3.—So-called **recurrence of nasopharyngeal adenoids** is not an example of true regrowth of the adenoid tissue, but, on the contrary, it is the result of incomplete removal of the original growth. This explanation of recurrence is based upon a study of the anatomy and histology of the parts concerned. Deep infiltration of the lymphoid tissue into fissures about the vomero-sphenoidal articulation and an abnormally rich vascular supply distributed throughout this area are conditions that may well give rise to a return of the symptoms after incomplete removal of the growth. From his own personal observations of patients with recurrent adenoids, Bliss noticed an under-development of the entire naso-facial region, an excessive vascularity of the hypertrophied lymphoid tissue, and an appearance corresponding to that of struma.

4.—To secure the ideal conditions for an **operation for the removal of pharyngeal adenoids**, complete anesthesia is necessary, as local anesthesia has many disadvantages. Of the three general anesthetics, ether will give the most satisfaction; and of the numerous and varied instruments that have been devised for this operation, the blunt forceps is the most efficient. When general anesthesia is either contraindicated or is for some reason undesirable the Hooper method of operating should be selected. There are two principles that should govern all these operations, thoroughness and humanity; that is, the most thorough extirpation of the growth, with a minimum of shock, pain, or injury to the patient. This operation is injudiciously regarded as a trifling one, and for this reason it is often undertaken by those wholly unqualified to execute it. It should be remembered that there is a certain amount of post-operative shock, requiring greater caution than is usually employed in the after-care of the patient.

6.—Goltman reports a case of **occupation-neurosis**, occurring in a man, 28 years of age, who had worked as a cigaret-roller for 9 years. After about 6 years he noticed that his right arm and fingers became weak, cold, and red while at work. The finger and thumb stiffened later; flexion and abduction took place, followed by extreme weakness of the arm, accompanied by pain. A year later the man was forced to give up his work. A few months later excessive twitchings of the finger and thumb developed, interfering with his holding the reins in driving a wagon. On examination the finger and thumb were found in flexion and abduction. Objects, such as a pen, were grasped tightly. The pain was chiefly in the forefinger. There was but little vasomotor disturbance and slight hyperesthesia. From inability to induce the patient to pursue a course of massage, gymnastics and electricity, he was given codliver-oil and strychnin, but under this treatment his condition grew worse.

7.—Root believes that the time to apply **forceps at the pelvic outlet** cannot be governed by fixed rules. Although it is impossible to draw distinct lines of indications, they may for convenience of study be divided into five groups: (1) The fault lies wholly with the *vis a tergo*; the head is more or less movable, and there exists no obstruction in front of the head; (a) the pains or uterine contractions are inefficient; (b) the umbilical cord is short; (2) cases in which the antero-posterior diameter of the head, though presenting, fails to engage in the corresponding diameter of the outlet, the head being more or less movable; a large head with (a) the occiput anteriorly; (b) the occiput posteriorly; (3) to produce complete flexion of a partially extended head that cannot be flexed by the expulsive forces, without undue duration of labor, or by the hands of the accoucheur, the head being more or less firmly fixed; (4) to shorten the sec-

ond stage of labor for the relief of maternal suffering; (5) for the immediate relief of the child.

### Medical Record.

October 29, 1898. [Vol. liv, No. 18.]

1. Some Observations on the Chemical Reaction of Human Urine. HEINRICH STERN.
2. Neurasthenia and Auto-Infection. A. M. DAVIS.
3. The Evolution of Surgical Procedure. G. K. DICKINSON.
4. An Emulsion and a Method for the Treatment of Purulent Ophthalmia and Ophthalmia Neonatorum. NORBURN B. JENKINS.

1.—Stern determines the acidity of the **urine** by titrating with 1-10 normal potassium-hydrate solution. The alkalinity is measured by a decinormal solution of oxalic acid, in either case using phenolphthalein as an indicator. He estimates the acidity in its relation to the total body-weight of the individual and the total quantity of urine passed during the day. The normal that he gives for the male is a mean acidity of 0.43, a total acidity per day equal to 3.39 gm. of oxalic acid and the acidity for each kilogram of body-weight equal to 0.046 of oxalic acid. The urine per day should average 17 cu. cm. for each kilogram of body-weight. For women the mean acidity should be 0.37; the total acidity per day should equal 2.84 gm. of oxalic acid; the acidity per kilogram being 0.043 of oxalic acid; and the total urine per day 18 cu. cm. per kilogram of body-weight. Stern has observed the usual lessened urinary acidity with pregnancy, and he thinks this is largely dependent upon the increase of water during this period, as very watery urines more readily become alkaline than do concentrated urines. In noting the effects of medicinal agents on the secretion and the reaction, he found that lithium citrate increased the quantity of urine, while the acidity fell, but the proportion of uric acid was not greatly affected. Piperazin had never very much effect upon the uric acid, nor had lysidin. The most marked effect was from uricedin, which caused the urine to become pronouncedly alkaline and uric acid was excreted in very large quantities. Stern has used this drug with successful clinical results in cases of latent gout, and in these cases also he found the amount of uric acid in the urine increased.

2.—Davis believes that **neurasthenia** is often dependent upon autoinfection (autointoxication?), and in support of this theory he mentions the statements of other writers who look upon the affection in the same way, and he reports two cases that showed grave mental symptoms in conjunction with neurasthenia. Both patients suffered from severe gastro-intestinal derangements, and when these cleared up, the mental condition also improved, and it continued normal after the cure of the gastro-intestinal trouble.

4.—Believing the various solutions and crayon applications of silver nitrate, copper sulphate, etc., in many instances to work more injury to the eye and its appendages than the disease for the relief of which such agents are recommended, Jenkins proposes the use of **silver nitrate** in the form of **emulsion** as being the least injurious, and most efficacious remedy in the treatment of all forms of **purulent ophthalmia** and **ophthalmia of the newborn**. The emulsion contains argentic nitrate, from gr. 5 to gr. 10, acacia q.s., distilled water and liquid petrolatum of each, one-half ounce. The emulsion is used when suppuration is established, the eye having been previously thoroughly cleansed with a 1-5000 mercuric-chlorid solution; two or more minims of the emulsion are dropped into the eye, and the everted lids are manipulated in such a manner that the emulsion may penetrate to the utmost recesses of the folds of the conjunctiva. At first the emulsion should be used every 12 or 24 hours, afterward less frequently, and in the interim between applications the eye should be frequently washed with the mercuric-chlorid solution.

### Boston Medical and Surgical Journal.

October 27, 1898. [Vol. cxxxix, No. 17.]

1. Tumors of the Frontal Lobes; with Special Reference to a Case with Predominant Symptoms of a Neurasthenic Type. EDWARD WYLLYS TAYLOR.
2. Traumatic Ventral Hernia. J. B. BLAKE.



3. Aneurysm of the Arch of the Aorta (with Radiograph). R. H. FITZ.
4. Successful Resection of the Pylorus for Cancer. R. H. FITZ, W. M. CONANT and C. B. PORTER.
5. Two Cases of Cancer of the Breast Illustrating the Dangers of Exploratory Puncture as an Aid to Diagnosis in Doubtful Breast-Tumors. MAURICE H. RICHARDSON.

1.—Taylor analyzes the literature of lesions in the frontal lobes, and finds that the consensus of opinion is that they are associated with more or less intellectual disturbance, particularly with that form called "moria," in which there is a tendency to make foolish remarks. He reports the case of a man, 36 years of age, who, 5 years before examination, had suffered from vertigo, followed by epileptiform convulsions at infrequent intervals. For 4 years the symptoms were not those of brain-tumor, such as headache, vomiting, choked disc, but chiefly of neurasthenic type. The patient had at various times consulted an aurist and an oculist, both of whom discovered very slight disturbances. At the first examination no distinct symptom of disease of nervous structure was detected, and a diagnosis was made of neurasthenia, the convulsions being supposed to be hysterical. Later there was difficulty in walking in a crowded street, or in riding a bicycle, and attacks occurred of ungrounded apprehension. There were neuralgic pains in the head, which, however, were improved by lenses and prisms. At about this time, some 4½ months before death, the eye-grounds were normal. Among the curious symptoms noted by the patient or his friends were deafness, increasing in the dark; inability to recall simple words, and perhaps accountable for a slight hesitancy in speech; obstinate constipation; and an abnormally large appetite. Shortly before death, the pulse was about 50, and the physical condition was excellent. Death occurred suddenly, the patient awaking from sleep with violent pain in the back of the head, which was relieved by vomiting, but was followed by coma and death in the course of 2 hours. At the autopsy a tumor was found occupying the entire first frontal convolution, with the exception of the extreme anterior part, and the posterior part of the second frontal. On the mesial surface of the brain the growth involved also fornicatus of the anterior half of the gyrus. (The paper is not completed.)

2.—Blake reports two cases of injury to the abdominal parietes following immediately upon trauma. The first illustrates the fact that a serious injury of the abdominal parietes and contents may be sustained without evidences of a marked degree of shock. The patient in question was struck by the blunt edge of a crowbar in the iliac region, but was not conscious of any serious injury when he went home, being able to mount three flights of stairs without assistance. Subsequently a small wound was discovered in the right groin, from which a yellow mass, two inches long protruded. Six and one-half hours after the accident the man was rather pale, but perfectly conscious, suffering no pain, with a temperature of 100°. There had been no vomiting, hiccough, or other symptom. Under ether the wound was explored and was found to contain a portion of contaminated omentum. The latter was washed with salt-solution and replaced; and the patient made an uninterrupted recovery. In the second case an injury upon the right side of the abdomen was sustained; in an attempt to jump across a small brook, the patient slipping and striking the ground heavily upon the right side. On the following day a large swelling, seemingly in the abdominal wall, was noted just below the ribs. In the course of 10 days the swelling practically disappeared, leaving a hard edge, with a depression somewhat like the crater of an absorbing hematoma. The patient was about to be discharged, when, after careful examination, a diagnosis was made of rupture of parts of one or more muscles of the abdominal wall, and a consequent traumatic ventral hernia. Under anesthesia this region was explored, with absolutely negative results, all the abdominal muscles being entirely intact. It was concluded that the bulging of the abdominal wall in this region must have been due to loss of muscular tone following traumatism. It was found that stronger currents were required upon the injured side in order to obtain the same reaction with the muscles as upon the sound side.

5.—Richardson deplores the employment of exploratory puncture as an aid in the diagnosis of breast-

tumors. There are two dangers attending this procedure: (1) That of overlooking a carcinomatous nodule really present, and (2) that of spreading an extensive and hopeless carcinomatous infiltration. One case is cited in which valuable time was lost by waiting for the report upon a section removed by the puncture-needle, the report of the pathologist having been favorable, although a carcinomatous nodule was undoubtedly present in the gland. A second case is cited illustrating the danger of causing carcinomatous infiltration by the use of the exploratory needle. In this instance the infection of the pectoralis major, the pectoralis minor, and the axilla in a straight line, demonstrated a direct contamination of previously healthy parts by the exploratory puncture. The nodules that were found in the pectoralis major were of about the same size and age, and were situated in just such a line as a needle would make, and not in the ordinary course of the lymph-channels.

### Medical News.

October 29, 1898. [Vol. lxxiii, No. 18.]

1. Carbonic-acid Gas; Its Physiological Action and Therapeutic Effect, as Seen in Emphysema of the Lungs, Anemia, Whooping-cough, Dysentery, and Impotence. A. ROSE.
2. Xerostomia, or Dry Mouth; Report of a Case. AUGUST JEROME LARTIGAU.
3. The Treatment of Adherent Retroposed Uteri. W. R. PRYOR.
4. Colloid Disease of the Omentum. Gangrene of the Leg; Amputation; Recovery. F. J. BOWEN.

1.—Rose presents a review of the physiology and chemistry of **respiration**, and a consideration of the diagnostic value of **inflation of the large intestine with carbonic-acid gas**.

2.—Lartigau reports the case of a man, 64 years of age, who was of an extremely nervous temperament, and who came of a neurotic family. There was no history of venereal disease. The mouth became dry about 5 months before the patient came under observation, and only a few weeks after his wife's tragic death. The mucous membrane of the mouth and pharynx was extremely dry, and this caused great discomfort. The salivary glands were normal and were never enlarged. The sense of taste was somewhat diminished. There was no evidence of disease of other organs, excepting that the urine contained hyaline and granular casts and albumin; sugar was absent. The perspiration was much less free after the onset of his xerostomia. Pilocarpin afforded relief for a time, but its effects soon passed off; the same was true of arsenic; and after 3½ years of observation, the man's condition was changed but little. The condition is believed to be dependent upon a functional derangement of the nervous system. It occurs in middle or advanced life, and almost always in women.

3.—Pryor states that **adherent retropositions of the uterus** can generally be traced to some form of infection. Abortion and labor, followed by sepsis, undoubtedly cause most of them; but gonorrhea is found to produce them also. In all operations aimed at the correction of these displacements the first step is to free the uterus and place it in the class of movable displacements; then treatment of the coexistent tubal and ovarian disease is to be undertaken; and finally, some means must be adopted to retain the replaced uterus in a position resembling the normal. Pryor prefers, in the majority of cases, to operate through the posterior vaginal cul-de-sac, excluding all cases showing pus. If there be occasion to remove the adnexa or a large tumor, he prefers celiotomy or hysterorhaphy; in all others the posterior vaginal operation is selected.

4.—Bowen reports a case of **colloid disease of the omentum** in which the early symptoms simulated those of hydrocele. The sac, however, was not translucent, and the fluid withdrawn was dark and carcinomatous looking. Within a short time the scrotum was again distended and the fluid could be seen distending the inguinal canals, and later the abdominal cavity. Death occurred in the course of 6 or 8 months, from exhaustion, and post-mortem examination confirmed the diagnosis.



**Journal of the American Medical Association.***October 29, 1898. [Vol. xxxi, No. 18.]*

1. Infantile Tuberculosis. LOUIS FISCHER.
2. Some Diseases Common to the Feeble-Minded. MARTIN W. BARR.
3. Artificial Feeding of Infants, Especially in Gastric Disturbances. J. M. G. CARTER.
4. Some Personal Experiences in Infant-Feeding. WILLIAM H. WELLS.
5. Prompt Attention to Earaches in Infancy and Early Childhood. LOUIS J. LAUTENBACH.
6. Fracture of the Clavicle in Children. A. E. GALLANT.
7. Neuro-Deformities in Children from an Orthopedic Standpoint. JAMES W. COKENOWER.
8. What Influence do Stimulants and Narcotics Exert on the Development of the Child? E. STUVER.
9. Gastro-Intestinal Choleric Catarrh. EDWARD L. DAVID.
10. Is the Use of the Term "Typhoid Pneumonia" Justifiable? A Case in Point. H. D. TULEY.
11. Auto-Infection versus Typhoid Fever as Seen in Young Children. W. C. HOLLOPETER.
12. Subnormal Temperature in Typhoid Fever. H. H. FREUND.
13. Observations in Diphtheria. H. D. JEROWITZ.
14. Indications for Intubation. H. M. McCLANAHAN.
15. Intubations for Diphtheritic Croup. F. E. WAXHAM.
16. Diphtheria as Viewed by the General Practitioner During the Last Year. ALEX. MCALISTER.
17. The Early Diagnosis of Diphtheria. WILLIAM K. JAKES.

1.—See this JOURNAL, Vol. i, p. 1094.

2.—Barr gives the results of a study of the medical records of about 3000 feeble-minded children undertaken to determine some of the diseases most common with such children. The most common nervous diseases are the cerebral palsies; meningitis is also common; while epilepsy is found in about 20% of the feeble-minded, although it is seldom seen among idiots. True chorea is rare. There is much hereditary predisposition to pulmonary troubles, which, coupled with lack of resisting power, renders such complications as tuberculosis and pneumonia inevitably fatal. Asthma, bronchitis and pleurisy are not frequent, nor is laryngitis, while tonsillitis, pharyngitis and rheumatism are common. Cutaneous affections are rare among the high-grade and middle-grade imbeciles, though frequently met with in the low-grade and idio imbeciles, in consequence doubtless of uncleanly practices. The sluggish habits of these children find the usual results in constipation, dysentery, diarrhea, dyspepsia and gastritis. Syphilis is rarer among the feeble-minded than is generally supposed. Defective vision due to errors of refraction is found among 90% of the high and middle-grades, and among the low-grades there is much conjunctivitis, iritis, corneal ulcer and blepharitis.

3.—See this JOURNAL, Vol. i, p. 1094.

4.—Wells discusses the composition of various kinds of milk and describes the best methods of modifying it. Some of the proprietary foods are also considered. These have a certain amount of usefulness, but, for children under 10 months of age, they are inferior to modified milk.

5, 6.—See this JOURNAL, Vol. i, p. 1086.

7, 8.—See this JOURNAL, Vol. i, p. 1093.

10, 11.—See this JOURNAL, Vol. i, p. 1094.

12.—Freund reports the case of boy, 9 years old, whose temperature, in the second week of an attack of typhoid fever, dropped to 96.4° F. and remained at about this level for 8 days. During this period there was nothing else in the patient's condition that was unusual or alarming.

13, 14, 15.—See this JOURNAL, Vol. i, p. 1147.

16.—See this JOURNAL, Vol. i, p. 1146.

17.—The method adopted by the Chicago Health-Department for making an early diagnosis of diphtheria consists in spreading a little mucus from the throat on a slide, allowing it to dry, then staining and examining microscopically immediately. It is possible in about 50% of the cases to find a sufficient number of bacilli to warrant a diagnosis. In case the Klebs-Loeffler bacilli cannot be found in this way the patients lose little by waiting for incubation of the culture. During 4 years the mortality of 38% from diphtheria, not including laryngeal cases, has fallen in Chicago to 6.7%,

including all forms of the disease. This result Jaques believes to be due to the improved methods by which early diagnosis is made possible, and the early use of antitoxin.

**Annals of Surgery.***September, 1898. [Vol. xxviii, No. 3.]*

1. Metatarsalgia or Morton's Disease. ROBERT JONES and A. H. TUBBY.
2. The Cranial "Cracked-Pot" Sound as a symptom of Cerebellar Tumors. NORMAN BRUCE CARSON.
3. Report of a Case of Traumatic Rupture of Pancreas, with Formation of Hemorrhagic Cyst, and Pancreatic Fistula. HAYWARD WARREN CUSHING.
4. Enterorrhaphy Without Buttons, Plates or Rings. JOHN I. SKELLY.
5. A Means of Regulating Inflation of the Bladder Preliminary to Suprapubic Cystotomy. WILLIAM JEPSON.
6. Four Atypical Cases of Appendicitis. GEORGE EMERSON BREWER.
7. Report of a Case of Castration for Enlarged Prostate, Without Benefit, Followed One Year Later by Prostatotomy. C. M. NICHOLSON.

1.—With a preliminary reference to metatarsalgia and to the anatomy of the bones of the foot, the positions of the heads of the metatarsal bones are shown by a coronal antero-posterior, and also a transverse section, and attention called to the relationships of the plantar digital nerves. The neuralgia is regarded as a pressure neuralgia, and explanation of most of the 30 cases differs from that usually given by Morton. The importance of the position of the communication between the external and internal plantar nerves as throwing light upon the cause of the pain is advanced as the point of difference in explanation from Morton. The affection is divided clinically into 3 degrees: (1) Comprising cases where shooting pain is felt during certain acts, such as dancing; (2) characteristic cases (illustrating by 8 cases), and (3) including cases of severity in which pain is persistent and cripples the patient. Summarizing the symptoms, the significance of eliciting pain by digital pressure on the head of the fourth metatarsal bone is dwelt upon. From the 30 cases cited, a history of injury was found in 10; in 9 cases the third joint was affected as well as the fourth; in 11 cases, lateral pressure gave relief; subluxation or reduction with a click was referred to in 6; flattening of both transverse and longitudinal arches existed in 11; 19 patients were women and 11 men; 5 had sensations of standing on something hot; in 1 case pressure of callus due to fracture elicited symptoms; and in only 1 case were found symptoms of gout or rheumatism. A foot subjected to constant movement, as in running a lathe, is more likely to suffer, and middle life is the time of greatest severity or development. On the question of heredity no statement is made. The writer dissents from the theory of causation as advanced by Morton, on the following grounds: "(1) The plantar digital nerves, instead of passing between the heads deeply, lie quite superficial and on the transverse metatarsal ligaments, and when the foot is pressed upon they are pushed away from, not necessarily between, the bones. (2) It is not proved that the anatomic positions of the heads of the third, fourth and fifth metatarsals is favorable to a nipping of the nerve on lateral pressure; on the contrary, there would be less escape were the metatarsal heads in absolute line. (3) That in the majority of cases a painful spot can be found intensely sensitive by pinching with the thumb on the dorsal and the forefinger on the plantar surfaces of the third or fourth metatarsal bones. (4) That such is usually quite local, and would not respond to pressure if, as asserted, the pinched and sensitive nerves were placed between the toes. (5) That in most cases a broadened foot, due to collapse of the anterior arch, accompanies the affection, rendering the digital nerves less liable to compression. This fact, in conjunction with another that a broad-soled boot hardly gives any relief to the third degree of plantar neuralgia, is strongly at variance with Morton's theory. (6) That in a large number of cases grasping the foot around the heads of the metatarsal bones, thus approximating them and at the same time raising the arch, relieves the spasm. (7) That frequent flexion of the toes is an instinctive method of relieving spasm, the flexion of the toes being accompanied by the raising of the



heads of the metatarsal bones. (8) That manipulations of the foot by the surgeon other than applying direct local pressure rarely produce pain. (9) That frequently beneath the painful head of the bone is to be found a distinct callosity, thus showing that pressure is greatest here." The differential diagnosis between neuralgia, the pain of flat-foot and ligamentous weakness is pointed out. The treatment varies according to the degree present. That of the first degree is largely preventative, being directed to discontinuance of any action which would cause pain. Patients find out for themselves the easiest way of adjusting this. In the treatment of the second stage, thickening of the sole of the boot  $\frac{1}{2}$  in. behind the heads of the metatarsal bones is to be tried and plaster may be worn around the instep or a leather anklet used. Baths of hot and cold water are useful, and oleates of morphia or belladonna for pain. In the third degree, treatment is par excellence excision of the head of the metatarsal bone where pain resides. Other operations are: Excision of the joint, amputation of the toe, application of the actual cautery, pushing in a heated needle, hypodermic injection of carbolic acid and resection of the digital plantar nerve. The simplest and best measure is exsection of the head of the metatarsal bone and should be practised in all cases in which the pain cannot be relieved by simpler and palliative measures.

2.—The "cranial cracked-pot sound" due to separation of the sutures from internal pressure, is a symptom of **cerebellar tumor**, Carson states from his experiences to have been much overlooked or neglected. It is elicited by percussion, and is not evident where the sutures are not widely separated, after having once been united, and is unavailable in congenital hydrocephalus. It is not a high-pitched sound, but a clear, distinct, cracked sound like that produced by striking a cracked pitcher or iron pot and is best elicited by percussing the cranial bones with the finger instead of a pleximeter. It is not peculiar to children's skulls after sutures have firmly united. Very slight pressure from within may produce separation of the sutures, and the cracked-pot sound be easily produced, especially in children, who are often subjects of cerebellar tumors. Carson's researches led him to conclude that the symptom is to be detected in all cases where ventricular effusion is sufficient to exert actual pressure. He cites 4 cases of cerebellar tumors, in 3 of which the cracked-pot sound was present, and claims that hydrocephalus can be surely diagnosed when the sound is present and, with the other symptoms of brain tumor, the tumor can be located either in the cerebellum or in the neighborhood of the corpora quadrigemina. Carson also holds that the cracked-pot sound is an important factor not only in diagnosis but also in localization. It has no pathologic significance before the third year or before the complete closure of the fontanelles.

3.—Cushing records recovery after **crushing and rupture of the pancreas**. The clinical symptoms indicative of pancreatic lesions are not well known and diagnosis is difficult and uncertain. He presents the record in detail of a case of pancreatic lesion. An unusual and interesting feature was the effect upon the skin in the vicinity of the wound of the pancreatic discharge, shown conclusively to have been pancreatic secretion. Whenever it came in contact with the unprotected skin, great itching, burning and smarting ensued, the epiderm being rapidly removed. Contrary to most general pancreatic literature, emaciation which ensued at first rapidly disappeared. Had no deficiency of pancreatic digestion ensued, this emaciation would not have been strange, since a severe injury, several weeks of suffering, a severe operation and a pulmonary abscess, as did occur, would have easily caused it. The urine contained no sugar, as usually stated, diarrhea did not arise, feces were practically normal and contained no starch in any amount, only a small amount of fat, some undigested muscle-fiber, epithelial cells and pus (microscopically only). The profuse loss of secretion seemed to have no effect and the patient was not especially pale or yellow. The discharge from the sinus was continual, drop by drop, and most rapid about 3 hours after eating. The "Pegram" tube was used to drain the sinus until the discharge almost ceased, and it is probable that the secretion of pancreatic digestive fluid is much greater than heretofore assumed by physiologists. The usual amount of pancreatic secretion in 24 hours (based mostly on results of experiments on animals) is placed as

from 250 to 350 cu.cm. For 8 consecutive days the total daily amount from this patient was from 500 to 660 cu. cm. He ate a mixed diet, and still feces were normal in amount and character. Cushing was unable to explain the affection to the parotid glands nor demonstrate definitely any nervous connection between the pancreatic injury and the torticollis. The erosive action of the pancreatic fluid caused more discomfort than any other even including the pancreatic lesion. Zinc stearate, starch, zinc oxid, bismuth, *et alii*, ointments of all kinds were soon washed off. Collodion was undermined at once and kept the fluid in contact with the skin. Painting the abdomen with compound tincture of benzoin finally gave relief and protection.

4.—Skelly regards the Murphy button, as the most popular but most dangerous of the various **inventions for facilitating enterorrhaphy**, and that its chief commendation is that it shortens the time of operation. He claims to make perfect union in less time than it can be done with the use of the button or any other invention. A cuff  $\frac{1}{2}$ -inch wide is turned back on the distal end of the section and the mucous membrane thoroughly removed. The serous coat is removed  $\frac{1}{2}$ -inch from the proximal end—a glass vaginal speculum or anal dilator facilitating this work. A fine catgut suture with a straight needle on each end is passed through the muscular coat of the proximal end. Needles are introduced about  $\frac{1}{4}$ -inch apart and near the cut end of gut, passed through the muscular tissue of the distal end near the line of denudation and brought out beyond the edge of cuff without penetrating the serous coat, and the sutures are continued clear around the gut. The cuff is now turned back over the denuded proximal end, and sutures tied. The serous coats of proximal and distal ends are then united by interrupted or continuous sutures. Extra sutures at the mesenteric attachment may be necessary.

5.—Jepson describes a device for **inflating the bladder with air**, the advantages of which are: (1) Those of air in general depending upon its physical characteristics. (2) The apparatus affords a simple, efficient, and certain method of forcing the air into the bladder. (3) The force employed is under perfect control, easily regulated, and the amount used readily determined by the gauge. (4) The amount of air which has been forced into the bladder is readily and accurately determined. (5) The air is maintained in the bladder under equitable pressure, but not rigidly confined. These last three are of much importance, as largely minimizing the dangers of rupturing the bladder.

6.—Brewer reports four cases of **appendicitis**, the first with large subcecal fossas, the appendix and mesentery being entirely within a fossa so that from external appearances it might be regarded as a case of absence of the appendix. The second case was attended by extensive cellulitis, up to the kidney and down the round ligament to the external ring and into the subcutaneous areolar tissue. In the third case an 11 inch appendix was found, postmortem, lying transversely across the right broad ligament. In the fourth case, a subacute retroperitoneal cellulitis resulted in a collection of pus behind the kidney, due to original infection of retrocecal lymphatics. Death ensued.

7.—Nicholson's case of eventual **prostatectomy**, after castration without benefit, resulted in improvement in general health, the patient pursuing his avocation:

### Journal of Nervous and Mental Disease.

September, 1898. [Vol. xxv, No. 9.]

1. Family Periodic Paralysis. EDWARD WYLLYS TAYLOR.
2. Experimental Researches on the Localization of the Sympathetic Nerve in the Spinal Cord and Brain, and Contributions to Its Physiology. B. ONUF (Onufrowicz) and JOSEPH COLLINS.
3. A Summary of the Symptoms in 61 Cases of Locomotor Ataxia, with Additional Remarks. W. H. RILEY.
4. On Regeneration of Nerve-Fibers in the Central Nervous System. W. L. WORCESTER.

1.—[The paper is not concluded and a full abstract will appear later.]

2.—Onuf and Collins undertook an experimental study with cats in order to determine the **disposition of the sympathetic nerve in the spinal cord and brain**. The results are divisible into three classes: (a) localizatory;



(b) physiologic; (c) general physiologic. (a) *Localizatory*. It was found that most of the afferent (sensory) fibers of the sympathetic nerves do not originate from cells of the spinal ganglia, but arise within the ganglia or plexuses of the sympathetic system. The efferent fibers take their origin (1) from the cells of the paracentral group, by which is understood the collection of cells situated on both sides of the central canal directly ventrad of Clarke's column; (2) from the small cells of the lateral horn; and (3) from cells of the intermediate zone. The afferent fibers of the sympathetic are connected by their terminal arborizations with the cells of Clarke's column; the whole zone separating the anterior from the posterior horns has relations to the fibers of the sympathetic, though many of the cells may in addition have other functions. Regarding the functions of the paracentral group, it is believed that it may be concerned in vascular and visceral motor innervation. Clarke's column, besides being the terminal station for afferent fibers, conveying impulses from the vegetative organs, may also be instrumental in conducting sensory stimuli from the muscles, tendons, joints and bones, to the cerebellum, being thus largely concerned in functions of equilibration. The vagoglossopharyngeal nucleus is considered as giving origin only to visceral efferent fibers of the vagoglossopharyngeal, and in part also the accessory nerve, while the nucleus ambiguus gives origin only to the somatic efferent fibers of these nerves—that is, to the motor fibers supplying striated muscles. (b) *Physiologic results*. With regard to the influence of the sympathetic upon the lacrimal secretion, the results reached were contradictory. With reference to the secretion of sweat, it was found that not all the sweat-secreting fibers of the forepaw pass through the main trunk of the sympathetic, a good portion following other pathways, these fibers developing a compensatory function so strongly as entirely to mask the loss of function in case of injury or disease. The experiments led to the belief that the cervical sympathetic contains not only the pupil-dilating fibers, but also pupil-contracting fibers. Digestive disturbances followed invariably after the removal of the stellate ganglion, of the lower thoracic portion of the sympathetic, and of a semilunar ganglion. The removal of one stellate ganglion as well as a lesion of the lower part of the thoracic sympathetic, caused attacks of sneezing, coughing, and hicough. Resection of the lower part of the sympathetic was followed by diabetes, which was permanent in character. Extirpation of the stellate ganglion caused an increase in the local temperature. The trophic influence was predominantly cutaneous. Under the head of **general physiological remarks** the statement is made that the sympathetic system possesses in a high degree vital functions. In very young cats, lesions of the important parts of the sympathetic invariably proved fatal. During operation, death was frequently caused by pulling on the sympathetic nerves, or bruising the ganglia. In such cases respiration would at times become suddenly arrested. In conclusion, the importance is emphasized of studying in cases of physiologic experiments not only the immediate, but also the remote effects, as the two frequently differ.

3.—Riley reports the results of a study of the **symp-toms in 61 cases of locomotor ataxia**. A history of syphilis was given in 31 of 49 cases examined. In the other 18 there was evidence of possible exposure to the disease. In the remaining 12, syphilis was either denied, or the point was not determined. In most of the cases the initial symptoms of ataxia appeared in from 8 to 15 years after syphilis had developed. In 2 cases, the disease followed soon after mechanical injury. A history of exposure to wet and cold was given in seven cases; one case developed immediately after typhoid fever. In 29 cases, the disease first appeared between the ages of 30 and 40. In two cases, it began at the age of 25, and in the one following typhoid fever at 22 years. In 37 cases, the initial symptom was pain in some part of the body, usually described as rheumatic. In 3 cases, it was gastric crises; in 3 cases, laryngeal crises; in four, incoordination of the lower limbs. A tabular statement is given of the symptoms present in the cases studied, from which it appears that absence of knee-jerk, severe paroxysms of pain, ataxia in locomotion, static ataxia, and various paresthesias were the most frequent symptoms. The knee-jerk was absent, however, in only 55 of the cases. The cutaneous reflexes were found exaggerated in the early stages, and this is considered

an important symptom. Attention is called also to the deafness, and to the acceleration of the pulse, that were present in 25 of the cases. In 8 cases, the pupils were dilated instead of contracted. The dilated pupil did not respond to light. Regarding the etiology of the disease the belief is expressed that two conditions are necessary: (1) An organic predisposition—a low resistance on the part of the nerve-elements; (2) the presence in the blood and tissues of a toxin, probably of syphilitic origin. In the treatment, a favorable impression was gained from the use of large quantities of water for purposes of flushing out the system. Patients are instructed to drink from 5 to 7 pints of water daily. Hydrotherapy, especially warm baths, electricity, massage, and other mechanical movements, including suspension-treatment, are valuable.

#### Glasgow Medical Journal.

September, 1898. [Vol. 1, No. 3.]

1. On the Treatment of Strabismus, with Special Reference to the Adoption of Advancements for Convergent Squint. FREELAND FERGUS.
2. Is there Room for Improvement in our Present Mode of Clinical Instruction in Midwifery? JOHN EDGAR.
3. Cysts of the Broad Ligament: their Diagnosis and Treatment. J. M. MUNRO KERR.
4. Surgical Treatment of Acute Rheumatism. JOHN O'CONNOR.

2.—Edgar refers to the general ignorance of practising physicians and midwives and the resultant evils, especially the prevalence of puerperal sepsis. He urges a correction in the college-curriculum, whereby better attention should be given to the subject of obstetrics, and practical experience demanded before a diploma be issued.

3.—Kerr divides **cysts of the broad ligament** into three classes: (1) Those that are more or less pedunculated; (2) those that occupy only the upper two-thirds of the broad ligament; (3) those extending deeply down into the pelvis and ramifying in the connective tissue around the uterine bladder, and rectum. These have been termed by Lawson Tait "embedded cysts." The cysts of the broad ligament that can be diagnosed as such by bimanual palpation are those found in the broad ligament—those of the second and third classes. Such cysts are to be felt firmly fixed and quite immovable, close down to the vault of the vagina. They are uniform in outline. Covering over the surface of the cysts are usually found the elongated and hypertrophied oviducts of the sides corresponding to the tumor. They are most commonly found in the upper and anterior part of the cysts. Occasionally, also, the ovaries may be distinguished, sometimes quite distinct from, but often glued to, the surface of the tumors. The treatment of pedunculated cysts of the broad ligament is ligation of the pedicles and removal of the tumor. That of the embedded cysts is enucleation, preferably performed through the abdominal incision.

4.—O'Connor reports two further cases of **acute articular rheumatism** that were subjected to surgical treatment, consisting in opening the joint by one or more incisions, thorough irrigation of the wound, and packing the wounds with mercuric-chlorid gauze. In one case the ankle, elbow and knee were subjected to this treatment at one operation, and in another both wrist-joints, and the left knee. The results obtained in each were, according to the report, nothing short of remarkable. It is believed that the articular affection under consideration should be termed acute infective arthritis, and not acute rheumatism. In those cases that do not respond to internal medication, prompt resort to surgical procedure is thoroughly justifiable.

#### Scottish Medical and Surgical Journal.

September, 1898. [Vol. iii, No. 3.]

1. The Power of Nature in Disease. J. WALLACE ANDERSON
2. A New Operation for the Cure of Varicocele. DAVID M. GREG.
3. Rheumatic Myositis—Subacute and Chronic. A. G. MILLER.
4. Rheumatism in Children. JAMES CARMICHAEL.



5. A Case of Injury to the Lumbo-Sacral Cord. W. E. FOGGIE.

6. A Case of Molluscum Fibrosum. R. S. MOWAT.

2.—Objections to the use of suspensory bandages have led Greig to devise an **operation** for the relief of **varicocele**, which permanently removes the redundant part of the scrotum and provides nature's own suspensory apparatus. Two semilunar incisions are made in front and two behind the scrotum, which meet laterally, and the skin thus marked off is removed. The varicose veins are isolated (the testicles having fallen downward through the incisions), are ligated above and below, and are excised. The usual lax and redundant scrotum existing after many operations for varicocele is regarded as a factor in recurrences.

3.—Speaking of **chronic and subacute myositis**, Miller refers to a symptom that he believes has not so far been specially described, namely, an effusion into the cellular tissue over the muscle after the myositis has subsided somewhat. This effusion is not great, but it gives rise to an audible crackling that can be elicited by moving the skin over the affected muscle. One may find this especially well marked in cases of intercostal rheumatism. The treatment is internal and local. For the former *cimicifuga* is preferred, a dram of tincture. Locally, the first place is given to heat. Massage is also of value.

4.—Carmichael describes two cases of **rheumatism in children**, with cardiac complications in both. In the one endocarditis, in the other endopericarditis or "action carditis" (Sturges). In the second case the rheumatic manifestations had been slight; there had been no pain or swelling in the joints and only fugitive pains in the limbs; and there had been chorea.

5.—Foggie reports in detail a case of **injury to the lumbo-sacral cord**, together with drawings showing areas of complete and partial anesthesia. The patient had fallen 47 feet and landed on his feet, and a bony deformity showed the site of injury. He was removed a distance of 10 miles, when it was found that paraplegia from the hips downward was present. The knee-jerks were absent and urine was retained. Rest in bed, with an ice-bag to the small of the back, and the catheter were employed. In 4 days the thighs could be drawn up. In 10 days catheterization was stopped. After a year and a half the condition was stationary.

6.—Mowat reports a case of **molluscum fibrosum** in a man 38 years of age, of which a marked feature, in addition to the multiple tumors chiefly on the back, was the presence of pigmentation of the skin interspersed with patches of leukoderma.

### Deutsche medicinische Wochenschrift.

September 8, 1898. [24. Jahrg., No. 36.]

1. Infection-toxins. E. BEHRING.
2. Clinical Reports. Cerebral Commotion; Small Contused Wound of the Head; Small Area of Softening in the Posterior Portion of the Left Half of the Pons; Circumscribed Vascular Disease. H. FISCHER.
3. The Mechanical Treatment of Spondylitis. H. MAASS.
4. Ligation of the Umbilicus and Resuscitation of the Apparently Stillborn. K. SEHRWALD.

1.—Behring gives a brief summary of the various changes that have taken place in the significance of the word **infection**. As late as 1841 this term was not in common use. Virchow first used it in connection with general diseases. Later, he contrasted infectious and parasitic diseases, that is to say, he divided the contagious diseases into two classes. The known parasitic, and those in which parasites had not been discovered. In the former group the parasites constituted the contagion. Later, the qualification infectious was restricted to those morbid conditions that were capable of infecting other tissues in the body from a primary focus. Naturally many of these diseases could also be contagious. Behring believes that at present the term infectious should be restricted to those diseases produced by living agents, whose role may be various. Thus, they may act mechanically, simply growing among the tissues and gradually causing their destruction; or they may produce in some way or other poisonous material, the micro-organisms themselves not being injurious. Among infectious diseases, however,

must be included those produced by the macroparasites, as well as microparasites, for a disease caused by snake-poison or ergotin is just as much an infection as one caused by tetanin.

2.—Fischer reports the case of a man, 38 years of age, who during a quarrel received a violent blow upon the skull and was rendered unconscious for many hours. When he awoke he did not remember what had happened to him, but returned home, went to bed at once, complained of severe headache, and apparently spoke with difficulty. In this condition he remained for 8 days, and then returned to his work, which he was obliged to give up 5 months later on account of weakness and numbness in the right leg. In a short time the right arm also was paralyzed, and the day after speech was lost. Later, there was convergent strabismus of the left eye. The pupil reacted sluggishly, and there was complete paralysis of all the branches of the right facial nerve. The tongue deviated to the right and was protruded with difficulty. The uvula pointed to the right, and the right half of the palate was paralyzed. Not only the extremities, but also the muscles of the trunk on the right side, appeared to be involved. No visceral disease could be detected excepting a catarrhal condition of both lungs. Death took place in a few days in coma. At the autopsy, the dura was found greatly thickened and adherent in the median line. It was also firmly adherent at the base, where there was a little yellowish fluid. Beneath the right occipital tobe the pia was infiltrated with blood. Thickened areas were found in the walls of the artery of the Sylvian fossa, and at the beginning of the basilar artery. The walls of both vessels appeared to have undergone colloid degeneration and were enormously thickened, their lumen being reduced to a narrow passage. Evidences of intra-cerebral pressure were present. The lateral ventricles were dilated, and the ependyma in the fourth ventricle was granular. In the left posterior half of the pons there was an area of softening that extended to the surface. The case, therefore, is one in which a lesion in the pons produced crossed paralysis of the facial muscles and those of the body, and homolateral paralysis of the abductens. The whole condition appears to have been caused by the degeneration in the arteries. According to Friedmann, these trophic changes in the vessel-walls are the result of commotio cerebri, and Fischer believes that his case indicates the serious nature of concussion of the central nervous system. [Colloid degeneration of the cerebral vessels may arise without any discoverable injury and the results of experimental concussion of the central nervous system are by no means in accordance with the pathologic conditions found in the case here reported. We must, therefore, regard the conclusion reached as too sweeping.]

3.—Maass discusses the indications for the treatment of **spondylitis** and describes a new form of apparatus. The material suggested is celluloid gelatin, rendered non-inflammable by the addition of magnesium chlorid, and painted into ordinary mull bandage-material with a stiff brush. An impression is made in plaster-of Paris, in the same way as in preparing Lorenz's bed, taking in the posterior part of the head to the vertex, the posterior part of the neck, the trunk as far front as the anterior axillary line, and extending halfway down the thigh. By the use of this cast the celluloid apparatus is prepared so as to cover only the back of the body as described with regard to the impression. A strap passes in front of the forehead and others pass in front of the shoulders and chest. To the anterior borders of the celluloid, from the level of the axilla to that of the symphysis pubis, are attached canvas flaps that lace over the front of the chest and abdomen. The apparatus is lined with flannel and is properly padded where it rests on bony prominences. The importance of the part taking in the thighs is considerable in case of disease of the lower part of the spine, as it prevents any possible influence of the psoas-muscles on the spine. The advantages of the apparatus are that it can be readily taken off, so that the patient can be washed and the skin kept in good condition; and that the material is inexpensive, light in weight and durable.

4.—According to K. Sehrwald, many stillbirths, many cases of impoverished blood with the consequent ill-effects, many cases of death during the first days, months, and years of life, and most of the so-called congenital heart-defects, may be avoided, should every physician and every midwife take proper time for the period of the third stage, and follow



always the axiom, never to ligate the cord of a child, and especially of a seemingly stillborn child, before the umbilical cord had ceased to pulsate for several minutes, and has become white and completely translucent. He objects to early ligation, on the ground that by such a procedure several ounces of blood are kept from the fetal circulation.

### Wiener klinische Wochenschrift.

September 8, 1898. [11. Jahrg. No. 36.]

1. Reform in School-Hygiene, with Regard to Measles. J. WIDOWITZ.
2. A Case of Bilateral Ulcerating Gumma of the Eyelid. LEON GRUDER.
3. A Report of Surgical Cases. JOS. PREINDLSBERGER.

1.—Widowitz relates two instances in which **measles** was brought into the town of Gratz, at a time that the city was free from this disease. In the first, a man came from Vienna with four children, two of whom he immediately sent to school; 12 days after their arrival, both of the latter were attacked by measles, and it was found that during the prodromal stage they had infected a number of their school-fellows. These carried the infection further, giving rise to an epidemic involving several thousand persons, with many deaths. In the second instance, a woman came from a neighboring town where an epidemic was raging, and shortly after her arrival developed measles. Her niece, whose family she was visiting, was kept from school, developed measles, but, as a result of the strict isolation, no further cases occurred. Children become capable of conveying infection nine days after they have received it. The prodromal period lasts four days, and during the acme of the disease they are still more infectious. It does not appear that the infection of measles can be conveyed by a healthy person or by inanimate objects. Widowitz explains this by supposing that the materies morbi is extremely susceptible to external influences, particularly low temperature, and is destroyed in the course of prolonged transmission. He has, himself, however, caused infection in children by inoculating them with the nasal secretion of others. He suggests the following regulations to control epidemics: In every class in school in which a case of measles has occurred, the children should be quarantined from the ninth to the fourteenth day from the notification of the first case. All children becoming diseased in this period are also to be isolated and observed, and their parents and guardians must keep them from associating with other children. Other children living in the same house may visit the school if they have had the disease.

2.—Gruder reports the case of a girl, 17 years of age, who presented on the right lower eyelid near the inner canthus, and on both lids of the left eye, 9 reddened, painless swellings, each surrounded by an infiltrated area and with an ulcerated surface. The patient had passed through an attack of bilateral ophthalmia, but nothing definite could be determined with regard to it. The condition under consideration had begun three weeks previously and had been treated with compresses saturated with some fluid furnished by a druggist. No cause could be discovered for the disease; syphilitic infection was denied and there were no signs of syphilis on the entire body. From the indolent, painless course of the process, with the presence of adenitis, and from the fact that it improved in a comparatively short time under treatment with compresses saturated with mercuric chlorid, a diagnosis of **ulcerated gumma of the eyelid** was made.

3.—Preindsberger reports the case of a man, 24 years old, who, in an attempt at suicide, made a deep incised wound in the neck, opening both the **trachea and the esophagus** a little below the level of the hyoid bone. The wound was closed with silk sutures with the exception of a small opening for a wick of gauze which was carried to the side of the trachea, and union took place by first intention. Two cases are reported also in which Murphy's button was used for **intestinal anastomosis**. One occurred in a man, 32 years old, who had a left-sided incarcerated inguinal hernia, and the button was used to unite the intestine after resection of a gangrenous portion 20 cm. in length. The button

was passed by the bowel on the thirteenth day after the operation, and recovery was uneventful. In the second case, occurring in a man, 35 years of age, it was found necessary to resect the sigmoid flexure because of gangrene following volvulus. The patient died 22 hours after the operation, but death is believed to have been due to the severity of the case rather than to the use of the button.

### Revue de Chirurgie.

August 10, 1898. [18. Année, No. 8.]

1. A Contribution to the Study of Hydatid Cysts of the Kidney. G. HOUZEL.
2. Tumors of the Liver from the Surgical Point of View. F. TERRIER and M. AUVRAY.
3. Horny Tumors of the Upper Extremity. M. PÉRAIRE and A. PILLIET.
4. Spinal Surgery and Pott's Disease. E. VINCENT.

1.—Houzel reviews the entire subject of **Hydatid cysts of the kidney**, and reports two cases of his own. He discusses the etiology, pathology, symptomatology, complications, diagnosis, and treatment minutely and thoroughly without adding any material facts to existing knowledge. He considers lumbar nephrotomy the operation of choice, and does not believe it should be postponed until urgent symptoms arise. Nephrotomy is indicated only in exceptional cases. In Houzel's first case the patient had only one kidney, and death from anuria and uremia occurred five days after the operation. In the second case the operation was followed by recovery. The bibliography forms a valuable feature of the article.

2.—(The article is not concluded.)

3.—Péaire and Pilliet report a number of cases of **horny tumors**, which they regard as neither pilous nor papillomatous, but as a pathologic tissue allied to the nails, and they give their views upon the origin, growth, and transformation of the formations and considerations.

4.—Vincent gives the details of many cases of **Pott's disease**, with appropriate illustrations. Methods of drainage are enlarged upon in a particular manner. He does not believe in operation in all cases, but holds that an area of disease, drained of its pus, will by that alone progress less rapidly. He looks upon plaster casts with qualified confidence, saying that economy is the most frequent cause for their employment. The remarks upon treatment of motor disturbances and upon the general health are judicious and sympathetic.

**Operation for Tuberculosis of the Kidney.**—Roswell Park (*Ann. of Cutan. and Genito-Urin. Dis.*, August, 1898) states that after the diagnosis of tuberculosis of the kidney is settled, the propriety of operation will depend on the condition of the other organs; if both kidneys are diseased or if there is serious tuberculous disease elsewhere, especially in inaccessible parts of the body, such as the lungs, mesentery, or intestine, operation is most inexpedient. In case the testicle, prostate or seminal vesicles are affected, operation is of doubtful propriety, but this is not necessarily true of lesions in parts that are easily attacked, as the lymph-glands, skin, long bones and joints. In case only one kidney is diseased the sooner it is removed the better. Partial nephrectomy would seem to be indicated when certain kidneys are examined during the progress of an operation, but the percentage of cases in which the kidney is the seat of a single lesion is exceedingly small. Lumbar drainage has been recommended by some, but it is thought to be a mistake, for the risk of infection of the wound and dissemination of the disease is very great. The progress of infection of the balance of the genito-urinary tract may be at least delayed and sometimes apparently checked by early removal of a tuberculous kidney. As to the choice between the extra-peritoneal or intra-peritoneal route of operation, the latter is often called for in the case of little children, it being the only route by which an enlarged kidney can safely be removed. The oblique incision with which Koenig's name is commonly connected is, for obvious reasons, preferable to the lumbar incision.



## Original Articles.

HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY  
AND AKROMEGLALY.<sup>1</sup>

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In an article in the *New York Medical Journal*, two years ago, I reported several instances of Marie's hypertrophic pulmonary osteo-arthropathy in connection with one case of typical akromegaly, calling attention to the marked differences that exist between the clinical pictures presented by these two affections, which have, in certain instances, been confounded. It occurred to me that it might be of interest to demonstrate several radiographs of two of these old cases, one of osteo-arthropathy and another of akromegaly, and to speak briefly of one new instance of the former affection that has recently come under my observation.

It may be well to summarize our three earlier instances of osteo-arthropathy.

CASE I.—A woman 28 years of age was admitted to the hospital on June 12, 1892, complaining of cough, pain in the region of the heart, and swelling of the legs. Her family and personal history were negative excepting that she had had cough, with considerable expectoration and shortness of breath, for 15 weeks. For 6 weeks the patient had noticed

side pain. The expectoration had no blood, but contained a trace of albumin, but no casts were found in the sediment. There was nothing remarkable about the hands or arms of the pa-



FIG. 1.— Hand of Case II and that of an individual 5 cm. taller.

tient beyond marked clubbing of the fingers, with incurvation of the nails. The feet and legs, however, were much enlarged. The tibiae at the upper end were about normal



FIG. 2.— Hand of normal individual and that of Case II. The thumb, wrist, etc., nearly the same length.

enlargement of the shins and ankles, associated with some tenderness and pain on walking. There were evidences of pleurisy with effusion on the right side. There was con-

in size; as one reached the lower third on each side there was great expansion, particularly on the right. At the level of the malleoli both tibiae were large and massive. The feet themselves were not so enormously enlarged. The patient remained in the hospital but 9 days and has not been heard from since.

<sup>1</sup> Remarks made before the Philadelphia Neurological Society, February 28, 1898.

CASE II.—H. H. first came to the hospital on March 13, 1893, at the age of 20 years, complaining of cough and pain in the right side of his chest. His family and personal history were good. He showed evidences of right-sided pleurisy with effusion, which, on account of his fever and general condition, was believed to be purulent. The man was not seen again until March 18, 1898, when he returned, complaining of the same symptoms. Nine

He presented, at this time, a markedly retracted right chest, with evidences of thickened pleura, while daily paroxysms of cough in the early morning, accompanied by profuse quantities of foul, sweet-smelling sputa, pointed to the existence of bronchiectasis. He showed the same remarkable changes that he now presents in his arms and legs. The radius and ulna, the tibia and fibula, particularly in the lower half of their extent, were enormously thickened and



FIG. 2.—Hand and arm of Case II (osteoarthritis) beside that of a woman with akromegaly.

months before his entry he had noticed that his spine was becoming somewhat "crooked." For two months he had been unable to grasp objects well with his hands, and for several months he had had occasional pains in his knees and tenderness over his shins. Within the last six months before entry he had noticed that it was impossible to lace his boots on account of the increasing size of his ankles and shins. He had also noticed an increase in the size of his wrists.

broadened. The hand as a whole seemed extremely large, while the metacarpal bones were greatly thickened, the fingers clubbed, the nails large and incurved. The skin was everywhere normal. There were no changes in the face. Since then the patient has been under observation off and on. He has had transient swellings in various of his joints—knees, wrists, and ankles—which have been sluggish and practically painless, and he has also had, at times, well-



marked tenderness over the enlarged areas in his arms and legs. There has, however, been no apparent increase in the symptoms during the past six months, and there has been no tenderness during that period.

CASE III.—A. K., a man, 31 years of age, entered the hospital on September 27, 1895, complaining of cough, weak-

ness, which he expectorated a large quantity of foul smelling pus, and since then, for the greater part of the time, the cough and expectoration had continued. For a year before entry there was stiffness in the knees, and nearly a year before, he began to notice an increase in size of his feet and ankles. Nine months previously the ends of his fingers and of his



FIG. 3.—Foot of Case II and that of a normal individual.

ness, pain in the right side of the chest, and enlargement of the bones of the wrists, hands, ankles, and feet. His family and personal history were good. Five years before, he had had an attack of pneumonia, followed by left-sided pleurisy, and later by what was apparently a pulmonary abscess, or, possibly, the rupture of an empyema into the lung. Two years later he had another attack, in

which he expectorated a large quantity of foul smelling pus, and since then, for the greater part of the time, the cough and expectoration had continued. For a year before entry there was stiffness in the knees, and nearly a year before, he began to notice an increase in size of his feet and ankles. Nine months previously the ends of his fingers and of his

wrists began to enlarge. There was at first a dull pain in his wrists, which of late had not been present. He had lost much power in his hands and his weight had fallen in six months from 143 to 127 lbs.

On physical examination there was evidence of thickened pleura in the right back, where there was well-marked dullness. The respiration was enfeebled in the dull area, with

fine crackling rales in the axilla. Both knees were somewhat prominent and enlarged, the lower ends of the femora being apparently expanded; the upper ends of the tibiae appeared also to be somewhat enlarged. There was an excess of fluid in the right knee-joint. Both ankles were enlarged, as well as the lower part of the tibia and fibula. The toes of both feet were elongated and clubbed. The lower ends of the radius

painful enlargement of the long bones of the arms and legs, particularly toward their distal extremities; increase in size of the phalangeal, metacarpal, and metatarsal bones; clubbing of the fingers and toes; indolent and almost painless joint-effusions. In all, these



FIG. 4.—Legs of Case II (osteoarthritis).

and ulna were markedly enlarged and thickened, though there was no impairment of motion at the wrist-joint. There was marked clubbing of the finger-tips; the nails were large and incurved. The patient stayed in the hospital but a short time and has not been heard from since his discharge.

All of these three patients, then, showed more or less

symptoms were secondary to pulmonary affections; in two to empyema and bronchiectasis, in one to long-continued pleurisy and bronchitis, a picture clearly different to that presented by akromegaly.

The accompanying radiographs will illustrate these



points. In Figure 1 is represented the hand of a normal man and that of Case II of osteoarthropathy. It is interesting to compare them with the photographs. The hand of the normal individual is not the same in the radiograph as in the photograph. It is, however, that of a man of exactly the same height as the patient. The extreme thickening of the metacarpal bones is a striking feature. The shafts are massive, so as to be nearly as broad as the lower epiphyses. All the phalangeal bones are rather large, especially the first phalanges.

Figure 2 shows the hands and forearms of the cases of akromegaly and osteoarthropathy side by side. The

the osteoarthropathy are strikingly brought forth, the bones in the case of akromegaly being practically normal.

In Figure 3 the massive enlargement of the first metatarsal bone in the patient with osteoarthropathy is strikingly shown. In Figure 4 the colossal enlargement of the lower parts of the tibia and fibula is to be seen. Figure 5 shows the hand of the case of akromegaly together with that of a normal woman of the same stature.

In these radiographs, then, a distinct difference becomes evident between the bone lesions in the akromegalic hand and arm and those of osteoarthropathy. The akromegalic hand shows a general plumpness of



FIG. 5.—Hand of a woman with akromegaly beside that of a normal woman of the same stature.

general roughness and plumpness of the bones, and particularly the tendency toward tufting about the epiphyses and at the points of tendinous attachment, are to be noted in the case of akromegaly. But the picture is very different from that of the case of osteoarthropathy, in which the changes are entirely restricted to the thickening of the shafts of the bones. The much greater thickness of the soft parts in the akromegalic hand is also striking, particularly when it is remembered that this is the hand of a small woman, while the other is that of a large man. The enormous thickening and deformity of the shafts of the ulna and radius in

the bones, with an exaggeration of the normal irregularities in outline, and a tendency to roughness and irregularity about the epiphyses and points of muscular and tendinous attachment. In this, as in many other cases, there is also a rather well-marked lateral roughening and tufting of the ends of the terminal phalanges. In the case of osteoarthropathy there is well-marked more or less general diaphyseal enlargement of the long bones, the smaller bones of the hands and the epiphyses being quite unaffected. In the present case this is especially marked in the lower parts of the diaphyses of the metacarpal bones.

To what are these changes in osteo-arthropathy due? Among 55 typical cases, excluding all doubtful instances, there were 20 autopsies. In 11 of these there were satisfactory notes as to the condition of the bones. In all instances there was an ossifying periostitis limited almost entirely to the diaphyses of the long bones of the hands, feet, arms, and legs. The process is most

joint-cartilages are found with an excess of fluid in the joints. The skin is practically unaffected.

The clubbing of the fingers does not depend upon bony changes, the last phalanges having been always unaffected. The changes here are probably in the main vascular. Freytag described a dilatation of the papillary processes, but no other cutaneous alteration. There were no scleroses of the corium nor of the subcutaneous tissue.

In none of our cases have we been able to make postmortem observations. A fourth case, however, which has recently come under our care, has afforded interesting evidence, from clinical observation and radiographs, as to the nature of the process.

**CASE IV.**—W. H. D., a clerk, aged 27 years, was admitted to the Johns Hopkins Hospital on February 7, 1898, complaining of shortness of breath, pains in the back, and pain and swelling of the hands and feet.

**Family History.**—His grandmother on the mother's side died of tuberculosis, while his father, at the age of 23, had hemoptysis and was told that he had pulmonary tuberculosis, but he recovered. His father, mother, one brother, and one sister are living and well. He has been married six years and has had three children. His wife is healthy.

**Personal History.**—As a child, he had measles and mumps, and four years ago he had typhoid fever. There is no history of diphtheria, scarlet fever, rheumatism, malaria, or pneumonia.

The patient was rather feeble as a child, but since his twelfth year he has been strong and well. Nearly all his life he has had frequent attacks of cough; these came on "like heavy colds" and are more frequent during the winter. There has been a good deal of shortness of breath in association with these attacks, but not much expectoration. The man denies venereal disease. He is a moderate eater and drinker.

**Present Illness.**—About six months ago, in August, 1897, the patient began to suffer from pain in the small of his back. This was rather sharp and recurred in attacks lasting a day or two at a time, with intervals of about a week. At times the pain was sufficiently severe to keep him awake at night; it was always aggravated by walking. The general condition remained good. On December 19th the patient noticed that his hands and feet were swollen, his attention being first drawn to the trouble by difficulty in lacing his boots and in putting on his clothes. On consulting a quack he was told that he was "suffering from kidney-trouble" and was given some medicine. The pains in the back, however, became more frequent and severe, and since then they have been continually present.

Ten days later the patient began to suffer from slight cough, which soon became much more severe, recurring in paroxysms that usually came on once in the middle of the night and lasted two or three hours. During the remainder of the night and the day he suffered but little. There was abundant yellowish sputum. After ten days the cough and expectoration diminished, but they were still present to a certain extent. During this attack the patient had several outbreaks of sweating at night.

A day or two before the onset of the cough he noticed a stiffness in his knees on going up-stairs. This has grown gradually worse, and during the past two weeks there has been some actual tenderness. For a week the patient has noticed swelling of the knees. He thinks that his hands and feet have been gradually growing larger since he first noticed the condition, and during the past three weeks movements of the extremities have been painful. For two weeks he has been unable to close his fist. He believes that the clubbing of his fingers has always been present and he states that his father's fingers showed a similar condition. Ever since he first noticed the swelling of the hands and feet, they have been tender on pressure. He does not, however, think that thermal or tactile sensation is in any way impaired. There has also been loss of strength in the



FIG. 6. Case IV. Hypertrophic pulmonary osteoarthropathy.

marked toward the distal extremities of these bones. The ribs are apparently unaffected. In one instance there was thickening of the skull. The bones in other regions appear to be uninfluenced. The periosteum is thickened; the new bone is, in some cases, laid on more or less regularly in layers, in other instances in a rough and warty manner. In many cases erosions of the



hands and legs, which he has observed especially during the last two weeks. Three weeks ago the patient first noticed soreness and stiffness at the right elbow. The joint is also sore to the touch and on motion. The pain in the back has gradually grown worse up to about a week ago, since which time it has

been more painful. There has been no fever at any time excepting last December.

The patient gave up work on January 1st and remained at home for about ten days. He then returned to work, but had to give up again after ten days. Two weeks ago he came to the dispensary, where he has been under treatment.



FIG. 7.—Hands and arms of Cases II and IV and of a normal individual. The shadows along the diaphyses of the long bones, particularly along the outside of the ulna in the arm of Case IV, on the left of the plates, represent, apparently, the fresh periosteal bone formation.

The shadows about the lower extremity of the radius, well marked in the plates, are, unfortunately, rather unsatisfactorily shown in the reproduction.

been about the same. Three weeks ago the pains began to shoot around toward the abdomen, seeming to follow the course of the last ribs. These pains are especially marked at night. The constant pain in the back, which at first was sharp, has now become "rather more of a soreness than a pain." During the past two weeks walking has become

The appetite is good; there has been no nausea or vomiting. The bowels move regularly every other day. Since the middle of December there has been frequent micturition—two or three times at night. The patient has lost from 12 to 14 pounds in weight during the last two weeks.

*Physical Examination.*—The patient is emaciated, the lips

and mucous membranes are of tolerably good color, though the face is pale. The tongue is clean at the edges and in the middle; there is a bluish coat on the lobes. The respirations are 28; the pulse is 90 to the minute, and of rather low tension.

The *thorax* is long, the costal angle narrow. The right side is distinctly retracted, the shoulder being a little lower on this side than on the left. The retraction is more marked in the lower front and axilla than in the back. The expansion, nearly equal above, is considerably diminished in the lower right front. There is slight rounded kyphosis, taking in the whole dorsal region, and a moderate scoliosis, with its convexity toward the left in the upper dorsal region. The right upper chest is perhaps a little more tympanitic than the left, the resonance extending to the seventh interspace in the right mammillary line and to the ninth rib in the mid-axilla. On auscultation the respiration in the right front is a little harsh and sometimes wavy, but otherwise clear. The respiration in the left front is clear and normal. In the right back there is slight but distinct dullness in the lower part, while the left side is clear. The respiratory murmur is somewhat enfeebled in the lower right back.

There is well-marked phlebo-sclerosis, almost all the veins of the arms being thickened.

A few small glands in the neck are to be felt; the epitrochlears are just palpable. The inguinal glands are not particularly enlarged. The conformation of the jaws, teeth, and facial bones is perfectly normal; the skin over the face is natural.

The hands and forearms present a remarkable appearance. The terminal phalanges are extremely clubbed; the skin is shiny and glossy; the nails are thin and incurved, having a parchment-like fluctuation about the roots—typical Hippocratic fingers. The skin of the fingers as a whole is tight and glossy. The fingers are tender upon pressure, while the metacarpal bones feel rather thick and massive, especially toward their distal extremities, and particularly the first metacarpal bones. The forearm shows remarkable expansion in its lower part, both the radius and ulna being distinctly enlarged. On palpation of the left radius there appears to be a somewhat more marked node-like irregularity about the middle of the upper third. There is a distinct fullness about the lower part of the legs, ankles, and feet, well marked at the level of the malleoli, while the metatarsal bones feel rather large. There is a curious puffy, somewhat edematous appearance about the hands and feet, though pressure does not produce pitting. The marks of the stockings, however, are left upon the skin. There are no nodes on the tibiae. The second phalanx on each foot looks somewhat Hippocratic. The knees on each side show a well-marked excess of fluid, and the patella is floating. The epididymis is natural on both sides.

When seen in the dispensary, the day before, the hands showed a most remarkable cyanotic mottled appearance. This was not present at the morning visit, but in the afternoon it returned.

The *blood* showed, on February 8, 1898, 4,344,000 red corpuscles, and 10,300 colorless corpuscles; hemoglobin, 70%.

*Urine*: Amber; acid; specific gravity, 1026; albumin and sugar absent. The sediment was slight and contained a few epithelial cells and an occasional leukocyte. On February 12th no albumin was made out with the ordinary tests; an occasional hyaline and granular cast was, however, found in the sediment.

The *temperature* ranged between 97.1° and 102.7° for three days. During the last two days in the hospital the highest point reached was 100.5°.

The patient was given tincture of *nux vomica* gtt. xx, three times a day, cod-liver-oil, and creosote. He left the hospital on February 12th, greatly improved. He re-entered the hospital on March 9th, the pains in the back and the general symptoms having returned. The cough, with scanty expectoration, still occurs at night. The condition was practically the same as upon the former entry.

On March 16, 1898, the following note was made: The clubbing of the fingers is very marked, but the cyanosis and puffiness of the hands are no longer evident. The ulna feels rather massive on both sides, as do also the metacarpal bones. The drawn, glazed, tight condition of the skin of the fingers has, however, entirely disappeared.

The note is a little higher on percussion throughout the right side; the expiration is somewhat prolonged. In the

back, in the dull area, there is well-marked enfeeblement of the respiration. The voice-sounds are distinct; there are no adventitious sounds.

The legs still show a rather marked enlargement of the lower part of the tibia and a moderate effusion into both angle-joints.

The *urine* was negative throughout the patient's stay in the hospital; the *blood* was about as on the former entry. The temperature was slightly elevated at night, often reaching about 100°, but never after the first two days going above 101°. After March 16th the patient received 10 grains of potassium iodid three times a day. He gained 6 pounds and left the hospital on April 12th, feeling much better, the acute swelling having apparently disappeared. The following measurements were made, unfortunately after the more marked swelling had disappeared:

Measurements.		
Height.....	173.5	cm. (68.25 in.)
Weight, 115 pounds (in ward-clothes)..		
Upper Extremities		
	Right	Left.
From tip of acromion to tip of middle finger.....	73.5	cm. 73.0
From tip of olecranon to tip of styloid process of ulna.....	26.0	" 26.0
Circumference of lower end of forearm, 1 cm. above tip of styloid process.....	17.0	" 17.0
Circumference of midcarpal region.....	16.75	" 16.75
Length of Metacarpal Bones.		
First metacarpal.....	5.25	" 5.25
Second ".....	7.25	" 7.25
Third ".....	7.0	" 7.0
Fourth ".....	6.75	" 6.75
Fifth ".....	6.0	" 6.0
Circumference of broadest part of metacarpals.....	23.0	" 22.0
Length of fingers from base of phalanx to tip.		
Thumb.....	6.1	" 5.9
Index finger.....	8.8	" 8.8
Middle ".....	9.4	" 9.3
Ring ".....	9.0	" 9.0
Little ".....	6.9	" 6.7
Circumference of fingers at base of second phalanx.		
Thumb.....	6.8	" 6.5
Index finger.....	6.5	" 6.3
Middle ".....	7.3	" 7.1
Ring ".....	7.1	" 6.9
Little ".....	6.0	" 6.0
Lower Extremities.		
Distance from tip of greater trochanter to level of sole of foot.....	82.0	" 81.5
Circumference of knee at middle of patella.....	33.5	" 34.0
Length of tibiae from articulation at knee to tip of internal malleolus.....	38.25	" 37.15
Circumference of leg 7 cm. below lower margin of patella.....	27.25	" 27.5
Circumference of calf, widest part (14 cm. below patella).....	27.50	" 27.75
Circumference of leg, 8 cm. above tip of external malleolus.....	20.5	" 20.0
Circumference of leg at level of external malleoli (foot at right angle to leg)...	26.0	" 25.75
Circumference at instep, tape passing over tip of heel.....	33.5	" 34.0
Length of foot.....	25.5	" 26.0
Length of femur from tip of trochanter to articulation between femur and tibia.....	37.0	" 36.5
Length of toes from metatarsophalangeal joints to tips.		
Big toe.....	6.75	" 6.75
Second toe.....	5.5	" 5.5
Third ".....	5.0	" 5.0
Fourth ".....	4.75	" 4.75
Fifth ".....	4.25	" 4.25
Circumference of terminal phalanx of great toe at thickest point.....	9.5	" 9.5



Figure 6 shows a photograph of this patient taken upon his second entry. The attitude exaggerates, unfortunately, the size of the hands and feet, but the relative enlargement about the forearms and legs is clearly brought out.

Figure 7 shows a radiograph of the patient's hand and arm. Upon the same figure is shown a normal arm of a small individual and that of Case II of osteo-arthropathy. On first glance the bones of Case IV appear relatively delicate and small; but on careful observation it will be noted that along the diaphyses of all the long bones of the hand and of both radius and ulna there is a well-marked more or less irregular shadow. This is most extensive about the lower parts of the shaft of the metacarpal bones, the radius, and the whole outer part of the ulna. In other words, it corresponds exactly to the areas of enlargement and tenderness evident upon physical examination.

This shadow clearly represents the periosteal new bone-formation. It is, so far as I know, the first instance in which the nature of the process has been clearly demonstrated during life.

The clinical picture, then, in these cases of osteo-arthropathy is materially different from that in akromegaly. This may, perhaps, be graphically illustrated by the following table of the more important symptoms of the two affections:

AKROMEGLALY.		OSTEO-ARTHIROPATHY.	
Subjective symptoms: headache; ocular disturbances. General nervous manifestations: sweating; polydipsia, etc.		Pain in joints and extremities only.	
Predominance of facial changes.		Absence of facial changes.	
Changes mainly in the soft parts.		Few changes in the soft parts.	
Changes in the bones are generally the indication of an abnormal growth, and while inflammatory changes (periostitis) may be present, they are rare and are usually limited to the points of muscular and tendinous attachment and the epiphyses, resulting in a general plumpness of the bone, with an exaggeration of the normal irregularities.		Characteristic periostitis, limited usually to the lower parts of the diaphyses of the long bones of the extremities, resulting in marked thickening and deformity of the bone.	
Fingers flat and expanded laterally; nails relatively small.		Fingers clubbed; nails large and incurved.	
Absence of joint-symptoms		Presence of joint-symptoms.	
Onset without apparent cause.		Secondary to some chronic, usually pulmonary, affection.	
Changes in the peripheral nerves are common.		Changes in the peripheral nerves rare.	
Tumor or disease of the pituitary body usual; goiter frequent.		Neither pituitary tumor nor goiter.	

The theories as to the cause of osteo-arthropathy are various and not wholly satisfactory. Bamberger speaks guardedly with regard to it. He notes the frequency of chronic suppurative processes, and suggests the possibility of the condition being due to the absorption of

toxic substances from the putrefying bronchial or other secretions. Similar processes have been produced by feeding hens with phosphorus. Experiments with rectal injections of putrefying bronchial secretion in rabbits yield negative results. Marie expresses a similar view more positively, and compares the process to gout, in which the changes are limited in a similar manner to certain definite parts of the osteofibrous system. Thorburn has suggested that the condition might be essentially tuberculous in nature, a slow tuberculous periostitis and arthritis, and has proposed the name "tubercular polyarthritis."

Massalongo, in a recent article, insists on the frequency of the occurrence of osteo-arthropathy without pulmonary involvement. He is impressed by the frequency with which such cases present a history of previous rheumatoid affections, and the common existence of a family-history of rheumatism. He notes the fact, moreover, that in several instances sensory disturbances and muscular wasting have been noted, while in his own case, which, by the way, was secondary to chronic bronchitis with bronchiectasis, he found a more or less extensive peripheral neuritis, the alterations being analogous to those found by Pitres and Vaillard, Klippel and himself in chronic articular rheumatism, namely, thickening of the neurolemma and of the intrafascicular connective tissue, with limited alterations in the axis-cylinders. He concludes that "hypertrophic pulmonary osteo-arthropathy does not then depend upon the alterations in the respiratory apparatus, nor in circulatory disturbances, but that it is the consequence of divers causes acting contemporaneously or alone, among which the arthritic diathesis plays the principal role, the secondary localization of pathogenic microorganisms (infective arthritis and osteitis, infective pseudo-rheumatism), syphilis and other humoral dyscrasias, and alterations in the trophic spinal centers."

Massalongo, it appears to me, goes out of his way to make light of the relationship between this clinical picture and chronic pulmonary disorders. In 43 of 55 typical cases of hypertrophic pulmonary osteo-arthropathy the affection was secondary to a pulmonary disorder. The symptoms followed:

Pulmonary tuberculosis.....	21	instances
Empyema.....	9	"
Pleurisy.....	5	"
Bronchitis with or without bronchiectasis.....	14	"
Sarcoma of the lung.....	2	"
Abscess of the lung.....	2	"
Carcinoma of the pleura with effusion.....	1	"
Acute pneumonia.....	1	"
Total.....	43	

The symptoms followed:

Syphilis.....	3	"
Valvular heart disease.....	3	"
Chronic diathesis.....	2	"
Spinal caries.....	1	"
Unknown causes.....	3	"
Total.....	12	

What the relation between the pulmonary affection and the periosteal and other changes may be is by no means clear. Thorburn's theory that the condition is tuberculous appears to have no foundation. On the whole the weight of evidence appears to me to be decidedly in favor of a modification of Marie's and Bamberger's theory of a toxic origin. The majority of the reported cases have followed conditions favorable to the retention of purulent secretions within the economy.

What these suppositious toxic substances may be and exactly how they may arise, and why they should be so much more frequently present with pulmonary affections than with suppuration elsewhere, are matters for speculation. It seems to me that we stand, with regard to secondary osteo-arthritis, in a position somewhat analogous to that which we occupy, for instance, toward amyloid degenerations. Thus we know that amyloid degeneration follows commonly chronic suppuration, particularly of bone; but it is not infrequently found in instances of syphilis in which there has been relatively little suppuration, as well as in other cachexia due to malignant disease, or in chronic malarial cachexia, and lastly in a certain proportion of cases in which no distinct cause can be found. So, in like manner, we have learned that the secondary osteo-arthritis are particularly frequent in connection with chronic suppurative processes in the lungs or pleuræ; but they have also been found in several instances of syphilis, in 2 instances of chronic diarrhea, in 3 instances of valvular disease of the heart, and lastly, occasionally, unassociated with other organic disease. In each condition we are led to believe that the process owes its origin to some toxic substance arising within the economy. What this is we are at present entirely unable to say.

There is little evidence, it seems to me, in favor of the idea that the condition may be due to primary or even secondary changes in the nervous system. The term, "Secondary hypertrophic osteo-arthritis," suggested by Massalongo, is much better than that originally proposed by Marie, but it is a question whether it will be possible to abandon a term that has come into such general use.

#### RESTITUTION OF SKIN BY PLASTIC OPERATION IN CASES OF EXTENSIVE TRAUMATIC SURFACE- DEFECTS OF THE SCROTUM AND PENIS.

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SURGEONS have for a long time been made aware of the fact that extensive skin-defects of the scrotum caused by injury or disease are usually repaired in a

comparatively short time by granulation, cicatrization, and epidermization. In cases of gangrene of the scrotum resulting in denudation of both testicles, the exposed organs are, in the course of a few weeks, furnished with a new coating without operative intervention, by the formation of a contracting scar, which, by making traction upon the surrounding skin, approximates the margins of the granulating surface from all sides, so that when the process of healing is completed the new scrotum is largely composed of normal skin obtained from the neighborhood by cicatricial contraction.

Bruns attributed to the scrotal tissues a maximum recuperative power in explanation of the speedy and satisfactory healing of extensive skin-defects. Kocher, on the other hand, denies any such special properties inherent in the tissues of the scrotum, and asserts that wounds of the scrotum heal in the same manner, and the healing process requires the same length of time, as the repair of surface-wounds in any other part of the body. He explains the apparently more rapid healing of scrotal wounds by the displacement of the adjacent loose skin by the contracting scar, an opinion that has since become satisfactorily substantiated by extensive and careful clinical observations.

Skin-grafting by Reverdin's or Thiersch's method has been resorted to and has been strongly advised by some surgeons to expedite the healing of large granulating wounds of the scrotum, but it is doubtful if the results obtained with the aid of this modern surgical resource are any better than those following spontaneous healing of such wounds. The skin-grafts are, at best, only an imperfect substitute for normal elastic skin, and their presence must, necessarily, interfere with the desired displacement of the adjacent skin by the contracting scar.

Nothing has been done in the way of primary plastic operations in restoring extensive traumatic skin-defects of the scrotum and penis. Surgeons have relied on the healing of such wounds by granulation in all cases in which, owing to the size of the wounds, suturing was out of the question. The location of such wounds renders it almost impossible to secure and maintain an aseptic condition long enough for the completion of the healing process. The denuded and exposed parts are exposed to the dangers incident to infection, and healing seldom takes place without suppuration, and often weeks and months are required before the injured parts are protected by new and displaced skin.

Considering that the external genital organs are surrounded on all sides by an abundance of loose skin, well adapted for plastic operations, it is somewhat strange that surgeons have not taken advantage of this favorable anatomic environment and resorted to plastic procedures in restoring recent extensive traumatic skin-defects of the scrotum and penis. In the case that forms the subject of this paper such an effort was made, and the result was so satisfactory that I have deemed



it of sufficient importance to bring it to the attention of the profession. In this instance the entire scrotum, one testicle, and the whole cutaneous sheath of the penis were torn away in a machinery-accident:

The patient, a German laborer 33 years of age, in good health, was injured October 11, 1897, and was admitted to St. Joseph's Hospital a few hours after the accident occurred. He was employed in a bicycle factory, and when the injury was sustained he was standing on a ladder, adjusting a belt on a pulley from the headline-shaft to a stamping-press. His clothes were caught by the revolving shaft, and, with the exception of his shoes and stockings, were torn from his body. He fell from the ladder down to the floor, a distance of ten feet, and at once discovered the extent of injury to the external genital organs. He attempted to arrest the bleeding, which was quite free, by washing the wound with cold water obtained from a sink. A physician was called, who dressed the wound and sent the patient to the hospital.

On examination at the hospital the entire skin covering the external genital organs, as well as the left testicle, was found torn away with the clothing. The parts lost are now in possession of the physician who first dressed the wound. Figure 1 represents the extent of the injury and the appear-



FIG. 1.—Extent of wound and appearance of parts before operation.

ance of the parts before the operation. The loss of skin extended nearly over the entire region of the mons veneris. The left spermatic cord and vessels were torn off near the external inguinal ring. The left inguinal canal was torn open nearly in its entire length. Hemorrhage from the spermatic artery had been arrested by applying hemostatic forceps.

The patient was pale, but did not suffer from any severe symptoms of shock. He was at once placed under the full influence of ether, when the wound and surrounding skin were thoroughly disinfected. The left spermatic vessels were ligated with catgut and the inguinal canal was sutured with the same material. Formalin-iodoform catgut was used both for ligatures and sutures. The right testicle, spermatic cord, and accompanying vessels were found loose and detached from the underlying tissues as far as the external inguinal ring; the tunica vaginalis was intact; pulsation of the spermatic artery was distinct. I decided to cover the wound by undermining and mobilizing the adjacent skin. The testicle was brought in proper position and was covered with skin by undermining the margins of the wound and suturing it in a vertical direction as far as the root of the penis.

The skin above was undermined in an upward direction sufficiently to secure room for the denuded penis, when a

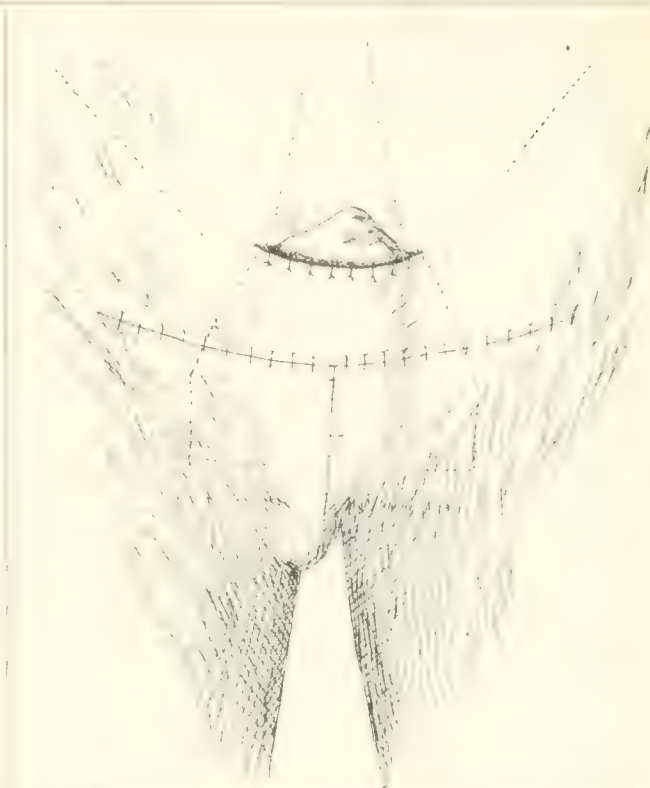


FIG. 2.—Appearance of parts after first operation. Dotted lines showing incisions of second operation.

transverse incision was made sufficiently large to bring the glans penis out, and the mucous membrane of the corona glandis was sutured to the skin with fine catgut and horse-hair sutures. The remainder of the wound was then closed transversely, as shown in Figure 2. Drainage was secured



FIG. 3.—Penis liberated and covered completely with skin from the abdomen. Wound above closed with two triangular flaps.

from the lower angle of the vertical to the left angle of the transverse wound by inserting a strip of iodoform gauze. With the exception of the drainage openings the wound was sealed with iodoform-collodion, over which the ordinary antiseptic dressing was applied and held in place by means of strips of adhesive plaster.

The operation was not followed by any untoward symptoms. The patient emptied his bladder without any difficulty, being directed to lie on his side during the evacuation. With the exception of a small place about the left angle of the transverse incision, the entire wound healed by primary intention.

On October 25th, two weeks after the first operation, a second plastic operation was performed, for the purpose of releasing the penis from its abnormal position and providing for it a complete cutaneous sheath from the skin of the abdomen. The operation was carried out under full ether-anesthesia. The dotted lines in Figure 2 show the number and direction of the incisions. The incision above the glans penis secured a flap to cover the dorsum of the organ. The lateral incisions furnished a flap to cover at least two-thirds of the circumference of the penis. The dorsal flap received an ample blood-supply from its new attachments with the base of the glans penis. After liberating the penis and bringing it into its natural position the dorsal flap was sutured on each side to the lower flap, which had become attached in the center to the whole length of the under surface of the penis. (Figure 3.) The large wound above the penis was covered with two triangular flaps, which were sutured together in the median line, and when in position were attached to the lateral incision and base of the penis by means of tension-sutures of silk and coaptation-sutures of silkworm-gut and horsehair. The dressing was the same as after the first operation, with the exception that the penis was dressed separately and with special care, to prevent harmful circular pressure. Primary union failed to take place at the root of the penis on the left side, where the apex of the triangular flap sloughed, leaving a limited granulating defect, which healed in a most satisfactory way in the course of three weeks. In spite of frequent and severe erections, the wounds on the side of the penis healed almost throughout by primary intention. The patient left the hospital two months after his admission, highly pleased with the immediate and remote results of the two plastic operations.

## AN ETIOLOGIC STUDY OF TUBERCULOSIS IN COUNTRY-PEOPLE.

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In the following we give the results of an inquiry into some of the etiologic problems of tuberculosis. The inquiry is necessarily limited in scope. Our clinical service is made up largely of farmers, lumbermen, and others, living in the country or in small towns. They differ, therefore, in important particulars from the usual hospital-patients of cities. Many interesting cases of tuberculosis have been encountered among these patients. In this paper we do not intend, however, to give clinical details. The number of cases analyzed is small, partly because we have used only those histories in which the intelligence of the patients and their knowledge of the family-history enabled us to gain the information desired. No selection was made other than this, and although we are aware that a larger series might alter the relative figures, yet we

feel that the points brought out may be useful, as well as interesting.

We have analyzed 100 cases of chronic pulmonary tuberculosis (bacillary phthisis), 2 of acute pulmonic tuberculosis, and 17 of tuberculosis affecting organs other than the lungs. The cases of chronic pulmonary tuberculosis are analyzed separately on account of the differences in course.

*Physical signs* were present in all of the cases of pulmonary tuberculosis, although in some they were so obscure that they could be detected only by careful exploration. Most cases were far advanced. In all cases tubercle-bacilli were found in the sputum, and in 66 elastic tissue, having the well-known characteristics, was present. (This was no doubt present oftener, but in some cases, for various reasons, it was looked for only once. We have never found it earlier than bacilli.)

The *average duration* of the disease when the patient was admitted was 2.3 years. Twelve cases gave an average of 7.9 years, one being 12 years.

*Occupation*.—27 patients were farmers; 22, housewives (farmers', mostly); 8, lumbermen; 8, laborers; 2, dressmakers; 1, a teacher; 1, a cook; 4, students; 20 had occupations that could be considered healthful, such as teamsters and skilled laborers in various trades; 7 had occupations that might have had a part in the etiology; *i. e.*, 2 were sawmill-hands; 1, a planing-mill hand; 1, a laborer in a grain-elevator; 1, a quilt-maker; 1, a marble-polisher; 1, a chicken-picker in a cold-storage warehouse. Two of the last 7 had a history of tuberculosis in the parents. The father of the chicken-picker, though still alive at the age of 78 years, exhibited recent symptoms of tuberculosis following diabetes; the mother of the marble-polisher had died of tuberculosis. In the other 5 the family-history was free from tuberculosis.

*Sex*.—There were 74 males and 26 females.

*Age*.—One patient was 11 years old; 11 were between 16 and 20; 48, between 21 and 30; 25, between 31 and 40; 13, between 41 and 55; 1 was 62; and 1, 67 years old.

Eighty-four patients gave a *history* of good health before the beginning of the characteristic symptoms. In 2 there was a history of rheumatism. In 4 the previous health was only "fair." In 6 it was "poor," the patients explaining this by saying that they "caught cold" readily. In 2 there was chronic bronchitis; in 1 nasal catarrh. One patient had an ulcer of the rectum several years before the pulmonary symptoms began.

The pulmonary disease began with a "cold" in 36 cases, following influenza in 16 and pleurisy in 9; with anemia or dyspeptic symptoms in 21, following pneumonia in 7, directly after nursing a tuberculous relative in 1, following pregnancy in 1, following hemorrhage in 3, after laryngitis in 1, after typhoid fever (?) in 1; it



began suddenly in 2, following a blow on the chest, with hemorrhage, in 1.

In about a third of the cases the *diagnosis* of "malaria" had been made at some time, and a number of cases were sent to the hospital with that diagnosis, but the characteristics of the alleged malaria were so vague, and the physical signs and sputum so conclusive, that no real difficulty in diagnosis existed on admission, though it may have previously. These cases we have included under the categories given above as being less inaccurate than that of malaria.

The cases described as following influenza all gave a clear description of influenza before the pulmonary symptoms began, followed rapidly by the latter. In all such cases in our service, including those not embraced in this study, bacilli were found in the sputum, sometimes very early. We make this statement because some have held that consumption of the lungs is not bacillary.

As to *figure*, 10 patients are described as large, without evidences of weakness; 5, as strong and robust; 18, as medium; 10, as good; 50, as slender; 7, as small. Of those with a tuberculous family-history, 7 had good physical development (4 tuberculous mothers; 3, fathers); 19 (10 paternal, 9 maternal, respectively), poor. The average of good and bad figures is, therefore, about the same in those with and those without tuberculous parents. These conditions might easily be modified by larger statistics, and we realize that the classification of figures in the late stages of tuberculosis, as many of our cases were, is not conclusive as to the original condition. The possible occurrence of tuberculosis in persons of robust figure, however, needs no argument.

Of the 100 cases there was no history of *tuberculosis in the parents* in 74. In 12 cases the mother alone had tuberculosis; in 13, the father alone; in 1 case, both father and mother. In regard to these statements we must explain that we have not been able to confirm the diagnosis of the disease in the parents. We have, as already stated, taken only the histories of those patients whose statements were clear enough and full enough to enable us to conclude with reasonable certainty the fact of tuberculosis. The proportion of cases having a history of tuberculosis in the parents is almost precisely the same as in the Johns Hopkins Hospital, as quoted by Osler.<sup>1</sup> We quote this one set of statistics because it may be taken as representing a typical city hospital-service.

We do not intend in this paper to compare various statistics on tuberculosis. The proportion of tuberculous parents among tuberculous subjects varies, as is well known, according to different writers, from a smaller proportion than that in our series up to 50% or 60%, or even more. We have excluded from the

analysis grandparents, uncles and aunts, and other collateral relatives. No one now believes that tuberculous infection can be inherited from a grandparent, and the investigation of the atavistic disposition was not included in our scheme. Our histories show that this is beset with contradictions, as might be expected.

The proportion of cases of tuberculosis in the parentage suggests a comparison. We have no accurate statistics on the distribution of tuberculosis in Michigan, and have therefore examined the histories of 100 adult patients admitted for non-tuberculous diseases, who gave full particulars as to family-history. Of these, 6 mothers and 6 fathers (in two families both father and mother) had chronic pulmonary tuberculosis, one each quick consumption. This difference has been noted by others, and is one of the facts from which some argue the frequency of inherited tuberculosis. The relation can be explained in another way, as we show further on.

A closer examination of the *ages* of the patients is suggested. We find that of the 26 patients with tuberculous ancestors 5 are between 16 and 20; 6, from 21 to 25; 3, from 26 to 30; 4, from 31 to 35; 2, from 36 to 40; 3, from 41 to 45; 3, from 50 to 67—that is, there are relatively more than the average below the age of 25; but this is altered after 25, and from that time the proportion at various ages is about the average.

To take up another aspect of the question, we find that of the 26 tuberculous families, 14 exhibit *tuberculosis in other members of the present generation*; namely, 17 sisters and 6 brothers of patients. Of these 23, 13 came from 8 families with tuberculous mothers. On the other hand, of the 74 families without tuberculous parents 13 families were affected in more than one member beside the patients; viz., 11 sisters and 4 brothers. Of the 100 families of non-tuberculous patients, the 12 tuberculous families show only 4 cases of tuberculosis in children. Three of these were in a family with both father and mother tuberculous; the fourth had a tuberculous father. Of the others, 6 families show 1 child each tuberculous.

These figures might, of course, be modified materially if the investigation were extended. As they stand, they show a greater tendency to tuberculosis in families with tuberculous parents; greater morbidity of the daughters when there is tuberculosis in the family; multiple appearance is commoner in families with tuberculous parents.

Those who hold to the view of inheritance, either of germ or of soil, may think these figures confirm their views, but a critical examination does not strengthen their ideas. In some of the cases the parents developed symptoms only a short time before the children; in all, the age at the beginning of the symptoms in the child was advanced beyond what we consider a reasonable period of latency. On the other hand the idea of post-natal infection becomes strong from these very

<sup>1</sup> Practice of Medicine, 2d Ed.—427 cases; mothers, tuberculous, 53; fathers, 72.

facts. So the relatively large number of tuberculous children below the age of 25 years may be explained more readily by the greater exposure of young people to infection present in the parents than by a prolonged latency of inherited germs, as held by Baumgarten and his followers. The larger number of daughters affected, the greater morbidity in children when the mother is affected, and the multiple appearance in many families with a tuberculous parent may all be easily explained by infection after birth.

We have in the cases analyzed few examples of *disease in both husband and wife*. There is one instance in the parents of a tuberculous patient, and two in those of non-tuberculous patients. One of us has at present under his care an example in which a man of healthy parentage became affected within ten months of the death of his tuberculous wife. In many of our patients the accounts cannot be considered closed.

As to possible *direct acquisition*, the series of cases gives little positive information. In one case a woman of 27 years, just after delivery nursed a tuberculous sister through her last illness, developing symptoms during that time. The patient's father had died at 65, a short time before the sister, having had pneumonia followed by a cough, his fatal illness, tuberculosis, lasting one year. A brother had died of tuberculosis at 28 at about the same time. A farmer of 27, whose parents were in good health, had lived with a tuberculous sister some years before. A woman of 24, with healthy parents, lived in the same house with her tuberculous father-in-law. A boy of 18, whose father had died of tuberculosis, 8 years before, began to have symptoms at 16. A woman of 34, with a good family-history, tuberculous 9 months, had nursed two sisters who died of tuberculosis 5 years before. A woman of 41 had symptoms for 8 years; her father had died of tuberculosis when she was 9 years old; at 26, she nursed two tuberculous patients for 2 months. A boy of 20 slept in the room with his tuberculous mother during 2 years; the mother died when the boy was 12 years old; 3, or perhaps 5 years later he developed the first symptoms. A man of 30, with healthy parents, slept with a tuberculous brother 5 years before his symptoms began. A man of 23, with healthy parents, nursed his tuberculous sister a year before his symptoms came on.

It is apparent that proof of direct infection is not possible in such cases, and, even in some more carefully observed, the actual relations are difficult to understand. One of our patients to be mentioned later, A. B., has had a tuberculous empyema, with a fistula, for nearly 8 years, 6 years under our observation. The parents are alive and free from tuberculous disease. A younger sister, E. B., came to live with A. (in the same room) early in 1892. This sister was then the picture of robust health, but later she gave the following history:

She had several attacks of what was called pneumonia as

a child, and in some of these she expectorated blood. At 17 she coughed and had night-sweats. In the following year she was told by her physician that she had "quick consumption." She recovered entirely, but a year later she had pneumonia and again expectorated blood. She recovered and for 3 years was perfectly well. About a year after beginning to live with A. B., E. had a cough, with expectoration and pain in the left side. She recovered and began to teach school. She was much exposed to the weather and again began to have night-sweats. Neglecting calls to urinate, the bladder became irritable, with great pain. Later, blood appeared in the urine. Cough began again; there was loss of weight. At this time E. B. came under our care. There were signs of infiltration in both upper lobes. The sputum contained both bacilli and elastic tissue. Bacilli could not be found in the urine, but owing to an objection on the part of the patient the examination could not be repeated. The further course was rapidly fatal.

Although the history suggests the possibility of an earlier infection, we cannot resist the conclusion that the fatal disease was acquired from the sister.

Another example of complex modes of infection is furnished by the history of the chicken-picker already mentioned. The father showed symptoms of tuberculosis at about the same time the boy did. The latter's occupation consisted in picking chickens in a hot room, filled with dust from the poultry, and at times going into the cold-storage rooms. He was therefore exposed to alternate heating and chilling and to inhalation of dust. The patient said that 8 fellow-workmen were similarly affected. We had no opportunity of examining any of the others.

The other nineteen cases were as follows:

#### *Caseous pneumonia; rapid tuberculosis:*

CASE I was in a student, aged 19, whose mother and father were alive and well. His maternal grandfather and his own brother had died of quick consumption. His previous health had been good. He was of slender figure. His disease began with symptoms of typhoid fever. Tubercle-bacilli and elastic tissue appeared in the sputum shortly before death.

CASE II was in a woman, of 49, whose father died of inflammation of the bowels at the age of 53, and her mother at 35 of tuberculosis. The patient's symptoms began with a "chill" and pneumonia developed, with great depression. Elastic tissue and tubercle-bacilli were detected later.

#### *Tuberculosis of the peritoneum:*

CASE I was in a farmer, aged 21, whose father, aged 54, had a chronic cough, but no other symptom of tuberculosis (no sputum); his mother was well. He was of slender figure, and his disease was of gradual onset. Celiotomy was performed two months after the beginning of distention of the abdomen. The diagnosis was confirmed by sections and inoculation. Recovery ensued and was maintained after 1½ years.

CASE II occurred in a woman, of 30, whose father had died of carcinoma of the stomach. Her mother was 59, and in good health. Her disease followed an attack of pleurisy; and the diagnosis was confirmed by operation and examination of the tissues.

CASE III was in a student, 21 years old, whose father was 49 and his mother 44; both were well. He was of slender figure; and had been ill for 6 months. Operation was performed and intense tuberculosis of all parts of the peritoneum (with tubercle-bacilli) was found. Death took place about 4 months after the operation.

#### *Tuberculosis of the lymph-glands:*

CASE I was in a woman, 25 years old; engaged as a teacher. Her father and mother were living and well. The cervical glands were enlarged; the source of infection was not discoverable. The diagnosis was made from sections and inoculation.



CASE II was in a man of 39, employed as a machinist. His father had died at 45 of inflammation of the bowels; his mother at 66 of tuberculosis, as also a brother. The patient had pleurisy at the age of 9 years, and the axillary glands had been enlarged for two years. The diagnosis was made by detection of tubercle-bacilli in pus from a sinus following removal of the glands. No other organs were involved up to four years from the time the diagnosis was made.

#### *Tuberculosis of the vertebrae:*

CASE I was in a farmer, aged 50, whose father had died of an acute illness, not tuberculosis. His mother was alive and well. The patient presented tuberculosis of the vertebrae, spinal meninges and cervical glands, of gradual onset, the diagnosis being confirmed by autopsy.

CASE II was in a woman of 26, whose father had died of pneumonia at 58, after an illness of two weeks. Her mother had died at 59 of "dropsy." The patient developed rigidity and painful swelling of the spine after a severe kicking. Later, subcutaneous abscesses formed, in the pus from which tubercle-bacilli were found. Death resulted from general miliary tuberculosis, confirmed by autopsy.

CASE III was in a farmer, aged 36, whose father died at 65 of pneumonia; and his mother in childbirth. He attributed his disease to an injury. Bacilli were obtained from a cold abscess in the back.

#### *Tuberculosis of the pleura: empyema:*

Seamstress, 29 years old, whose father and mother were alive and well, had a pleural effusion develop after a chill in bathing. A bloody exudation was found on operation (resection) 3 months after the chill. Two years later the patient had entered the medical clinic (Dr. Dock): The pus from the empyema contained large quantities of tubercle-bacilli, which proved virulent to guinea-pigs. The patient is still alive, now in the eighth year after the onset. She has had many operations, but a small sinus remains and the pus occasionally contains a few bacilli.

*Genito-urinary tuberculosis* was found in 8 cases; 2 of the kidney (operation in one); 3 of the testes; 2 of the bladder; 1 of the seminal vesicles. The ages were 27, 28, 29, 35, 44 (in 4 cases). Seven were in men; one in a woman (a kidney-case with operation). The diagnosis was confirmed in all cases by inoculation. In 5 cases the parents were still alive and well. In one the mother was alive, the father died at 79 of paralysis. In another the father had died at 73 of stone in the bladder, the mother at 60 of carcinoma of the stomach. In the third the father had died, after a week's illness, at 60, the mother at 53 of asthma (probably not tuberculosis). Five patients were farmers, one a weaver and carpenter, one a student, one a farmer's wife. Two were of slender figure, the others strong. In only one case was there a history of gonorrhea. This was in a man of 40, who had gonorrhea at 20, lasting one month, but for 15 years he occasionally passed clots and blood (the testis and the cord were tuberculous). The woman with renal tuberculosis, aged 29, had had an attack of cystitis at 14. Two patients (testis and bladder; seminal vesicles) gave histories of sexual excess. In one there was also a fall, followed by hydrocele. A fistula followed a second tapping.

Of the 19 cases the fathers were alive in 11; and dead of non-tuberculous disease in 8. The mothers were alive in 14; dead of tuberculosis in 2; of non-tuberculous disease in 3.

As to brothers and sisters, one brother and one sister had died of tuberculosis in families with the parents

living and well. In one family with a tuberculous mother, one other son had died of tuberculosis. In another family 7 children had died of unknown diseases. In 10 other families there were other children without tuberculosis to the number of 46.

We think a careful examination of all the material we submit points toward the view that in a large proportion of cases tuberculosis originates, as any other infectious disease may, without the precise mode of infection being discoverable. In any epidemic of scarlet fever, measles or smallpox, cases may be observed in which the immediate sources cannot be traced. No one looks beyond the nearest cases for the explanation, except in rare instances, when the virus is known to have been long preserved and later exposed. Efforts to check the epidemic by protecting against infection from the affected bodies are often successful. Yet it is curious and important that many refuse to apply these facts to tuberculosis. All admit that in the eruptive fevers the supposititious germs may be transported, enter the body in various ways and so cause the disease anew. Yet in the case of tuberculosis, the germs of which are known, and of which enormous numbers, often with high resistance, are thrown off from affected bodies, a similar possibility is either ignored or denied by many. More remarkable still is the fact that some who deride bacteriology advance the negative results of laboratory-experiments to show the improbability of infection from the germs from previous cases. In this connection it is interesting to note that Cornet, whose earlier experiments with inhalation-tuberculosis were failures, has recently had successful results.<sup>2</sup> By exposing guinea-pigs in a room in which tuberculous dust was beaten out of old carpets he was able to infect 46 of 48. Tubercle-bacilli, accidentally inhaled and lodged in his own nose during the experiments, produced lesions when inoculated in animals. Until we know much more of the life-history of the tubercle-bacillus than we do now, our knowledge of the etiology of tuberculosis must be incomplete. In the meantime the careful use of statistical material such as we have here attempted seems to promise results of value.

Those who believe that an inheritance of the disease is frequent are compelled to accept a period of latency in some cases lasting all of the life of the parent. That a long latent period sometimes occurs all clinicians and pathologists will admit. One of us has recently observed a case in which a young man very early in the course of a tuberculosis of the right apex expectorated quantities of calcareous particles. From the physical signs and the history, it seemed as if these must have been formed anterior to the present active lesion, and we have thought that there was either an old calcified focus in the apex, or, more probably, in a bronchial gland. Again, one can hardly explain certain cases of tuberculous pleurisy without supposing an old latent

<sup>2</sup> *Deutsches med. Wochenschrift*, 1898, No. 13.

focus. We have in mind the case of a healthy lumberman who went into the woods in the autumn. About Christmas he was seized with symptoms of acute pleurisy; came to the hospital and was found to have tuberculosis of the lungs and pleura. In such a case it is true the infection might have been acquired in the lumber-camp, for tuberculous men sometimes join such camps and their life offers opportunities for infection.

Our material contains no example suggesting infantile or congenital tuberculosis. The occurrence of congenital cases cannot be denied; their proportion, however, must be determined by more extensive statistics than any now available. In the great majority of our cases, however, the probabilities certainly favor the idea of infection by inhalation or swallowing, rather than through the placenta or spermatozoa.

The occurrence of tuberculosis of the deeper organs, as of the kidney or testis, is often looked on as convincing evidence of inheritance. The cases cited show how rare the family-affection may be. On the theory of accidental infection, however, such cases are no more remarkable than many forms of invasion by animal parasites. Formerly, these, too, were supposed to be acquired by inheritance only, a view that now seems ridiculous. Many seem to think that in people such as we have studied, living in the country, tuberculosis must necessarily be hereditary. The open-air life on the farm and elsewhere is supposed to make infection unlikely. On the other hand, observation among such cases shows how easy infection may be. The long hours of idleness in winter; the habit of using a common living-room, which is often the dining-room, and often overheated, while the other rooms are cold; the carelessness with sputum, often shown by a common use of handkerchiefs, cups, etc.—these far offset any advantage of air and nutritious food.

Many who examine our figures will make much of the fact, that of 100 cases of tuberculosis, one-fourth had a tuberculous family-history. To us it seems much more important to know that of 100 cases three-fourths had no such history.

The subject is practically important in various ways. To us it emphasizes the desirability of lessening the chance of infection from sputum, the commonest source, just as we endeavor in scarlet fever or variola to lessen the dissemination of the infectious epithelium. Measures have been taken to this end, as in the prohibition of expectoration in public places, etc., but this can never be thoroughly carried out until the danger of infection is more clearly and generally recognized by all classes than it is now.

In practical diagnosis such considerations are also of extreme importance. Every hospital-physician, every consultant, knows how often the early stages of tuberculosis are overlooked because the family-history is good. A patient is told that he has "bronchitis," or "malaria," or what not, and assured that there is no

danger "because there is no consumption in the family." Only too often such statements increase the proverbial self-deception of tuberculous patients, and so postpone the best time for treatment.

Sometimes another error is made. We know of a patient with a rapidly developing abscess (staphylococci) in the axillary glands, who was referred by a surgeon to a colleague for medical treatment, with the suggestion the "disease was tuberculous," solely because a brother of the patient had died of tuberculosis. In another case a syphilitic testis was removed because a distant relative of the patient was said to have had tuberculosis.

That any one with a physical predisposition to tuberculosis, or with a bad family-history, should live under the most favorable conditions needs no argument. So far as diagnosis is concerned, however, it seems more rational to leave the family-history out of account and to depend entirely upon the physical signs and the sputum-examination. This has been our clinical teaching, although we also advise the investigation and recording of the family-history for purposes of comparison and statistics.

### PERICHONDritis OF THE LARYNX: WITH A REPORT OF TWO CASES. AND THE DESCRIPTION OF A NEW TRACHEOTOMY-TUBE.<sup>1</sup>

By GEORGE L. RICHARDS, M.D.,

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As a primary affection perichondritis of the larynx is rare, due, when it occurs, to cold or exposure, or a complication in connection with some one of the infective fevers; rarely to traumatism, as in the case of a foreign body in the larynx. Secondarily it occurs in connection with tuberculosis, carcinoma, or syphilis, especially the latter two. Here it may be and frequently is very difficult to make a positive diagnosis. In any case the disease is essentially a destructive one, usually going on to necrosis and pus-formation. Recovery, when it takes place, is due to a cessation of the process, with resultant ankylosis of the joints that may have been involved, or else, in those rare cases in which the inflammation has not gone on to pus-formation, the affected cartilage becomes wholly or partially ossified.

The symptoms, which are invariably grave, are so in consequence of the relation of involved cartilages to important laryngeal structures, and the impossibility of having any severe inflammation there, whether of soft parts or cartilages, without serious interference with both phonation and breathing. With the formation of pus and the danger of its discharge into the larynx, such interference becomes grave, as one, at least, of my cases will show. Moreover, before the case goes on to pus-formation

<sup>1</sup>Read by title before the American Laryngological, Rhinological and Otolaryngological Society, at its annual meeting in Pittsburg, May 11 and 12, 1898.



tion life may be threatened by the severity of the dyspneic symptoms, and if tracheotomy be not performed, death results; hence the need of making a diagnosis at the earliest possible moment. One cartilage may be affected to the exclusion of all others, though that is unlikely, as by contact other cartilages are liable to be involved. In the order of probability, perichondritis affects the arytenoid and cricoid cartilages most often, less frequently the thyroid cartilage and the epiglottis. An early diagnosis may be difficult, owing to the readiness with which intralaryngeal and extralaryngeal structures become swollen, thereby preventing satisfactory examination. Especially is this the case when the epiglottis and the false bands, one or both, are considerably swollen. Under such conditions the symptoms of edema of the glottis may entirely obscure the primary affection. Given a diagnosis, the probabilities are in favor of necrosis and pus-formation. The thyroid and cricoid may be affected on either their inner or their outer surfaces, while the arytenoid will be affected throughout its whole extent. The arytenoid, when swollen, has a pear-shaped appearance; and the pus, when present, will point at or near the vocal process. The affected cartilages early become immovable and the vocal band of that side fixed, assuming the cadaveric position, and in phonation requiring its fellow of the opposite side to approximate as closely to it as possible. The color of the parts is heightened in intensity, while the ary-epiglottic folds lose their pearly luster. The epiglottis is likely to be swollen irregularly, if only one side is affected, owing to the line of division between its two halves. The pus has a foul odor, which is especially marked in cases of syphilis. The laryngoscopic image is one of infiltration of the affected and adjacent structures. Externally there is little that is characteristic, as there is no appreciable swelling unless the external surface of the cartilage is involved and then it is not very great.

If the pus discharges on the outside, the danger is much lessened, as a fistulous opening is likely to be made first, and with that as a guide the pus can be satisfactorily evacuated, unless the destruction has been too great. When the abscess tends to point inwardly, and it will usually do so if the intralaryngeal surfaces of the cartilage are principally involved, the risks of suffocation, both before, during, and after evacuation, are greatly increased. Under such conditions the abscess should be opened at the earliest possible moment and the pus evacuated.

If the pus cannot be evacuated, or if its presence is not recognized in time, the further history will depend entirely on the symptoms. Tracheotomy should be performed at the earliest moment that the symptoms threatening life appear, and should not be left as a last resort, when discharge of pus has begun and the patient is weakened, with resulting inability to properly expel it by coughing, and the development of septic pneumonia

if it be not expelled. Early diagnostic signs of the primary variety are hoarseness, difficulty in swallowing, difficulty in breathing, and pain. Pain is a variable symptom and depends on the amount of pressure on affected areas brought about by the inflammation. It will be greatest when the arytenoids and the cricoid are affected.

When the disease is secondary to syphilis, carcinoma, or tuberculosis, the diagnosis depends upon a differentiation among these diseases, and is a perichondritis only because it is the cartilage that is involved. The diagnosis between syphilis and carcinoma in doubtful cases is often a most difficult one, as in the case to be reported. As carcinoma is primarily a disease of the soft parts, attacking those in the larynx by preference, the chances of the case being syphilitic are greater when the cartilage is the part involved, especially if a syphilitic history can be obtained.

In a slowly progressing case of perichondritis the diagnosis must necessarily rest between syphilis, carcinoma, and tuberculosis. The diagnostic signs of the latter are sufficiently clear, so that it ought not to cause much trouble. In the absence of, or even with, a syphilitic history it may be impossible to decide as to carcinoma, or tubercle, for a syphilitic may suffer from carcinoma or tuberculosis as well as any one else. Many of the symptoms are common to both. The destructive process can be as fatal in cases of syphilis as in those of carcinoma. As to the treatment of this form of perichondritis a few words will suffice. Both carcinomatous and syphilitic perichondritis are always grave. Tracheotomy is to be performed whenever the necessity arises. Laryngotomy, or laryngo-tracheotomy, or any serious intralaryngeal or extralaryngeal operation is hardly to be considered, if there is any extensive perichondrial inflammation. If the case is carcinomatous, it necessarily progresses more or less rapidly to a fatal termination; while, if it is syphilitic, antisiphilitic treatment may hold the process in check, the necrosed tissue may be cast off, or encapsulated, and the individual may live for some time, breathing, if need be, through a tracheotomy-tube or a tracheal opening. In all these cases tracheotomy should be performed as low down as possible.

The vocal bands and their power of phonation will be affected in accordance with the cartilage involved, and as one or both sides suffer. When the cricoid is involved on its posterior aspect, or one or both arytenoids, the difficulty in swallowing may be very great. Difficulty in swallowing will also occur in connection with the swelling, and, it may be, edema of the epiglottis, which is invariably present and prevents the proper closure of the glottis. When this is extreme, the taking of food becomes so uncomfortable that, even when the swallowing is of itself not so painful as an act, the getting of some particles of food into the windpipe causes such coughing and distress that food will be refused for this reason, if for no other.

The following two cases illustrate the points that I have referred to:

CASE I.—J. M., a man, 60 years old, born in England, formerly a cotton-mill operative, was seen in May, 1897, when he was suffering from an attack of severe dyspnea, almost strangulation. Examination showed a much swollen and edematous epiglottis, with its two halves folded on themselves, omega-shaped, and in contact. The vocal bands were not visible. The ary-epiglottic folds were swollen. The right arytenoid was altered in shape and appearance. In the pyriform sinus were seen ulceration and gray deposit, bleeding easily. The whole picture suggested carcinoma, though there was no pain, and not much difficulty in swallowing.

The epiglottis was freely incised and the dyspnea much relieved. The breathing improved, and later, I was able to make a satisfactory examination and found the following: The right half of the epiglottis was swollen and thickened; the right ary-epiglottic fold infiltrated and swollen so as to give a tumor-like appearance to the part; the right arytenoid had lost its individuality, was enlarged, thickened, irregularly swollen, and immovable; the right vocal band was invisible beneath the foregoing structures. On the left side the epiglottis was free from swelling; the arytenoid was movable, and only a little larger than normal; the vocal band was very red and somewhat thickened. Phonation was effected apparently by efforts of the left band only; voice hoarse, though not markedly so. In the right pyriform sinus was an ulcerated area admitting a cotton-tipped probe from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch, and covered on its withdrawal with blood and granulations. Pure lactic acid was applied, but neither examination nor application seemed to produce any pain.

The previous history was not very clear, although the man had apparently had throat-trouble for some time; and once before, and perhaps twice, had had an attack of difficulty in breathing, though nothing like the attack in which I first saw him.

The diagnosis seemed to lie between tuberculosis, syphilis, and carcinoma as a cause for the perichondritis of the left arytenoid and adjacent cartilages, which was evidently the lesion with which I had to do. Tuberculosis was easily ruled out on account of the entire absence of any suggestive constitutional symptoms. Later, I obtained a history of a primary sore in 1863, when the patient was in the army, and which had been treated for but a short time by an army-surgeon. As the man had raised a family of five children since then, four of whom were apparently perfectly healthy, and the fifth not far from that condition, and as 34 years had elapsed without there having been, so far as he knew, anything in his history to suggest a return of the disease, I was in doubt as to how much to ascribe to this source. In the absence of any pain or cachexia suggestive of carcinoma, I assumed the diagnosis to be tertiary syphilis, and began to treat the man accordingly. He was given potassium iodid and mercurous iodid internally, and iodo-glycerin locally. The first was rapidly increased up to 20 gr., thrice daily, which seemed to be at that time about the limit of tolerance. The man improved rapidly, and about July 1st the right arytenoid had the appearance of an enlarged, thickened, hard cartilage. In the middle of July there was another acute attack of dyspnea, though not very severe. I removed, then, two small bits from the ary-epiglottic fold, unfortunately too small for microscopic examination. Bleeding and relief followed. For a month the man did well, except that the anti-syphilitic treatment was omitted once or twice because it seemed to upset his stomach. This may have been due to the mixed treatment that was employed in the hope of getting a still greater alternative effect, for when that was later omitted, he took large doses of potassium iodid. Monochlorparaphenol in 10% strength was being applied locally to the ulcerated area, and under its use healing apparently took place. During my absence in August another acute attack came on, and the ulceration broke out afresh, the whole appearance becoming more suggestive of carcinoma than at any previous time. The man was, however, free from pain and carcinomatous cachexia. Early in September I began to apply, after 20% cocain, pure liquid formaldehyd to the sinus-ulcerations. This caused sharp pain for a few minutes, but was followed by relief. The patient now began to complain of poor nights, and coughed and raised bloody

matter. On September 15th, while making an application to the left sinus, the applicator went down an inch below the surface, bringing back a clot and considerable foul-smelling blood; and for the next few days considerable blood was spit up. Following this I was several times called to the man's house on account of bleeding from this region, which was always easily controlled by tannic acid and ice. Externally there now appeared a cartilaginous enlargement of the right wing of the thyroid, irregular in outline and not painful on pressure. On September 23d, the man had an attack of severe dyspnea, and I thought I should have to perform tracheotomy, but he became easier. The trouble still seemed limited to the cartilaginous structures of the right half of the larynx. These structures were pushed over to the left side in such a way as to cause dyspnea. Soon after this the patient was seen in New York by Dr. Robt. C. Myles, who at first thought the trouble was carcinoma, but who, after a long and careful examination, came to the conclusion that it was probably syphilitic perichondritis of the thyroid, including the arytenoid, and all the adjacent folds, affecting mostly the right side. It was thought it might be carcinoma, but inoperable in any event, owing to its relation with the esophagus and the pharynx and the impossibility of removing everything without great damage to these. Treatment in a hospital, and large doses of potassium iodid up to 180 gr. a day, were advised. It was thought tracheotomy would have to be performed in a few days on account of the dyspnea. The man was admitted to the Fall River Hospital and put on 30 gr. of potassium iodid thrice daily, to be increased 5 gr. daily. In a day or so the temperature began to rise, and the pulse to become accelerated, while the dyspnea increased and the man became cyanosed to such a degree that at midnight of September 23d I was hurriedly summoned, and found him nearly cyanotic and at once performed tracheotomy between the second and fourth rings. The man did well for a day or two, and then developed well-marked pneumonia, and an unfavorable prognosis was given. Not wishing him to die in the hospital, he was removed to his home in the ambulance. On the way, but unknown to any one at the time, the tracheotomy-tube, which was evidently too small, though the largest we had, slipped out and a great deal of mucus was coughed up. When I saw the patient a few hours later, I made no attempt to put back the silver tube but substituted for it a piece of hard-rubber tubing slightly ellipsoid in shape and of greater caliber. This was carried through the tracheal opening and fastened by a string passing through a hole in the tube-wall. Subsequently the opening in the trachea was enlarged and some form of hard-rubber tube worn until a permanent silver one, formed on the same lines, was made. The hard-rubber tube was often coughed out, but was easily replaced.

The pneumonia ran its usual course, with moderate fever. On October 5th, I began the administration of potassium iodid again, and by October 18th the man was taking 180 gr. every other day, and with the tube closed, could talk some and breathe a little. There was no bleeding from the larynx, and things seemed in *statu quo*. The patient was soon up and about the house, was gaining in flesh and strength and could swallow liquid food without pain. There was more or less troublesome regurgitation, owing to the food getting into the larynx, necessitating its ejection by cough through the tube. This was sometimes exceedingly troublesome, and at others not, on account, it seemed to me, of his inability to make the epiglottis work properly and close the glottic opening. The amount of mucus spit up and coughed up through the tube was very great. On election-day in November he was able to walk to the polls and vote. About this time there appeared rapid involvement of the left arytenoid and the esophageal surface of the interarytenoid space; while so far as surface-manifestations appeared, the ulceration in the right sinus had seemingly healed. The patient now began to complain more of difficulty in swallowing than at any previous time, and the breathing became extremely difficult when the tube was closed. The ulceration broke out again and the bleeding became very troublesome. The man was taking 180 gr. of potassium iodid every other day, and was up and about all the time. The left side began to be more and more involved, and I changed my diagnosis to carcinoma and increased the potassium iodid to 140 gr. every day, hoping still that the disease might be syphilis and that I should be able to control it. There was no improvement; the epi-



glottis became very edematous and had to be repeatedly incised; the ulceration became active again, swallowing difficult and painful until both food and medicine were refused. Necrosis of the thyroid cartilage took place, with discharge of pus between the two layers of the deeper fascia of the neck opening into the tracheotomy-opening. He failed rapidly and finally died on January 22, 1898, nearly five months after the tracheotomy had been performed.

At the autopsy, held six hours after death, the soft tissues on the right side of the neck were all necrotic to the tracheotomy-opening. The larynx and trachea only were examined. The epiglottis was softened and much thickened; the surface-edema had disappeared. The right half of the thyroid was stripped of its mucous membrane, the superior horn and adjacent tissue mostly gone, and what was left was soft and necrotic. There was a spontaneous fracture beginning near the attachment of the upper horn to its fellow of the opposite side, and going downward and backward nearly to the inferior horn; and the line of fracture was necrosed. The right arytenoid was the size of an almond, irregular in shape, on its surface finely nodular, and somewhat warty in appearance. The right ary-epiglottic fold was mostly obliterated by enlargement of the arytenoid and the epiglottis. The left arytenoid was half as large as the right, though of about the same gross appearance. The vocal bands were thick. The right band in its anterior half was not especially changed, but posteriorly it was in part destroyed, soft, and in part partaking of the nature of the surrounding diseased structures. The left band was smooth at its border throughout its whole length. In the region of the vocal process there was a funnel-shaped opening, leading down to the cricoid, the covering of which at this point was denuded. The cricoid cartilage, as a cartilage, was unaffected, but, beginning at the bases of the arytenoids and the inter-arytenoid space, the soft parts covering the posterior surface of the cricoid and forming the beginning of the anterior wall of the esophagus to a point  $\frac{1}{4}$  inch below the lower border of the cricoid, were thickened and enlarged to such a degree as to nearly obliterate the esophagus, while the surface of the cricoid had the same characteristics to a less marked degree as the two arytenoids. The left half of the thyroid cartilage was apparently normal. The diseased parts everywhere were soft and foul from the extensive necrosis and pus-formation.

From these appearances the weight of evidence was in favor of carcinoma as a diagnosis, although the cartilages rather than the soft parts seemed to have been primarily affected. The amount of involvement of the left arytenoid and the esophagus in the disease was much greater than I had anticipated, although the difficulty in swallowing had progressed very rapidly for the weeks immediately preceding death.

On microscopic examination of a section from the left arytenoid numerous nests of round epithelial cells, somewhat cylindrical on the periphery, were found; while the connective-tissue stroma was infiltrated in many places with round-cells. The mucous borders were thickened, and here the appearances suggested those of epithelioma of the lip. A diagnosis was made of epidermoid carcinoma.

Whether the presence of the old syphilis in any way affected the course of affairs I do not know. The histologic appearances of tertiary syphilis are not sufficiently distinct to enable us always to make a diagnosis from the microscopic findings alone.

One of the points suggested by this case is with reference to the diagnostic value of potassium iodid. That the patient improved under its use, and that the symptoms were less prominent is undoubted. He improved to such a degree that for a time I abandoned the diagnosis of carcinoma. Is such improvement in a doubtful case any proof of syphilis? I am personally

inclined to the belief that it is not. Furthermore, it is entirely within the bounds of a reasonable hypothesis to assume that even in malignant cases the well-known alterative action of the iodid may for a time retard the progress of the growth, even to the extent of causing us to believe that improvement is taking place.

As to operative measures, which are coming more and more into vogue in cases of serious laryngeal trouble, there was no time while the man was under my observation that a radical laryngeal operation would have offered any hope of recovery. I have been sorry since that I did not try mercury by inunction at the time that I regarded the trouble as syphilitic. Iodid has been regarded as the sheet-anchor in tertiary syphilis; so I stuck to it, giving, however, for two or more months at the beginning, mercurous iodid. In another suspected case of tertiary syphilis of the nose or throat I should most certainly also give mercury by inunction.

The tracheotomy-tube here used is, I think, original with me, for I have never seen or read any description of one like it. It was made of silver, by a local



jeweler, after a model that I had prepared, and was more comfortable than the regulation-tube. When a tube must be worn for some time this one seems to me to possess some advantages. It furnishes an abundant supply of air; the patient can talk by placing a finger over the tube, and he can have, for prolonged conversation, a little plug that can fit inside, or a little door could be made to cover the opening. Having one edge longer than the other, it conforms itself better to the direction of the trachea; especially is this so if a low tracheotomy is performed. It should be long enough to pass into the trachea a short distance, but not far, and if made in advance of its possible use, it should be long enough, as it can be easily cut off, but cannot be lengthened. An instrument-maker could easily improve on this model.

CASE II.—P. M., an Irish laborer, 50 years old and probably alcoholic, though the previous history could not be obtained, was seen on June 1 or 2 by one of the district city-physicians, who found him delirious and breathing with difficulty, and complaining of choking, but not of pain. He was sent to the hospital with a diagnosis of edema of the larynx. When seen by me on June 6th the epiglottis was swollen and thickened, the left arytenoid enlarged and presenting a tumor-like appearance, as was also the ary-epiglottic fold on that side. The right arytenoid was slightly enlarged, the vocal bands were not visible; and a grayish deposit and abundant mucus covered the parts. The voice was husky, respiration hurried and stridulous. Potassium iodid was given, although there was no evidence of syphilis, and in the absence of that, the case looked like one of primary perichondritis of the left arytenoid. On June 9th,

the man was somewhat cyanotic and more positively delirious, with slight elevation of temperature. The appearance of the larynx had changed but little, except that there were small punctate spots, like little pustules, here and there visible, especially in the left half. The epiglottis was more swollen, and dyspnea was more extreme. I scarified the epiglottis, and a few hours later the left arytenoid as well. Some temporary relief followed and the temperature dropped to normal. At 10 P. M. on June 10th, low tracheotomy was performed by Dr. Buck and myself. He breathed better at once, but soon septic pneumonia developed. The temperature became high, and pulse and respiration accelerated, and death took place on the third day after the tracheotomy, the temperature being 103° and the respiration 44. The larynx was obtained for examination, but the chest was not investigated. The larynx was covered on its surface with foul-smelling pus, as were the surfaces of the trachea also. The edema had left the epiglottis at the time of the last examination; the left arytenoid and the ary-epiglottic fold seemed to be merged, as it were, into one another at their junction. At this point there was a large pear-shaped swelling containing pus and discharging at about the vocal process. At this point, the cartilage was denuded of its covering. On the upper border of the left wing of the thyroid was a pus-cavity opening both externally and internally; the pus-cavity had been on the internal surface, for this surface was denuded downward for an area of half an inch. There was no direct connection between this and the arytenoid abscess. The false vocal band and all the tissues adjacent to the left ary-epiglottic fold were infiltrated and edematous. The true vocal bands and the right side of the larynx did not seem to be involved. Microscopic section showed an invasion of the cartilage by small round cells; unquestionably acute suppuration with destruction of the arytenoid and top of the thyroid.

The pus from these two abscesses caused the septic pneumonia. Being weakened by his ten days of previous illness, he had not the strength to cough up the pus. From the little that could be learned of the man's habits and previous history I regard the case as one of primary perichondritis, due probably to exposure, although I cannot positively exclude syphilis.

Had I been able to make a positive diagnosis of the presence of pus and had freely incised the arytenoid, the man might perhaps have been able to cough the pus up sufficiently to have recovered. As, however, he was in a semi-delirious condition, and laryngoscopic examination was exceedingly difficult, I may, perhaps, be pardoned for not recognizing the purulent nature of the perichondritis in time to save the patient. With a much swollen epiglottis, it is difficult to say with absolute certainty exactly what the condition of the underlying structures is.

My experience with perichondritis is limited, but I should regard well-marked cases of it affecting the internal laryngeal surface decidedly unfavorable as to prognosis. Recovery can, of course, take place when the abscess points inward, but it is unlikely. In cases due to syphilis, which are recognized early and treated appropriately, recovery is entirely possible. When the abscess points outward the case is entirely different, and if an early incision is made and the pus is properly evacuated such cases should recover.

**The new buildings of the Medical Department of the University of California** were occupied at the opening of the present session.

## A MODERN MADHOUSE: AN INSPECTION REPORT.

By ALBERT L. GIHON, A.M., M.D.,

Medical Director United States Navy (retired).

ABOUT thirty miles from Baltimore, a little off from the main line of the Baltimore and Ohio Railroad, on the undulating land bordering the valley of the Patapsco, lies one of the historic demesnes of the State of Maryland. The manor-house, built in the classic simplicity of the Colonial period, although well in its second century, has fortunately escaped disfigurement by modern additions and improvements. Here lived the wilful "Betty" Patterson, who, one night after her father had gone to bed, let herself out by a window and, mounting a horse, with a negro slave upon another horse carrying her dress, rode to Baltimore to attend the ball, where she met the French officers and found her fate among them in the young Jerome Bonaparte; and here, one lovely summer evening after dinner, we sat on the beautiful lawn fronting the house, the road, unlike the approach to most dwellings, leading to the rear, listlessly watching the rising full moon, the hum of birds and insects in the surrounding park alone disturbing the blissful calm, until the notes of a distant bugle sounding the tattoo caused the post-prandial idlers to stroll out upon the lawn and look whence came the sounds, toward a group of buildings that had been erected within a year upon a hill 400 yards away, and which were then brilliant with electric lights. Again the bugle sounded "taps," and with the last notes the lights disappeared simultaneously, save a few dimly marking certain sites.

It was not a military post that sent forth these familiar martial strains, but a *madhouse*, wherein 154 madmen had gone to bed as so many soldiers in a barrack, to sleep unmanacled and behind no restraining bars or locked doors until the bugle's reveille should call them to the labors of the day; and the old Colonial homestead is the official residence of the superintendent, Dr. George H. Rohé, where he rules his domain of 800 acres by the touch of an electric button.

Let us see how the madman of to day lives his disjointed life.

By the time we had had our own breakfast and had crossed the intervening space to the "cottages on the hill," we met gangs of apparently well-conditioned laborers or farmhands at work with spade and shovel and pick leveling off hummocks and grading hillsides; others with heavy iron mallets sitting in the road breaking stone for macadamizing; still others, rake and hoe in hand, weeding the vegetable gardens—here a party mending fences and trimming hedges, there a crowd of jolly haymakers, and in the house some with long-handled *frotteurs* polishing the waxed floors of the corridors, sitting-rooms and dormitories, or with mop and cloth brightening mirrors and window-panes and chasing incipient dust-heaps from their hiding-places in corners and crevices.



Of the 154 inmates, the morning report of the medical officer-of-the-day showed 113 actively at work, their troubled minds diverted from dwelling upon their one dominating idea by congenial occupations that demanded their attention, the outdoor employments giving them at the same time exposure to sun and air and healthful exercise of muscles—hygeiathrapy—that made them keen for the signal to cease their labor and prepare for dinner—how?—by depositing their soiled working-clothes in the basement of their several cottages and washing at the spacious lavatories on that floor. Then, with clean hands and faces and combed hair and decent garments, they fall into line at the bugle's call to dinner and, led by uniformed attendants, march in squads, two by two, arm in arm, the stronger supporting the weaker, each with his chosen companion, along the covered corridors to the dining-room in the service-building, where, standing until all are in place, they seat themselves, upon a signal, at tables covered with clean, white cloths and furnished with porcelain plates and bowls or cups and saucers, glass tumblers and—what old madhouse-doctor would believe it?—knives and forks, and, at the time of our visit, spoons for ice-cream, which was decently served as a dessert.

There was no stint of food. The plates of the hungry and the ravenous were replenished over and over by watchful attendants; the indifferent or obtuse were gently induced to eat, or whim and fancy catered. When all had finished, the knives and forks were gathered and counted and, this done, the medical officer-of-the-day, always present, pulled the gong-signal, and they rose in order, fell in in pairs, and, at another stroke of the gong, marched back to their respective cottages, to smoke, to loll, to gossip until their afternoon-duties should again call them to work, or to bathe or to stroll, or to whatever else might be the day's routine.

The distinguishing features of this new establishment for ministering to men with minds diseased may be briefly stated to be: (1) Impressing upon the inmates the fact that they are patients under treatment in a hospital; (2) dispensing with every form of mechanical or visible restraint or irritating means of compulsion; (3) finding appropriate occupation, especially outdoor work for every one, utilizing the skilled labor of mechanics, or giving the Polish Jew, who never knew other instrument than the needle, the task of mending clothing and bedding; (4) encouraging and exacting habits of personal cleanliness, water-closets, urinals, lavatory-basins or rain-baths, soap and towels being provided on every floor in apparent superfluity; (5) instituting a quasi-military precision and regularity in the associated operations, in dressing and undressing, in beginning and quitting work, in going to bed and rising, bugle-calls, so far as possible, supplementing personal orders and the uniformed attendants acting rather as captains and guides than as keepers or guards.

The hospital-idea, in its full development, compre-

hends covering the numerous elevations embraced within the extensive limits of the estate with independent groups of buildings. One for male patients is completed and in successful operation; ground has been broken for a second for females, which is to have only female nurses, attendants, cooks and assistants, and female medical officers; a third for epileptic insane will follow; and so, until the capacity of the grounds shall have been exhausted and the inmates number thousands. The group completed consists of four detached buildings, each occupying the side of an open space or court, 200 feet square, connected by covered but uninclosed corridors. One of the four is the service-building of the group, in which the medical officers and attendants live and have their offices, and wherein are the visitors' reception-room, the store-rooms and dispensary, this being the least frequented in the building, and in the basement, the kitchen, pantries, refrigerators and patients' dining-room, as only the bed-ridden and the helpless are fed elsewhere. The other three buildings are practically two-storied and basement cottages, of which the ground floor is chiefly devoted to sitting-room purposes, with large, open porches, whose attractive outlooks make them the preferred resorts; while on the upper floor are the dormitories, solely used as such. In the basements are hooks and boxes for working-suits and shoes. On all the floors are lavatories.

At the sound of the tattoo, the inmates of the several cottages ascend to the dormitory-floor, strip off their day-clothes, each article having its appropriate hook, wash at the lavatory on this floor, which in appointments would not be out of place in a first-class club or hotel, and donning their night-shirts go to bed. The long line of day suits exposed to the current of air sweeping through the open windows of the ante-room outside the dormitory thus becomes thoroughly ventilated during the night. At "taps" lights are extinguished, save at the attendant's table, where he sits awake, with every bed in view, until relieved, when he goes to his own room in the service-building to sleep, as no one but patients is allowed to sleep in the cottages. Within reach of the attendant are the switches controlling the electric lights and telephone-calls communicating with the service-building and the superintendent's quarters. A characteristic feature of the dormitories is the long row of open windows, checked only enough to prevent the egress of a body, but with no suggestion of bolt or bar. On the living floor below, numerous doors without locks open freely outward, a catch on the exterior knob only preventing entrance from the outside. Stone and brick passage-ways from the dormitories without bends or angles, locked and unused except in emergencies, provide a rapid means of escape from fire to the outside without the necessity of traversing the buildings. An automatic register in the office in the service-building records the progress of the night-

watchman in his hourly rounds, indicating the time and the place of his several visits.

What can be accomplished toward humanizing these unfortunates who have come here, to be made well if that be possible, or to be cared for if incurable, is most strikingly illustrated at the general weekly inspection by the superintendent on Sunday morning, when every nook and corner are explored with a thoroughness that bespeaks the military antecedents of Major Rohé. Having been more than once invited to act as inspecting officer and urged to indicate defects and oversights, for which 20 years' experience in charge of United States Naval Hospitals perhaps qualified me, I bear witness to the wonderful results that have been here accomplished.

One hundred and fifty cleanly-appareled, clean-skinned men, mostly of the humbler class, decorously sitting on comfortable chairs upon the porches in pleasant weather; waxed floors unsoiled by expectoration; spotless window-panes and lavatory-mirrors; the ridges and hollows of the moldings of steam-registers, the angles and bends of stairs, the tops of door-jams and window-frames, and the narrow spaces behind pipes, which invite dust and neglect, all without evidence of either, even at places only to be reached by chair and ladder; balusters and brasswork, which give no smear to the pocket handkerchief, all these tell their story to the alert inspecting officer. Once only I found a stray dust-cloth under a steam-coil, where it had been hastily left by an attendant unexpectedly called away. In attic and basement, in dormitory and living-room, in ante-room and dining-room the same incredible order prevailed. Even in the attendants' closets the paraphernalia of service were neatly arranged and the folded bedcovers and pillow-cases on the long line of beds, all but one unoccupied, would have been the envy of a housewife or the head chambermaid of a hotel, while both these would have appreciated the fact there is no such thing as a chamber-pot in the dormitories. Not the least interesting display of the Sunday inspection were the rows of workday clothes and hats and shoes, each in its assigned place in the basement, where their owners had placed them the previous Saturday on ceasing work.

In each cottage on the dormitory-floor there is a single ample-sized porcelain bathtub standing well into the room, so as to be accessible on every side, and used only by the very sick and feeble or others unable to bathe themselves; but an abundance of rain-baths (appropriate and desirable for private residences) is provided, where general ablution can be performed decently and thoroughly. When the weather permits, it is the custom to march the several squads for outdoor bathing, for which the numerous watercourses of the domain furnish facility.

Here, then, the problem has been solved, so far as human intelligence can do it, of the humane treatment

of those unfortunates, whose minds have gone adrift. Here, amid the placid surroundings of rural life, away from every exciting cause, with agreeable out-door occupation, the unbalanced mind may recover its equilibrium, or if that cannot be, if healthy living, wholesome food, and generous indulgence cannot effect a cure, the inveterate sufferer can at least live peacefully, decently, and, as far as the fantasies shaped by his seething brain will permit, contentedly.

But these are selected cases, an old-time keeper suggests. Is it probable that the almshouse from whose overcrowded insane-wards most of them have been received would transfer any but the most unruly and least orderly and least serviceable of its inmates? I saw myself a patient admitted, an acute case, whose wrists still showed the marks of the handirons he had worn, and put to bed in an open ward and kept there by a watchful attendant, or as many as might be required, and who in three days had become tractable and responded to the usual clinical questions of the physician; while another who, as soon as he landed from the wagon that brought him, made a break to escape and thrice repeated his attempt the same day, before a week had passed was sitting quietly among the others and taking part in their work or play.

Great was the indignation when the people of Carroll County learned that the aristocratic Patterson estate was to become a "lunatic-asylum." The village-shopkeepers refused their wares to the pestiferous invaders. Immediate neighbors declared their intention of moving away. Those who had to pass along the roads watched askance the groups of laborers who had been put to work utilizing the farm-buildings on the grounds. Soon they learned from their own employes that these very laborers were the dreaded crazy men. To-day the brilliantly lighted buildings on the hill, visible for many miles around, are the pride of the county and the envy of adjoining ones, while railroad and express, local dealers and post-office rejoice over the thrifty newcomers.

The State of Maryland has great reason to be proud of this unrivaled establishment, and the Board of Managers may congratulate themselves upon the trust they so implicitly placed in the judgment and acquirements of the Superintendent, who himself has the rare satisfaction of having seen his plans and promises fulfilled to the very letter. What has already been accomplished in this superb institution betokens what may be expected in its further development. Simple, chaste, elegant in architecture and appointments, its broad halls, lofty rooms and admirable proportions and equipment cannot fail to please the critical visitor, while the man whose monument all this is, may justly boast that without stint of what was necessary, with lavishness only in the direction of the sanitary provisions of cleanliness, not one dollar has been expended for which a full equivalent is not in evidence.

Is this a sketch of fancy? Let the doubter defer his verdict until he can "come and see."



# The Philadelphia Medical Journal

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**"The M. O. A. P."**—According to an ill-written postal card that lies before us (bad morals are quite sure to be expressed in bad language), all physicians are requested to join the M. O. A. P. (may mean the Medical Order of Associated Physicians) and to "correspond" with Dr. ———, Joplin, Mo. "The order is secret, admits all schools male and female. The college and not the Stat Board shall decid who shall practice not the Stat." And so we are to have a new order of secret fraternities, a medical Ku-klux-klan, to fight the profession. We should like to learn something more of the movement. Professor James, of Harvard College, should get his friends to renounce secrecy and learn to spell. Good English and metaphysics are great helps in covering up bad ethics.

**The stealing of students by medical colleges,** or the enticing, by means of various sorts of bribes, of students away from a rival college, is one of the disgraces of the profession which must be stopped. It is too nefarious and contemptible to be permitted. The bribes offered consist in lowered or cancelled tuition-fees, or lowered and sham pass-examinations. In either case, the secret is soon out, and the college officers who wink at and encourage the pernicious trick at once advertise themselves as auctioneers of ignorance and fraud, and managers of a hypocritic diploma-mill. We have known of colleges immediately graduating the "plucked" men of a rival school, of renouncing fees of those who will leave the rival, etc., etc., and have heard the cynical laugh of the sharpers attesting their own self-degradation. If the knowledge of many more repetitions of such practices reaches us we shall feel compelled to give it publicity.

**"The Absorption of Cataracts"** is an ever-recurring claim of advertisers of "preparations" or "treatments." Some years ago this old error was regvanized into life by a Boston man, and later an echo of his fame attained some vogue and professional discussion in New York. The judgment of expert professional opinion was that either the diagnosis of the disease was inexact or the result of treatment was unsuccessful. We believe institutions have been conducted with a view to the exploitation of the delusion. Many people, of course, will always prefer to believe and try the method rather than trust the opinion of the thousands

of scientific ophthalmologists of the medical profession. And yet the circulars will continue with amazing recklessness to assert that, "The unqualified endorsement of the medical profession," etc., etc. It is not possible to "absorb," or "dissolve" genuine senile cataract by any means except surgical operation.

**"T. D.,"** we are informed in a letter from the President of *The Dispensary of Chicago*, "represents Doctor of Therapy, which is a profession now being offered for healing purposes of a strictly curative nature." The engraved letter-head, in which the explanation desired is given, reads as follows:

MEDICAL	LEGAL	RELIGIOUS
"First of the"	"Second of the"	"Third of the"
Subscribed and sworn to before me at Chicago, Ill., this _____ day of _____, 1898.		
THE DISPENSARY OF CHICAGO		
FOUNDED BY THE PATIENTS OF W. H. BIRWING, D.D.		

The drug-envelope bears a picture of what we take to be a rainbow sweeping from the southwest corner to the north, and thence to the southeast corner, and bearing the blazoned words, "God's Promise." Within the bow is the President's name and title, and the words in caps, "Specialty Nymphomania," with the directions as to taking the medicines enclosed, the address, the telephone number, etc. There is also the somewhat puzzling motto beneath, "Let not your left hand know what your right hand doeth."

**Old-age pensions** of \$90.00 a year have been voted by the New Zealand House of Representatives to every poor person over 65 years of age. The tremendous growth of socialistic feeling in all civilized countries makes it almost certain that they will soon imitate New Zealand in this respect. It will be a hazardous step, to be watched by all to see how it will operate. Taxes must be increased by it, but that is a less important fact than others which lie behind all such proposals: Will personal independence be thereby lessened, together with the moral fiber and the prudential characteristics generally; and will this, the least criticizable project, be used to clear the way for the far more general and doubtful desires of frank communism? The lot of the older workmen who have not been able to lay by for a rainy day is often most pitiable, but on the other hand it should never be forgotten that this very fact begets greater economy, energy, and foresight

in those who have some small share of these virtues, and that unless carried out with exceptional justice and care, such measures finally come to act merely as rewards of negligence, laziness, and imprudence.

#### **The Physique of the English Public-School Boy.**

—If there is one thing more than another that we have always believed the Englishman to pride himself upon it is his public schools and the sturdiness of their component lads. And now a medical man has written to the papers to say that he has examined recently 100 boys from one school and has found 63 of them subject to some deformity or other. No less than 20 had defective eyesight, and all 63 fell below the proper anthropological measurement of chest-girth. The failure in eyesight might be thought a serious matter, but we should first understand just what the examiner meant by the term. There is a deal of misunderstanding upon this subject, and indefiniteness of reporters makes judgment impossible. Was the "failure" simply due to ametropia in otherwise healthy eyes, and corrigible by proper glasses? If so, it is not a very alarming thing—at least it would not be so held with us. Of course the fact is one which schoolmasters, parents, and especially the medical men in particular charge of schools, will do well to look into closely. We also do not attach much importance to frequent variation in chest-girth among growing lads. The anthropologic standard is itself not fixed, while between the ages of 14 and 16 it is possible for one and the same boy to be quite below the average for one year and well above it for another.

**Explanations of the drink-habit** have long been common in harmony with the similar way of reasoning in all organic evolution which ascribes a result as due to the "action of the environment." Thus, national character is explained as due to "climate," but when one asks for any clear proofs he gets only very glittering and very contradictory generalities. In fact, the explanations themselves need explaining. A recent attempt has been made to explain the drinking habits of different peoples by the mysterious agency of this same divinity, climate. Canadians, it is said, do not drink so much alcohol as Englishmen, because in Canada there is so much sunshine, and the air is so bracing that additional bracing is not needed, whilst in England the sun so seldom shines and the air is so debilitating that everybody must use alcoholic spirits to keep the psychic spirits up to anything like good working order. Consequently Canada has voted for prohibition, and English prohibitionists cannot even secure consideration for a proposed balloting upon the question. A little observation would soon convince the unprejudiced social philosopher that all this is fiddle-faddle extremely wide of the mark. Who has taken the actual statistics of days of sunshine, humidity,

temperature, etc., among even a dozen different countries, and races, and times, and compared these with the amounts of alcohol consumed per head? Race, habit, wealth, etc., and, more than all, temperament, have, we fancy, far more to do with the matter than climate.

**Water-tight mental compartments** are becoming strangely frequent in these times. We know, for example, a man who is shrewd enough to make a large amount of money every year during a few days' descent into Wall Street, but who spends the whole of the remainder of the year with professional spiritualist-mediums and "investigations" of their doings. There are hundreds of people sensible in other matters who think that all of our evils, psychologic and pathologic, come from the use of salt, and numberless thousands trace all our woes to doctors and their drugs. The man with a fad is so common that one almost expects to find the hidden delusion in every person if only the probing is sufficiently thorough. One is finally likely to ask the bewildering question, What then is sanity, and where does insanity begin? One of the greatest scientific minds of the age, Mr. Wallace, has just published a book, a large part of which is devoted to proving that spiritualism and phrenology are true and that vaccination is a failure. There are hundreds of similar illustrations which might be cited, showing that in certain directions or subjects the mind may work with admirable and fruitful precision, whilst in others it is as untrustworthy as that of the veriest lunatic. It is a sad fact, far more common, as we have said, than one at first thinks, and it is one that, as a matter of pure psychologic analysis, has not been satisfactorily explained. The practical lesson is clear as to the duty of the best of us, to keep a sharp watch upon ourselves against the domination of prejudice.

**Abdominal Section for Severe Injuries without External Wound.**—Mr. Marmaduke Sheild, assistant surgeon to St. George's Hospital, London, read an interesting paper on this subject before the Medical Society of London, on October 24th. After pointing out that, although the rules of practice were still far from being defined, few modern surgeons would now treat a severe abdominal injury on the expectant plan, Mr. Sheild advised caution lest readiness to take to the knife should betray the operator into heedless procedure. He regarded persistence of collapse, if associated with vomiting, rigidity of the abdominal muscles, and subsequent distention of the belly, as indications for operation, and recommended as a preliminary measure a small median opening when these symptoms were present as a means of ascertaining the exact condition, which opening could afterwards be enlarged in any direction according to necessity. While he pointed out that operative proce-



ture in the light of modern knowledge was the only possible course for the surgeon to pursue in many cases of ruptured viscus, Mr. Sheild warned his hearers against expecting invariably good results, although, as he said, such operations, when unsuccessful, must be looked upon as failures to save life and not as fatal in themselves. Mr. Sheild's paper led to some outspoken approval of the old-fashioned expectant policy, the speakers apparently making their protest under the idea that Mr. Sheild was advocating operative measures in all cases of abdominal injury. This, however, was a mistake, as Mr. Sheild's paper only insisted on the necessity of operation when certain symptoms were present. Whilst some hesitancy to resort immediately to surgical procedure would be expected on the part of general practitioners living remote from medical centers, we are rather surprised to hear of opposition from so progressive a body of men as the members of the Medical Society of London, to principles which we believed had been for some time generally accepted by leading surgeons everywhere. Not only after severe injuries, but whenever persistent collapse, vomiting, abdominal distention and rigidity exist, rupture of some hollow viscus is probable, and in the vast majority of cases early operative interference offers the only hope for the patient's recovery. This is well shown by the marked decrease in mortality since operation has become more frequent for perforating gastric and typhoidal ulcer, gunshot wounds of the abdomen, etc. From the brief report which we have thus far received, we judge that Mr. Sheild confined his paper mainly to the discussion of injuries to the hollow viscera. Although of less common occurrence, rupture of the spleen, kidney, or other solid viscus, may also call for immediate celiotomy, and a considerable number of cases are on record in which a fatal hemorrhage has been avoided, by promptly suturing a ruptured spleen or kidney or by the removal of these organs. We believe that the facts which clearly demonstrate the urgent necessity of early operation in the class of cases under consideration should be kept constantly before the profession until the importance of timely intervention is generally recognized.

**Opticians Who Prescribe Glasses Should be Criminally Indicted and Sued for Damages.**—The disgrace of the prescribing optician is becoming so acute, flagrant, and harmful to the community, that the medical profession must set the law in action to abate the nuisance. Every ophthalmic surgeon who finds a patient injured by the optician—and hundreds of such instances occur every day—should advise the patient to sue the optician for damages, and promise the patient professional support in carrying through the suit. The physicians of the community should unite in willingness to give testimony. The rank commercialism of the optician's impertinence, the

quackery of his claim that the prescription of glasses is not a medical matter, is producing incalculable injury to thousands of eyes and nervous systems. It is not in reality, except very temporarily, injuring the oculist's practice or lessening his financial income, because the meddling optician by his bunglesome ignorance is increasing ocular and nervous diseases to a calamitous degree. Hence it is not the selfish interest of the physician that moves him to oppose the prescribing optician. It is precisely the opposite motive, his interest in the health of the community, that spurs him to stop this degrading traffic in the diseases of the community.

No physician with any physiologic knowledge of the eye would deny that every case of ametropia has pathologic bases or relations; without the knowledge of ocular pathology no glasses whatever can be ordered meeting all the conditions. No lenses can be prescribed without attention to muscle-balance, retinal diseases or conditions, systemic relations, accommodation, etc., etc. Only the physician can possess a knowledge of these, or be able to diagnose them. Presbyopia and aphakia are no exceptions. Not even a physician can prescribe proper glasses in the vast majority of his patients without the use of a mydriatic, and this the optician dare not use, and hence in his circulars he denounces the "dangerous drops" and the needlessness of their use.

And the laws of most States are wholly sufficient and clear as to the matter. Suits for malpractice against opticians can be won under them by any intelligent attorney and a cooperating medical profession. For example, in New Jersey the law, Section 8, Chapter 190, 1890, reads as follows:

"Any person shall be regarded as practising medicine or surgery within the meaning of this act who shall append the letters M.D. or M.B. to his or her name, or prescribe for the use of any person or persons any drug or medicine, or *other agency for the treatment, cure, or relief of any bodily injury, infirmity or disease.*" (Italics ours.) (Other States have similar laws.)

Every physician will willingly swear in court that every case of ametropia, exophoria, presbyopia, aphakia, etc., is a "bodily injury, infirmity, or disease," according both to the spirit and letter of the law. Every person, lay or professional, must also confess that glasses are "agencies" "for the treatment, cure, or relief" of these bodily "infirmities or diseases." Would any judge or jury therefore refuse conviction in the case of a suit for damages against an optician who had sold glasses without a physician's prescription? We sometimes grumble at legislators, but here is a plain case of the law being more progressive than ourselves. We are the offenders,—and in this, as in many other cases, the sin of omission to prosecute is a sin of commission. We permit by our negligence the crime, for crime it is, which we detest. In permitting it we in reality are

committing it, as being privy to an illegal act is legally complicity. The profession must rouse itself to grapple with the evil, for it is growing in magnitude and shamefulness every day. Let the optician hire his renegade doctor to cover his impudent traffic—we can afterwards deal with the professional traitor according to his deserts.

The attorneys of medical societies could abate the nuisance by securing the indictments of opticians who in proved instances have prescribed glasses, because the prescription of glasses is a part of the "practice of medicine and surgery," according to professional understanding. Almost every State has some kind of a medical-practice act, infringement of which is a criminal offense. The profession is unanimous as to the fact of ophthalmology being a part of medicine.

**Suggestions to Writers, No. 14. Magniloquy.**—The employment of bombastic, lengthy, or ponderous terms, when briefer would suffice, is not an uncommon literary sin. This is simply one form of what may be illustratively called anatomic esotery. Now that the choice is offered, the anatomist who deliberately says, e. g., *aponeurosis* for fascia, *anfractuosity* for fissure, and *convolution* for gyre, thereby arrays himself with the village orator, in whose turgid discourse a fire is always a conflagration.

**Editor and Reader, No. 2. The difference between a commercial and a professional medical journal** is not at all plain to most physicians; and yet the two are as different as two things can be. The busy physician is likely to think there is no difference, but the expert eye can pronounce upon two journals with perfect acumen. We would like to have all our readers clear on this matter, and propose to do a little ear-marking in order to make the distinction somewhat more definite. We touch to-day only upon one or two general points. In the first place, not all journals published by nonmedical commercial firms are commercial medical journals. The presumption is that they are, and as a rule we fear they do not belie the presumption. Some laymen, however, may be as high-minded and as diligent in furthering professional ends as are some medical men; sometimes it may even happen that a layman or lay firm may put some of our pseudoprofessionals to shame in the illustration of dignity and medical honor.

In the second place all journals fathered by professional men are not by any means professional. The fact that a journal is owned, published, and controlled by a physician, as well as edited by him, is indeed, judging from experience, rather a presumption that its professional soul is up for sale to the highest bidder. It may not be so, but as in the preceding case the fact itself of ownership or control will tell nothing as to the real character of the publication. Some have thought we should take our professional literature entirely out of the hands of laymen as a guarantee against its falling subject to commercial influences. These forget that there are no more thoroughly corrupt and conscienceless periodicals in yellow journalism than many so-called medical journals under the complete control of medical men. When a medical man sells his soul and prostitutes his calling for money's

sake he is very likely to represent a degree of rottenness not exceeded by any of the one-cent evening newspapers. *Corruptio optimi pessima.*

The fact, therefore, that a serial dealing with medical matters is in part or wholly owned and edited by physicians, or that it is owned and controlled by laymen, is *per se* no indication whatever that either professionally or ethically it is good, bad, or indifferent. We must judge of it from other standpoints and by other criterions.

The first and most important of these standards, we should say, relates to the class of readers which the periodical seeks. Does it cater to the more ignorant, or to the better classes of physicians? Is it simply hungering after large numbers of subscribers by giving cheap and trashy matter adapted to mental and educational poverty, or does it seek the class of men who, by intellectual and scientific equipment are carrying on professional progress? In the lay-newspaper world everyone recognizes whether or not a journal aims at the pennies of the servant-girls, the rowdies and vauriens of the community, and the sensational and salacious readers. In medical journalism it is just as clear whether the managers seek the professional mob or whether they prefer the fewer subscribers with better minds and characters. Demagogery is quite as rampant in medicine as it is in politics. The preacher, orator, or editor who puts himself on the level of the poorest and worst of his audience thereby renounces his desire to lead that audience, and to educate and help it to higher standards of literature, science, character, and life. Popularity-hunting by means of the plebification of the matter given in a journal is one of the best criterions of worthlessness. We have at least one hundred more medical journals in the United States than we should have, and they live solely by supplying cheap and trashy writing to people who like that sort of thing. The responsibility for the existence of the class of people who like that sort of thing lies, of course, with the medical schools who in the past have been willing to dub such men with the degree of M.D. But, generally speaking, the medical schools are now becoming more careful and the average character of graduates is rapidly rising. We may, therefore, expect an equally prompt rise in the standards of the literature demanded. It is our aim to meet that demand, and we ask you to help us.

**Corrections.**—In reference to the news-item on page 932, issue of November 5th, as regards the election of officers of the New York County Medical Society, we regret that our inadvertence permitted, even incidentally, the hearsay statement as to the motives of one of the parties.

A correspondent kindly points out a typographic error by which (p. 867, issue of October 29th) Professor Crookes was incidentally alluded to as presenting the subject of telepathy to the *British Medical Association*, instead of the *British Association for the Advancement of Science*.

**Every subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to aid us. In addition to this we trust you will write these friends a personal request to examine the sample copies we shall send to them, with a view of subscribing. We believe that we are giving more and better medical literature for the money than can be had elsewhere. If this is so it is your friend's misfortune if he fails to become a reader of our JOURNAL.



## Reviews.

**Microscopic Examination of the Eye.** [Die mikroskopischen Untersuchungsmethoden des Auges.] By DR. S. SELIGMAN. Berlin: S. Karger. 1898. Pp. 240.

If we were told that some one had written a book of 240 octavo pages on simple histologic technic, we would likely ask how he found so much to say. And if we were told that some one had written 240 pages on nothing but "microscopic methods of investigating the eye," our surprise would doubtless give way to amazement. And yet this is what Dr. Seligman has done, and that, too, without making himself fullsome or prolix. What can the author have to say? Well, he tells where and how to get the best material; what animals' eyes are best adapted to different methods, and stains; what tissues are best influenced by the various reagents; how to select stains for this, that, and the other kind of highly specialized cells; whether the stains should be used hot or cold, acid or alkaline, weak or strong, fast or slow, and an infinitude of details about teasing, freezing, imbedding, cutting, mounting, injecting, etc., that are all of inestimable importance in arriving at correct results in cytology, a thorough knowledge of which is, after all, the thing greatly to be desired; for, as is the life of the cell, so will be the life of the organism. The Germans are the pathologists of the world to-day, and the author sets forth the beginnings of pathology. "Great is Method of the Germans!" Dr. Seligman, in his book, has not only thoroughly described the most recent technic in microscopic examination of the eye, but he has also builded a monument to German patience.

**A Text-book upon the Pathogenic Bacteria.** For Students of Medicine and Physicians. By JOSEPH McFARLAND, M.D. With 134 Illustrations. Second Edition, Revised and Enlarged. Philadelphia: W. B. Saunders. 1898. Price, \$2.50. Pp. 497.

The book before us is divided into two parts. The first deals with general considerations, such as the biology of bacteria, immunity, sterilization and disinfection, and bacteriologic technic. In the second part, specific diseases and their bacteria are considered. The author divides these diseases somewhat peculiarly, and in a manner open to criticism. The primary division is into phlogistic, toxic, and septic diseases, the first being subdivided into acute inflammatory diseases and chronic inflammatory diseases. The discussion of the various infections is exhaustive, and based upon a comprehensive knowledge of the literature. The author believes in the value of the Widal's reaction in typhoid fever, both for purposes of diagnosing the disease and for confirming species of bacilli in doubtful cases. The preparation of the antitoxin of diphtheria is described carefully and at length. A number of interesting facts are cited from the author's experience in the preparation of the substance on a large scale. The administration of a preliminary dose of antitoxin to horses obviates the necessity of administering small preliminary doses of toxin. The interesting statement is made that the production of strong serum depends chiefly upon the horse and not upon its treatment. The one important bacterium, reference to which seems to have been omitted, is the meningococcus or diplococcus of cerebro-spinal meningitis. The book is written in an entertaining style, and gives pleasure in the reading.

**Manual of General Pathology for Students and Practitioners.** By WALTER SYDNEY LAZARUS-BARLOW. Philadelphia: P. Blakiston, Son & Co. 1898. Price, \$5. Pp. 795.

The science of pathology has heretofore not fared so well at the hands of English writers as, for example, that of physiology, and there is no text-book in the former branch that compares with Foster's treatise on physiology. The books that exist lack, for the most part, that philosophic treatment of the subject which has been made so familiar to us in the German works. It is therefore with great pleasure that we welcome the book under consideration, since it is

eminently characterized by philosophic insight and the critical spirit. Its style is pleasing and its treatment of controversial subjects temperate and suggestive. We hardly think that the work will answer as a text-book for students, but it is splendidly adapted to afford co lateral reading and to instruct those who are already somewhat familiar with pathologic questions. The author has caught the trend of modern pathology and gives free sway in his work to pathologic physiology. After a chapter on vegetable microorganisms, he takes up the pathology of the circulation—the pericardium, heart, and blood-vessels; the pathology of the blood; inflammation and its sequels; infection; heat-regulation; the pathology of shock and collapse; the pathology of nutrition, and of secretions, excretions, and respiration. These titles are sufficient evidence that the book is not an ordinary general pathology, meaning thereby a general pathologic anatomy, but is pathology in the widest sense, including in its scope both changes in structure and changes in function. Very interesting is the author's treatment of the subject of lymphformation and edema. He has done considerable experimental work in this line and speaks with authority. He does not believe in the purely physical theory of lymphformation, but, following Heidenhain, considers it a secretory process. A few errors are noticed in looking over the work. The author apparently makes aphthae and thrush synonymous terms, and considers them due to the *Sacchromyces mycoderma*. The actinomycetes he ranks, contrary to most writers, among the true molds. He also omits to mention the meningococcus of Jaeger-Weichselbaum.

The value of the book is enhanced by brief bibliographies at the end of each chapter.

**A Manual of Otology.** By GORHAM BACON, A.B., M.D., Professor of Otology in Cornell University Medical College, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an introductory chapter by CLARENCE JOHN BLAKE, M.D., Professor of Otology in Harvard University. With 110 illustrations and a colored plate. New York and Philadelphia: Lea Brothers & Co. 1898.

In a book of 400 pages there is comprised a combination of the author's experience and a condensation of more elaborate treatises—not an easy task, yet well done in spite of the many difficulties attending it. The arrangement is admirable and most of the chapters are commendable. One in particular is that devoted to the methods of examination of the ear. In no book, large or small, is there a better description of the various procedures requisite for a careful examination of the ear itself and the necessary tests of hearing, and a study of it will enable even a novice to make a satisfactory examination and record of the result. The portion devoted to special diseases is in a measure disappointing, probably because of the difficulty of embracing in a small compass the mass of information contained in larger works. Thus, the treatment of acute catarrhal otitis media is incomplete, and many procedures of known value are omitted, and unfortunately, if the book is intended for general practitioners and students. So also in the treatment of adenoids, the statement is made that the growths if small may be removed by the application of chromic acid or the galvanic cautery. Such advice not supplemented by accurate instruction as to how to make the application is unwise, as either procedure is not only difficult of performance, but will cause pain and surely lessen the confidence of young patients—a matter of no little moment when the operation must necessarily be repeated. No mention is made of the spray-test so easily made, although the description of the operative treatment is concise and explicit, and the pathology is barely touched upon. It is regretted that the author has not more definitely stated his opinion upon the various methods of aural massage than to say that they should be given a fair trial, as many of the patients who consult their physicians for impaired hearing do so because of the extraordinary praise this procedure has received at the hands of some aurists.

As a matter of fact, all the criticism that can be made of the book is based upon its incompleteness and necessitated by its size. As a whole it is suitable for all readers, contains many valuable hints, and will do much to dispel the gloom that hangs over so many men when asked to prescribe for an earache or for advice concerning a beginning deafness.



## Correspondence.

## THE TRANSMISSION OF DISEASE BY VACCINE-VIRUS.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL :—

My reply to Dr. McGovern's letter on vaccine-farms in the JOURNAL for October 1st was prompted by a desire to correct certain statements regarding the organisms said to be commonly found in vaccine-virus, and also a most unjust generalization of the character and ability of vaccine-producers as a class. It is evident from Dr. Sangree's letter in reply to mine that I did not make myself clear.

I beg to assure Dr. Sangree that I am thoroughly familiar with the subject in its various phases from beginning to end, and I must adhere to my former statement that the organisms of tuberculosis, diphtheria, anthrax, etc., are rarely, if ever, found in vaccine-virus. Many competent observers, among them Lothar, Meyer, Guttman, Straus, Chauveau, Jossier, and others, have thus far failed to find tubercle-bacilli even in the virus collected from cows known to be tuberculous or to produce tuberculosis in test-animals with this virus; and I must say that, with the exception of some staphylococci, I have failed in a large number of tests to find anything bearing resemblance even to a pathogenic organism. It is true that cultures made from points *may and do swarm* with organisms of a harmless character, but the same organisms inhabit our daily bread, and our bodies likewise, and the finding and counting of them is simply a waste of time. Their presence may indicate uncleanly surroundings and lack of care, or they may be due altogether to climatic and atmospheric conditions beyond the operator's control.

With regard to the staphylococci mentioned, they correspond minutely in morphologic character with *white-pus cocci*. These are almost invariably present in the normal skin of man and beast, and they do not necessarily excite or produce pus of themselves. I have made many attempts to collect sterile serum from the calf after a thorough antiseptic toilet, then scarifying, as is usual when vaccinating, and collecting the serum on needle as it oozes up through the skin. Serum thus collected is always contaminated, generally by the organisms mentioned, and many of its friends and neighbors known to be harmless. Yet many bacteriologists would probably condemn a virus in which they might find the staphylococci, simply on the evidence of an agar-slant, never for a moment taking into consideration the fact that they are probably non-virulent, certainly so if stored in glycerin for a short time.

So far as I am aware, Klein is the only authority, who has found the streptococcus of erysipelas, and this was in human virus.

I do not wish to be misunderstood. *I am not in favor of any kind of virus that has not been subjected to the glycerin for three weeks at least.*

I have found by many trials that glycerin is by far the best medium to use as a sterilizing and preservative agent for the virus. I do not, of course, claim anything in this respect. What I say is simply confirmatory of the work of Kent, Copeman, Chamber, Straus, and others.

In America, the honor of introducing glycerinated pulp vaccine belongs, I believe, to Huddleston, of the New York Board of Health. My work with it dates from about the same time. King, of the Indian Service, Calcutta, proposed lanolin as a medium, and, without any knowledge of his work, I thought, for a time, I had secured in it a valuable

medium, but it has some drawbacks. Ropke proposes salicylic acid and alcohol in addition to glycerin, and Kitasato and Mumenno describe a method, using from 0.66% to 0.8% carbolic acid. Though they claim to have secured good results, I was not much impressed by their enthusiasm on reading their article in the *Sei-I-Kwai Medical Journal*, Tokio.

I am quite sure that any one who reads the splendid article by Weaver in the *Journal of the American Medical Association* for December 26, 1896, or Copeman's brilliant résumé in the *Lancet*, from May 7 to 21, 1898, will acknowledge that the production of vaccine-virus has been revolutionized during the past two or three years, and that *the death-knell of the ivory point has pealed.*

With regard to the sore arms and amputation mentioned by Dr. Sangree, I would say that I have notes of several quite severe infections in which virus known to be sterile was used, the patients undoubtedly infecting the wound by unclean hands, clothing, or other means. There are too many elements to be considered to state positively that an infected wound following vaccination is due to the virus. A man in Brooklyn in apparently good health pricked himself with a pin recently and died of rapid septic infection. What if he had been vaccinated the same day?

I trust Dr. Sangree's description of what he saw in Munich is only figurative. I should consider the process described as rather crude. By vaccinating calves with sterile virus and continuing asepsis as far as possible during incubation one can produce right along a crop of typical cowpox, which, when removed (again under strict precautions) is not "an offensive mass."

I believe the degree of pitting after vaccination is in direct ratio to the amount of infection. A pure vaccination leaves very little mark. If made subcuticular it will give complete protection without any scar to speak of. There is another fact that I am not aware has before been mentioned. If the pulp from a pure pock on the cow is collected at say the fourth or fifth day, and if there is no suppurative process going on beneath the vesicle, there is scarcely any flow of serum. I believe that in order to obtain serum in commercial quantities it is necessary to vaccinate from cow to cow and thus perpetuate a form of mixed infection that will cause a mild superficial suppuration. When this is done serum will flow in quantities. If, however, the vaccine is kept pure, the serum will not be produced so freely.

I believe that the so-called areola is not due to the vaccine, but to some mild extraneous infection. I have no hesitation in placing as many as one hundred squares, each at least an inch across, upon the abdomen of a six-months' old calf, leaving only from  $\frac{1}{4}$  to  $\frac{1}{2}$  an inch of normal skin between them, knowing that the skin will remain normal in color and condition, that the areola will be represented only by a narrow red line of say  $\frac{1}{8}$  inch in width, and that there will be little increase of temperature and that vaccine produced under these circumstances will yield a pure vaccinia, but it will not do to put this "rather offensive looking mass into a bottle along with glycerin." It must be carefully mixed with certain proportions of *sterile glycerin* and preserved under strict aseptic surroundings.

Dr. Sangree's views on the restrictions that he thinks should be enforced by boards of health regarding the sale of virus in a State are rather un-American, and, I fear, if tried in practice would lead to the very corruption and favoritism he speaks of. Now, in a hypothetical case I cannot see why a "competent bacteriologist," appointed or engaged by said hypothetical board, should be any better than many, many



of his fellow-men; why he should not err, at least when friendship exists; and if he should chance not to be above reproach, he might, for certain substantial reasons, force upon physicians a vastly inferior article. I believe our plan in the State of Pennsylvania is at present equal to any. Not only the bacteriologists, but the entire State Board of Health, have inspected several of the plants, at least. They state the cold facts as noted by them, without showing any favoritism "to certain producers;" leaving it to the individual practitioner to judge for himself, for we must all acknowledge that he is thoroughly competent to do this. He knows that one place has been declared clean, another dirty, one up to the times, the other a back-number, and if he has any interest in his work he will avail himself of this information. If he does not, all the laws in the world cannot prevent him from sending to China for the worst vaccine to be obtained, and, what is more, from using it.

Respectfully,

RICHARD SLEE.

Swiftwater, Pa.

### A VISIT TO CRAIG COLONY.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

It is estimated that in New York State alone there are 600 epileptics in hospitals, almshouses, asylums, etc., etc.; the waiting list of applicants, not inmates of hospitals, almshouses, etc., for admission to Craig Colony contains the names of nearly 500 others. At the time of my visit there were also 322 inmates at the colony. Thus in one State there are certainly in the neighborhood of 1,500 epileptics, unprovided with proper treatment and care. This is probably a small portion of the total number of all afflicted. When one considers closely the tragedy of the lives of these patients, the pathos of it all is most poignant. They are debarred from most of the occupations of ordinary life, and besides this by popular prejudice and ignorance they are shut out from sympathy and social pleasures. The tragedy is thus both physical and mental. Add to this the fact that the enforced idleness of these hyperesthetic and sensitive beings very probably increases the number and severity of the attacks, and we have a condition that appeals profoundly to us for help and alleviation.

Contrasting the pitiful fate of those I had known and seen, not at Craig Colony, I was deeply moved by the contrast. Here were 322 people living in what was a close approximation to home and family life, surrounded by those who by the same affliction were bound to be sympathetic, and governed by those whose duty and pleasure it is to cure if possible and at least to help.

But the greatest blessing of all was the out-of-door, healthful labor which was offered and urged, and which, as a rule, was gladly accepted by all. What more naturally-curative method could be devised than that of draining to the muscles, if one may so speak, and to the digestive system, the overplus of the hypersensitive nervous mechanism, which otherwise floods with injury the lowlands upon which it is abnormally deluged. Everybody was busy, and everybody seemed to be happy in the activity of fruit-gathering, gardening, and the hundred other labors going on. An occasional fit caused no malign excitement or curiosity and the patient always found present those ready to prevent injuries during the seizure or to give help after it was over.

Since the opening of the institution, 410 patients have been received, of which number 322 remain. Buildings now

in process of erection will bring the capacity up to 600 beds. These new buildings will permit a relative segregation of the males and females, a result to be desired for a number of reasons. An infirmary for the helpless and crippled of each sex is also projected, so that the most needy of all patients may be received. The new buildings across the Kishaqua gorge, for women and children only, will be completed ready for occupancy in July of next year. When finished, all of the women on the west side of the creek will be transferred to the new quarters, and the Kishaqua gorge will be an efficient boundary between the two sexes. The new buildings, comprising a central administrative building, two school dormitories and eight cottages, are to be of brick, and will accommodate 258 patients, at a cost of \$387.59 per capita, including plumbing, heating, and lighting.

The greatest need of the colony is the buildings to care for a greater number of patients. In this way the per capita cost of maintenance will be greatly reduced. To the community the total expense of epilepsy will be thus lessened, because at present the care direct, and indirect, of those outside the colony is more expensive than it would be in it; and this leaves out of consideration the fact that outside there is practically no therapeutics, actual or attempted, while within cure is not only possible, but relief at least sure. The evil will not be an ingravescent but a lessening one. The superintendent tells me that the appeals of the 600 applicants for admission are most pathetic and insistent. Besides feeding, clothing, and providing medical attendance and nursing for the patients, the management aim to—

1. Educate them intellectually and in the acquisition of useful trades.
2. Study them scientifically, that like sufferers may be benefited.
3. Provide for them simple and recreative forms of amusements.
4. Improve, develop, and cultivate a vast farm of nearly 2,000 acres.

It is this last feature that causes the colony to differ so radically from other charities. Most of them have simply a building full of patients, with perhaps a small farm or garden attached; but none of them are forced to make a dollar do as much as at the colony. On the other hand, the cultivation of the soil pays, and what was grown on it and produced in the various departments of the colony amounted this year to the very gratifying sum of \$36,889.03, and of which there was on hand on the first day of October, available for use during the coming year, \$19,603.62 worth. This is surely a good economic showing.

I was particularly interested in the fact of the employment of patients. During the month of my visit 86% of the men of the colony were employed, at an average value per patient of \$46.90. The figures for women were somewhat less. As far as the physical condition of the patient will admit of it, all are required to engage in some form of occupation. The advantages of occupation to the epileptic are beneficial and remedial. Wholesome outdoor exercise, the kind that quickens the circulation, brightens the eye, sharpens the appetite, and rehabilitates a flagging digestion, has been found, not only in this country but in England, and wherever epileptics have been segregated for rational treatment, to have for them a marked and peculiar value. This fact is now recognized by the National Society for the Employment of Epileptics in England.

The work under the charge of the matron—a woman of exceptional ability and devotion to her work—was highly

interesting. There are daily classes for children in plain sewing, etc., in domestic science, table-waiting, bed-making, etc., etc. Basket-making was an interesting novelty. Physical-culture exercises, marching, dancing, etc., were also not forgotten. The list of articles made in one year by the girls and women (mattresses, sheets, night-shirts, towels, etc.) footed up about 10,000. The school-attendance averaged 25. Manual training among the boys and men was in full swing, one class of 20 being chiefly engaged in Sloyd work under an instructor from the Boston training-school.

A training-school for nurses is carried on.

As to the seizures, the superintendent, Dr. Spratling, has courteously allowed me to copy the following data from his forthcoming report:

SHOWING 39,304 SEIZURES CLASSIFIED BY HOURS.

1 A.M. ....	1187	1 P.M. ....	1490
2 A.M. ....	1397	2 P.M. ....	1369
3 A.M. ....	1468	3 P.M. ....	1197
4 A.M. ....	1801	4 P.M. ....	1117
5 A.M. ....	1461	5 P.M. ....	1016
6 A.M. ....	1641	6 P.M. ....	920
7 A.M. ....	1249	7 P.M. ....	826
8 A.M. ....	1139	8 P.M. ....	995
9 A.M. ....	1128	9 P.M. ....	1822
10 A.M. ....	1133	10 P.M. ....	1597
11 A.M. ....	1311	11 P.M. ....	1232
12 M. ....	1519	12 N. ....	1279

It will be noted from the foregoing table, that 7 o'clock in the evening was the hour at which the smallest number of seizures occurred, while the greatest number occurred at 9 o'clock in the evening. From the 1896 report, a study of 5,377 seizures showed that the hour of greatest frequency was 2 o'clock in the afternoon, while the minimum number occurred at 7 o'clock in the evening.

Inasmuch as the observations of the two years do not coincide, it is proposed another year to extend the same so as to include a study, by the hour, of 300,000 seizures.

As to the frequency of seizures, about 90% of 275 cases had fits on an average of one, or more, every seven days. Only 27 had attacks less than a week apart.

As to treatment, more than usual attention was paid to the matter of diet during the past year. Gluten bread, selected on account of its freedom from starch, was used to a considerable extent and, on the whole, with very satisfactory results. It was found to have especial value in cases subject to gastrointestinal disorders, and its action in such cases was uniformly good. The same care was demanded of the cooks in the preparation of food in the kitchens that the apothecary exercises in the pharmacy in the compounding of medicines. All new remedies were given a trial, and the old ones tried in new combinations. The superintendent thinks that he has not yet met with that degree of success in the drug-treatment of the disease that leads him to think that proper diet and systematic exercise are inferior to diet as therapeutic measures.

The conservative physician will approach the question of the curability of epilepsy with full caution, and it is very proper that he should, for among the long list of intractable disorders epilepsy easily holds first place. And yet seven patients were discharged during the year, no seizure having taken place for two years. I copy the letter, written by one of these, with the thought that if this were the only result obtained the colony has proved a success:—

DR. W. P. SPRATLING.

Dear Sir:—Yours of recent date before me. Am most happy to inform you that my son has not had an attack

since leaving the colony. The latter part of May he went to work in a printing office for six hours a day and is there at this date. Has not missed an hour since then, and some days has worked overtime.

His earnings supply the table entirely for us two.

Yours truly,

Mrs. W. A. S.

The last letter refers to a young man who had been discharged as "incurable" from two State hospitals some years prior to his admission to the colony. For five years before coming to the colony and at the time of his admission, he averaged from 75 to 125 seizures each month. While here he learned the printer's trade, and, as will be noted by his mother's letter, he is now supporting himself and his mother by it.

A startling fact incidentally came to light in my conversations with Dr. Spratling, relating to the pursuit of the epileptic by the nostrum-vendors. One man when he arrived had something like a half-bushel of belts and devices, each "guaranteed to cure." "The astounding avidity with which epileptics are willing to try any remedy of alleged value in epilepsy only shows how eager is their desire of relief. Thus the manufacturers of so-called 'patent' nostrums and the great army of quacks find in the epileptic their readiest victim. They beguile him with vivid representations of wonderful cures and then deliberately set about to rob him of his honest means and, what is worse, of what little stamina and vigor of constitution he may possess. He is deceived with a drug that *suppresses* his attacks for a limited time, but *which does not cure*, and which must be taken in such powerful doses that in time it effects the destruction of his mind and ruins his physical health. We are not giving hearsay evidence, but facts, and to make sure of such facts we tried one of the 'surest' cures at the colony, with the result that two patients were made temporarily insane, but made good recovery on the withdrawal of the drug. A young man recently admitted to the colony, and whose malady for the past year had been growing rapidly worse, had in his possession, at the time of admission, *twenty-six* separate and distinct quack and patent remedies. He was at once relieved of them with the result that he began at once to improve."

The managers of the colony are not, I am glad to say, in danger of becoming simply administrative officers, or even physicians of the special cases of disease under their care. The superintendent's words as to scientific research are so excellent, and, one must say, so unusual, in such reports, that I cannot forbear quoting them, as showing the highest professional ideals. In all ways, indeed, Dr. Peterson, the promoter and founder of the colony, may well be proud of his work and hopeful of its future.

"The culminating feature," says the last report, "of the segregation by the State of large numbers of epileptics in one institution should be the making of ample provision for the successful prosecution of scientific work. Custodial care for this class, even in its highest and most humane form, is not enough; the intellectual and moral training of the epileptic is not enough; the industrial and manual training of the epileptic, that he may at the colony and in the world at large produce as well as consume, is not enough; the scientific treatment of the disease by an efficient corps of skilled physicians is not enough; the sum total of what is demanded of us will not be reached until we are given the facilities and the means for the efficient investigation into the causes of this widespread malady. In assuming the care of these dependent sufferers, the State took upon itself a beneficent



moral obligation that will not be fulfilled until it sets resolutely in action scientific machinery of the highest type, whose sole function it will at all times be to inquire into the causes that underlie the disease.

"We have made a start in the right direction. We have the means for building and equipping a laboratory, and the work of construction is now well under way. But even all this is not enough, and will all go for nought, until we are given the means for attracting to its management the best scientific minds. It is necessary that we make a perpetual reasonable outlay to get and retain such talent, and I take pleasure in recommending to the Board that the only way it can be done is to secure a perpetual grant from the State of a certain fixed sum, \$4,000 per annum would suffice, for the proper prosecution of the work. This would not be a proper charge under Maintenance, and should not be taken from the yearly sum given us for that purpose. The aim is to have the laboratory-work a separate and distinct department, presided over by the best talent we can procure, and conducted by the State in the interest of scientific medicine the world over."

G.

## TWO CASES OF CEREBRAL HEMORRHAGE IN ASSOCIATION WITH RENAL DISEASE.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

ON p. 889 of the JOURNAL for October 29th is an abstract from the *British Medical Journal* of the report of a case by Crane of pontine hemorrhage associated with indefinite symptoms. The following two cases observed at the Newark City Hospital seem interesting in this connection, and especially the first:—

A man, 48 years old, weighing 240 lbs., was brought in by the police, without any history. He was unconscious, but not paralyzed, and there was only partial abolition of sensation over the body in general. Breathing was labored, the pupils equal and contracted minutely. There was no deviation of the eyes. The temperature, taken in both axillæ, was 99° F. A specimen of urine was withdrawn from the bladder and found to have a specific gravity of 1006, and to contain a considerable amount of albumin. A diagnosis of uremia was made, after excluding narcotic poisons by examination of the gastric contents. Treatment for uremia was adopted, but the patient died 4 hours after admission, the temperature rising to 102° by rectum just before death. On postmortem examination, made 3 hours after death, the heart was found to weigh 19 oz.; its valves were apparently normal. The kidneys weighed 18 oz.; their capsules were slightly adherent; the organs were free from cysts, but the cortex was narrow. The brain was in its external appearances normal. A small amount of fluid was present in the ventricular cavities. In the midline of the pons were found four clots, each with a diameter of about 5 mm. and rather oval in outline, and the most anterior one connected with a small amount of clotted blood in the fourth ventricle. The other organs were normal in macroscopic appearance. The interesting problem is as to the relation between the renal disease and the hemorrhages, and whether the diagnosis of pontine hemorrhage could have been made before death.

The second case occurred in a man, 40 years of age, of spare build, weighing 125 or 130 lbs., who was brought in partially unconscious by the police. There was a slight contusion over the right frontal eminence, with a history of a protracted drinking bout. There was no paralysis of any part of the body. The pupils were equal and contracted on

exposure to light. The temperature was normal. Unconsciousness deepened; the breathing became labored; the pupils minutely contracted, though they remained equal. The urine had a specific gravity of 1010 and was highly albuminous. There was at no time any evidence of delirium tremens. The pulse was throughout weak. The heart and lungs presented no abnormality. In this case also treatment for uremia was carried out, but the patient died 20 hours after admission, never having regained consciousness and the temperature having risen to 104°. At the autopsy, 5 hours after death, the heart was found to weigh 12 ounces; the left ventricle was abnormally thick, but there was no valvular defect. The kidneys weighed 8 ounces and contained a few small superficial cysts; the capsules were slightly adherent, and the cortex was narrow. Just posterior to the fissure of Rolando on the right side of the brain was a small cortical hemorrhage, almost 2 cm. in diameter; and there was another on the basilar surface of the left frontal lobe, involving the triradiate fissure. At the apex of the left temporo-sphenoidal lobe was an area of softening about the size of a pigeon's egg.

The same interesting questions arise in connection with this as in the first case.

Respectfully,

G. WALTER MCCOY,

Acting House Physician.

Newark City Hospital, Newark, N. J.

## PUERPERAL INFECTION WITH HYPERPYREXIA.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

APROPOS of the report in THE PHILADELPHIA MEDICAL JOURNAL for August 20th, by Dr. Edward Horgan, of a remarkable case of septicemia, with recovery, after a temperature of 108° F., I beg to recall a case of septic endometritis that I reported in the *American Medico-Surgical Bulletin*, for October 10, 1896, in which the patient recovered after a temperature of 113°. The patient was a small woman, in whom the symptoms appeared on the 5th day of the second confinement. Local heat was applied during the chill, cold applications during the hyperpyrexia. The temperature was reduced to 105° by the applications and the immense quantities of mercuric chlorid douches that were continually used. After this the uterus was curetted, the first operation on the unconscious patient without an anesthetic reducing the temperature temporarily to the normal; the second curettage, under chloroform, eventually resulting in permanent reduction of the temperature.

This case was complicated with a burn of the abdomen, and is further interesting in that, after all, the milk was preserved for the benefit of the infant. In cases of breast-abscess during lactation, it is often a serious question what to do about the milk.

So far as I have been able to learn thus far, this is the highest recorded temperature after which a patient has recovered.

Sincerely,

SAMUEL F. BROTHERS.

227 Madison St., New York City.

**In Memory of Hans Wilhelm Meyer.**—An international monument in memory of Professor Hans Wilhelm Meyer, the discoverer of adenoid growths of the pharynx, was unveiled in Copenhagen on October 25th. The monument is a bronze bust of Meyer, and was presented to the municipality of Copenhagen, in behalf of an international committee of subscribers, by Sir Felix Semon, laryngologist to St. Thomas' Hospital, London.



## Selection.

**Homeopathy in the Army and Navy.**—The *Medical Advance* (a homeopathic journal) of October 15th, contains the following editorial:—

"The medical and surgical statistics of the army go to show that a large majority of the mortality during a campaign is from sickness, rather than from shot and shell. And our recent experience in Cuba and Porto Rico only verifies that of 1861-65. It is the physician that is, or ought to be, in greatest demand, not the surgeon. The men suffer most from the effects of exposure and derangements of the digestive tract—rheumatism, diarrhea, dysentery, pneumonia and fevers—and this is the peculiar province of Homeopathy. Hence the righteous indignation of the volunteer when compelled to submit to treatment to which he is unaccustomed and in which he has no confidence whatever. Hence also the persistent demand for homeopathic representation in the army and navy, that our soldiers and sailors may have the same treatment when in active service that they have in private life.

"In the recent Spanish war we have at least been partially successful, a number of homeopathic surgeons having received commissions; one regiment in particular, the First Illinois Volunteers, the pride of Chicago, having three homeopathic surgeons, all college professors and all representative men. In this regiment there were many men who had never taken anything but homeopathic remedies and they and their friends had great confidence in their ability under homeopathic treatment to withstand even the severities of the rainy season in Cuba or Porto Rico. The results have been bitterly disappointing not only to the brave man who faced the dangers of the Cuban campaign, but to their friends and the profession in general, and not a few questions have been asked. The members of the dominant school have also a right to ask questions, and here is a fair sample of a just yet severe criticism from a correspondent of THE PHILADELPHIA MEDICAL JOURNAL."

The letter of our correspondent "Physician" in the JOURNAL of October 1st., entitled, *Sectarianism in the Army*, is quoted, and the editorial proceeds:

"If we may judge from the reports of the sick soldiers just returned from Santiago and Camp Wykoff, and as private patients and in consultation we have seen many of them, the homeopathic treatment dispensed by homeopathic surgeons did not differ in any essential from that employed by the regular surgeons. We have treated patients that had yellow, malarial, and typhoid fevers in camp, and the universal statement has been that they received quinin in from 10 to 40 gr. per day, and in many cases against the vigorous and emphatic protests of the patients that were homeopaths at home and preferred to take their chances with purely expectant treatment rather than run the dangers of quinin, against which they had been cautioned before leaving Chicago. Their appeals for homeopathic treatment to their homeopathic (?) surgeons were disregarded and in some cases where they refused to take quinin it was given by inunction. Even men on duty were given one and two grains of quinin per day as a preventive, and yet the surgeons claimed to be homeopathic! Is there not good reason for the honorable allopathic correspondent to accuse us of dishonesty when professed practitioners desert their colors under fire? There has not been such an opportunity this century, and there may not be in the next, for demonstrating the superiority of similia over all other methods of practice in that much dreaded scourge of the gem of the Antilles, yellow fever. And yet it was wilfully thrown away by our weak-kneed representatives, who received their appointments as homeopathic surgeons, who in the hour of trial deserted the trusts sacredly confided to their keeping, and sold their birthright for a mess of pottage. Better, far better not to have had a representative on the surgical staff than to have the humiliation of knowing that our chosen representatives went over to the enemy. If our soldiers had deserted in the same way at Santiago what would the world have said of American manhood?"

## American News and Notes.

**The New Columbian University Hospital in Washington, D. C.,** was dedicated with appropriate ceremonies, November 1st.

**Chicago Ophthalmological and Otological Society.**—At a meeting held November 8th, Dr. Fulton read a paper on Operative Treatment of Ulcerated Blepharitis, and Dr. Bulson one upon Mastoiditis.

**St. Louis College of Physicians and Surgeons.**—Dr. John Young Brown, recently president of the Mississippi Valley Medical Association, has been appointed professor of diseases of women and clinical gynecology.

**The East Boston Medical Society** was recently organized, with the following officers: President, Dr. B. F. Campbell; vice-president, Dr. W. H. Grainger; secretary, Dr. D. B. Hurley; treasurer, Dr. W. H. Ensworth.

**Fort Worth University, Texas.**—Dr. I. L. Van Zandt has been elected professor, and Dr. R. B. Grammer, assistant professor, of the theory and practice of medicine and clinical medicine in the Medical Department of Fort Worth University.

**Phoenixville (Pa.) Hospital.**—The corner-stone of the new hospital was laid with appropriate ceremonies on November 5th. The structure will be constructed of brick and Indiana limestone, with marble and granite trimmings. It will be three stories in height and is estimated to cost about \$25,000.

**St. Luke's Hospital, New York.**—The will of the late Mrs. Elizabeth Lee Barker devises the sum of \$5,000 to St. Luke's Hospital, as a memorial of her late husband, Dr. Fordyce Barker and her son Fordyce Dwight Barker, for the foundation of a bed to be known as the Fordyce Barker Memorial Bed.

**Dispensary-abuse in Baltimore.**—An unexpected illustration of dispensary-abuse occurred at the City Hospital Dispensary in Baltimore, when a man who had just applied for free treatment, on the plea that he was unable to pay a physician, dropped dead, and in his pocket was found \$1,500 in notes.—[*Maryland Med. Jour.*]

**Washington (D. C.) Obstetrical and Gynecological Society.**—At the annual meeting held recently, Dr. Thomas C. Smith was re-elected president; Dr. John W. Bovée, first vice-president; Dr. W. P. Carr, second vice-president; Dr. J. T. Kelly, Jr., recording secretary; Dr. Edwin Morse, corresponding secretary; and Dr. John Van Rensselaar, treasurer.

**Clinico-Pathological Society of the District of Columbia.**—At the recent annual meeting the following officers were elected: President, Dr. John Van Rensselaar; first vice-president, Dr. John R. Wellington; second vice-president, Dr. Sterling Ruffin; recording secretary, Dr. R. T. Holden; corresponding secretary, Dr. J. T. Kelly, Jr.; treasurer, Dr. Frank Leech.

**Diphtheria in Boston.**—The present unprecedentedly low mortality from diphtheria in Boston, which is extremely gratifying, is probably due to three factors, namely, the early diagnosis of the disease by the bacteriological examination, the introduction of antitoxin, and the excellent facilities for treatment afforded by the contagious department of the City Hospital.—[*Boston Med. and Surg. Journal.*]



**The Frederick County (Md.) Medical Society** was organized October 29th, with the following officers: President, Dr. Wm. H. Baltzell, Frederick; first vice-president, Dr. J. E. Beatty, Middletown; second vice-president, Dr. Wm. H. Johnson, Adamstown; recording secretary, Dr. Ira J. McCurdy, Frederick; corresponding secretary, Dr. Wm. C. Johnson, Frederick; treasurer, Dr. Franklin B. Smith, Frederick; librarian, Dr. Samuel T. Haffner, Frederick.

**The Bucks County (Pa.) Medical Association** celebrated its fiftieth anniversary on November 2d at Doylestown. Addresses were delivered by Drs. W. R. Cooper, Joseph Thomas, Frank B. Swartzlander, and G. M. Grim. The following officers were elected: President, Dr. O. H. Fretz, of Quakertown; vice-presidents, Dr. R. C. Foulke, of New Hope; Dr. A. S. Wilson, of Bristol; secretary, Dr. A. F. Myers, of Blooming Glen; treasurer, Dr. Frank Swartzlander, of Doylestown.

**The New Building of the Medical Society of the County of Kings, New York.**—The corner-stone of the new building was to have been laid November 10th, with the following order of exercises:—

Address by Dr. Frank E. West; Invocation, by Rev. Dr. Richard S. Storrs; The Society's Work, by Dr. George MacNaughton; Laying of the Corner-stone, by Dr. Joseph H. Hunt; Address, by Seth Low, Esq.; Benediction, by Rev. Father Malone.

**The Medical and Surgical Society of the District of Columbia** celebrated its decennial anniversary, October 31st. The origin and progress of the society was discussed by Dr. Lewellyn Eliot, the president. Other addresses were delivered as follows: By Dr. Landon B. Edwards, on "The Benefits to a Community and the Medical Profession by Medical Examining Boards;" by Dr. W. W. Johnson, on "The Relation of Health to Education;" and by Dr. George M. Kober on "Higher Medical Education."

**Physicians' Club of Chicago.**—At a regular meeting held October 31st, a discussion was had on "The Lessons of the War," and was participated in "From the Political Standpoint," by Senator Wm. E. Mason; "From the Strategic Standpoint," by Col. Marcus Kavanagh; "From the Standpoint of a Regular," by Gen. Andrew S. Burt; "From the Medical, Surgical, and Sanitary Standpoints," by Drs. Nicholas Senn, William Cuthbertson, Wm. G. Willard, Albert Hartsuff, Charles Adams, Thos. E. Roberts.

**Yale Medical School.**—Mr. B. Moore, formerly assistant professor of physiology at University College, London, has been appointed professor of physiology; Dr. Henry P. Stearns, after a service of 25 years as lecturer on insanity, has resigned and has been succeeded by Dr. A. R. Defendorf; Dr. Charles A. Lindsley, emeritus professor of the theory and practice of medicine, is to lecture on sanitary science, in place of Professor William H. Brewer; Dr. E. H. Arnold has been appointed instructor in orthopedic surgery; Dr. Charles D. Phelps has been appointed instructor in physical diagnosis; and Dr. R. E. Peck has been appointed instructor in diseases of the nervous system.

**Cooper Medical College.**—A change in the time of beginning the course to conform to the almost universal custom of colleges has been decided upon by the Faculty of Cooper Medical College of San Francisco. The regular course of lectures will be given hereafter during the winter instead of the summer months. In order to effect the

transition to this new arrangement, the next regular course will begin January 3, 1899, and terminate August 12, 1899. The succeeding course will begin October 1, 1899, and terminate May 31, 1900. Thereafter the regular course will begin August 15th, each year, and continue for eight months.

**Chicago Medical Society.**—At a clinical meeting held November 2d, Dr. E. J. Senn exhibited a case of plastic operation following recurring carcinoma of the breast. Dr. J. R. Pennington presented a case of extensive fistula in ano and a case of rectal incontinence. Dr. Emil Ries demonstrated experiments regarding the value of calcium carbide in the treatment of carcinoma. Dr. A. R. Small presented a case of comminuted fracture of the patella. Dr. Alexander Hugh Ferguson presented a case of floating kidney, tubal pregnancy, and gall-stones—treated surgically on two different occasions. Dr. John Ridlon exhibited a case of infantile paralysis affecting only the shoulder-muscles.

**Convicted of Producing Criminal Abortion.**—Dr. Y. S. Troyer, a quack of the newspaper advertising class, was recently convicted, at Memphis, Tenn., of producing a criminal abortion, and sentenced to three years in the penitentiary. A patient went from his hands to the City Hospital for treatment, the abortion being "incomplete," and was induced by the surgeon in charge to appear against Troyer. The case was vigorously prosecuted by the attorney-general, who was extremely diligent in procuring evidence, and whose speech in the case was a most scathing denunciation of the criminal. The extreme penalty for this offense is five years.

**The Doctor in General Literature.**—Occasions for us to record the successful efforts of medical men in general literature have grown more frequent of late, we are happy to be able to say. The most recent production of the sort is by a well-known Cincinnati physician, Dr. Whittaker. The adventures of a young Russian exiled to Siberia, whither he is followed by his Greek sweetheart, form an interesting story on which are strung many curious bits of information on the most diverse subjects, together with no little ingenious speculation. The book is most scholarly, and we hope that it will be followed by others by the same accomplished author.—[*N. Y. Med. Jour.*]

**Thurber (Mass.) Medical Association.**—The following is a portion of a circular issued by Dr. C. H. Cole, president, and Dr. J. M. French, secretary, of the Thurber Medical Association:

The forty-fifth annual meeting of the Association was held October 13th, and was a very successful one. The secretary's report showed a membership of 42. During the year 28 papers have been read by 19 members, besides two papers and two addresses by specialists outside the society. In the number and variety of the papers, as well as their literary character and scientific value, the society has done better work during the past year than ever before. Twelve of the papers read, as well as full reports of the meetings, have been published in the *Atlantic Medical Weekly*, thus adding greatly to the interest of the members, especially those living at a distance and not constant in their attendance. It is therefore with deep regret that we have received the announcement of the suspension of the *Weekly*, the last number of which was published October 1st. Its subscription-list and good-will have been turned over to the PHILADELPHIA MEDICAL JOURNAL, which is unquestionably one of the best medical journals in the United States. Representing the

best element of the profession throughout the country, it is well worthy of the patronage of all our members.

The following was announced as the program of the meeting to be held November 3d: A case of Eclampsia, by Dr. Herbert McIntosh, of Medway; Nurses and "Nusses," by Dr. J. Cushing Gallison, of Franklin; paper (title unannounced) by Dr. W. W. Browne, of Blackstone.

**Obituary.**—DR. DESIRE ALEXANDRE GAILLARD, a native of Marseilles, and a graduate of the Faculty of Medicine of the University of Paris, France, in New York City, November 1st.—JAMES INGRAHAM PECK, assistant professor of biology in Williams College, and assistant director of the Marine Biological Laboratory at Wood's Hole, Mass., November 5th.—DR. PERRY BENSOTER, acting assistant surgeon U. S. Army, on duty at the general hospital at Lexington, Ky., of typhoid fever, November 4th.—DR. ARTHUR KEMBLE, Salem, Mass., October 27th, aged 59 years.—DR. JOHN ST. P. GIBSON, Staunton, Va., October 31st, aged 66 years.—DR. WASHINGTON A. SMITH, Cambridge, Md., October 29th, aged 77 years.—DR. EMANUEL L. BETTERLY, Wilkesbarre, Pa., November 3d, aged 68 years.—DR. MARIAN DE CAUSEY, Sealy, Tex., October 21st, aged 56 years.—DR. I. J. MILLER, Cincinnati, O., October 23d, aged 30 years.—DR. ROBERT STEIN, Dayton, O., October 20th, aged 37 years.—DR. J. H. OMO, Maysville, Ind., October 22d, aged 65 years.—DR. CLAUDE EYERETT, Promise City, Ia., October 20th, aged 27 years.—Dr. John Helme, New Brunswick, N. J., November 7, aged 59 years.

**New York State Association of Railway Surgeons.**—Program of the eighth annual meeting to be held in the Academy of Medicine, No. 17 West Forty-third Street, New York City, Thursday, November 17, 1898:

Morning Session, 9.30 sharp, Special Topic: "Surgical Service on Railways."—(a) "A Service with Local Surgeons Only," by Geo. Marsden, Esq., Middletown, Claim Agent O. & W. R. R. Discussion by F. A. von Moschzisker, Esq., New York, Special Claim Agent, Erie R. R., Dr. Theo. D. Mills, Middletown, and Dr. R. S. Harnden, Waverly. (b) "Employee's Mutual Relief Association, Physical Examination and Hospital Car, with Chief and Local Surgeons," by Dr. J. F. Valentine, Richmond Hill, N. Y., Chief Surgeon, L. I. R. R. Discussion by H. A. Wheeler, Esq., New York, General Claim Agent, L. I. R. R. (c) "An Endowed 'Home,' Relief Fund and Contract Hospital Service, with Chief and Local Surgeons," by O. O. Essed, Esq., Sayre, Pa., Supt. Penn. & N. Y. Div. L. V. R. R. Discussion by Dr. W. L. Estes, South Bethlehem, Pa., Chief Surgeon, L. V. R. R. (d) "Relief and Hospital Department," by Col. S. G. McLendon, Thomasville, Ga., Atty., Plant System. Discussion by Dr. Frank Caldwell, Waycross, Ga., Supt. and Chief Surgeon, Plant System. Discussion of Special Topic continued by Hon. W. H. Baldwin, Jr., New York, President L. I. R. R., L. L. Gilbert, Esq., Pittsburg, Pa., Assistant Counsel, Penna. R. R., Dr. G. P. Conn, Concord, N. H., Dr. Geo. Chaffee, Brooklyn, and others.

Afternoon Session, 2 o'clock. President's Address. "Diagnosis of Alleged Railway Injuries, Where no Visible Effects Exist," by Dr. M. Cavana, Oneida; "Hysteria, or Malingering?" by Dr. W. M. Townsend, New York; "Carbolic Acid in Surgery," by Dr. Seneca D. Powell, New York; "Remarks on Amputation of the Foot," by Dr. Henry Flood, Elmira; "Is a Railway Surgeon Justified in Performing Pirogoff's Amputation?" by Dr. G. N. Hall, Binghamton; "The Use of the Normal Salt Solution," by Dr. C. S. Parkhill, Hornellsville; "Extemporaneous Splitting"—A New Method, by Dr. Edward A. Tracy, Boston, Mass.

Officers for 1898: President, C. B. Herrick, Troy; vice-presidents, T. D. Mills, Middletown, W. B. Morrow, Walton; secretary, Geo. Chaffee, Brooklyn, treasurer, H. P. Jack, Canisteo.

**Health Reports.**—The following cases of smallpox, yellow fever, cholera and plague have been reported to the Supervising Surgeon-General of the U. S. Marine Hospital Service, during the week ending November 5, 1898:

## SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
PENNSYLVANIA:			
East Vincent Township,			
Chester County . . . . .	Oct. 20-29 . . . . .	3	

VIRGINIA:			
Norfolk . . . . .	Oct. 31 . . . . .	2	

## SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Oct. 1-8 . . . . .	1	
BRAZIL:			
Bahia . . . . .	Sept. 24-Oct. 1 . . . . .	25	3
" . . . . .	Oct. 1-8 . . . . .	23	2
Rio de Janeiro . . . . .	Aug. 26-Sept. 2 . . . . .	4	2
" . . . . .	Sept. 2-9 . . . . .	9	
" . . . . .	Sept. 16-23 . . . . .	17	4
ENGLAND:			
London . . . . .	Oct. 8-15 . . . . .	1	
INDIA:			
Calcutta . . . . .	Sept. 10-17 . . . . .		1
RUSSIA:			
Moscow . . . . .	Oct. 2-10 . . . . .	9	2
Odessa . . . . .	Oct. 1-8 . . . . .	2	1
Warsaw . . . . .	Oct. 1-8 . . . . .		6

## YELLOW FEVER—UNITED STATES.

MISSISSIPPI:			
Harriston . . . . .	Oct. 28-Nov. 5 . . . . .	2	1
Jackson . . . . .	Oct. 28-Nov. 5 . . . . .	17	2
Madison . . . . .	Oct. 28-Nov. 5 . . . . .	12	
Natchez . . . . .	Oct. 28-Nov. 5 . . . . .	7	2
Orwood . . . . .	Oct. 27-Nov. 5 . . . . .	1	

## YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro . . . . .	Aug. 19-26 . . . . .	10	7
" . . . . .	Aug. 26-Sept. 2 . . . . .	9	6
" . . . . .	Sept. 2-9 . . . . .	7	5
" . . . . .	Sept. 16-23 . . . . .	6	3
" . . . . .	Sept. 9-16 . . . . .	5	2

## CHOLERA.

INDIA:			
Bombay . . . . .	Sept. 20-27 . . . . .		2
Calcutta . . . . .	Sept. 10-17 . . . . .		2
Madras . . . . .	Sept. 17-23 . . . . .		31

## PLAGUE.

INDIA:			
Bombay . . . . .	Sept. 20-27 . . . . .		150
Calcutta . . . . .	Sept. 10-17 . . . . .		1

TURKESTAN:  
Samarcand . . . . . Epidemic.

**New York Academy of Medicine.**—At the meeting of November 3d, which was in charge of the Section on General Surgery, DR. EUGENE FULLER read a paper on **The Radical Treatment of Hypertrophy of the Prostate.** He said that every one knows the serious effects which confinement and operations often have on old people, and these must be taken into consideration in the radical treatment of these cases. For this reason he insisted upon reducing the duration of both the anesthesia and of the operation to the minimum. Every effort must also be made to guard against postoperative shock. The danger of hypostatic pneumonia was to be counteracted by frequent changes of position in bed, and the assumption of a semi-recumbent posture once or twice a day. The pioneer operations consisted in little else than cutting through the prostatic floor and then establishing perineal drainage. The results of such treatment were frequently unsatisfactory. McGill was the first to attack the prostate through the suprapubic opening,



but he often cut away a portion of the bladder, and this led to profuse hemorrhage. The writer advocated enucleation of the prostate by a method which he had described in 1895. The hypertrophy of the parts could be easily removed by this method without undue hemorrhage or injury to the vesical neck. Some hypertrophies could not be removed in this way, and if this was the case, a prostatectomy-forceps should be inserted and the dense hypertrophied tissue twisted or cut off. He preferred the use of two suprapubic tubes, and one layer of silkworm-gut to close the wound. Dr. S. Alexander had advocated opening the bladder suprapubically, perforating the vesical floor and establishing drainage through both the suprapubic and perineal wounds. It was an excellent method, but, in his opinion, his own was superior in that it was quicker and attended by less hemorrhage. He had tested the method personally in about 27 cases. He did not condemn either castration or Bottini's operation, for they were simple and in reach of many who would not perform the more severe operations, but neither of these seemed to him sufficiently radical. The result of castration on the prostate was often disappointing. The Bottini operation seemed to him applicable only to the less serious forms of prostatic obstruction, and the objection to the operation, in his mind, was that it inflicted more damage upon the bladder than upon the prostate. The radical treatment of prostatic obstruction should not be unduly delayed; it should be suggested whenever catheterism became exceedingly difficult, or it was impossible to prevent urinary decomposition.

DR. WILLY MEYER contributed a paper, entitled **Personal Experience with Bottini's Operation for the Radical Cure of Hypertrophy of the Prostate**. He gave a detailed account of five out of the twelve cases that he had treated by this method, and showed that they had been greatly improved. Of the seven others, 4 were relieved of all symptoms, 1 was much improved, 1 died ten days afterward from chronic septic pyelonephritis, and 1 died shortly after a suprapubic incision. So far, he counted 2 cures, 2 cases of marked improvement, 2 deaths independent of the operation, and 1 death indirectly connected therewith. Bottini, with an experience of 23 years, claimed to have seen no recurrences, and it certainly seemed difficult to believe that these grooves would fill up again. If they did, it would be easy to repeat the operation. He was now almost ready to advise all patients who had reached the stage of self-catheterization to submit to the Bottini operation, provided the obstruction was due to uncomplicated prostatic hypertrophy. In the discussion, DR. R. F. WEIR said that although the Bottini operation had been proposed 20 years ago, it had only been practised by a few, apparently because of the liability to infection where a part of the body was cauterized which could not be readily kept aseptic. Although Dr. Meyer had operated on a small number of cases only, the mortality was by no means insignificant. DR. S. ALEXANDER said that after an extended study of the pathology of the prostate, he had learned that the glandular form of hypertrophy was the most common in the early stages, and hence, he thought, prostatectomy would be done much more frequently and successfully in the future. He had performed prostatectomy by the perineal route in 14 cases, with 2 deaths, and had not found the operation more tedious or more often attended by severe hemorrhage than the other methods. Of the fatal cases, one death was from acute uremia, and the other from a general sepsis. The other patients recovered within five weeks. One great advantage which he claimed for his oper-

ation was, that it preserved the muscular fibers lying over the trigone, thus enabling the bladder to thoroughly expel its contents.

**New York Neurological Society.**—At the meeting held November 1st, DR. JOSEPH COLLINS presented for diagnosis a case, which those present were inclined to look upon as one of **infantile scurvy**. The patient was a girl of three years, who last January was noticed to have an area of ecchymosis about the right eye, and the eye was apparently shrunken. About the same time there was tenderness over the right brachial plexus. At times, these ocular symptoms would disappear. Then there developed certain hard swellings of the head, resembling those seen in angioneurotic edema. In spite of tonic treatment, the child steadily lost strength, and recently developed a nearly continuous temperature of about 103° F., and became more irritable. There had been no hemorrhages from the mucous membranes; the urine and blood had been examined with negative result, and antiscorbutic diet and treatment had not benefited the child at all.

DR. ONUFF presented a case of **superior tabes**, occurring in a colored man. The symptoms dated back to 1895. He presented certain peculiar contractions of the facial muscles, analgesia of the face and mucous membrane of the mouth, and some ataxia of the upper extremities.

DR. PEARCE BAILEY presented a male patient, 26 years of age, of good habits and physique, whose symptoms led to a diagnosis of **atypical progressive muscular atrophy**. The etiology was obscure. The first symptom was observed in June, 1896, and consisted in a dropping of the left eyelid and rotation outward of the left eyeball. The prominent symptoms were, an alternating ophthalmoplegia, symmetrical atrophies in the extremities, loss of flesh and strength, and increased nervousness. Examination showed weakness and atrophy of both triceps muscles and both anterior tibial groups. The atrophy was not so apparent in the legs, but the weakness of these members became evident when he walked. All of the affected muscles showed a diminished response to the faradic current, and while there was no reversal of the reaction with the galvanic current, the contractions were, in places, distinctly vermicular. In the discussion, DR. C. L. DANA said that he had seen several of these cases in which the disease had ceased to progress, and the patient had been able to live an active life for 20 years or more. He thought that when progressive muscular atrophy began with ophthalmoplegia and proceeded downward, the atrophies were likely to be symmetrical.

DR. JOSEPH COLLINS reported a case of **tumor of the spinal cord**, occurring in an unmarried negress, 23 years of age, who had had an infantile uterus and a sarcomatous ovary removed in April, 1896. She came under observation shortly before her death, on September 15, 1898, and stated that the illness had begun on August 29th, by a feeling of numbness and a loss of power in the legs. The noteworthy features of the case were: (1) the sudden onset; (2) the simultaneous and complete overthrow of the functions of the bladder and bowel; (3) paraplegia dolorosa; (4) localized pain in the back; (5) absence of radiating neuralgic pain in the extremities; (6) the early occurrence of trophic symptoms in the shape of a bed-sore. The autopsy revealed a tumor growing through the dura of the spinal cord and implicating the pia in the lower dorsal and upper lumbar region, and a connection between this and a retroperitoneal neoplasm. Microscopical examination showed both the dural and the abdominal tumor to be round-cell sarcoma.



DR. CHARLES L. DANA read a paper on **"The Combined Scleroses of Pernicious Anemia,"** and added one more case to those already reported by him. He said that he had analyzed 17 of these cases which had been reported with autopsies. The initial nervous symptom was always a persistent paresthesia, usually of the feet, associated with some weakness, and quickly followed by ataxia, loss of power, and pains in the back and limbs. Often within one or two months the symptoms were well developed, and the disease usually reached its acme in from 6 to 12 months. While it was probable that recovery occasionally took place, a fatal termination usually ensued in from 6 months to 2 years. The essential nature of the process was a primary nerve-degeneration affecting first the neuraxons in the columns of Goll, and the crossed pyramidal tract. It usually developed between the ages of 50 and 50, often following the acute infections, prolonged diarrhea, lead-poisoning, malaria, etc. In 10% of the cases, pernicious anemia was also present; in the others, there were varying degrees of anemia. In the discussion, DR. W. B. NOYES referred to a case recently seen by him, that of an Italian of 30 years, who presented at first the ataxia of a spastic paraplegia, with but little sensory disturbance, and with marked anemia. Although at first almost completely paraplegic, under the administration of iron he improved very rapidly, and ultimately recovered completely from his paraplegia.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon A. M. F. DE YARRE will proceed to the United States, reporting on arrival there to the Surgeon-General by letter.

Leave for one month on surgeon's certificate, with permission to return to the United States, is granted Lieutenant Col. V. HAVVIE, chief-surgeon, Department of Santiago. Oct. 12.

Major S. Q. ROBINSON, surgeon, is relieved from duty as medical inspector and detailed as acting chief surgeon, of the Department of Santiago.

Captain R. S. WOODSON, A. S., is detailed as medical inspector of the Department of Santiago.

Acting Asst. Surgeon J. A. DENWOODY will proceed to the United States, reporting on his arrival by letter to the Surgeon-General.

Acting Asst. Surgeon JAMES B. CUTTER is relieved from duty at the division-hospital and will report at the Presidio for duty in the post-hospital.

Acting Asst. Surgeon JOHN A. MURTAGH will proceed from Fort Logan to Camp Pilot Butte, Wyo., for duty, relieving Acting Asst. Surgeon R. HARVEY REED. The contract of Dr. Reed will be annulled.

Acting Hospital Steward CHARLES G. BRYANT will proceed from Fort Grant to Camp Pilot Butte, Wyo., for duty.

Major JEFFERSON D. GRIFFITH, acting chief surgeon, 1st Army Corps, will proceed to Atlanta, Macon, Columbus, Americus and Albany, Ga., on business in relation to the selection and preparation of camps to be located.

The Secretary of War orders that the General Field-Hospital at Camp Hamilton, Lexington, Ky., shall hereafter be known and designated as John Blair Gibbs U. S. A. General Hospital, in honor of Acting Asst. Surgeon JOHN BLAIR GIBBS, U. S. Navy, who died June 12, 1898, from wounds received in an engagement with Spanish Infantry.

Leave for 30 days is granted Acting Asst. Surgeon ROBERT E. BELL. Oct. 27.

Acting Asst. Surgeon JOSE LUG VINA will proceed to New York City for transportation to Ponce, Porto Rico, for assignment to duty.

Acting Asst. Surgeon ALAN B. MURRAY will proceed to Portland, Head, Me., for duty.

Hospital Steward WM. PRAKE, appointed Oct. 24, now supposed to be at Fort Clinch, Fla., is assigned to duty at that post.

Acting Hospital Steward WALTER S. BAKER will be relieved from duty at Fort Wadsworth and will proceed to Fort Greble for duty.

Hospital Steward ROBERT MARSDEN is assigned to duty at Bedloe's Island, N. Y.

Acting Hospital Steward JOHN H. BAUSE will proceed to Washington Barracks for duty.

Major EDWARD C. CARTER, brigadesurgeon, will proceed to Chickamauga Park and assume charge of the Sternberg General Hospital to relieve Major R. EMMETT GIFFIN, chief surgeon; Major Giffin will await orders at Chickamauga Park.

Captain CHARLES F. KIEFFER, Asst. Surgeon, on the expiration of his present sick-leave, will proceed to his proper station, Fort Meade, for duty.

Acting Asst. Surgeon JOHN E. BACON will proceed from Chickamauga Park to Fort Hancock for duty.

The orders of Oct. 19, directing Acting Asst. Surgeon MILTON D. NORRIS to proceed from the Sternberg U. S. General Hospital, Chickamauga Park, to Jefferson Barracks for duty are revoked. Leave for 7 days granted to Acting Asst. Surgeon WILLIAM W. CALHOUN is extended 7 days. Oct. 28.

Acting Asst. Surgeon LAWRENCE A. FELDER is relieved from duty as attending surgeon with 1st Alabama Volunteer Infantry, at Birmingham, Ala., and will proceed to Sullivan's Island.

Acting Asst. Surgeon VOLNEY McR. SCHOWALTER is relieved from duty at camp at Hiltonhead, S. C., and will proceed to Fort Morgan for duty.

Acting Hospital Steward SAMUEL A. SLOUGH will report at Eagle Pass for duty.

Colonel WILLIAM H. FORWOOD, A. S. G., will proceed to Savannah, Ga., on business pertaining to the construction of U. S. General Hospital to be erected at that place.

Major CHARLES M. GANNY, brigade-surgeon, is relieved from duty at Fort Mason, and from further duty in the field with the 4th Army Corps, at Huntsville, Ala., and will proceed to Columbus, Ga., and report to Major-Gen. WILLIAM LUDLOW, commanding 2d Division, 1st Army Corps, for assignment to duty as chief surgeon of that division.

Major EDWARD O. SHAKESPEARE, brigade-surgeon, will proceed to Camp Meade, Pa., on business pertaining to the investigation of typhoid fever.

Extension of leave on surgeon's certificate of disability granted Major PHILIP G. WALES, brigade-surgeon, is further extended 1 month on surgeon's certificate of disability. Oct. 29.

Major JOHN M. G. WOODBURY, chief surgeon, is honorably discharged, to take effect Dec. 27.

A board of medical officers, to consist of Major WALTER REED, surgeon, Major VICTOR C. VUGHAN, division surgeon, and Captain GEORGE D. DE SHON, A. S., is appointed to meet at the Army Medical Museum Building, Washington, D. C., Nov. 2, for examination of acting assistant surgeons.

First Lieutenant DEANE C. HOWARD, A. S., is relieved from further duty at Fort Crook, and will proceed to Fort Columbus for duty.

Major RUDOLPH G. EBERT, surgeon, will proceed from Vancouver Barracks to San Francisco, Cal., for temporary duty, and when his services are no longer necessary will return to his proper station.

Leave for 1 month on account of sickness is granted Major CHARLES R. PARKER, brigade surgeon. Oct. 31.

The following named brigade-surgeons U. S. V., recently appointed, are assigned as follows: Major MARTIN L. FOCHT, now at Lewisburg, Pa., will proceed to Augusta, Ga., and report to the commanding general, 2d Army Corps, for assignment to duty; Major FRANCIS T. MARCILLI, on the expiration of his present leave, will report to the commanding officer, U. S. Hospital Ship "Relief," for duty; Major WILFRED TURNBULL, now at Santiago, Cuba, will report to the commanding general, Department of Santiago, for assignment to duty; Major GEORGE G. GROFF, now in Porto Rico, will report to the commanding general, Department of Porto Rico, for assignment to duty.

Leave granted Acting Asst. Surgeon ANDREW J. WYNTER is extended 1 month on account of sickness. Oct. 31.

The following named acting asst. surgeons will proceed from Chickamauga Park, Ga., to their respective homes, hereinafter designated, and on arrival there will report by letter to the Surgeon-General of the Army: JESSE ROWE, to Abingdon, Ill.; SURGEON CHEEK, to Danville, Ky.; DAVID T. CORDE, to New York City.

Acting Asst. Surgeon EDWIN C. SHATTUCK is relieved from duty at St. Francis Barracks and will proceed to camp at Hiltonhead, S. C., for duty.

Captain WM. F. LIPPITT, JR., A. S., is relieved from duty at Washington Barracks and will proceed to Huntsville, Ala., on business pertaining to the settlement of his accounts as acting medical-supply officer, 4th Army Corps, and on completion of this duty will proceed to Fort Myer.

Major HENRY P. BIRMINGHAM, brigadesurgeon, will report to Col. Dallas Bache, A. S. G., president of the examining board appointed to meet at the Army Medical Museum Building, Washington, D. C., for examination for promotion.

The following named officers, recently appointed, are assigned as follows: Major WILLIAM J. KERNACHAN, brigadesurgeon, 4th at Huntsville, Ala., will report to the Commanding General, 4th Army Corps, for assignment to duty; Major WILLARD S. H. MATHIAS, brigadesurgeon, will report to the Commanding General, Department of California, for assignment to duty; Major WILLIAM B. WINS, brigadesurgeon, now at Huntsville, Ala., will report to the Commanding General, 4th Army Corps, at that place for assignment to duty; Major WILLIAM DOLZ, brigadesurgeon, now at Santiago, Cuba, will report to the Commanding General, Department of Santiago, for assignment to duty.

The following named officers are relieved from the assignments made in G. O. 172, Oct. 22, this office, and they are assigned as follows: Major JOHN L. MACUMBER, brigadesurgeon, will proceed to Huntsville, Ala., and report for duty as chief surgeon, 1st Brigade, 1st Division, of the 4th Army Corps; Major JAMES D. GLENNAN, brigadesurgeon, will report at Lexington, Ky., for duty as chief surgeon, 1st Brigade, 2d Division, 1st Army Corps.

The following named officers are honorably discharged from the Volunteer Army: Major ARTHUR SNOWDEN, brigadesurgeon.



Oct. 31: Major JOHN W. BAYNE, brigade-surgeon, Oct. 31: Major ADRIAN S. POLHEMUS, captain and assistant surgeon, U. S. Army), as brigade-surgeon of volunteers, only, Nov. 30; Major CHARLES B. EWING, captain and assistant surgeon, U. S. Army), as brigade-surgeon of volunteers, only, Nov. 30.

The order directing Captain WM. F. LEWIS, A. S., to return to his station at Sullivan's Island, S. C., is amended so as to direct him to report to Brigade-General Louis H. Carpenter, commanding cavalry brigade, 7th Army Corps, Huntsville, Ala., for duty.

Par. 12, S. O. 249, Oct. 21, this office, relieving Captain NORRIS STRONG, A. S., from duty at Chicago, Ill., and directing him to report at Columbus Barracks, is amended to direct him to report to Colonel Dallas Bache, A. S. G., president of the examining board at the Army Medical Museum Building, Washington, D. C., for examination for promotion and upon the conclusion of his examination to proceed to Columbus Barracks for duty.

Acting Asst. Surgeon FRANCIS C. HOLLIDAY will proceed to Willets Point, N. Y., for duty.

Acting Asst. Surgeon WM. C. WARMSLEY will proceed to New York City for transportation to Santiago, Cuba, for duty.

Major JEFFERSON D. GRIFFITH is honorably discharged to take effect Dec. 2.

Leave to include Dec. 2, is granted Major JEFFERSON D. GRIFFITH, chief surgeon.

Major WILLIAM STEPHENSON, brigade-surgeon, is relieved from further duty in Porto Rico and will proceed to Santiago, Cuba, for assignment to duty.

Captain GEORGE M. WELLS, A. S., on the expiration of present sick leave will proceed to Ponce, P. R., for duty in the U. S. General Hospital.

Leave for 1 month from Oct. 23, on account of sickness, is granted First Lieutenant BAILEY K. ASHFORD, A. S.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon L. W. SPRATLING, detached from the naval hospital, Philadelphia, Pa., November 10, and ordered to the naval hospital, Yokohama, Japan, by steamer of Nov. 19.

Passed Asst. Surgeon J. STOUTHON, detached from the naval hospital, Yokohama, Japan, and ordered to the Asiatic Station.

Passed Asst. Surgeon N. J. BLACKWOOD, ordered to the naval hospital, Philadelphia, Pa., Nov. 10.

Surgeon F. W. F. WIEBER, ordered to the naval station, San Juan, Porto Rico, via "Solace."

Surgeon E. H. GREEN, detached from the Naval Dispensary, Washington, D. C., and ordered to the headquarters of the Marine Corps.

Asst. Surgeon A. G. GRUNWELL, detached from the headquarters of the Marine Corps and ordered to the "New Orleans."

Surgeon V. C. B. MEANS, ordered to the marine recruiting rendezvous, San Francisco, Cal., and to special duty attending officers of the Navy and Marine Corps.

## Foreign News and Notes.

**A new Infectious-Diseases Sanatorium** has recently been inaugurated at Huddersfield, England. It has been constructed in the Renaissance style of architecture, at a cost of about \$150,000, and is provided with accommodations for 100 patients.

**A Retreat for Medical Men.**—M. Bron Félix has bequeathed to the Rhône Medical Association of France a part of his fortune for the purpose of organizing a "retreat" for the aged and infirm medical men of the Rhône and Isère Departments, an institution where children of medical men who are old or needy are to be brought up, and an orphanage for the children of medical men.

**Suit Against a French Surgeon.**—A Lyons surgeon was recently sued for \$2,000, the allegation being that he was responsible for the death of a lady upon whom he had operated. The decision was to the following effect: "The patient appears to have died from septic troubles connected with metritis determining pulmonary congestion following the operation. But the operator can not be held responsible for complications that can not be foreseen and which rarely occur. If such responsibilities were admitted the practice of medicine in many cases would be rendered impossible."

**Dr. Sidney Coupland**, physician to the Middlesex Hospital, has been appointed a Commissioner of Lunacy. There are three medical Commissioners of Lunacy for England. Their salaries are high and their work arduous, for they are practically responsible for the conduct of the private lunatic asylums of the country. It need hardly be said that only men of the highest professional attainments are appointed.

**Vital Statistics of the Italian Army.**—From recently published official statistics it appears that during 1896, 151,438 Italian soldiers, out of a total army-strength of 204,382, were treated in the hospitals and infirmaries. There were 1,184 deaths, of which 536 were due to infectious diseases, 225 being attributed to typhoid fever. The mortality was greatest during the first year of service, and between the ages of 21 and 23 years.

**A New Red-Cross Decoration.**—A new decoration, "The Red-Cross Medal," has been founded by the German Emperor, at the suggestion of the Empress Victoria Augusta, Lady Patroness of the German Red-Cross societies. The medal, of which there are to be three classes—bronze, silver, and gold—is to be bestowed on persons of both sexes, without distinction of rank or position in life, for special services rendered to the Red-Cross cause.

**The Anatomical Museum of Cambridge University**, England, has been considerably enriched by a second donation from Professor Flinders Petrie, consisting of 19 cases of skulls and bones from his excavations at Hierakonopolis, Egypt. This donation, consisting, as it does, of remains of the prehistoric and earliest dynastic races, makes the collection thoroughly representative. It consists now of specimens from all periods of Egyptian history, from prehistoric times to the battle of Tel-el-Kebir.

**The German Pathological Society**, which was organized by the pathologists of Germany last year at Braunschweig, met in first scientific session after the recent meeting of the German Naturalists and Physicians at Düsseldorf. The meeting was held under the presidency of Professor Rudolf Virchow, and was well attended by representative pathologists of Germany, including von Recklinghausen, Ponfick, Ziegler, Köster, Orth, Böstrom, and numerous others. In addition Professor Chiari, of Prague, Professor Bouchard, of Paris, Professor Pio Foa, of Turin, and others were present. Scientifically, also, the meeting was a marked success.

**Hydrophobia in the Philippine Islands.**—The *British Medical Journal* states that according to a local scientific journal (*Cronica de Ciencias de Filipinas*) rabies, when it attacks the human subject in the Philippines, is popularly believed to occur under two distinct forms, to wit, hydrophobia properly so called, and aërophobia; the malady in the first form being characterized by an intense horror of all lustrous objects, including water, while in the second form the spasms are excited by air-currents, however slight. A further subdivision into furious madness, when hyperexcitement of the nervous centers prevails, and dumb madness, when the chief symptoms are paralytic, is also generally recognized by observers. The following treatment is customarily adopted: (1) Cauterization of the wound with a live ember, or by means of the actual cautery; (2) washing the part with a concentrated decoction of a plant known locally as "macabuhay" (*Menispermum crispum*); (3) the administration in copious drafts of a warm infusion of cau-

ella (*Laurus cinnamomum*) until the effects show themselves in exaltation of the nervous system. The canella, which should be persevered with for a fortnight, is said to cause profuse perspiration lasting four or five hours, the patient meanwhile being kept closely enveloped in thick blankets in order to encourage the action of the skin. In the opinion of the heaven-born physicians who chiefly represent the medical faculty the foregoing treatment is nothing less than infallible, provided it be commenced early enough, but unfortunately trustworthy statistics are lacking.

**A New Atmospheric Gas.**—Professor Noevius claims, in *Wiedeman's Annalen*, to have discovered still another gas in the atmosphere. The evidence is not very strong, and is entirely spectroscopic, but should stimulate further investigation in the same direction. After eliminating all lines due to electrode matter, a number of lines common to the blue argon-spectrum, and also to the nitrogen-spectrum, were discovered, and the supposition is advanced that they are due to an unknown gas that remains as an impurity in the preparation of argon, and also in the preparation of nitrogen. A coincidence with one of the lines of krypton was noticed, but in other respects the lines seemed to be unlike any previously noted.

**The health of the Khartoum force** was wonderful throughout its long and arduous Southern march, and the death-rate and sickness-rate arising immediately out of the actual contest with the dervishes was strikingly low; but since the battle of Omdurman put an end to the war, a somewhat alarming amount of enteric fever has broken out among the British troops. Numbers of them, chiefly the younger men, have sickened during the return marches to Cairo; at Cairo there are deaths daily from typhoid in the service hospital; and the First Battalion of Grenadier Guards, which reached London in the middle of October, have now many cases in the station hospital in Westminster. In the return voyage down the Nile the regiment lost thirteen men from this cause.

**A Medical Man Condemned to Death.**—John Lloyd Whitmarsh, a medical man residing in London, was, on October 26th, at the London Central Criminal Court, condemned to death for the murder of a girl named Bayley, who died from the results of his attempts to procure criminal abortion. The prisoner was tried in the summer, on which occasion the jury disagreed and were discharged, but now, at the second trial, a verdict of guilty has been returned. It is certain that Whitmarsh will not be hanged, for the jury added to their verdict a strong recommendation to mercy, and the judge, in passing the death-sentence, promised to give the words of the jury all possible force in the right quarter; but as Whitmarsh is over 60 years of age it is equally certain that he will pass the rest of his life in prison. It is possible that the death-sentence in this case may give pause to other light-hearted traffickers, both medical and lay, in their disgusting crime, and regarded in this light the sentence is a salutary one. But it provides a funny example of the vagaries of the law. It is not so long since the English Attorney-General, Sir Richard Webster, in prosecuting a man named Collins for this same crime, pointed out to a jury that where death ensued as a sequel to an act, however illegal, which was not necessarily a dangerous act, it would be sound law to return a verdict of manslaughter. As a consequence the jury, whose natural feelings were averse to the condemnation to death of a man who, whatever his crimes, had certainly not designed to take life, brought in Collins as guilty

of manslaughter, and he was sentenced, as we recorded at the time in the *JOURNAL*, to a term of hard labor. His crime was exactly on all fours with the crime for which Whitmarsh has been condemned to death, but in the latter case the judge pointed out to the jury that it was only open to them to bring in the milder verdict of manslaughter if they were prepared to believe that Whitmarsh thought the operation *could not possibly be a dangerous one* for the woman. The credulity of the jury, to the credit of their understanding be it said, would not go so far; so that Whitmarsh is condemned to be hanged for the sin which Collins is expiating by a term of imprisonment.

**Erythema Enematogenes.**—At a recent meeting of the Clinical Society of London, Dr. G. F. Still read a paper on a rash in children due to enemas, of which, he pointed out, few cases have as yet been recorded, and that while the affection is of itself of little moment, it is of importance because it may be mistaken for some of the specific exanthems of children. As indicated by 26 cases which have been studied, the rash has a characteristic appearance and course. There seems to be no reason to doubt the causal relation of the enema to the rash. In some children repetition of the enema was followed repeatedly by the rash. Usually a bright-red, patchy erythema appears, especially on the front of the knees, the backs of the elbows, the buttocks, and the face; in some cases, however, the rash is scarlatiniform, or the two forms may be combined. It appears most often from 12 to 24 hours after the enema, and lasts usually from 24 to 48 hours; there is rarely, if ever, any constitutional disturbance; the amount and time of retention of the enema and the duration of the preceding constipation do not seem to affect its occurrence. The rash occurs most commonly after a first enema, and is more prone to develop in children over 6 years of age than in younger ones. Scarlet fever, *rötheln*, and measles are the exanthems for which an enema-rash is most likely to be mistaken. The absence of constitutional symptoms, of sore throat, coryza, and pyrexia, and often slight differences in the character and distribution of the rash, together with its appearance just after an enema, may serve to differentiate the enema-rash. The differentiation from scarlet fever is sometimes rendered difficult by the fact that desquamation may occasionally follow an enema-rash. It is thought that a certain number of cases of so-called "surgical scarlet fever" may be the result of an enema given before the operation. This enema-rash is regarded as the result of vasomotor dilatation, but the manner of its production is uncertain. Three possible explanations suggest themselves: (1) Absorption of some toxic substance from the soap of the enema, possibly from the fats or the resins used; (2) absorption of some fecal toxin, thrown into solution by the enema; and (3) a reflex effect on the vasomotor centers. While arguments might be adduced in support of each supposition, it is deemed most reasonable to regard the rash as dependent upon the absorption from the intestine of some constituent of the feces or the enema, including vasomotor disturbances.

**The Treatment of Aortic Aneurysm by Injections of Gelatin.**—At a recent meeting of the Académie de Médecine de Paris, Lancereaux made an important communication upon this method of treatment, which has yielded remarkable results in his hands. One patient had an aortic aneurysm which projected anteriorly. Subcutaneous injection of a solution of gelatin in artificial serum was made and the patient got well. Some time previously the blood had



escaped from the aneurysm and coagulated just under the skin; the patient's state was very critical, but injections of gelatin promptly brought about coagulation of the extravasated blood. In the second case the patient suffered from aneurysm of the aorta which had not come to the surface. By means of the gelatin-injection treatment all the pain disappeared and the dilated superficial veins diminished in volume. Lancereaux has treated by this method many aneurysms of the aorta and one subclavian aneurysm, with similar success. Two other patients who suffered from aortitis and dilatation presented, however, no amelioration. They died, and postmortem examination showed that no coagulation had taken place in the dilated portion of the artery. The operative proceeding was as follows: A solution of 2 grams of gelatin in 100 grams of saline solution is made, and this is injected under the skin of the thigh into the subcutaneous cellular tissues in a dose of 250 cu. cm. The injection is renewed at varying intervals of time—from every 2 days to 15 days. As a rule, 10, 15, or 20 injections are quite enough to obtain a complete cure. Huchard has employed the method in many cases, one of which was very serious, the pulsation of the aneurysm being very strong. A complete cure was obtained by means of 20 injections. The sole inconvenience attaching to this treatment is that it was very painful. In a patient suffering from pulmonary tuberculosis, with constant hemoptysis due to little aneurysms, Huchard employed the same treatment, and succeeded in stopping the hemoptysis. This, however, did not prevent the patient from dying later from the pulmonary disease. Certain precautions have to be observed in this method of treatment, for a patient under the care of Boisset, in whom injections had been made on a small scale lest the blood should coagulate all at once, died very suddenly from embolism. The injections must never be made in the neighborhood of the aneurysmal sac, and still less into the aneurysmal sac itself.—[*Lancet*.]

**Medical Study in Vienna.**—Dr. Jay Perkins, of Providence, R. I., writes from Vienna as follows: Both in America and here one hears frequently two questions: Are there not as good physicians in America as in Europe? and What advantage is it to American physicians to come to Vienna to study? To the former question the answer is certainly yes; there are as good physicians and as talented men in the medical profession in America as here. In comparing the men here with many in America, the question is What men here are good enough to be compared with Americans? and not Can Americans be compared with men here? No place in America can, however, furnish the material and opportunities for study that Vienna affords, and this is the answer to the second question.

There is here a hospital with 3,000 beds, and autopsies are held upon all patients who die. The clinical diagnosis is written upon a sheet that goes to the autopsy-room with the body. The person responsible for the diagnosis is present, as also are many others. By thus comparing the postmortem findings with the clinical signs and symptoms one naturally becomes skilled in diagnosis. It is to be hoped that the trustees and benefactors of American hospitals will in time appreciate the fact that great benefits can be bestowed upon the sick by aiding the thorough investigation and understanding of diseases, and that in the future, in estimating the work done by the hospitals, as to the amount of good accomplished, they may look more to this than merely to the number of sick treated. Of course the handling of such things must be quite different in a republic than in a monarchy;

but if the advantage to be derived from autopsies were appreciated by physicians themselves, I believe that the people would also soon come to view the matter in a more rational manner.

The autopsies here are held in the forenoon, and from 5 to 6 P.M.; the material is demonstrated to students. As an example of the wealth of material it can be mentioned that one night recently three cases of carcinoma of the esophagus were presented, and on another night three post-abortion uteri.

In the wards of the hospital the patients are under the absolute control of the physician and can be and are used freely for teaching purposes. When the patient is so sick that repeated examinations would be injurious, a notice that this patient is not to be examined is put at the head of the bed. Thus the patients are used for the good of others who are to be sick and at the same time make some return to the physician for his attendance; and apparently the most of them do this willingly. It is thus possible for work to be done here on a thoroughly scientific basis. This is a great stimulus for rational medicine, but a depressant to exclusive systems and Christian science. They have no place and no advocates in Vienna.

As to the treatment of diseases, medical or surgical, Austria has no advantage over America, and there are certainly many things the latter could teach the former; and were the Austrians as enterprising as the Americans, more of them would find the other side of the Atlantic. During the summer there are not so many courses nor so much material as during the winter, but neither are there so many students, and certainly there has been no trouble this summer in finding plenty of good teaching and opportunities for work.

The most noteworthy course of the summer is that in pathological anatomy, by Professor Alexander Kolisko. For many years Dr. Kolisko has been one of the leading men for Americans. Besides the excellence of his teaching and an abundance of material, he is very enthusiastic, and has ever been a great friend to the American student.<sup>1</sup> The month of September has seen him give his last course in pathology, as he, this month, begins his duties as professor of legal medicine.

Dr. Albrecht, who will now take Dr. Kolisko's former place, is a worthy successor. For years he has been Dr. Kolisko's assistant and is a thorough master of his subject, and a forcible and clear speaker. He gave the course during August, while Dr. Kolisko was on his vacation, and won many expressions of praise from American students. Dr. Oscar Stoerk has taken Dr. Albrecht's place as teacher of pathological histology. Dr. Stoerk speaks a very clear German (some of the teachers do not) and also has a good command of English.

In clinical medicine one of the most popular men is Dr. Kovacs, whose clinic is held at the Franz Josef Spital. In the General Hospital Dr. Müller<sup>2</sup> is one of the best men. He is especially good on auscultation and percussion. Other excellent courses in clinical medicine have been given during the summer by Drs. Ortner, Schlesinger and others.

On diseases of the ear Dr. Alt, in Gruber's clinic, has given an excellent course.

In diseases of the throat the most satisfactory course has been in the clinic of Prof. Karl Stoerk.

Dr. Hajek is now giving his course in Nothnagel's clinic as a university course, he having recently been appointed a privatdocent.

<sup>1</sup> He was recommended by Americans as the man who as a compliment to them, celebrated the Fourth of July as a holiday. He was removed from the place.

There are many courses on every subject, and almost anyone can find clinics and good teaching in any line.

Most of the courses taken by Americans are private courses and it thus makes but little difference to them whether the University is open or not. Some, however, try to attend the regular clinics, as those of Kaposi on the skin, Politzer on the ear, and others.

As to Vienna itself, it has not been a very uncomfortable place during the summer. It is easy to find fair accommodations, but one must not expect all the luxuries of American life. The sanitary arrangements of the houses are bad, and in the most of the houses bath-tubs are unknown. There have been so many Americans here that many of the places know what kinds of food they like, and so one gets along very well on that score. The streets of the city are dirty.

### Verdict of Manslaughter in the Case of the Death of Harold Frederic.

—The Coroner's jury that investigated the death in London, on October 19th last, of Harold Frederic, the well-known author and newspaper-correspondent, rendered a verdict on November 8th, of manslaughter against Miss Kate Lyon, a member of the late Mr. Frederic's household, and Mrs. Mills, the Christian scientist, who attended Mr. Frederic during his last illness. We shall discuss this question editorially in next week's issue.

**Obituary.**—DR. HORACIO A. JIMENEZ, professor of clinical medicine at the University of Cadiz, Spain.—DR. C. G. GIBELI, professor of botany and director of the Botanical Institute at Turin, Italy.—DR. EWALD ALBERT GEISLER, author (in conjunction with Professor Moller) of the *Real-Encyclopädie der Pharmacie*, aged 49 years.—WILLIAM RUTHERFORD ANCRUM, M.D., F.R.C.S., M.R.C.P., Gloucester, England, October 24th, aged 82 years.—PROFESSOR ANXIO CASELLI, professor of clinical surgery in the University of Genoa, October 19th, aged 52 years.—DR. V. A. SUBBOTIN, professor of hygiene in the University of Kiëff.—DR. KOS TIURIN, professor of pharmacology in the Military School of Medicine at St. Petersburg.—DR. K. F. SLAVINSKY, professor of clinical gynecology in the Military Medical School at St. Petersburg.

**The Microphonograph in the Education of the Deaf.**—In a recent number of the *Presse Médicale*, Laborde records the following conclusions, based upon a series of experiments undertaken by Gélle and himself with the microphonograph of Dussaud: The method not only awakens the function of a perceptive organ hitherto unemployed, but enables the patient to form an auditory memory that was previously absent. In a sense, the auditory organ is renovated by the renewal and awakening of its function. This functional and organic restitution is such that the penetration of sounds, increased in intensity and constantly repeated, to the perceptive centers, creates in them a true state of mental obsession of such a kind as to aid in a marked degree the revival and progressive growth of the functions. When after a suitable number of exercises (and this number is soon reached), the auditory image of a vowel, that is to say, one of the simplest representatives of speech, and with which it is desirable to commence the education, has been fixed in the mind with the aid of the instrument, the patient is able to hear that vowel when simply pronounced with the voice raised. Finally, the patient is able himself to pronounce with accuracy a vowel of which he has acquired an auditory image.

## Philadelphia News and Notes.

**Obituary.**—DR. JAMES D. LINTON, a graduate of Jefferson Medical College, November 2d, aged 60 years.

**Dr. Chas. H. Frazier**, a member of the editorial staff of the PHILADELPHIA MEDICAL JOURNAL, has been unanimously elected surgeon on the visiting staff of the Philadelphia Hospital, succeeding Dr. J. William White, resigned.

**Red Cross Hospital.**—The Red Cross Society opened, on November 2d, the building formerly occupied by the Epileptic Hospital, at Lambert and Cherry streets, for the care of sick soldiers. During the day 60 soldiers were brought from Camp Meade and placed in the hospital.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending November 19th:

Monday, November 14—College of Physicians of Philadelphia—Section on General Medicine.

Tuesday, November 15—College of Physicians of Philadelphia—Section on Ophthalmology.

Thursday, November 17—College of Physicians of Philadelphia—Section on Gynecology.

**A Newspaper Quotation.**—From the *Bedford Inquirer* of October 28th, we clip the following item:—

"If your eyesight is poor or your eyes are diseased, do not fail to see Dr. W. H. Sears at the office of Dr. H. B. Strock, on Friday, Nov. 4. Dr. Sears is at present connected with the eye department of the Philadelphia Hospital, and is the proper person to consult in eye-diseases."

And again:

"Dr. W. H. Sears will be at the office of Dr. H. B. Strock, on Friday, Nov. 4."

**Vital Statistics of Philadelphia** for the week ending November 5, 1898:

Total mortality ..... 394  
Children under 5 years of age ..... 82

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis .....	.....	62
Diphtheria .....	100	39
Nephritis .....	.....	36
Pneumonia.....	.....	25
Heart-disease .....	.....	22
Senility .....	.....	18
Typhoid fever.....	170	14
Casualties .....	.....	14
Apoplexy .....	.....	13
Eclampsia.....	.....	11
Scarlet fever .....	21	2

**College of Physicians of Philadelphia.**—At a meeting held November 2, Dr. FREDERICK A. PACKARD read a paper on "**The Abuse of Ergot in the Treatment of Hemorrhage.**" He contended that the administration of ergot being productive of an increase in blood-pressure, which it is desirable to avoid, the exhibition of the drug is contraindicated in all varieties of hemorrhage, with the possible exception of the postpartum variety. Attention should rather be directed toward the administration of remedies such as tend to favor coagulation of the blood, as calcium chlorid, etc., the mechanical favoring of a clot and its non-disturbance, particularly by rest, etc. In the discussion, DR. E. W. WATSON coincided with Dr. Packard, particularly with respect to pulmonary hemorrhage and



hemorrhages from eroded vessels. He thought, however, that in cases of capillary hemorrhage, as for instance in epistaxis, ergot is of great service locally and is also indicated internally. DR. H. A. HARE said that the remedy is distinctly indicated in case of capillary hemorrhage, but that it can do no good in hemorrhage from a larger vessel. He drew attention to the value of tannic acid and antipyrin in hemorrhage from larger vessels. DR. PACKARD spoke of the difficulty of distinguishing between arterial and capillary hemorrhage unless the bleeding point could be inspected.

DR. H. A. HARE read a paper entitled "**The Strength and Reliability of Drugs,**" pointing out the strength of many important drugs is dependent upon a variety of circumstances, such as the locality of growth, the nature of the soil, the temperature, sunlight, moisture, the season of gathering, etc. Even if botanically perfect, it is difficult for the druggist to assure himself of the quantity of active principles that a certain specimen contains. When, in addition, the number of unscrupulous wholesale and retail dealers is considered, the liability of getting an inert preparation is much increased. Dr. Hare advocated that all drugs should be subjected to chemical assay or should be tested physiologically.

DR. W. REYNOLDS WILSON read a paper entitled "**A Study in the Physiology of the Newborn,**" discussing consecutively the respiratory system, the circulatory system, the gastrointestinal system, the urinary system, the skin, the ductless glands, the nervous system, the special senses, the psychic apparatus, and the temperature in the newborn.

**Obstetrical Society of Philadelphia.**—At a meeting held November 3d, DR. ANDREW J. DOWNES reported a case in which 11 fibroid nodules of various sizes were removed by myomectomy from the uterus of a woman in the ninth week of pregnancy, as was also a small ovarian cyst. The woman aborted the next morning. The myomectomy was performed in the interests of the child, the operator believing that the fibromata would afford an obstacle to delivery at term. The paper was discussed by DRs. MONTGOMERY, KRUSEN, NORRIS, and NOBLE, the consensus of opinion being that as myomectomy during pregnancy is usually followed by abortion, the best interests of the child are preserved by allowing the mother to go to term, at which time the removal of the tumors, should they prove an obstacle, could be carried out with as little risk to the mother as earlier.

DR. CHARLES P. NOBLE reported a case in which he performed abdominal section upon a woman suffering from exophthalmic goiter. The patient suffered with procidentia uteri, and the operation consisted in curettage of the uterus, amputation of the cervix, resection of the antero-vaginal walls, restoration of the pelvic floor, and hysterorrhaphy. The recovery from the operation was good.

**Alvarenga Prize of the College of Physicians of Philadelphia.**—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1899, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the secretary of the College on or before May 1, 1899.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelop having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1898 was awarded to Dr. S. A. Knopf, of New York City, for his essay entitled: "**Modern Prophylaxis of Pulmonary Tuberculosis and its Treatment in Special Institutions and at Home.**"

**Philadelphia Academy of Surgery.**—At the meeting, Monday evening, November 7th, DR. HOPKINS presented 3 patients, upon whom he had operated, removing the astragalus and cuboid for **talipes equino-varus**. DR. WILKARD believes, in children under 1 year old, the results following this treatment are not better than those obtained by tenotomy and the other ordinary methods of treatment. Removal of the astragalus and cuboid destroys the elasticity of the arch of the foot to a great extent, and should not be resorted to as a routine method of treatment in young children.

DR. JOHN B. ROBERTS read a paper, entitled "**The Ignorance of Surgeons Regarding Fracture of the Lower End of the Radius.**" Dr. Roberts said that his attention was called to this subject by a paper recently published in a New York journal, in which the statement was made that fracture of the lower end of the radius is often accompanied by transverse fracture of the lower end of the ulna. The skiagraphs which accompanied the article, together with the age of the patients in whom the injury occurred, showed that the condition was simply an ununited epiphysis of the lower end of the ulna. In another case, in which he was called in, a pad had been applied before the fragments had been thoroughly reduced. Dr. Roberts believes that fractures of the lower end of the radius are among the most easily and satisfactorily treated; that there should be but little pain or discomfort after the first 24 hours; and that there should be slight stiffness after the first week of treatment; deformity should be so slight as to make it unnoticeable, unless the fracture is comminuted; and sufficient force should be used to break up impaction, in some cases, under anesthesia. Eight cases were shown, in which excellent results had been obtained. The dressing applied is of little importance, provided the fracture is properly reduced. A band of adhesive plaster, wound several times around the wrist, is quite sufficient in many cases, or a posterior splint, a Levis splint, or a plaster-of-Paris bandage, may be applied. DR. HOPKINS believes that some form of apparatus to hold the limb at absolute rest is desirable for a time. DR. WHARTON agrees as to the importance of reduction, but does not find it always easily accomplished, and an anesthetic is often necessary. In spite of the greatest care, there may be much discomfort for several weeks, and even after complete reduction, disordered function sometimes follows. DR. W. J. TAYLOR mentioned the case of a boy of 17, in whom the skiagraph showed the reduction of the fracture to be perfect, but a certain amount of displacement was found to have occurred after putting the arm up on a splint. DR. HEARN does not find it easy to reduce the fractures, and believes that an anesthetic should be used in most cases. DR. MEARS compared the methods of treatment in use 25 years ago, when, in many cases, the arm was put up on a band without reduction, with those of the present time. DR. DAVIS be-

lieves that the line of fracture is usually oblique from above downward, this making it impossible to reduce it by pressure from above. DR. ROBERTS, in closing, stated that if the fracture were comminuted it could not be easily retained in position, otherwise there would be no difficulty. The adhesive plaster would, of course, not be used in case there was swelling in the arm.

DR. H. AUGUSTUS WILSON read a paper on "**Hot-Air in Joint-Diseases.**" He stated that in 2 years' experience with this means of treatment he has found it very useful in the treatment of sprains; it also acts very favorably in softening the bands of adhesion in ankylosed joints; a disappearance of fluid often follows its use in cases of hydrarthrosis; and, although further experience is needed to determine the ultimate results in tuberculous joint-disease, it is looked upon as favoring the promotion of absorption. In rheumatic affections, and chronic rheumatoid arthritis, however, the results have been most disappointing; the pain is not only not relieved, but often seems to be increased by the treatment. The limb should be wrapped well, preferably with flannel, and a temperature of 250° to 400° is used. DR. WILLARD has had an experience similar to Dr. Wilson's, as regards the favorable results in sprains and fibrous ankylosis, and the lack of success in rheumatic affections.

DR. J. CHALMERS DACOSTA reported "**Three Unusual Complications of Hernia.**" The first patient, a man 41 years of age, entered the Jefferson Hospital with symptoms of strangulation in an enormous scrotal hernia, which extended to the knees. The condition was first noticed when a boy of 15; there had been gradual increase in size, which had been more rapid of later years and had caused considerable discomfort and interference with his occupation. When first seen there was pain, complete constipation, nausea, sensitiveness on pressure, and the mass was entirely irreducible. On incision the mass was found to include the cecum and appendix, the ascending and part of the transverse colon, a large part of the ileum and a portion of omentum measuring from the tips of the operator's fingers to the elbow. Restoration to the abdominal cavity, after removal of the omentum, was effected with great difficulty by main strength, and the steps of Bassini's operation were carried out as far as possible. Recovery followed, and although there is a slight relapse it is kept in place by a truss. An umbilical hernia has also developed since the operation and it is retained by a truss. The second case reported was that of a man, 22 years old, who had had an inguinal hernia of the left side for several years. He had been under the care of a physician who had applied ice, and made several attempts to return the bowel by forcible taxis, one of them under ether. The typical symptoms of strangulation were present. The constriction at the internal ring was relieved and Halsted's operation was performed. The interesting feature of the case was that after ligating and dividing the accessory veins of the cord a purulent clot was found in them, from which a pure culture of the staphylococcus pyogenes aureus was obtained. The third case occurred in a man who had been operated upon a few days before for prolapse of the rectum by the cautery method. Pain developed, the hernia could not be reduced, and a crackling sensation was felt on manipulating the sac and all along the colon. When the sac was opened, in performing the radical operation, it was found to contain a part of the colon, and the mesocolon was filled with bubbles of gas as far as it could be traced. Thinking that possibly the gas might come from the rectum, an examination was made and an ulcer found to

have resulted from the use of the cautery. On pressing in this region gas escaped. The enormous size of the hernia in the first case, the thrombosis and infected clot of the accessory veins of the cord in the second case, and occurrence of gas in the mesocolon in the third case are believed to be features of very unusual occurrence.

DR. ORVILLE HORWITZ read a paper entitled "**An Account of two Cases of rare Disease Affecting the Penis; one Hypertrophy due to Traumatism, the other Elephantiasis.**" These conditions are of very rare occurrence in this country. The case of hypertrophy occurred in an acrobat who had never suffered from venereal infection and who was married and had 2 children. The enlargement followed traumatism and soon became so great as to be very noticeable when he wore tights. For some time he performed as usual, strapping his penis back between his legs. Finally he injured himself severely, and suppurative adenitis resulted. When received for operation his penis measured 10½ inches in length. He was circumcised, the suppurating glands removed, and a good recovery followed. The second case reported occurred in a colored sailor of 45. There was no history of venereal disease. The penis was generally enlarged, was 11 inches in length, had a doughy feel, and the surface was crossed by longitudinal and transverse furrows. Examination was made for the filaria sanguinis, with a negative result. On incision thick fibrous tissue was found. The wound of the incision healed by granulation in 4 months with a satisfactory result, sexual power being restored.

**Carcinoma of the Male Genitalia.**—Wm. P. Munn (*Denver Med. Times*, October, 1898) estimates the number of cases of prostatic hypertrophy that he has treated at about 100; 14 patients were operated upon, and one was found to be suffering from carcinoma of the prostate; three others that were not operated upon died from prostatic carcinoma. The patient operated upon, a man aged 68, had suffered from difficulty in urination and occasional urinary hemorrhages for a year. Perineal prostatotomy was performed, and for a few weeks improvement in urination was manifest. Then the old condition recurred more markedly than before, and the patient began to lose flesh rapidly. Suprapubic cystotomy was performed, and the prostate was removed piecemeal. Death took place from exhaustion 5 days after the operation. Microscopic examination showed the growth to be an adenocarcinoma. Of the patients not operated upon, two had been previously operated upon by other surgeons for supposed stone in the bladder, but in both cases nothing but calcareous deposits at the base of the bladder were found. The wounds refused to heal, leaving perineal fistulas. Operation for removal of the carcinomatous tissue was not considered justifiable in either case, and death followed several weeks later. The age of one patient was 30 and of the other 33. The fourth patient was 68 years old. He had suffered for some years from prostatic hypertrophy, with occasional hemorrhages. Palliative operation was refused and death followed after two months. Munn states that he has never seen carcinoma of the penis in patients who had not suffered from congenital phimosis. He reports three cases. A patient, aged 50 years, had had an indurated sore on his penis for a year. There was no venereal history, and the previous health had been good. The penis was amputated for epithelioma of the prepuce, with an excellent result. In a second patient, aged 55 years, an extensive operation was performed, removing a large area of skin about the pubes, dissecting out enlarged inguinal glands, detaching the crura of the penis from the pubes and transplanting the urethra to the perineum in front of the anus. The suprapubic wound did not heal, the disease spread and death followed from exhaustion at the end of about two months. In the third case, a man also aged 55 years, a similar operation was performed for an extensive epitheliomatous condition that had given rise to several fistulous openings, and the patient was without recurrence for over a year.



# The Latest Literature.

## British Medical Journal.

October 22, 1898. [No. 1973.]

1. The Influence of Character and Right Judgment in Medicine. DYCE DUCKWORTH.
2. The Bactericidal Functions of the Liver, and the Etiology of Progressive Hepatic Cirrhosis. J. GEORGE ADAMI.
3. Two Cases of Malignant Disease of the Vocal Cords; Thyrochondrotomy; Non-recurrence in One Case after Two Years. HERBERT TILLEY.
4. The Mutual Relationship and Relative Value of Experimental Research and Clinical Experience in Laryngology, Rhinology, and Otology. FELIX SEMON, GREVILLE MACDONALD, and W. MILLIGAN.
5. The Treatment of Singers' Laryngitis. HOLBROOK CURTIS.
6. Notes of a Case of Epithelioma of the Pharynx, with Microscopic Specimen. CECIL E. SHAW.
7. An Operation to Remove the Deformity from a Fracture and Displacement of the Triangular Cartilage of the Nose. HEMINGTON PEGLER.
8. Notes on Extradural Suppuration in the Sigmoid Fossa due to Ear-disease. THOMAS BARR.
9. A Case of Double Acute Mastoid Empyema with Exposure of Dura Mater on One Side; Operation in Both. THOMAS BARR.
10. A Case of Foreign Body Removed from the Nasopharynx. H. S. BIRKETT.
11. Some Unmanageable Complications of Suppurative Middle-Ear Disease. HUGH EDWARD JONES.
12. Catheterization of the Eustachian Tubes. T. MARK HOVELL.
13. Mechanical Vibration Applied to the Spine in the Treatment of Sclerosis of the Middle Ear. DUNDAS GRANT.
14. Demonstration of a Short Process for Making Charts of Hearing Power for Various Tuning-forks, according to Hartmann's Method. DUNDAS GRANT.
15. Wounds of the Facial Nerve during Operation on the Mastoid. W. R. H. STEWART.
16. A Case of Sarcoma of the Middle Ear. G. L. CHEATLE.
17. Some Observations upon Antrectomy as a Means of Treatment in Suppurative Middle-Ear Disease. W. MILLIGAN.
18. Three Cases of Foreign Body in the Throat in which the Position of the Body was Determined by the Röntgen Rays. WALKER DOWNIE.
19. A Plea for the More Thorough Sterilization of Nose and Throat Instruments. ADOLPH BRONNER.
20. A Case of Septic Thrombosis of the Lateral Sinus. HAMILTON A. BALLANCE.
21. The Pathogenesis and Earlier Clinical Evidence of Laryngeal Tuberculosis. JOBSON HORNE.
22. Nasal Hydrorrhea. ST. CLAIR THOMSON.
23. On the Relation of Fibrinous Rhinitis to Diphtheria. JOHN MIDDLEMASS HUNT.
24. On the Value of Curing the Middle Ear in Cases of Suppuration. G. JACKSON.
25. The Treatment of Dysphagia in Laryngeal Tuberculosis. EUGENE S. YONGE.
26. The Thyroid Treatment of Middle Ear Disease. MACLEOD YEARSLEY.
27. Cases of Laryngeal and Nasal Diseases. MCBRIDE.
28. A Case of Winged Scapula. W. J. T. BARKER.
29. Morphin-Poisoning in an Infant. J. FOTHERINGHAM.
30. Green Stools in Enteric Fever. RICHARD H. QUILL.
31. A Case of Aneurysm of the Aorta; Operation; Cerebral Embolism; Death. P. C. E. TRIBE.

2.—Adami has discovered in sections from **cirrhotic livers** minute **diplococcus-like bodies** surrounded by a faint halo, which, by experimentation, he found to be one of the numerous varieties of the colon-bacillus. He has also obtained the typical colon-bacillus from cases of this disease. The only well-marked difference that he has recognized between the form discovered in this condition and the ordinary colon-bacillus is that while the latter causes broth reacting 1.5% acid to phenolphthalein to become generally turbid in from 24 to 48 hours, with the development of very little sedi-

ment, the forms isolated from the liver, spleen, and kidney of cases of cirrhosis induce extremely little turbidity of the medium, and the sediment is relatively abundant. As to the methods by which these bacilli pass into the liver-cells, it is pointed out (1) that the endothelium of the hepatic capillaries possesses pronounced phagocytic properties; (2) that Chiari has recorded similar results following the intravenous inoculation of a closely allied form (the typhoid bacillus) and (3) that the remarkable appearances presented can be easily reproduced by cautious staining with carbol-thionin. While the colon-bacilli injected into the blood-stream find their way into the liver-cells and are present in these in greater numbers than in the spleen, kidneys, or other organs, if streak-cultures be made from the various organs, abundant colonies are obtained from the spleen, the heart-blood, and, to a less extent, from the kidney; the liver-juice, on the other hand, providing relatively few colonies. In these early cases the bile has been found to be sterile. This would suggest that the liver-cells do not act as excretory agents for the bacilli, but have pronounced bactericidal functions. The bacilli seen in the liver within 24 hours after inoculation are, if not dead, at least incapable of proliferating outside the body. Their form and the fact that they easily give up their stain and that when decolorized they have a peculiar brown tinge show that they are in process of degeneration. Not only in the liver, but in the lymphatic glands, kidney, and spleen, the colon-bacillus is liable to assume the form of a coccus or diplococcus. Outside the body, in the early stages of rapid growth in nutrient broth, the bacillus is frequently represented by diplococci of fair size, and when the short, stumpy bacterium-form predominates, proper staining with fuchsin and decolorization cause the appearance of more intense polar staining, with the clearer central space. In older growths the long bacillary forms stain to the proper degree, and, examined under a high power, seem to be composed of an obscure string of spherical bodies united by a common investing substance. Grown in broth or upon agar close to the upper temperature-limit and under certain other conditions unfavorable to active proliferation, these anterior bodies are most easily demonstrable. In sections from 40 portions of liver preserved from necropsies, from cases in which examination with ordinary stains demonstrated the absence of cirrhosis, Adami has found, almost without exception, indications of the presence of these shadows of the colon or allied bacilli. The unstaining diplococcus-like bodies tending to be surrounded by a halo were almost constantly found. In only three cases were they not found. It is believed that not a little of the fine brown pigmentation recognizable in liver-cells apparently healthy is an indication that colon and presumably other bacilli have been taken up and destroyed by the liver-cell. From this it follows that colon-bacilli in small numbers are constantly finding their way into the finer branches of the portal circulation in the healthy individual, and that one of the functions of the liver is to arrest the further passage of these bacilli into the general circulation, and to destroy them through the agency of the specific cells of the organ. In the ordinary liver from which cirrhosis is absent the visible bacillary forms are almost all corpses. It is considered that the large number of deeply stained diplococcus-like bodies found in well-marked, advancing cases of cirrhosis is ample evidence that there is a distinct connection between these and the process. In favor of this there are the following considerations: (1) the great number of these forms found in the liver in well-marked progressive cases of ordinary hepatic cirrhosis; (2) the coincident great number of the same forms recognizable in the mesenteric lymphatic glands; (3) the parallelism in general between the bacteriology of these cases and that of Pictou cattle-disease (the most characteristic lesion of which is a peculiar extensive cirrhosis of the liver). It is possible that some additional factor is necessary to cause the cirrhosis, some prior action upon the liver-cells favoring the multiplication of the bacteria or aiding the pathogenic action of their toxins upon the hepatic tissues. If the bacilli gain entrance into the system through the mediation of leukocytes, then a subacute enteritis or gastroenteritis would appear to be the determining feature. If depression of the functions of the hepatic cells be requisite, then alcohol, the main predisposing cause of ordinary cirrhosis, would serve the purpose.



**3.**—Tilley reports **two cases of malignant disease of the vocal bands**, in both of which he performed **thyrochondrotomy**, according to the suggestions that have been made and practised by Hahn, Butlin, Semon, and others. Both patients made excellent operative recoveries, and in neither case has there been any recurrence for two years. Several interesting features were noted in both cases. The only symptom that had been complained of was hoarseness; this is but a striking instance of the fact that malignant disease may exist for some time without the development of any other noticeable symptom. In one case the hoarseness had been present for 12 to 14 months, and yet there were no secondarily infected glands in the neck or elsewhere. This tendency for the growth to remain localized for a considerable length of time is peculiarly characteristic of epithelioma of the larynx. On this account it is possible to give a more favorable prognosis in malignant disease involving the bands, and in many cases permanent cure may be rightly anticipated. The differentiation between tuberculous and malignant growths of the larynx is in some cases impossible from the mere laryngoscopic appearance, and in these cases a small portion of the growth may be removed for microscopic examination. In one of the cases the voice was excellent six months after the operation, despite the fact that the whole vocal bands, and a large portion of its corresponding vocal process were removed. The voice of the other patient, after the operation, is described as gruff.

**5.**—In the treatment of **singers' laryngitis** Curtis advocates vocal gymnastics by singing exercises, the object being primarily to make the bands adopt a new method of vibration in respect to their segmentation by changing the color or overtone effects.

**8.**—Barr reports three cases of **extradural suppuration**, two of which ended in recovery after operation, while the other, which was not operated upon, had a fatal termination. In each case there was a firm wall of bone between the middle-ear cavities and the extradural abscess-cavity. In all the disease had been preceded by purulent middle-ear inflammation of many years' duration. A special feature of each of the cases was the occurrence of frequent and severe rigors, with high temperature, although no evidence of sigmoid sinus-thrombosis existed. There was neither pain nor swelling, nor cording of the internal jugular vein, neither was there, on exposure of the sinus, so far as inspection and palpation went, any evidence of plugging.

**11.**—Jones reports four fatal cases of **suppurative middle-ear disease**, in none of which had treatment been given by an ear-specialist. In three of the cases suppuration had advanced beyond the limits of successful operative treatment, and in the fourth the fatal lesion was in the cerebellum, inaccessible to treatment.

**15.**—Stewart contends that, in cases in which there is extensive necrosis of the temporal bone, the surgeon is justified in removing the tissue that is so likely to cause dangerous intracranial infection at the risk of injuring the facial nerve, the intracranial danger being so much greater than that of the nerve-injury.

**16.**—Cheatle reports the case of a girl, aged 2½ years, from whose external auditory meatus he removed a **pedunculated sarcoma** and necrosed bone. The growth returned in a short time, and led to a fatal result.

**20.**—Ballance reports the case of a woman, aged 24 years, pregnant for five months, who was suffering from septic thrombosis of the lateral sinus. Although disease had been in progress in the left tympanum and mastoid for many months, there had been no discharge from the ear until one week before admission. The patient had had repeated rigors, sickness, and headache, and double optic neuritis was present. The complete mastoid operation was done, an extradural abscess opened, and a slough removed from the inside of the sinus. The internal jugular vein was divided between two ligatures in the neck. The patient miscarried two days after operation, and subsequently secondary abscesses formed in the arm, leg, and kidney. Suppurative tonsillitis, jaundice, and two attacks of erysipelas also occurred, but eventually the patient recovered completely. Pure cultures of the streptococcus pyogenes were obtained from the various secondary foci, and the use of streptococcus-antitoxin was attended with benefit.

**21.**—Horne has studied the pathogenesis of **laryngic**

**tuberculosis** in larynges removed from undoubted cases of tuberculosis but presenting no naked-eye evidence of that disease at postmortem. Attention is directed to the ventricle as a harbor for tubercle bacilli, and special study of the interarytenoid space is recommended in cases with suspicious symptoms. The earliest changes noted in the lymphatics were proliferation of the parenchyma of the acina and efferent ducts and the formation of masses of small round cells distending and choking the ducts and obliterating the glands, the adjacent and superficial structures remaining intact. These changes were noted when careful microscopic examination of the entire larynx had failed to reveal changes in the lymphatics in other parts and it was possible to demonstrate tubercle-bacilli in the midst of these lymphoid masses. Having gained entrance into the lymphatic ducts the bacilli acted as irritants and caused slight proliferation. The development of the giant-cell from the wall of the lymph-space could be demonstrated with the tubercle-bacilli lying amongst the endothelial cells forming the wall of this space, as well as the fusion of the adjacent and divided cell; and the separation of this plasmodial mass as a giant-cell. As the tuberculous process commences in the lymphatics, the interarytenoid region, the posterior third of the vocal band, the ventricular band, and the epiglottis, especially the petiolus, the parts more richly endowed with glands, are the parts more commonly ulcerated in laryngeal tuberculosis. The vocal cord being free from glands escapes ulceration, except by continuity. With this cell-proliferation there occurs proliferation of the subepithelial blood-vessels. Changes occur at an early stage in the muscle-fibers, as shown by early functional failure, which is mainly myopathic. The earlier clinical evidences of laryngeal tuberculosis consist (1) in disturbances of sensation, hypesthesia, hyperesthesia, paresthesia; (2) color-changes, anemia, hyperemia; (3) functional disturbances; (4) impaired movements of the vocal bands, apart from paralysis; (5) changes in the contour of the larynx due to slight edema. Slight edema of the inner wall of the ventricular band frequently occurs, and this, together with an enfeebled action of the compressor sacculi laryngis, effectually retains the sputum laden with tubercle-bacilli within the ventricle when once it is lodged there.

**22.**—Thomson contends that the term **nasal hydrorrhea** has been incorrectly applied and believes that it should be limited in application to an infection in which there is a profuse watery discharge secreted by the nasal mucosa and not dependent upon any visible intranasal or neighboring source of irritation. He gives a series of chemic tests for the detection of cerebrospinal rhinorrhea, a condition that is commonly considered as nasal hydrorrhea. The latter is an affection of adult life, affecting males and females indifferently. The flow usually is from both nostrils. Handkerchiefs soaked with discharge are stiff when dried, while those soaked from cerebrospinal rhinorrhea are quite soft, and can be used again without washing. In the latter affection also the discharge is limited entirely to one nostril, except when there is an obstruction on the affected side. When the fluid originates from the arachnoid there is frequently headache or mental symptoms, which are relieved by the discharge. In nasal hydrorrhea malaise occurs with the discharge and only disappears with its cessation. The condition is often ushered in with sneezing, photophobia, and lachrymation. The symptoms rarely continue during sleep, as they do in cerebrospinal rhinorrhea. The disease is erratic in onset and in its intermission, and it is dependent upon external influences and conditions of health. In the treatment the chief matter is to avoid interference, from the risk of septic infection in the event of the fluid being of cerebral origin. He refers to a case in which cure had been effected by keeping the patient, a girl, at home from her work for two months.

**23.**—Hunt summarizes as follows his opinions on the **relation of fibrinous rhinitis to diphtheria**: (1) While admitting that other bacteria than the Klebs-Löffler bacillus cause membranous exudation in the nasal passages, the Klebs-Löffler is in the vast majority the specific factor; (2) it is impossible on clinical grounds alone to distinguish fibrinous rhinitis from mild nasal diphtheria; (3) all cases of fibrinous rhinitis should be regarded as diphtheria until bacteriologically proved not to be.

**24.**—Jackson reports a case of **suppuration of the**



middle ear as the result of a local irritant. Curetment was done, the meatus and tympanic cavity being filled with growth. This redeveloped, and a superficial abscess formed over the mastoid. A second curetment was done, this time including the sinus behind the ear. In three months the condition had apparently healed, but it redeveloped. A portion of the growth was now removed and found on microscopic examination to be granulation-tissue, probably tuberculous. A third curetment was done. An opening was made through the sinus into the meatus and a drainage-tube introduced and brought out through the external meatus, making thus thorough drainage. The discharge stopped entirely in about a month, and the patient was well at the end of two years. Curetment has been extensively practised with excellent results.

**28.**—Barker reports a case of **dislocation of the scapula**, having its origin in peripheral neuritis terminating in paralysis of the muscles. The patient was treated with potassium iodid and strychnin internally and the application twice daily of a weak faradic current to the nerve and muscles.

**29.**—Fotheringham reports a case of accidental administration of a fluidram of liquor morphinæ, B.P., to a three-months-old baby. Within ten minutes the child was suddenly seized with violent tetanic convulsions and with periodic cessation of breathing. The pupils were contracted to a pin-point. Later the child was comatose. Artificial respiration was resorted to and continued constantly for three hours and occasionally for the succeeding six or seven. The pulse in the beginning was unnaturally strong. Within an hour the child was given  $\frac{3}{60}$  gr. of atropin subcutaneously; and in half an hour  $\frac{1}{150}$  gr. Twice afterwards  $\frac{3}{60}$  gr. was administered. A strong decoction of coffee and peptonized milk was given by the rectum, and fomentations were applied to the epigastrium. The face, upper part of the chest, and other accessible parts were slapped with cold, wet towels. The child opened its eyes at the end of 24 hours, and not before 48 hours would it suck from the mother. At the end of this time broncho-pneumonia developed, from which the child recovered entirely in ten days.

**30.**—Quill reports a case of **enteric fever** in which there was acute and persistent back-pain and bright-green stools mixed with flakes. Postmortem examination disclosed nothing unusual.

**31.**—Tribb has reported the case of a steam-crane driver, 42 years old, with a history of syphilis of 20 years' standing, who presented symptoms of an **aneurysm of the arch of the aorta**. After a course of treatment, including rest and potassium iodid, during which the aneurysm was evidently increasing in size, it was decided to ligate the left common carotid artery. The operation afforded no relief, the aneurysm continued to increase rapidly in size, while signs of pressure and, finally, hemiplegia, due to cerebral embolism, developed, and the patient died. At the postmortem examination the aneurysm was found springing from the end of the ascending part of the aortic arch, and extended across the origin of the great vessels springing from the transverse arch. The left common carotid had been effectually ligated; there was practically no thrombosis on either side of the ligature. The aorta was generally atheromatous. The rapid increase in the size of the aneurysm, the absence throughout of a bruit, the previous history of syphilis and the laborious occupation, both of which must have entered into the etiology, are among the interesting features of the case.

### Lancet.

October 22, 1898. [No. 3921.]

1. The Influence of Character and Right Judgment in Medicine. DYCE DUCKWORTH.
2. Corneal Ulcers and their Treatment. PERCY DUNN.
3. A Contribution to the Pathology of Infection by the Pneumococcus. W. H. BRODIE, W. G. ROGERS, and E. T. E. HAMILTON.
4. The Use of Formalin-lamps for the Disinfection of Rooms (Alfort Lamps and Formogène Richard). A. A. KANTHACK.
5. Observations on an Infectious Disease in Lascars (having Close Relations with Variola and Varicella). R. S. THOMSON and JOHN BROWNIEF.
6. The Sterilization of Catgut by Dry Heat. J. H. DAUBER.

7. Removal of a Calculus from the Common Bile-duct, 2 in. long and  $3\frac{1}{2}$  in. in Circumference, without Suturing the Duct. H. J. THORNTON.
8. A Case of Pyemia Treated with Injections of Antistreptococcic Serum. HERBERT M. RAMSAY.
9. Practical Hints on Cycling for Country Practitioners. J. B. EMMERSON.
10. Sudden and Complete Inversion of the Uterus and Cervix after the Menopause; very small Fibroid Nodule in the Fundus; Gangrene; Operation; Recovery. JAMES OLIVER.
11. The Treatment of Ringworm of the Scalp. GEORGE STEELE PERKINS.
12. Case of Puerperal Septicemia. HENRY K. DAWSON.
13. A Case of Bleeding Fibroid in which Arrest of the Hemorrhage and Shrinking of the Tumor followed Ligation of the Uterine Arteries. (Under the care of G. E. Herman).
14. Old Traumatic Dislocation of the Hip; Operation; Recovery. (Under the care of Charles E. Bell).

**3.**—Brodie, Rogers and Hamilton describe an **epidemic condition occurring among the Kaffirs** employed in the mines of South Africa, the salient features of which were a purulent discharge from the nostrils, in most cases pneumonia, and sudden unexpected death unaccounted for by any premonitory constitutional disturbance or signs of sufficient local disease, and in which there invariably existed at the autopsy a livid, injected, swollen condition of the pituitary membrane. The manifestations of the disease were variable. At first it was thought that the pneumonia, parotiditis, dysentery, diarrhea, and spinal meningitis in the various cases were distinct and independent illnesses, but pathologic and bacteriologic examinations in various cases showed that all were but a part of one disease. In some cases no autopsy was made, and many of the cases were not fatal, but there was little doubt that the majority, if not all, of the cases were due to the same cause. In the large majority in which pneumonia existed this involved only a small part of the lung and the Kaffirs continued at work. In all cases in which dysentery existed the patients died and in most of the fatal cases dysentery was the immediate cause. No treatment was of any use in lessening or modifying the nasal discharge. From the symptoms cerebral meningitis could almost be excluded, but in a great number of cases extensive purulent cerebral meningitis was found post mortem. In all cases a greenish thick purulent discharge appeared at the nostrils. The nasal mucosa showed every stage of inflammation. In the more marked cases there was atrophy, while in other cases there was thickening almost suggesting tumor-like masses. In many cases the bones of the nasal fossa were bare and necrotic. In the majority the sphenoidal sinus was filled with pus or showed pus between the periosteum and the bone. The sinus was always gravely implicated. In the meningeal cases the frontal sinuses and other air-spaces communicating with the nose showed the same condition. Within the skull-cavity purulent infiltration of the arachnoid and pia mater extended backward usually from the optic groove and the foramen magnum. From the base it spread over the convexities, involving the mesial surfaces of the hemispheres. Pus was seen in the processes of the pia mater dipping into the sulci and following the reflection covering the choroid plexus of the lateral ventricle. The membrane in this position was thick with edema. Over the cribriform plate of the ethmoid the meningitis was in some places especially marked, and also along the ophthalmic veins at their entrance into the cavernous sinus. The cranial nerve-sheaths of the first eight pairs were often profoundly affected; sometimes the entire cranial part of the optic nerve was obscured by the exudation. The under surface of the pons was involved in some instances. The cerebellum usually escaped. Spinal leptomeningitis was found in 2 cases of 5 in which the cord was examined. In 12 cases of 26, meningitis was present. Croupous pneumonia was present in the majority of cases and all stages of the pneumonic process were represented. Recent pleuritic lymph always accompanied the pneumonia. Endocarditis was not observed. Usually the peritoneal cavity contained considerable fluid and there were slight pleural and pericardial effusions. There were no gross intestinal changes in the dysenteric cases. The most usual course of the organism from the nasal cavities to the interior of the skull was thought to be from the



muco-periosteum of the sphenoidal sinus and the sheaths of the nerves embedded in the wall of the cavernous sinus, and thence by direct extension to the arachnoid and pia mater. In some cases infection occurred along the nerves and vessels traversing the cribriform plate of the ethmoid, or by the Eustachian tube to the middle ear and petrous bone, thence by the seventh and eighth nerve-sheaths. Complete bacteriologic examinations were made in 15 cases. Pure cultures of a lanceolate micrococcus, nearly always united in pairs, and tending to grow in chains in old cultures, in recent cultures being surrounded by a transparent, halo-like capsule, which was most obvious in cover-slip preparations from the recent tissues, and which disappeared in cultures or in media, were obtained from either the spleen or the pericardial fluid or the heart-blood in 7 cases. In some it was obtained in pure culture from all three sources. In the remaining 8 cases no organism was developed in cultures in the tissues named. In 2 cases, pure cultures of the organism were obtained from the cerebral exudate. In 5 others examined it was associated with streptococci and staphylococci. From the foregoing study it is concluded, (1) that the diplococcus described is identical with, but more virulent than, the pneumococcus of Fränkel; that the pneumococcus is the specific factor in the causation of cerebro-spinal meningitis; (2) that in these cases the pneumococcus first affects the nasal mucous membrane and produces there a definite local lesion, and that all other subsequent pathologic effects are merely the result of the extension of the organism along the various anatomic channels of infection; (3) that the pneumococcal septicemia, the result of the pneumonic rhinitis, even when unattended by such secondary effects as pneumonia or meningitis, is sufficient to cause death. It is suggested that this may explain the fulminating attacks of epidemic cerebrospinal meningitis of previous writers. It is believed that further research will establish the contention that a general infection by the pneumococcus, with its diverse lesions, is often the complement of an unsuspected acute specific rhinitis.

4.—Kanthack reaches the following conclusions in the study of **formalin-lamps for the disinfection of rooms**: Formalin does not penetrate deeply and cannot be used for the sterilization of blankets, linen, etc., heaped one upon the other. It is merely a superficial disinfectant. Blood and fecal stains are indelibly fixed in linen and like materials by it. Metal dyes and most colors are not destroyed, although some aniline dyes may be slightly altered. Dust and soil are not sterilized with certainty.

5.—Thomson and Brownlee describe an **infectious disease having close relations with variola and varicella**, and differentiated from smallpox in the following manner: (1) by the coincidence of the rash with the onset of the general symptoms, the temperature rising and advancing with the development of the eruption; (2) by the entire absence of anything like secondary fever; (3) by the absence of any special predilection of the eruption for the face and scalp, the bulk appearing mostly on the back, chest and arms; (4) by the entire absence of eruption from the palms and soles in every case; (5) by the rapid transformation of the papules in certain cases into vesicles, the latter being occasionally present on the first day; (6) by the entire absence of true pustules. In addition, three of the patients had already had smallpox, two of them comparatively recently. Four of the patients were re-vaccinated successfully during the crusting stage, while the others had been re-vaccinated successfully from 2 to 4 weeks before the symptoms developed. In some respects the resemblance of the disease to chickenpox was very striking, namely, the coincidence of the onset with the first appearance of the eruption, as well as the general character of the fully developed rash, and the rapid evolution of certain of its elements. On the other hand, the papules constituting the first stage of the eruption were large, hard, dense, and frequently cone-shaped, the apex being more or less pointed at first, colorless and not easily observed. They felt hard and shotty. Later they assumed a dusky-red color, thus differing from the papules of true varicella. Again, in some cases the great bulk of the papular elements showed no tendency to vesiculation, disappearing by absorption of their solid contents, as is sometimes seen in modified smallpox. Most papules did not vesiculate until the second or third day. The frequent throat-eruption, with a marked catarrhal condition of the fauces, and the invari-

able absence of eruption from the palms and soles, were features that are unusual to varicella in adult patients. A very wide areola, which developed later in the eruptive stage, the slow process of desiccation and the deep pitting, without any evidence of secondary infection, were against the disease being varicella. The high fever observed in many of the cases, the severe pain in the back and the vomiting were against varicella. A very similar condition has been described by Dr. Anderson before the Epidemiological Society of London.

6.—The following is the **method of sterilizing catgut by hot air** adopted by Tscherning, of Copenhagen: Ordinary commercial catgut is placed on trays between sheets of cellulose paper and heated for six hours consecutively; for the first hour at a temperature of 60° C., for the second and third hours at 100° C., and for the fourth, fifth and sixth at 140° C. The catgut is then wrapped up and closely sealed in an envelop of cellulose paper, which is in turn enclosed in a second envelop, and subjected for another two hours to a temperature of 140° C. The sterilization is thus effected by dry heat alone. The simplicity of the method is its most attractive feature.

7.—Thornton removed a **calculus**, 2 inches long and 3½ inches in circumference, from the common bile-duct by an incision into the duct itself. The wound in the duct was not sutured, an India-rubber tube having been inserted through the abdominal wound for drainage. The tube was gradually shortened and was removed altogether in about seven days, there being no further discharge of bile after the third day. The patient made an uninterrupted recovery.

8.—In the course of a **suppurative inflammation of the middle ear**, with tenderness over the mastoid region, complicating an attack of **measles**, the patient, a girl, 14 years old, developed symptoms of **pyemia**. The mastoid-cells were opened, and nothing was found there sufficient to account for the high temperature. The skull, too, was opened, but the dura mater did not bulge, and the lateral sinus was evidently not occluded. As the patient was going from bad to worse, it was decided to employ **antistreptococcic serum**. Three injections, of 10 cu. cm. each, were given daily, until the child showed signs of improvement, when the number of doses was reduced to one daily. On the twelfth day after the injections had been begun, examination of the blood failed to find micrococci, which had previously been present. From this time on convalescence continued without interruption, with the exception of the formation of an abscess beneath the gluteal muscles. There seemed to be no question, in reviewing the history of the case, but that immediate improvement was manifested in the patient's condition after the serum-treatment was commenced. Although the temperature did not fall rapidly, the patient slept better, took her nourishment better, and was altogether more natural.

10.—Oliver reports a case of successful **vaginal hysterectomy for sudden and complete inversion of the uterus**, the exciting cause of which was a small sessile fibroid growth in the fundus. The patient had passed the menopause, and the tumor, although gangrenous, was producing very little disturbance, until the odor of the discharge became unbearable, and a physician was consulted.

11.—In the treatment of **ringworm of the scalp** Perkins uses an ointment of sodium chlorid in vaselin, which is applied to the shaved scalp until the skin is intensely inflamed, after which a simple application is made to allay the soreness. This results in the destruction of the tinea trichophyton and a renewal of the growth of hair.

12.—Dawson reports a case of **puerperal septicemia** occurring in a woman, 25 years of age, after her fourth confinement. On the third day of the puerperium there was a rigor and the temperature rose to 102° F.; later reaching 106.2°. The treatment adopted consisted in frequent intra-uterine douches of corrosive sublimate, the introduction into the vagina of iodoform-suppositories, and 5 gr. doses of quinin every 2 or 3 hours. After a prolonged illness, the patient ultimately recovered.

13.—Herman reports a case of **ligature of the uterine arteries for the arrest of hemorrhage due to uterine fibroids**. The patient, who was 35 years of age, had been flooding at intervals of 3 weeks for 3 years. She had been treated for hemorrhage with ergot, without any benefit. A movable tumor, composed of hard, rounded



nodules, was felt rising out of the pelvis and reaching to within three-fingers' breadth of the umbilicus. The patient absolutely refused any operation that would deprive her of the possibility of pregnancy. It was therefore decided to tie the uterine arteries. A transverse incision was made through the vagina in front of the cervix, the bladder and ureters separated from the uterus in front, and the broad ligament opened up at its sides; a ligature was passed over each uterine artery from above downward with an aneurysm-needle and was tied. Oozing was checked by packing the wound with iodoform gauze. After the operation the patient menstruated about once in 5 weeks, and not more copiously than was normal. Ligature of the uterine arteries was first proposed and practised by Franklin H. Martin, of Chicago, in 1892. The operation has the obvious advantages of not mutilating the patient and of being attended with less danger than abdominal section.

14.—Bell reports a case of **traumatic dislocation of the hip**, in which, after 5 months, as the limb was practically useless, it was determined to attempt reduction by operative interference. By means of steady traction and manipulation, the head of the femur was replaced in the acetabulum, which was partially filled with recently organized tissue. After two months of fixation the patient was allowed to go about on crutches, and subsequent examination showed that he had recovered perfect functional activity in the joint.

### New York Medical Journal.

November 5, 1898. [Vol. lxviii, No. 19.]

1. The Relation of Suppuration to Shortening of the Limbs in Tuberculous Diseases of the Hip-joint. A Study of 106 Cases. RUSSELL A. HIBBS.
2. Influence of Lymphoid Hypertrophy on Epilepsy. URBAN G. HITCHCOCK.
3. A Case of Nasal Fibroma. A Supplementary Report. W. E. CASSELBERRY.
4. On the Treatment of Deficient Excretion from Kidneys not Organically Diseased, and Some of the Diseases peculiar to Women, and Diseases of the Skin. L. DUNCAN BULKLEY.
5. The Relation of Syphilis to Cancers of the Mucous Membranes. WILLIS P. KING.
6. Review of the Several Methods of Operations for Hemorrhoids: The Best Operation. J. COPLIN STINSON.
7. Learning to See at Forty; First with One Eye, and Later with Both. JAMES L. MINOR.
8. Congenital Absence of the Glans Penis. IRA E. ATKINSON.
9. Chloroform for General Anesthesia. DAVID R. FLY.

1.—From close observation in 106 cases of **tuberculous disease of the hip-joint** Hibbs concludes that the process of **suppuration** is not necessarily a factor in the causation of **shortening**. Of the entire number 47 were of the non-suppurative variety and 59 of the suppurative; all had been under observation for at least two years, had been subjected to the same mechanical treatment—the long traction hip-splint—and if abscesses developed they were allowed to open spontaneously and to continue uninterfered with throughout their entire course. The effect that suppuration produced upon those limbs should represent its true effect, as the abscesses were not interfered with in any stage of their existence. The statistics compiled demonstrate that shortening occurs almost as frequently in the non-suppurative as in the suppurative cases and that the amount of shortening is greater in a larger percentage in the nonsuppurative cases. Suppuration is not regarded, therefore, as influencing the degree of shortening, but is looked upon as evidence of the involvement of the soft structures, which offer less resistance than bone to the tuberculous process. If destruction of bone by the process of suppuration is not responsible for shortening, what are the causative factors? According to Hibbs they are traumatism and trophic disturbances, the former by diminishing the resisting power of the bone, the latter by seriously retarding growth of the bone and producing atrophy thereof. The amount of shortening will depend upon the extent of the bone involved.

2.—Hitchcock reports a case of **epilepsy** in a boy 11 years old, who presented marked lymphoid hypertrophy, which

was removed by operation under ether. The attacks, which had been as frequent as ten per day, immediately ceased for a period of 18 months, after which time they recurred. Another operation for the removal of the remnants of the lymphoid masses resulted in a cessation for a period of 5 months. Following a blow on the head at about this time attacks of petit mal occurred and continued. Lymphoid hypertrophy is thought to be the cause of many cases of epilepsy.

4.—In speaking of the **treatment of deficient excretion from kidneys not organically diseased**, Bulkley calls attention to the fact that the deficiency is in many instances dependent upon defective action of the gastro-intestinal tract, and of the liver, and defective metabolism, and suggests that any abnormalities of this nature should be rectified. One should not be satisfied with a normal total daily excretion of solids, and a scanty urine and high specific gravity. Perfect health is maintained only when the urine is normal in amount and specific gravity. As to the treatment of the kidneys, the proper administration of water, either mineral or plain waters, is recommended above all. They should be given warm or hot on an empty stomach, and be taken in small quantity with meals. The commercial waters have the advantage over the common drinking-waters that they are more palatable and the mental effect produced is good. Drugs are of much less value. Potassium acetate is considered the best, given in doses of from 10 to 20 grains, with nuxvomica and a bitter infusion after meals. Nitric acid, in 5-drop doses of the strong acid well diluted with water, after meals has rendered good service.

5.—Contrary to the consensus of opinion among syphilographers, King takes the ground that the **syphilis** may originate *de novo*, and is not necessarily a disease of direct transmission. In support of this view, and as a demonstration of the relation of syphilis to **carcinomas of mucous membranes**, he cites a series of cases, in which the operator has been infected with syphilis through a wound or abrasion of the finger while performing operations upon such carcinomas of either the vaginal tract or the rectum. King relates his personal experience, having, 10 days after two operations for carcinoma, found a chancre at the site of a needle-wound on his thumb. He suffered intensely during the various stages of the disease. In fact, in all of the cases reported, the infection was so virulent as to prove fatal in the majority. The virus is elaborated in the putrefactive changes that take place in the carcinoma, and, as is the case with all diseases due to specific viruses, the infection is much more virulent at first than after it has passed through several organisms. This pronounced virulence of the virus would seem to support the theory that it may originate *de novo*, as it becomes attenuated after passing through several organisms.

7. Minor reports the case of a man, 40 years old, who, though blind from birth, was able, when cataracts were removed from the eyes, to recognize at once various colors and was soon able to judge of distance, the size and shape of objects, etc. The fields of vision and of color were normal, and the eyes were possessed of binocular vision when the first efforts were made in that direction. The theory of the progressive development, of both the optic nerves and a greater part of the optic tract, occurring after birth, as a result of the functional activity of the eyes, meets with an exception in this case. Minor says that "it is probable that the perception of light possessed by my patient may have kept these parts intact, but it is difficult to understand how they were ready to assume such perfect functional activity as was noted, if there is really as much in the theory of development being dependent upon functional activity as is currently supposed."

9.—Fly recommends chloroform for general anesthesia as being equally safe with ether but less frequently attended with vomiting, depression and dangerous complications.

### Medical Record.

November 5, 1898. [Vol. liv, No. 19.]

1. Differential Diagnosis Between Extra-Uterine Pregnancy and Early Abortion. HIRAM N. VINEBERG.
2. Dermatitis Venenata: A Resumé of its Etiology, Symptoms, Diagnosis, and Treatment. JACOB SOBEL.
3. Operative Cure of Inguinal Hernia in Men. E. D. FERGUSON.



## 4. Remarks on Antitoxin, Diphtheria, the Practitioner, and History. ADOLPH RUPP.

1.—Vineberg believes that a frequent error is made in diagnosing **early abortion for extrauterine pregnancy**. There are cases in which it is almost impossible to decide definitely whether the case is one of early abortion, with a thickened tube, or early ectopic gestation, with sympathetic enlargement of the uterus. A retroflexed, pregnant uterus, with a long cervix, is frequently mistaken for extrauterine pregnancy. In this condition there is also a tendency to irregular hemorrhages and to severe paroxysmal pain, from the inability of the organ to grow, owing to the fundus being imprisoned below the promontory. Great stress has been laid by many writers upon the discharge of decidual membrane or tissue from the uterus. There can be nothing more misleading than this symptom. In the first place, there is no membrane discharged in a great number of cases, the decidua either being cast off in shreds or undergoing degeneration. In the second place it may be expelled, unnoticed, in the blood-clots. Thirdly, the patient, when questioned, will often reply that she has passed a membrane, when what she actually passed was a semi-organized blood-clot. Lastly, and most important of all, is the fact that even the most expert microscopist cannot distinguish between the decidual tissue of a uterine pregnancy and that of a tubal gestation. Of course the discovery of chorionic villi in the discharged products would be evident proof that the gestation was intrauterine, but such a fortunate occurrence is exceedingly rare and not frequently met with in the cases under consideration.

2.—Sobel includes under the term **dermatitis venenata** only that poisoning which results from the action of the rhus toxicodendron. In connection with the diagnosis he mentions that the condition is differentiated from eczema by the vesicles being much more numerous, swelling and edema being greater, and exposed parts being more likely to be affected, particularly the inner surfaces of the fingers, while the eczematous eruption is more frequently polymorphous. Sunburn sometimes resembles dermatitis venenata, but it is more diffuse, and is usually localized entirely to exposed parts, while rhus poisoning affects the breasts and genitalia also. Scabies is excluded by the history and by the absence of the acarus scabiei. In the treatment, Sobel has had particularly good results with a modified "Burrow's solution," containing 1 dram of lead acetate, and 3 drams of alum to a quart of water. He has also found picric acid, in a 1% solution, useful, applying the solution that is used in estimating albumin by Esbach's method. He adds that, from his recent experience, he can especially recommend salol in a 3% solution.

3.—To attain the best results in operations for the **radical cure of inguinal hernia** one must select a method that places most reliance upon the fascia and aponeurosis, and not upon the muscles alone, as the latter offer comparatively little resistance to the tendency to reformation of the hernia. Furthermore, it is important that the normal conditions and anatomic relations should be restored so far as possible. To accomplish this end, tissue must be united to identical tissue, and apposition maintained until repair is thoroughly established; the sutures must be so applied as not to disturb nutrition or interfere with repair; and, lastly, septic processes must be avoided. The operation, conducted on these principles, places the tissues of the cord at the upper and outer part of the internal ring, retaining them in this position by uniting the posterior and superior portion of Poupart's ligament to the transversalis fascia, the roof of the canal being formed by uniting the tissues of the external oblique. Coaptation of the flow of the canal is best attained by the "Cobbler's" stitch, inserted from  $\frac{1}{4}$  to  $\frac{1}{2}$  inch apart; this stitch secures a broad surface of union and does not interfere with the nutrition of the part. Kangaroo-tendon is the best suture-material, as it offers support until union is sufficiently firm. Metallic sutures, introduced with the idea of mechanically holding the parts together, are objectionable for the reason that, if the parts are held by the tension of the sutures, the latter will cut into the tissues until they no longer hold the parts securely; the possibility of their finally acting as a foreign body is an additional objection. To ensure against infection it is a good plan to seal the wound with collodion and cotton.

## Medical News.

November 5, 1898. [Vol. lxxiii, No. 19.]

1. The Modern Small-arm Projectile and the Wound it Inflicts; A Report of Fifty Cases. WILLIAM FRANCIS CAMPBELL.
2. Atony of the Stomach. A. J. PATEK.
3. Carbonic-acid Gas; Its Physiological Action and Therapeutic Effect, as Seen in Emphysema of the Lungs, Anemia, Whooping-cough, Dysentery, and Impotence. A. ROSE.
4. Two Interesting and Unusual Complications of Pneumonia. CHARLES J. ALDRICH.
5. Enormous Hypertrophy of the Kidneys and Dilatation of the Bladder and Ureters in a Child Thirteen Months of Age. Suppurative Orbital Cellulitis. HENRY B. HEMENWAY.

1.—[The observations of Campbell upon the nature and characteristics of the **wound inflicted by modern small-arm projectile** conform with those that have been published by various writers since the recent hostilities in Cuba. Campbell includes in his article brief records of fifty gunshot-wounds, that came under his observation.]

2.—Patek defines **atony of the stomach** as a condition of diminished motile power, resulting in inability to discharge the gastric contents in the normal time. Among the causes are excessive eating and drinking, and certain mechanical disturbances. The subjective symptoms are gastric distress, and sometimes neurasthenia. Among the objective symptoms are dilatation, clapotement, and increased area of tympany on percussion after artificial distention. Patek is not satisfied with the salol-test. Gastroptosis, or sinking of the whole stomach, causes constipation and often severe pain after meals. Two cases are reported. The first, with mild symptoms, was relieved by nuxvomica and sodium bicarbonate, with laxatives. The second was in a man, 28 years old, who had been suffering for 10 years, and presented symptoms of neurasthenia, with great distention of the abdomen after eating, and considerable dilatation of the stomach. The treatment consisted in abdominal massage, galvanization, faradisation, careful diet, strychnin, laxatives, etc. In the course of 4 months, examination showed that the stomach discharged its contents completely within 7 hours.

3.—Rose continues his article upon the **therapeutic effects of carbonic-acid gas**. The gas appears to be useful in cases of pulmonary and cardiac disease, especially in the form of a bath or of rectal injection. When introduced into the rectum, it is absorbed by the venous blood, and when it reaches the lungs it causes an excessive diffusion of gas, producing thereby increased ventilation. In chlorosis, it appears to be of some value. It is also useful in whooping-cough, in dysentery, and in various gynecologic disorders.

4.—Aldridge reports a case of **pneumonia** in which, at the end of the third week, when recovery was taking place, severe hiccough suddenly developed and persisted for 5 days in spite of treatment. On the sixth day, evidences of biliary obstruction being present, calomel was given, and in a short time the hiccough ceased. Several days afterward, severe pain occurred in the right shoulder, and there was some paresis of the muscles of the arm and shoulder. Four months later, the trapezius, spinati, deltoid and supinator longus muscles were found to be atrophic. The case is regarded as one of neuritis commencing in the phrenic nerve and ascending to the brachial plexus. Aldridge reports also a case of pneumonia in which on the twelfth day severe pain developed in the region of the right parotid gland, which became swollen and tender, and there was a slight rise in temperature. The condition was relieved by incision and scraping, and the patient recovered.

5.—Hemenway reports the case of a child that had been sickly from birth. When about 7 weeks old, it was noticed that the lower portion of the abdomen was unusually prominent. This condition progressed, while the patient became weaker, dying at the age of two months. At the autopsy, some ascitic fluid was found in the abdomen. The bladder, ureters and kidneys were enormously distended, the kidneys being apparently cystic. There was nothing significant in the family history, and the specimens were not care-



fully examined. Hemenway reports also a case of orbital cellulitis, with necrosis of the bone and destruction of the eyeball, following suppurative disease from a decayed tooth.

# Boston Medical and Surgical Journal.

November 3, 1898. [Vol. cxxxix, No. 18.]

1. Tropical and Camp Disease: A Study of Santiago Cases at the Boston City Hospital. E. M. BUCKINGHAM.
2. The Gratuitous Medical Treatment of those not in Needy Circumstances. HASKET DERBY.
3. Tumors of the Frontal Lobes; with Special Reference to a Case with Predominant Symptoms of a Neurasthenic Type. EDWARD WYLLYS TAYLOR.
4. Localized Neuritis. S. G. WEBBER.
5. Cholecystenterostomy with the Large Intestine by Means of the Murphy Button. W. L. COUSINS.

1.—Buckingham gives an account of some 130 soldiers invalided from Santiago that were under his care at the Boston City Hospital. All probably had malaria; usually of the estivo-autumnal type. Often a diagnosis could not be made at first from the blood, but subsequently, plasmodia were readily found. The spleen was enlarged. The patients usually were pale. Chills were infrequent, but attacks of fever, not always associated with prostration, occurred very often. A number of cases of neuritis developed among these patients, but it is uncertain whether they were due to the malaria or to the quinin. The blood of nearly all the patients caused a moderate clumping of typhoid bacilli.

2.—Derby believes that no distinction should be made in the case of persons able to pay a fee for medical advice at **free dispensaries** between those having and those not having medical conditions of sufficient interest to render them valuable for class-demonstration.

3.—Taylor continues his article on **frontal tumor of the brain**. Microscopic examination of the growth in the case reported proved it to be a glioma. An analysis of the symptoms showed that, of characteristic tumor-symptoms, headache was never constant, nor very annoying, and vomiting occurred only during the convulsive attacks. The optic discs were normal. Vertigo was frequently present. The convulsive attacks were not uniform in type, being sometimes followed by unconsciousness, sometimes not. Bradycardia was pronounced just before death. In spite of the involvement of such large areas of the frontal lobe, judgment, reason, and character were unimpaired, and the patient filled with distinction a responsible position until shortly before death. All the symptoms throughout the course of the disease were those of profound neurasthenia. In summarizing the case, Taylor mentions the following six points: (1) Absence of the characteristic symptoms of brain-tumor; (2) absence of symptoms of tumor of the frontal lobe; (3) the early occurrence of convulsive seizures; (4) the pronounced neurasthenic symptoms, diminishing under suggestion; (5) the absence of intellectual disturbances; (6) the sudden death.

4.—Webber relates a number of curious cases of **localized neuritis** following slight injuries, such as too vigorous squeezing of the hands, injury by blow or pressure on the fingers, burning the skin with nitric acid, etc. Occasionally these cases are obstinate, and result in more or less permanent disability. If they are severe, rest, constitutional treatment, and slight counter-irritation along the course of the nerves may be employed.

5.—**Cholecystenterostomy**, carried out, as in the case reported by Cousins, by joining the gall-bladder to the large intestine, is an operation that has rarely been attempted, and then with a high mortality. In this case the operation was undertaken for the relief of a biliary fistula, the result of a cholecystotomy. The patient not only made a good operative recovery, but, contrary to expectation, her digestion was in no way impaired; in fact, it was materially improved, as before the operation the patient had suffered from habitual constipation, while subsequently the bowel-movements became regular. Murphy has reported one successful case, and is familiar with three others. Mayo Robson states that anastomosis with the large intestine should never be done, except in exceptional cases. [Just why the more dangerous method should have been selected in this case is not mentioned in the report.]

# Journal of the American Medical Association.

November 5, 1898. [Vol. xxxi, No. 19.]

1. Progress in Neurology. C. H. HUGHES.
2. Hereditary Syphilis. L. DUNCAN BULKLEY.
3. The Medicinal Treatment of Congenital Infantile Syphilis. CHARLES S. SHAW.
4. The Debility of Adolescence. LOUIS FAUGÈRES BISHOP.
5. Tetany in Infancy; with a Report of Six Cases. JOHN LOVETT MORSE.
6. Neuralgia and Nerve Cries. CHAS. HOWARD LODOR.
7. A Further Contribution to the Study of the Difficulties of Defecation in Infants. THOS. CHARLES MARTIN.
8. What are the Symptoms of Nephritis? ROBERT T. EDES.
9. Precordial Area in Children. H. B. WHITNEY.
10. A Study of the Heart and Circulation in Feeble-Minded Children. J. MADISON TAYLOR and F. SAVARY PEARCE.
11. Discussion on Gastric Diseases. Opened by CHARLES V. STYAK.
12. Milk Mixtures as Food for Infants. EDWIN ROSENTHAL.
13. A New Bread for Diabetics. N. S. DAVIS, JR.
14. Dentition. JOSEPH CLEMENTS.

1.—See this JOURNAL, Vol. I, p. 1179.

3.—Shaw prefers to treat **infantile syphilis** by inoculation because of the digestive disturbances usually following the administration of mercury by the mouth in children. The oleate or ointment of mercury should be diluted with an equal quantity of lard or vaselin and spread on the abdominal binder. Every second day the child is bathed and the ointment reapplied.

4.—See this JOURNAL, Vol. I, p. 1094.

5.—The etiology, morbid anatomy, and frequency of **tetany in infancy** are discussed. In addition to the 77 cases collected from American literature by Griffith, Morse has found 13 cases and he reports besides this 6 cases occurring in his own practice. (1) The first case, that of a girl 4 months old, had been operated on for mastoid disease. No previous history was obtainable. There was slight diarrhea, typical contracture of the hands and arms on handling, no laryngospasm, facial phenomena absent, Trousseau's symptoms present, knee-jerk exaggerated. The further progress of the case is not known. (2) A colored girl, 4 months old, had spasms of the hands and arms, no laryngospasm or facial phenomena, Trousseau's symptom was easily elicited. The final outcome is unknown. (3) A girl of 10 months old had contractures of the upper part of the body and laryngospasm; facial phenomena or Trousseau's symptom were not present. There was disordered digestion. The child was given modified milk, small doses of bromids and the symptoms disappeared permanently. (4) A boy six months old had remittent contractures of the hands and feet, Trousseau's symptoms present, facial phenomena doubtful. There were symptoms of indigestion. Calomel, salol, and bromids were given. Symptoms of indigestion and the contractures disappeared in a month. (5) A boy 4 months old had had convulsions since birth, facial phenomena and Trousseau's symptom not determined. The symptoms disappeared under small doses of bromid. (6) A girl 10 months old was subject to almost constant contractures, respiratory spasm was marked as was Trousseau's symptom, the knee-jerks were normal, the spasms diminished slowly and finally disappeared under treatment.

6.—See this JOURNAL, Vol. I, p. 1181.

9.—See this JOURNAL, Vol. I, p. 1146.

10.—Taylor and Pearce have carefully gone over the records of 532 cases to determine the condition of the **heart and circulation in feeble-minded children**. Arrhythmia and tachycardia were found in about one-half the cases, bradycardia was not an unusual phenomena, and intermittent heart was seldom noted. Increased area of precordial pulsation was present in about one-third of the cases and transient thrills occurred in many cases. Bruits in the neck were few and inconstant; the pulse seems to follow less closely the result of cardiac action. Conditions of edema are singularly rare.

12.—See this JOURNAL, Vol. I, p. 1094.

13.—The various materials for **breads suitable for diabetics** are discussed, and Davis recommends the use of flour made from edible pine nuts. It is fine, slightly yellow, bland in taste, contains no starch, and 7% of cane-sugar. If raised



with yeast, the sugar is decomposed so that only a fraction of 1% can be found. Bread and cake made from it are relished, and it is an agreeable substitute for wheat bread. It should be used in moderation, so as not to produce indigestion. The flour is known as the Chicago Sanitary flour, and is also useful for those dyspeptics who do not tolerate amylaceous foods.

14.—See this JOURNAL, Vol. I, p 1147.

### Practitioner.

September, 1898. [Vol. lxi, No. 3.]

1. A Clinical Lecture on Cases of Thyroid Cyst. CHRISTOPHER HEATH. (Illustrated.)
2. On the Diagnosis and Treatment of Certain Chronic Joint-Affections. F. LEVISON.
3. Remarks upon the Value of Uranium Nitrate in the Control of Glycosuria. C. HUBERT BOND.
4. Unusual Aspects of Tertiary Syphilis. J. KESER.
5. A Case of Active Pneumonia and its Significance. THOMAS FRANCIS RAVEN.

1.—Heath warns against the use of injections of iron into solid **growths of the thyroid gland**, but not into cystic ones. The only safe injection for solid growths is from 20 to 30 drops of an alcoholic solution of iodine, which is more effectual than external applications. Enucleation, however, is as satisfactory in cases of solid as of cystic growths of the thyroid. Heath reports 3 cases of cystic growth successfully enucleated.

2.—Levison enlarges upon the diagnostic points of **chronic gouty arthritis**. The treatment consists essentially in the use of the electrolytic power of the constant electric current. Ten patients were markedly improved, 4 with continued benefit after 15 months without treatment; 3 with acute and subacute attacks; while 3 disappeared. It is important to distinguish uric arthritis, in which a deposition of biurate first occurs, and deforming polyarthritis, due to infection of unknown character. To this end, tophi are to be looked for, on the ear, olecranon, fingers or other situation; a strong hereditary tendency inquired into; and the condition of the kidneys and urine examined. The kidneys are always abnormal in gouty patients. The Roentgen rays also may be utilized. A gouty hand misshaped by ordinary photography is apparently natural under the rays. Uratic deposits allow the rays to pass. The thickening about the joints, and, not that which causes it, is all that can be seen. In gout an abundant deposit of fat takes place in bones, especially in the articular ends, which doubtless accounts for the paler areas in the heads of bones in a radiograph. In arthritis deformans, the ends of the bones appear darker with the Roentgen rays, less clear and sharp and in old cases, and the articular cavity cannot be recognized. Concerning the treatment of the two affections, gout has been chiefly treated by ensuing abundant diuresis, and preventing uric-acid precipitation in urine or increased irritation of the kidneys. Guaiac resin, from 60 to 70 cg. daily, usually with half the amount of potassium iodid, was given by Levison. Wine of colchicum was found a specially good analgesic. This treatment was usually responded to. The treatment of deforming polyarthritis is more doubtful. Local hot-air baths are encouraging. Recovery followed in one case, treated with general hot air baths and massage. Internal remedies play a small part in the treatment of polyarthritis.

3.—Bond records a series of 9 cases of **glycosuria and diabetes** treated with **uranium nitrate** with, in his belief, great success. One case of diabetes seemed entirely cured. Five cases of glycosuria showed marked improvement, and 3 seemed well, while 3 further cases of diabetes were improved.

4.—Keser reports the case of a man 50 years of age, in which sudden loss of consciousness came on with scarcely any preceding warnings of nervous trouble. The loss of consciousness was complete, and the limbs were flaccid. There was no evidence of any definite localization of cerebral disease. The kidneys, heart, and other organs seemed normal. It was remembered that the man had had a chancre 16 years before, and specific treatment brought rapid improvement, with ultimate recovery. In a second case, a highly nervous man, who had peculiar paresthesiæ, with exaggeration of the reflexes and epileptiform seizures, the

spasms recurred repeatedly, but improvement ensued under specific treatment. The third case resembled one of tuberculosis of the lungs, as the patient became emaciated and anemic, had night-sweats, diarrhea, anorexia, and cough with profuse expectoration; the sputum containing elastic fibers but no tubercle-bacilli. There were also ocular paralysees, which led to a suspicion of syphilis. Treatment for syphilis absolutely cured the suspected pulmonary tuberculosis.

5.—Raven records an interesting case of **pneumonia** in a boy of 12 years of age. The crisis seemed about to set in on the seventh day, and the temperature dropped rapidly almost 3°. The condition became worse subsequently, the pulse and temperature rose, and the patient for the first time became delirious and the abdomen distended, while the evidences of consolidation vanished rapidly. The condition was for some time afterward exceedingly grave, but improvement set in, followed by fugacious evidences of spots of consolidation in various parts of the lung. The temperature dropped to 99° in the morning and rose in the evening. On the nineteenth day violent paroxysmal cough again set in. There were chills and sweats and dislocation of the heart, and the diagnosis of enlarged and suppurating bronchial glands was made and seemed to be established by the subsequent expectoration of pus. Improvement then occurred. The belief is expressed that after the pseudo-crisis a poisoning of the boy's system by the exudate in the lung took place from the untimely clearing up of the inflammation. He insisted that the exudation in the lung is a local process, representing a vis medicatrix naturæ, for the purpose of eliminating the materies morbi through the lung. The chief conclusion is that the use of ice-bags over the pneumonia for the purpose of limiting the inflammation is not only an insufficient method of treatment, but is likely to be harmful.

### American Gynecological and Obstetrical Journal.

September, 1898. [Vol. xiv., No. 3.]

1. Analysis of One Hundred Cases of Laryngeal Diphtheria, Including Forty-seven Intubations. ROSA ENGELMANN.
2. Intravenous Injections of Normal Saline Solution. HORACE TRACY HANKS.
3. Menorrhagia and Metrorrhagia as Symptoms. W. L. DUNNING.
4. Some Practical Remarks on the Obstetric Forceps: A Description of a Modified Simpson Forceps and also a Traction Instrument. D. BENJAMIN. (Illustrated.)

1.—Engelmann states that the etiologic entity of croup is by no means established, nor will it be until patient research shall have added to our knowledge of the association and cultural peculiarities as affecting morphology, growth, benignancy, malignancy, interrelation, and septic qualities of the **germs** commonly concerned in **throat-lesions**. She no longer believes that certain definite symptoms pertain absolutely to a Löffler, a streptococcal, or a staphylococcal infection because first, of the possible polymorphic character of the Klebs-Löffler germ, second, because a pure form of the one or the other infection or disease so seldom exists. Changes of temperature, especially lowering of the same, have a very deleterious effect upon a diphtheritic intoxicated animal. Sex plays an important role, and age is a decided factor. Croup is rare in sucklings. Under one year of age recovery is uncommon. The day upon which antitoxin was given has a more appreciable effect upon the cases not intubated than upon the cases intubated. Seventy-five per cent. of children dying of diphtheria have broncho-pneumonia from aspiration into the larynx, weak expiration, pulmonary enlargement, lack of expectoration, palatal and laryngeal paralysis, and from the pulmonic interstitial changes that Klebs has shown to be present. Furthermore it has been proved that the toxin of diphtheria hastens the diffusion of the pneumococcus in the animal experimented upon.

2.—Hanks has fully tested during the past three years the advantages of special effort to **prevent shock**. The danger from severe accidents and from operations is due undoubtedly, first, to loss of blood; second, to traumatic injury of soft parts, while later comes septic absorption and obstruction of the bowels and suppression of the urine. In order to put his patients into the best possible condition he



prepares them by moderate and judicious stimulation. Commencing six hours before the operation they receive from one to three teaspoonfuls of whisky in one ounce of hot water every hour until the time for operation. Two hours before operation one or two ounces in four ounces of warm normal saline solution are passed into the rectum, high above the brim. He is in the habit of using regular and systematic intravenous injections of the normal saline solution at a temperature of 115° F., using from one pint to three quarts, as may seem to be demanded by the effect produced if the patient has lost much blood. The pulse should be watched during the transfusion, and when the desired tension is restored the injection can be stopped. The same can be repeated again four to twelve hours if occasion demands. He uses these intravenous injections of normal salt solution for loss of blood from any cause, for severe traumatism, for the early stage of sepsis after an operation, for suppression of urine, and for obstruction of the bowels from paralysis. Rectal irrigations with water at 115° F. have often relieved a congestion which was present in the kidneys. In over 20 patients on whom he has used intravenous injections he has had no accidents, and only three cases in which the injection was followed by a chill, and all of these were quickly relieved with morphia and brandy hypodermically.

3.—Dunning remarks that as **menorrhagia and metrorrhagia** are but symptoms of some pathologic condition it is illogical to institute treatment until the underlying cause is determined. In the case of menorrhagia in virgins, tonic and hygienic measures suffice as a rule. If metrorrhagia is present it calls for investigation. Inflammatory diseases of the uterus and appendages are in most cases septic or suppurative, and, therefore, as a rule, the treatment is surgical. Displacements of the uterus must be corrected before the hemorrhage can be controlled by means of a pessary or operation. In the various diseases of the endometrium curettage is indicated. Fibrous tumors, when symptoms are annoying, may usually be enucleated without sacrificing the uterus. Malignant disease is preeminently a surgical disease, hysterectomy being required. As a rule cases of abortion require curettage to secure the patient against hemorrhage and sepsis. Extrauterine pregnancy calls for surgical operation as soon as discovered. In case of alarming hemorrhage from the uterus from whatever cause, packing the uterus with sterilized gauze will control it perfectly, but this must be done with every aseptic precaution.

#### American Journal of the Medical Sciences.

September, 1898. [Vol. cxvi, No. 317.]

1. Danger of Error in Diagnosis between Chronic Syphilitic Fever and Tuberculosis. E. G. JANEWAY.
2. The Diffuse Infiltrating Form of Secondary Melanosarcoma of the Liver and its Association with Ascites. LUDVIG HEKTOEN and JAMES B. HERRICK.
3. Subarachnoid Serous Exudation Productive of Pressure-Symptoms after Head-Injuries. GEORGE L. WALTON.
4. The Pathology and Morbid Anatomy of Huntington's Chorea, with Remarks on the Development and Treatment of the Disease. JOSEPH COLLINS.
5. Traumatic Nervous Affections. THEODORE DILLER.
6. A Contribution to the Study of the Muscular Dystrophies. AUGUSTUS A. ESHNER.

1.—Janeway believes that **chronic syphilitic fever and tuberculosis** are not rarely confounded, and he cites illustrative cases from his own practice. The first concerns a patient who had lost forty pounds in weight in three months, had slight continued fever, and weakness and pain on the right side. The pain was found to be dependent on perihepatitis, which produced a distinct friction-fremitus. The patient had had syphilis ten years before, and he completely recovered under antisyphilitic treatment. The second patient had fever, sweating at night, loss in weight, and pain in the right side. Examination failed to reveal signs of pulmonary disease, but a small sinus was discovered near the middle third of the right clavicle, and two of the ribs on the same side were sensitive to pressure. Syphilitic infection was admitted and recovery ensued under antisyphilitic treatment. In the third case the patient had been sent to a health-resort for tuberculous patients without benefit. Examination of the chest yielded negative information. The

man was declining steadily and miliary tuberculosis was suspected. Careful investigation elicited a history of syphilitic infection in early life, and antisyphilitic treatment was instituted, with prompt recovery. The fourth case is similar to the others. The fifth occurred in a child that had continued fever and wasting; the liver was somewhat larger than usual at this age. The diagnosis lay between tuberculosis and syphilis. At the autopsy syphilitic disease of the liver was found, and the father admitted past syphilis. The last case is that of an adult who had lost flesh, had night-sweats, and continued fever, with enlargement of the liver and spleen. Antisyphilitic treatment was given and rapid improvement ensued. Syphilitic infection had occurred ten years before.

2.—**Secondary sarcoma** may appear in the form of circumscribed masses and nodules, as a diffuse infiltration of the whole liver, or in form of a mixture of both varieties. Hektoen and Herrick report three cases of the second or diffuse variety. They call particular attention to the presence and causes of ascites. The first case was one of diffuse infiltrating melanosarcoma of the liver, secondary to melanosarcoma of the choroid of the right eye. Ascites was present and on microscopic study of the liver was found to be due to occlusion of the capillaries of the liver and consecutive thrombosis of the intrahepatic branches of the portal vein. The second case was also consequential on a melanosarcoma of the eye and was attended with ascites. The liver showed on section both pigmented and unpigmented areas. It seemed as if the capillary tumor-cells emboli were principally chromatophorous, while the more advanced ones produced pigment-free cells. In the third case the primary growth occurred in the right eyelid; ascites was also present. Histologic examination in the first two cases (no autopsy was held in the third) showed extensive diffuse capillary embolism of tumor-cells, the cells apparently having reached the liver through the hepatic artery rather than through the portal vein. There was no metastases in the capillaries drained by this vein. As the capillaries and small vessels become packed with tumor-cells, the portal circulation is hindered, ascites develops, and thrombosis of the intrahepatic vessels of the portal vein may, as in one of the cases, be induced. In the third case ascites was probably connected with sarcomatous involvement of the peritoneum itself. In other cases the ascites might be connected with an accompanying nephritis or hepatic cirrhosis. In the matter of diagnosis the importance is emphasized of careful inquiry as to the nature of existing eye-trouble and of causes for extirpation of eyes seen to be missing. Painsstaking search for cutaneous and subcutaneous nodules should be made. Many of these are so minute that their possessor is not aware of their existence. In determining whether the serous membranes are involved in case of an exudate into the cavities of the body, the specific gravity of the fluid and a study of the cells present may afford valuable clues.

3.—Walton calls attention to the importance of recognizing, if possible, the part played by **subarachnoid serous exudation** in the production of pressure-symptoms after head injuries, and cites three illustrative cases. In all there was well-marked paralysis, and operation seemed to be indicated, the symptoms being strongly suggestive of hemorrhage. In two of the cases improvement occurred, with eventual recovery, without operation. In the third the skull was trephined, but the suspected hemorrhage was not found, merely a bulging of the dura and an excessive amount of fluid. Walton's conclusions are as follows: (1) A severe blow may result in a local bruise, with serous exudation into the subarachnoid, either with or without edema of the brain-substance; (2) if the accumulation of fluid occurs over the motor centers it may cause focal pressure-symptoms, simulating those of meningeal hemorrhage; (3) the mechanism of this accumulation is probably analogous to, if not identical with, that of the so-called serous meningitis of Quincke; (4) the lesion is self-limiting, the resulting paralysis disappearing in the course of a few days; (5) these conditions may be mistaken for middle meningeal or middle cerebral hemorrhage. The diagnosis is difficult and sometimes impossible. Factors aiding in the diagnosis are (a) the atypical course; (b) absence of steadily increasing coma; (c) the presence of sensitiveness to pain on manipulation of the head, even after unconsciousness is so great that questions are not answered. The general symptoms



(restlessness, stupor, headache, and moderate febrile movement) may be the same in both conditions; (6) the mere presence of paralysis following a blow upon the head is not necessarily an indication for immediate operation, and in the absence of steadily deepening unconsciousness and of steady increase of other cerebral symptoms, it will often be wise to postpone surgical interference, although, generally speaking, exploratory operation is always justified in the case of focal paralysis following head-injury; (7) the lesion is to be particularly borne in mind in the case of children and young adults and perhaps alcoholic patients. In elderly patients the same set of symptoms points more decidedly to hemorrhage.

4.—Collins has made a careful pathologic study of the case of **Huntington's chorea** in a patient belonging to a family in which the disease was hereditary. Investigation of the family-history showed that nine members, beginning with the patient's grandfather, had been affected. The lesions found were as follows: Thinness and atrophy of the cortex; a mottled tier-like or streaked appearance and a cribriform state on cross-section of the brain in the fresh condition. This appearance was due to a diminution in number and in size of the ganglion-cells and to an increase in size of the perivascular and pericellular spaces and to increased patency of the bloodvessels. The microscopic changes were as follows: (1) degeneration of the ganglion-cells throughout the cortex of the brain, involving principally the layers of the large pyramids and polymorphous cells, and most marked in the Rolandic region; (2) increase of the glia most marked in those sections that showed greatest cell-degeneration, but nowhere sufficiently prominent to constitute sclerosis; (3) enlargement of the pericellular spaces and distention of the perivascular spaces; (4) slight hyperplasia of the external and internal coats of the bloodvessels; (5) relative paucity of the medullated constituents of the cortex; and (6) slight degeneration of the crossed pyramidal tracts of the spinal cord. The changes, in short, consisted in a chronic parenchymatous degeneration of the cortex, with consecutive changes in the interstices and vascular system. These observations are compared with those of other observers, and then some speculation regarding the genesis of the disease is indulged in. The belief is expressed that the cells are originally properly formed, but that they are not endowed with their normal longevity. With respect to treatment, drugs, if given at all, must be administered in the largest possible, almost toxic, doses, for a long period of time. The marriage of persons with a heritage of Huntington's chorea should be discouraged.

5.—Diller has carefully studied 10 cases of **traumatic nervous disease**, particularly with reference to the medico-legal questions involved. In 8 of the cases damages were claimed; in 2, not. Seven patients of the first group were injured in an accident in a cigar-factory by an explosion of natural gas, and most of them received surgical injuries. In all the shock was followed by more or less marked nervous phenomena. In the first case, in a man 37 years old, there was partial hemiplegia, absolute hemianesthesia, spinal tenderness, and restriction of the visual fields. The case was considered one of hysteria and neurasthenia. The second, in a girl of 24, complained after the accident of constant pain in the back and neck, and of frequent headache, and of loss of strength and endurance. There was marked tenderness over some of the thoracic vertebrae. The symptoms were believed to be genuine and neurasthenic in nature. The third case was in a girl, 21 years old, who was subject to violent laughing spells, insomnia, terrifying dreams, and headache. There was diminution in strength and endurance, and points of tenderness were present over the spine, and a small spot of anesthesia on the back of the chest. The case was looked upon as one of hysteria, with an element of neurasthenia. The fourth patient was 37 years old and complained of indefinite nervous symptoms, which were considered partly or wholly simulated. This was very likely true also of the fifth case, in a man aged 44. The sixth was in a girl, 22 years old, emotional, with disturbed sleep, night-terrors, lack of energy, feeling of fatigue, moroseness and depression of spirits, with some ovarian tenderness. The symptoms were considered a mixture of hysteria and neurasthenia. The seventh patient, a girl aged 18, had received a serious burn, but nevertheless did not complain of any nervous symp-

toms. The eighth case concerns a man, 54 years old, a litigant, who had been struck by a live electric wire. Thereafter he had diminished knee jerks, tremors, and loss of pain-sense in the left leg; had become cranky and irritable, and had lost energy; and there was a tenderness on pressure over the spine. The case was interpreted as one of severe neurasthenia. The ninth case is particularly interesting, because progressive ophthalmoplegia came on after a fall. There were also pains in the occipital region and along the spine, loss of muscular strength and endurance, and clumsiness of finger-movements. The ophthalmoplegia is considered as due to degeneration of the related nuclei and the nervous shock of the fall is held as the exciting cause. The last patient, a man 21, had after a fall of fifteen feet, subjective symptoms and staggering gait and anesthesia, paralysis of the left side, with partial loss of control over the rectal sphincter. The man was not a claimant for damages and the symptoms were considered as real and not simulated and as belonging to grand hysteria. The general conclusions reached are as follows: (1) Nervous symptoms complained of as following severe accidents are, while often exaggerated, usually very real; (2) simulation is rare and easily detected by the skilled neurologist; (3) to successfully simulate nervous symptoms is a difficult task, possible to only a few; (4) the symptoms in any case may be subjective wholly or chiefly; (5) the nervous symptoms set up are, as a rule, neurasthenic or hysterical, or both; (6) a certain number of patients suffer from symptoms not attributable to either neurasthenia or hysteria; (7) actual degeneration of the nerve-substance is sometimes set up, and may progress; (8) while there is a strong tendency to recovery in many of the cases under consideration, the prognosis is, in not a few cases, grave, and in still others quite hopeless; (9) while the physical element is in most of these cases powerful, there are others in which it plays a minor role; (10) any name used to describe these nervous affections, carrying the idea that they constitute a morbid entity is undesirable; (11) some name *e. g.*, "traumatic neurosis," if used to mean any nervous affection following a traumatism, would be useful.

6.—It is pointed out that the **muscular dystrophies** are characterized especially by their hereditary or family distribution, their onset early in life, their preponderant occurrence in the male sex, their progressive course, the frequent presence of enlargement of some of the muscles affected, disappearance of the mechanical irritability of the muscles, with loss of reflexes and quantitative changes in electric reactions. The disease usually sets in during the first years of life. Different types have been established by Erb, Duchenne, Landouzy-Dejerine, and Leyden, but the belief is expressed that such a classification into types cannot be strictly maintained, as most cases present evidences of two or more varieties at the same time. The disease is of long duration, and often terminates fatally from pulmonary complications. After death the nervous system is ordinarily found intact, and the only important changes are found in the muscles. The dystrophies must be distinguished from neuritis and degeneration or inflammation of the anterior horns of the spinal cord. The histories are given of 20 cases collected from records of the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. Most of the patients presented the form known as pseudo-hypertrophy. Four of the patients were of the female sex; all were white. Attention is called to the rarity of dystrophies in pure blacks. In 11 of the cases infectious diseases had preceded the onset of the dystrophy. In only 2 cases did similar disease exist in another member of the same family. As to the pathogenesis of the disease nothing is known. The hypothesis is suggested, however, that the disease may be connected in some way with the thymus-gland, as its commencement usually falls in the period during which the thymus is normally most active, and the use of thymus extract is proposed in the treatment of the dystrophies.

#### American Journal of Obstetrics.

September, 1898. [Vol. xxxviii, No. 249.]

1. Carcinoma Developed from the Wall of a Dermoid Cyst of the Ovary. J. G. CLARK.
2. A Contribution to our Knowledge of Chronic Inflammatory Hyperplasias of the Vulva. H. D. BEYER.



3. Forty Cases of Fever in the Puerperium, with Bacteriological Examination of the Uterine Contents. J. WHITBRIDGE WILLIAMS.
4. Relaxed Abdomen and its Evil Consequences: Its Cure; Its Prevention. H. ILLOWAY.
5. Two Cases of Primary Carcinoma of the Fundus Uteri. J. M. BALDY and H. L. WILLIAMS. (With two illustrations.)
6. The Use of Mammary Gland in the Treatment of Fibroids of the Uterus, and of Parotid Gland for Ovarian Disease. JOHN B. SHOBER.
7. Hysterical Eructations. E. L. TOMPKINS.
8. A Case of Recurrent Vulvar Growth. J. M. BALDY and WILLIAM H. WELLS. (With one illustration.)
9. Two Cases of Fibroma of the Broad Ligament. JOHN C. DACOSTA.
10. A Case of Retained Ovum. H. C. NEER.

1.—Clark states that only 8 cases, excluding the one he now reports, of **carcinoma**, arising from the epidermal layer of a dermoid cyst, have been recorded. Of these, 6 are certainly true examples of this type. The other 2, that of Heschl and that of v. Wahl, can only be accepted provisionally. Until quite recently epidermal carcinomata have been the exclusive type reported. To this list, however, Yamagiva has added an extremely interesting and unique example of carcinoma of the glandular type associated with a teratoma of the ovary. This case marks an epoch in the history of dermoid cysts and must be assigned a new place in their classification. There still remains, however, a niche to be filled, for as yet no instance of carcinoma of the glandular type arising from the special glands of the skin lining these cysts has been reported. The point of paramount value in determining the origin of the carcinoma in the present case is that it was possible to directly trace the epithelial layers from the point at which they presented a normal arrangement to the border lines of the tumor, where the transformation into carcinomatous tissue was observed. Upon this fact was based the diagnosis of carcinoma of the cyst-wall arising from the epidermal lining. The age at which this complication is most likely to occur appears to follow the same general law of carcinoma in other regions, developing by preference in women approaching or beyond the menopause. As to the question of metastases, beside the retroperitoneal blood and lymphatic channels leading from the pelvic organs, another frequent route for transmission of the carcinomatous particles appears to be the fluid currents of the peritoneal cavity through which secondary growths become engrafted upon the peritoneal surfaces situated more or less remotely from the tumor.

2.—Beyea states that **round ulcer** of the **vulva** is an excessively chronic, at first small, circumscribed, hard, and edematous inflammatory hyperplasia, or an ulcer appearing without apparent cause in women who are often otherwise healthy, upon various portions of the vulva, particularly in relation with the urethra, the perineum, and the navicular fossa, and the cutaneous and mucous surfaces of the labia majora. The lesion may appear and disappear for a time, and then become persistent, continuing, slowly increasing in size, perhaps for many years, until finally the patient dies from exhaustion; or, in consequence of the resultant poor health, she dies from intercurrent disease, usually peritonitis or pulmonary tuberculosis. The growth is painless. Local treatment results in little or no improvement; excision and cauterization are likely to be followed by a return of the disease within a few weeks. The hypertrophic or hyperplastic form is usually associated more or less with the ulcerative form. The patient is usually of the poorer class, uncleanly in her habits and often a prostitute. Infection and trauma are thought to be predisposing causes. True tuberculosis of the vulva has up to the present time been seen only as an ulcerative process, and is an extremely rare disease. The growth is a grayish ulcerating area covered with small tubercles and areas of caseation. In most of the cases reported there were typical tuberculous lesions of the oviducts and uterus.

4.—Illoway states that it is now a well-established anatomic fact that the **anterior and lateral abdominal walls** constitute an important factor in the maintenance in their proper places of the organs located in the abdominal cavity. The small intestine, attached to a large and loose mesentery, and from its nature very mobile, is hung upon the vertebral column and requires the firm pressure

of a strong, abdominal wall to hold it thus. The large bowel, also, lies but rather loosely attached, and likewise requires the support of the abdominal parietes to hold it well in its position. The stomach is much dependent upon the support of the abdominal walls, and failure of such support is one of the etiologic factors in the production of atony of this organ. There can be no doubt that the contractions of the abdominal muscles, assisted by the pressure from above downward of the descending diaphragm, are the principal agents in the emptying of the gall-bladder. Under certain conditions the abdominal walls become relaxed to a greater or lesser extent, and according to the degree of relaxation, impairment of the physiologic function, and even dislocation, of one or more of the various organs of abdominal cavity, may occur. There may then supervene constipation, retardation of the outflow of bile from the gall-bladder, atony of the stomach, enteroptosis, instability of the kidney, hepatoptosis, varicosities, hemorrhoids, weakness of the heart, and dragging forward and downward of the bladder. Enteroptosis is found mostly in women, and but rarely in men. This great difference in liability to the morbid states named between the two sexes is readily understood by taking into consideration the causes that produce relaxation of the abdominal walls. These are: (a) The various diseases, acute or chronic, that cause emaciation and consequent disappearance of the panniculus adiposus, or that cause large effusions into the abdominal cavity that greatly distend its walls, and with all this a weakening of tone of the whole muscular system; (b) abdominal tumors that largely distend the abdominal walls and are later removed by operation; (c) pregnancy. The relaxed abdomen of pregnancy is of two kinds—the wrinkled belly and the pendulous belly. It is evident that the maintenance of the normal abdomen is of the greatest importance to the welfare of the human being, especially the female. The measures to be employed for the prevention of undue relaxation of the abdominal wall can be divided, from the period of time at which they are employed, into two great groups: (a) Those to be employed during pregnancy; (b) those to be employed after parturition. Under the first group are included: (1) Dietetic measures; (2) inunctions with oil or vaselin; (3) abdominal support with a bandage. Those to be employed after parturition include the well-known binder for immediate use, and remedies used for a subsequent period, for the relief of relaxed abdomen.

5.—Baldy and Williams report two cases of **primary carcinoma of the fundus of the uterus** in which the diagnosis was verified by microscopic examination of the specimens. The tumor from the first case partook of the nature of a malignant adenoma, with profuse proliferation of the uterine glandular tissue. The second tumor was a diffuse carcinoma, involving the upper uterine segment.

6.—According to Shober the healthy action of the mucous membranes, skin, and adjacent connective tissue, appears to be dependent upon a peculiar action of the thyroid gland, as shown by recent studies in myxedema and psoriasis. Therefore, may not epithelioma of the cervix uteri arising from the epithelial layer of the mucous membrane be due to the absence of some obscure catalytic influence of this gland? It has also been observed that disease of the thyroid gland is often accompanied by excessive metrorrhagia, showing that the function of this gland exerts some potent influence upon the lining membrane of the uterine canal. Shober reports four cases of **fibroids of the uterus treated with mammary-gland extract**, with marked improvement. He reports also four cases of ovarian disease treated with parotid gland, with results that while striking were not convincing.

7.—In a search through the literature Tompkins found but few cases of **hysterical belching**. He reports a genuine case occurring in his own practice, in which relief was afforded by administration of a mixture of hyoscyamus, camphor, and valerian.

8.—Baldy and Wells report a case of **recurrent vulvar growth** that was diagnosed as malignant in nature and was excised. On microscopic examination it was found to be not carcinomatous, but that it rather partook of the nature of a rodent ulcer as described by Veit. Baldy is inclined to the belief that the tumor was malignant, notwithstanding the histologic characteristics.



9.—DaCosta has been able to find but 5 or 6 cases of **tumor of the broad ligament** not involving adjacent organs. The best description of such a tumor is given by Vautrin, who thinks they originate in the shining fibers of the broad ligament, near the uterus. Almost all cases cited in the literature on the subject as tumors of the broad ligament exhibit evidence of having originated in either the uterus, the ovary, the round ligament, or the oviduct, and the great majority evidences of malignancy. DaCosta reports a case presenting neither of these features.

10.—Neer reports a case of **retained ovum**, in which there probably occurred complete separation of the placenta at the time of the first attack, without labor-pains or serious hemorrhage. The ovum was retained without ill effects for 2½ months.

#### Deutsche medicinische Wochenschrift.

September 15, 1898. [24. Jahrg., No. 37.]

1. Concerning Proteids. A. KOSSEL.
2. Determination of the Activity of the Tuberculous Toxins. V. LINGELSHIM.
3. The Asepsis of Suture-material. PAUL KLEMM.
4. The Clinical Picture of Friedreich's Ataxia. ALEXANDER KATZ.
5. A Case of Neuromyositis. HERZOG.

1.—Until recently the only **decomposition-products of proteids** known were the monoamido-acids, such as leucin, asparaginic acid, glutaminic acid, tyrosin, etc. At present, however, a number of basic products are also known. Types of these are lysin, histidin, and arginin, which Kossel terms hexon-bases. He further believes that in every proteid molecule there is a nucleus from which these bases are derived, and this fundamental atom-complex has indeed been found in every proteid so far examined. The protamins, a group of substances closely resembling proteids, can be decomposed into basic products of the hexon-type; e.g., salmin can be split into histidin, arginin, and lysin. These substances, salmin and its congeners, are analogous to the polysaccharids, which are composed of several hexon-molecules. Kossel believes that an atomic group similar to salmin, that is, a protamin-group, is the central nucleus of the proteid molecule, and is the mother-substance of histidin, arginin, and lysin, which can be isolated from the various proteid bodies. This view suggests a valuable classification of the albumins; they can namely be divided according to the group or lateral chain connected with the protamin-nucleus, whether leucin, tyrosin, or glyccoll, is inserted into the group, and accordingly as one or more of these groups contain sulphur, iodine, or iron. Already quantitative estimations as to the presence of hexon-bases have been attempted; for example in casein and egg-albumins, the nitrogen represented by arginin and histidin is from 12 to 18%, the total nitrogen being taken as 100%. Histon, a peculiar proteid, contains, on the other hand, as much as 30% of its total nitrogen in the form of arginin and histidin. Histon has been found in the nucleus of the red corpuscles and in cellular organs, such as the thymus and testicle. Saint-Hilaire, working under Kossel's direction, has found a microchemic reaction for these bodies based on the biuret-reaction. One of the most interesting results obtained by the various chemic studies was the discovery of the fact that the nearer the place of formation of the organic substance, the cell-nucleus is approached, the more subordinate, quantitatively, become certain chemic groups, as for example those that yield the monoamido-acids; while on the other hand certain other groups rich in nitrogen become more prominent, as the alloxur-bases and the hexon-bases. It is evidently from these atom-complexes that the formation of organic substance proceeds.

2.—Lingelsheim rejects the present method of **estimating the strength of tuberculous toxins** as unreliable, and proposes intracranial injection of the substances to be tested. The animal is narcotized, a flap of skin is removed, and the skull is perforated with a gimlet; a syringe is now introduced to a depth of 5 mm., and the fluid is injected. Using this method with Koch's new preparations of tuberculin, it was found that TO was three times as toxic as TR. Another interesting result was the discovery of the fact that the destruction of a guinea-pig by intracranial injection required only  $\frac{1}{15}$  of the amount necessary by subcutaneous or

intraperitoneal injection. This is true of healthy animals. When tuberculous guinea-pigs are used  $\frac{1}{500}$  or  $\frac{1}{1000}$  of the amount required by subcutaneous injection suffices to kill. This difference is explained on the ground that the poison is to a large extent neutralized at the site of subcutaneous or intraperitoneal injection.

3.—To insure **freedom from infection** in wounds through the agency of **suture or ligature materials**, the latter must be so arranged that it is necessary for one person only to handle them before they are inserted in the wound; the danger of infection being directly proportionate to the number of persons who handle them. Klemm prefers silk, as there is no question as to its sterility after it has been boiled. For ligature-purposes the silk is wound on glass reels, a number of which are arranged on a rack immersed in a 2% solution of boric acid. The operator has but to grasp the end of the material with forceps and cut it at the desired length. For suture-purposes silk of various sizes is wound on small glass plates, the needle having been previously threaded. With such a technic the danger of infection from contact with the hands of nurses or assistants is reduced to a minimum.

4.—Alexander Katz believes that many cases diagnosticated as **Friedreich's ataxia** are really instances of some other condition. He reports the case of a Jewish girl, 8 years of age, one of eight otherwise healthy children, and without neuropathic antecedents, who 3 years before examination had had a severe attack of scarlet fever, followed by a condition that was diagnosticated as cerebrospinal meningitis, and causing total paralysis of all the limbs, loss of speech, and inability to open the eyes. Improvement, however, gradually occurred, and finally a year later she was able to walk with support. At the time of the first examination she was well nourished and a well developed child, without deformity or disease of any of the organs. It was noticed that when she stood, there was marked restlessness of all the limbs, which was still present, but less pronounced when she sat up, but which disappeared completely when she lay upon her back. These static ataxic movements were not increased by closing the eyes. The gait was that of an intoxicated person; the movements of the arms were incoordinate, but there was no tremor, and the patient was able to write. Speech was nasal and scanning, and there was occasional slight nystagmus. The condition is to be distinguished from Friedreich's ataxia by the fact that there were no neuropathic antecedents, and no similar disease in the family; moreover, the condition occurred shortly after an acute infectious disease, and showed progressive improvement.

5.—Herzog reports the case of a student, 22 years of age, with extremely neuropathic antecedents, but who, personally, had been healthy and muscular, and who had been accustomed to eating considerable quantities of raw beef. After a period of excitement due to the examinations, and after exposure to wet, the young man suddenly noticed weakness in the right leg, followed the same day by weakness in the left, but without subjective symptoms of fever. Later, the muscles of the neck and body became weaker, and there was difficulty in swallowing. In the second week the man suffered from severe pains in various parts of the body, with tenderness over the nerve-trunks. At the end of three weeks there was slight return of power, and gradually the pains became less and only occurred as a result of pressure upon the muscles. At no time in the course of the disease was there any swelling or redness of the skin. The muscles, however, diminished considerably in volume, and there was a diminution in the electric reactions, without qualitative change. In the course of the disease there was some fibrillary twitching in the muscles. The diagnosis was at first uncertain, the possibility of neuritis not being excluded, owing to the slight sensitiveness of the nerve-trunks. Later, the painfulness of the muscles, and their rapid wasting indicated that the case was one of **neuromyositis**.

September 22, 1898. [24. Jahrg., No. 38.]

1. Constitution of the Diphtheria-Poison. PAUL EHRLICH.
2. A Second Case of Diphtheric Noma—Noma Faciei; Treatment with Antitoxic Serum; Recovery. FREYMUTH and PETRUSCHKY.
3. Stenosis of the Pylorus in the Infant, with Remarks on the Surgical Treatment. KARL STERN.



4. A Contribution to the Tabes-Syphilis Question. S. H. SCHEIBER.
5. A. Casuistic Contributions to Myopathology. B. The Cause of Intermittent and Interstitial Myositis. HERZOG.

1.—The diphtheria-poison contains, in addition to its special toxin, other substances of lesser toxicity, which have the same property of combining with the antitoxin as the true toxin itself. These substances Ehrlich designates **toxoids**, and he has found that they become increased during standing of diphtheria-bouillon, while the toxins are diminished. The toxoids can be conceived as having three forms: (1) One in which their affinity to the antitoxin is greater than that of the genuine toxin (*protoxoids*); (2) one in which their affinity is exactly the same (*syntoxoids*); (3) one in which their affinity is less (*epitoxoids*). The last are already present in fresh toxin, but do not become increased later. Indeed they may become diminished. This leads to the conclusion that epitoxoids must be separated from the other toxoids inasmuch as they cannot be considered transformation-products of already-formed toxin, but as primary products of the diphtheria-bacillus, and they are placed aside in a separate class termed *toxons*. Attempts have been made to estimate the quantity of toxoids present in diphtheria-bouillon. In describing these experiments a number of new terms are used. The  $L_0$  dose is the quantity of any toxin that is completely neutralized by the addition of one immunity-unit. In this mixture all of the combining groups, that is, toxins, toxoids, and toxons, are saturated by the antitoxin. The  $L_+$  dose is that quantity of toxin in which, on addition of one immunity-unit, just enough toxin remains unsaturated to kill one guinea-pig of 250 grams within 4 days. The unsaturated part of the toxin corresponds to a single lethal dose. An immunity-unit contains, according to certain calculations, 200 combining-units. The equivalent of a single combining-unit (Bindungseinheit—B E) is that quantity of the pure toxin that corresponds to a single fatal dose for a guinea-pig of 250 grams. The figure 200 implies that in an  $L_0$  dose 200 combining-units are contained, corresponding to the 200 combining-groups of the immunity-unit. In other words, the sum of the combining-units, toxins, toxoids, and toxons is 200. The figure 200 is somewhat arbitrary, and its selection is explained in a somewhat labored manner. Several charts illustrate the constitution of toxins. These charts, which are called toxin-spectra, show that protoxoids, syntoxoids and epitoxoids are present in the toxin, but their relations to the latter are very complicated. This complication depends upon the fact the diphtheria-toxin is not a simple substance, inasmuch as the bacillus produces various toxins, possessing different degrees of affinity for the antitoxin, and many of these toxins are again capable of producing their own toxoids. The following conclusions are summarized: (1) The diphtheria-bacillus produces two kinds of substances, (a) toxins, and (b) toxons, both of which combine with the antitoxin. Toxins and toxons have been found in three fresh bouillons in the same quantitative relation; (2) the toxins and probably also the toxons are not simple bodies, but they break up into various subdivisions, which differ in their affinity for the antitoxin. Three groups can be distinguished: prototoxins, deuterotoxins; tritotoxins; (3) this division does not exhaust the complication, for it must be assumed that each species of toxin consists of exactly two equal parts of different character, which have the same relation to the antitoxin, but differ in their destructive influence. They probably differ from each other like dextrorotatory and levorotatory substances; (4) one of these constituents is called X-modification, and this is readily transformed in all toxins into toxoids. This transformation begins already in the incubator. Owing to the disappearance of one-half of the poison the complete metamorphosis into toxoid causes a semivalent toxin to remain, called *hematoxin*. The second modification,  $\beta$ -modification, is in the different species of poisons, prototoxins, deuterotoxins, and tritotoxins of variable permanency. The  $\beta$  modification of the deuterotoxins is the most stable. This explains the fact that after a time diphtheria-bouillon reaches a stage of definite toxicity that is permanent; whence only those poisons that have entered this state should be used as diseased toxin; (6) in the change of toxin into toxoid the affinity of the antitoxin is not in the least modified, and the toxoid of the prototoxin,

for example, binds the antitoxin in the same way as the prototoxin itself does. The varieties of poisons combining less promptly with the antitoxin are less readily destroyed by the latter than those that combine with it more promptly; (7) regarding the significance of the  $L_0$  and the  $L_+$  dose, it is to be noted that the  $L_0$  dose is subject to greater variation than the  $L_+$  dose; (8) the facts developed are best explained by assuming that in the toxin-molecule two independent atom-complexes are present. One of these is haptophorous, which causes the binding of the antitoxin to the corresponding lateral chain of the cells. The other is toxophorous, *i. e.*, the cause of the specific action. The same is true of the toxons; (9) the haptophorous group is responsible for the combination of the toxin-molecule with the cells and thus of rendering the latter amenable to the influence of the toxophorous group; (10) the effects of the haptophorous and toxophorous groups can in certain cases be separated experimentally. Morgenroth has shown that the nervous system of the frog fixes tetanus-poison in the cold; disease-phenomena do not arise under these circumstances. If the frogs, which have been treated at proper intervals, first with poison and then with antitoxin, are placed in the incubator, tetanus develops even when all the circulating poison has combined with the antitoxin, and even when the latter is present in excess. The haptophorous group thus acts already in the cold, the toxophorous only after the application of heat; (11) the temporal difference in the action of the haptophorous and toxophorous groups explains also the incubation period; (12) the toxophorous group is more complicated and less permanent than the haptophorous. The anti-bodies produced by the influence of the poison act exclusively on the haptophorous group. By combining, through the mediation of this haptophorous group, with the entire toxin-molecule, they prevent the toxophorous group from acting upon the organs; (13) the specific antitoxin can also be produced with toxoids, but the immunity cannot be used to procure curative serum. The toxons probably play an important role. In natural immunity, *i. e.*, in the form in which not the poisons isolated but the causative agents themselves are the factors. Toxoids are decomposition-products of the prepared toxin; (14) it is probable that prototoxins also are under certain circumstances capable of bringing about a direct cure, by displacing the poison from the tissue-elements by reason of their stronger affinity for the latter.

2.—Freymuth and Petruschky report another case of **noma** due to **diphtheria-bacilli**. The first case reported was one of noma genitalium. Both patients recovered under the use of antitoxin.

3.—**Stenosis of the pyloric extremity of the stomach in infants**, though of rather uncommon occurrence, frequently escapes observation until revealed at the autopsy. According to Henschel, hypertrophy of the circular and longitudinal muscular fibers of the stomach-wall is the chief etiologic factor. As to what part syphilis, tuberculosis, or anemia may play in the etiology nothing is definitely known. Some authorities regard this hypertrophy of the muscular layers as a secondary manifestation, maintaining that some cases of stenosis are at first attended with no hypertrophy. In discussing the symptomatology and diagnosis the cases must be divided into two groups, those of complete and those of partial stenosis. Of the 10 cases hitherto reported, in which the diagnosis has been confirmed by autopsy, 5 belonged to the former group, 2 to the latter, while 3 were doubtful. The cardinal symptoms are vomiting and constipation, varying in degree accordingly as the stenosis is complete or incomplete. It is of importance to determine whether or not material vomited is stained by bile, for in this way one can decide whether the seat of obstruction is above or below the opening of the choledoch duct in the duodenum. Vomiting occurring immediately after the ingestion of a large amount of food and attended with much retching is rather characteristic. In cases of absolute stenosis there is but one treatment to be considered, *viz.*, gastroenterostomy. Though the mortality of this procedure in infants is necessarily high, it is the means of rescuing a small proportion from otherwise certain death. In cases of incomplete stenosis it is advisable to treat by local measures the accompanying gastric catarrh and dilatation, bearing in mind that eventually operation may be necessary.

4.—Scheiber is an opponent of the **syphilis theory of tabes** and contends that statistics antagonistic to the theory



have a right to be considered. He mentions the following facts: (1) The rarity of tabes dorsalis among the Kirghiz of Central Asia, despite the fact that syphilis is very common. (2) Syphilis is common among negroes, tabes almost unknown. (3) In Bosnia and Herzegovina syphilis is extremely common, tabes rare. This is true also of Abyssinia. Among the Arabs, despite the frequency of lues, general paralysis is rare. Tabes is also rare among prostitutes, although most of them are syphilitic. These facts seem to prove that syphilis is not the principal factor in the causation of tabes (and of dementia paralytica) and experimental evidence is cited to show that a condition analogous to tabes and general paralysis can be produced in animals. The opinion is expressed that tabes must be divided into meta-syphilitic and non-metasyphilitic forms.

5.—Herzog reports a case of **intermittent interstitial inflammation of the right biceps femoris and vastus externus muscles**. The intermittent character is explained by the existence of a rheumatic influence. The treatment consisted in rest, ice, and elevation. Massage and electricity did not seem to do much good.

### Wiener klinische Wochenschrift.

September 15, 1898. [11. Jahrg., No. 37.]

1. The Empress Elizabeth.
2. Concerning Recurrent Traumatic Corneal Neuralgia. WICHERKIEWICZ.
3. A Case of Pseudo-Muscular Hypertrophy. JULIUS DONATH.
4. A Case of Arsenical Poisoning. C. HÖDLMOSEER.

2. Wicherkiewicz contends that there is a **recurrent neuralgia of the cornea** following a slight abrasion of the epithelium or merely a blow, and he cites two illustrative cases.

3.—Donath reports the case of a boy, 17 years old, whose mother's antecedents were unknown, whose family-history disclosed no hereditary predisposition. The patient was healthy until the age of 15 years. He then noticed an enlargement of the calves of the leg. For one year following this there was no change in gait; after that the leg continued to gradually increase in size and the gait changed. For eight months the patient had to walk on his toes to avoid falling backward, and for some months he had been unable to walk without shoes. He was well nourished and his bony system was well developed. He stood and walked on the metatarsal joints, the left heel being more elevated than the right. He exhibited marked lordosis, especially in the lumbar region, and a slight scoliosis with a convexity to the right in the cervico-dorsal region, and to the left in the lumbar region. The patient stood with difficulty with the legs together. The thorax was pushed forward. The muscles of the chest and of the upper extremities, including the shoulder-girdle, were weak, but normally developed. The abdomen was somewhat pendulous. The glutei were well developed. The left anterior superior iliac spine was higher than the right. The legs were larger in circumference than the thighs. All the joints of the lower extremities were weakened, especially the knee-joints. Joint-movements were less free on the left side than on the right. Abduction and adduction of the thighs were lessened, especially the latter. The vastus internus and externus stood out strongly when either thigh was lifted. The inner surfaces of the thighs were much flattened. The knee-jerk was absent. Turning was easily accomplished. The method of rising from a lying or sitting posture was of the ordinary type. The faradic and galvanic excitability of most of the muscles of the lower extremities was much lessened; and there was no special change in the muscles of the upper extremities. There were also no changes in the organs of special sense. The treatment consisted in faradization of the whole muscular system for a period of three months, especially of the lower extremities, and some improvement followed. The hardness of the calf-muscles lessened; the gait was less stiff, and the patient's general strength was greater. Emphasis is laid upon the absence of any history of heredity and the presence of the reactions of degeneration. The absence of the knee-jerk is considered in large part attributable to the great wasting of the quadriceps, partially also to the involvement of the spinal cord. The coexistence of lordosis and well-

defined scoliosis are evidences of the irregular distribution of the muscular degeneration.

4.—Hödlmoser reports the case of a man, 35 years of age, who worked in the sun on a very hot day, slept comfortably the following night, but on the next morning complained of pain in the abdomen and vomited, and in a few hours was dead. On postmortem examination the entire extent of both hemispheres and the meninges presented a milky appearance, together with thickening and a grayish deposit over the sinus. There was a fairly large quantity of serous fluid at the base of the brain, and the meninges here were, in areas, markedly thickened, succulent, and coated with a grayish material. There was considerable serous fluid in the cerebral ventricles. The stomach was distended with gas and the folds of the mucous membrane presented numerous light red, striped, and bean-shaped ecchymoses, and yellowish millet-seed sized, cheesy collections. Chemic examination of the matter vomited, of certain areas of the stomach and of the cheesy masses in the stomach revealed the presence of arsenic. Emphasis is laid on the importance of examining the vomited matter, as well as the stomach and its postmortem contents, especially when there is the slightest sign of suspicion in the stomach. In the present case the autopsy showed the existence of a meningitis sufficient to have caused death. Neglect of the chemic examination would have failed to show what is considered the true cause of death.

### Centralblatt für Gynäkologie.

September 24, 1898. [22. Jahrg., No. 38.]

1. The Treatment of the Incarcerated, Retroverted, Pregnant Uterus. F. AHLFELD.
2. Vaporization of the Uterus. LUDWIG PINCUS.
3. An Interesting Case of Missed Abortion. N. K. IWANOFF.

1.—Ahlfeld discusses the various methods suggested for the treatment of the **incarcerated pregnant retroverted uterus**. He prefers replacement by modifying the position of the woman and by the introduction of Meyer's ring-plate, giving brief notes of a case in which this treatment was successfully followed.

2.—With regard to the technic of **vaporization of the uterus**, Pincus advocates the use of a wooden tube for the protection of the cervix. This is considered preferable to gauze, which becomes too readily saturated with hot vapor. The wooden tubes should be kept in a disinfectant solution. If there is a tendency of the metal tubing for conducting the steam to become stopped with clots, it will be necessary to carefully empty the uterus of blood; the vapor heated to 110° C. will arrest the hemorrhage in a short time. It is desirable to use vapor for the shortest possible time; one-quarter minute is sufficient for most cases, and one-half minute should be considered the maximum. The temperature should range between 102° and 110° C. The higher the temperature the shorter the time of application. A case of abortion with considerable hemorrhage is mentioned in which vaporization rapidly arrested the bleeding.

3.—Iwanoff reports the case of a woman, 32 years of age, who had never suffered from disease of the sexual organs, had married in her 18th year and had passed through four normal labors, and who was suddenly seized with pains and bleeding, followed by the expulsion of a four-months' fetus. Microscopic examination showed some of the chorial villi to be necrosed, while others were in normal condition, and the mucous membrane of the uterus had become completely regenerated in places. The mother had passed through the entire time of pregnancy without pains or the loss of a drop of blood until the time that this four-months' fetus was expelled.

**Extrauterine Pregnancy.**—Strauch (Wratsch, 1898, No. 19) reports 79 cases of extrauterine fetation subjected to operative intervention. In 69 celiotomy was performed; in 9 the hysterocele was opened through the vagina; in 2 an uninjured two-months' tubal gestation-sac was extirpated through the vagina; in one the uterus was removed to arrest excessive hemorrhage. The patients varied in age between 21 and 46 years; 16 were primiparas. The right oviduct was involved in 31 cases, the left in 39.



## Original Articles.

### A FURTHER ACCOUNT OF THE TREATMENT OF ANEURYSM BY THE CONJOINT USE OF GALVANISM THROUGH INTRODUCED COILED WIRE: REPORT OF CASES.

By D. D. STEWART, M.D.,

of Philadelphia.

Physician to the Episcopal Hospital, etc.

HAVING been disappointed for a long time with the results obtained by the usual methods of treatment of such cases of aneurysm as were insusceptible of cure by surgical means, and finding too often inefficient the employment of potassium iodid, with the Tufnell plan of rest and diet, however carefully adapted to suit a particular case, I was constrained some years ago to experiment with a method originally proposed and made use of by Corradi,<sup>1</sup> that of the electrolytic action of a galvanic current, through wire introduced into the aneurysmal sac. The method, as devised by Corradi and employed in Burres's case, and as subsequently employed in the greater number of the seven cases then on record, was faulty in many vital particulars. In several cases, as in Corradi's, the wire was not previously drawn so as to form coils or snarls in the sac; the wire was in some instances of improper caliber and of improper material; in several it was in amount introduced enormously in excess of what could be productive of ultimate good. In one of the seven cases a large amount of catgut (100 ft.) had been first introduced prior to the passage into the sac of 150 ft. of wire. In one no mention of the polarity of the current passed through the wire is made. It was as likely to have been the kathode as the anode.<sup>2</sup>

In another case<sup>3</sup> in which, after the introduction of 100 ft. of catgut, 150 ft. of wire were inserted, through which the current was passed, the anode (50 ma.) was at first the active pole for half an hour; then the kathode (100 ma.) for a second half hour.<sup>4</sup> In another of the seven cases, the necropsy showed the aneurysm to be a fusiform one, naturally insusceptible of cure by this method. Briefly, therefore, of the seven cases then reported, in but three (Barwell's, the second in which the procedure was carried out; Kerr's second case—Case VI of the series—and Rosenstern's, Case VII) was the technic such as to justify expectation of lasting results. In these as in all of the seven, the outlook was well-nigh hopeless prior to operation, and in practically all it had been undertaken as a last resort. In two of the three, however, a permanent cure was regarded to have resulted.

<sup>1</sup> *Lo Sperimentale*, April, 1879. <sup>2</sup> It was remarked in this case that "one pole of a constant battery" was attached to the wire, the other being applied to the right shoulder. See Case III in my first paper on this subject: "Treatment of Sacculated Aortic Aneurysm by Electrolysis through Introduced Wire," *American Journal of the Medical Sciences*, October, 1892. <sup>3</sup> Case IV, *ibid.* <sup>4</sup> Surely resulting in the softening and at least partial dissolution of the clot formed by means of the anode.

The fact that Corradi first carried out this procedure was generally unknown until attention was called to it in my first paper. The method had very erroneously been styled by one writer "the Loreta-Barwell operation." Loreta had previously simply introduced wire into an abdominal aneurysm first exposed by celiotomy, without galvanism. It must be said here that should it be desired to dignify the method by the name of its originators it could only rightly be termed the *Moore-Corradi*. Moore first, in 1864, introduced filiform material (in his case wire) into an aneurysm, and Corradi first combined this method with that of electrolysis.

In my first case, the eighth of the series, the outlook was absolutely hopeless. The aneurysm was of six years' duration. The sac was of enormous dimensions

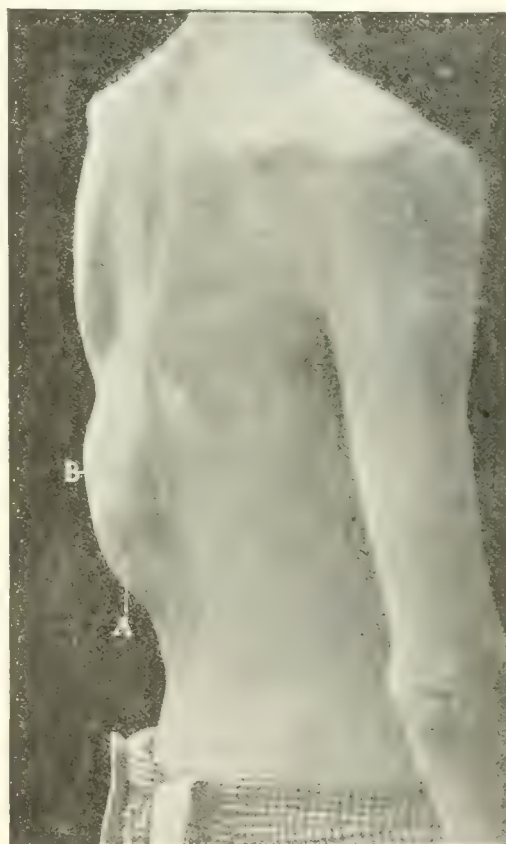


FIG. 1.—F. D. F., reported in the *Amer. Jour. Med. Sciences*, October, 1892. Very large aortic aneurysm healed by electrolysis through wire. A, site and direction of entrance of cannula through which wire was introduced. B, site and direction of entrance of second needle.

(12 in. in oblique measurement), involving the thoracic and the abdominal aorta, and having as a part of its wall several segments of the spinal cord denuded of vertebral protection. There was, moreover, a large area in which a portion of the ribs had been completely removed by erosion. Cure, or even chance of more than slight benefit, was not expected or promised in this case. The patient had desired the operation, trusting that it might assist in rendering his last days less painful and tend to afford euthanasia. It was undertaken solely with this

idea and that the experience gained by its application might be of utility in its employment in subsequently encountered, less advanced cases in which the outlook was more promising. As in this case, with a sac of such extraordinary dimensions, expectation of its final obliteration, through subsequent contraction of the clot formed about the wire, was out of the question, it seemed best to employ a rather coarse silver wire, the large spirals of which would tend to support the newly created coagula engaging its meshes. The relief from pain following the operation and the condition found subsequently at the necropsy justified both of these expectations. Unfortunately not nearly enough wire had been introduced to permit of the formation of sufficient clot to tend by early accretion to obliterate the sac in a patient whose physical condition was so debilitated. What was made surely evident, however, by the operation was the extraordinary power possessed by this procedure in producing prompt clot-formation. The

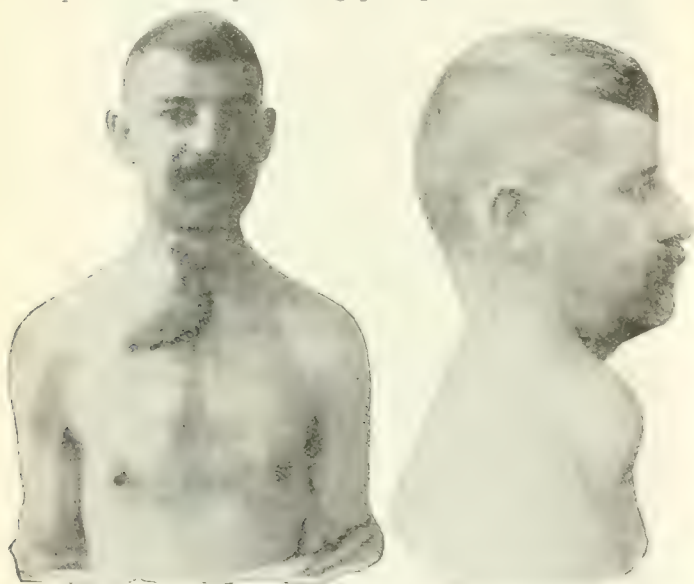


FIG. 2.—Solidified aneurysm of the innominate artery, some months after operation.

second case of aneurysm in which I employed this method was made the subject of two papers,<sup>5</sup> and has been discussed in publications by Hershey, of Colorado, and by Hare, of Philadelphia. In this case, a patient of Dr. Salinger, of Philadelphia, upon whose kind solicitation I performed the operation, there existed a large, rapidly increasing aneurysm of the innominate artery, the appearance of which, succeeding its consolidation by this method, is shown by the accompanying photographs, reproduced from Hare's work on *Practical Diagnosis*. These show the solidified aneurysmal nodule some months after operation. Before operation the aneurysm was of much greater dimensions, and its sac-wall externally was of such tenuity and so un-

protected by clot that merely passing an exploratory needle but a line or two beneath the skin in several situations permitted the blood to spurt with violence at each contraction of the heart. The lack of external clot-protection was well shown also by the fact that the needles after introduction, if not upheld by the hand, lay from their weight horizontal to the sac-wall. The extraordinary power of clot-formation was well shown in that, after half an hour's passage of the current, the two needles remained firmly perpendicular, unsupported by external help, coincidentally with visible diminution in pulsation over a large area of the sac. With this there was a sensation of density imparted to the finger not before manifest. These changes were remarked upon by all present at the operation. As stated in a previous paper, this patient had been a "bum" or "rounder"—an habitual excessive spirit-drinker. He was, moreover, a syphilitic, and had pronounced aortic and mitral disease, extensive cardiac enlargement, generalized endarteritis, and chronic nephritis. As stated in an earlier paper, the results in this case were more than temporarily beneficial, and that which was early apparent to eye and hand became still more manifest as time passed. The complete solidification of the sac was later shown by the introduction of needles. The patient lived for 3½ years, finally succumbing to an ailment totally unconnected with the aneurysm. The sac-cavity was found to be completely obliterated by organized coagula, engaging which were the coils of wire. The specimen was exhibited at a meeting of the College of Physicians and at the Pathological Society at Philadelphia. The accompanying illustrations, reproduced through the courtesy of the *British Medical Journal*, show the consolidated aneurysm both unopened and again exposed by section to show the clots and coils of wire.

It is of special interest to remark that Dr. John Ashhurst, Jr., after examining the specimen, in commenting favorably upon the method employed and its result, remarked that "it shows that the cavity of the sac was as completely obliterated by the contained clot as it could have been by either the Hunterian or the Amylian operation; in fact, as far as this part of the artery is concerned, the circulation was as completely obliterated as it could have been even by extirpation of the whole aneurysmal sac."<sup>6</sup>

So far as I am aware, no case, other than the 7 already mentioned, treated by this method has been recorded up to the present in which I have not been directly concerned.

Of the following 5 cases, 2 were my own, and the remaining 3 were patients under the charge of Drs. E. P. Hershey, W. H. Noble, and H. A. Hare. In Dr. Hershey's case I directed the technic from a distance. In the others I personally supervised the operation.

<sup>5</sup> On the Treatment of Aneurysm by Electrolysis through Wire: Report of a Successful Case, *American Journal of the Medical Sciences*, August, 1896; "Final Report of a Case of a Very Large Innominate Aneurysm Completely Cured by the Employment of Electrolysis through Ten Feet of Snarled, Coiled Fine Gold Wire Introduced into the Sac; Death at the Expiration of Three and a Half Years from Cerebral Thrombosis," *British Med. Journal*, August 14, 1897.

<sup>6</sup> See Transactions of the College of Physicians of Philadelphia, vol. xix, 1897, p. 43.



CASE IX.—This case was one of sacular innominate aneurysm, symptoms of which had first appeared about 1½ years before operation. A bulging, pulsating mass existed at the root of the neck on the left side. There was much pain and asthenia. The aneurysm showed signs of rapid increase at the time the patient came under Dr. Hershey's observation. Routine methods of treatment had been tried without result. Operation by the introduction of wire and the employment of galvanism was decided upon. The technic of the method employed was outlined by me to Dr. Hershey. The wire was 14 karat gold, drawn out to 28 gauge. Unfortun-

ately, the patient remained free from symptoms for a year, when death occurred suddenly while the patient was in California; the exact cause of death could not be ascertained.

In this case, doubtless, a more permanent result could have been obtained by the passage of a larger quantity of wire into the sac. It had been Dr. Hershey's intention to introduce 10 feet of wire, as I had in my

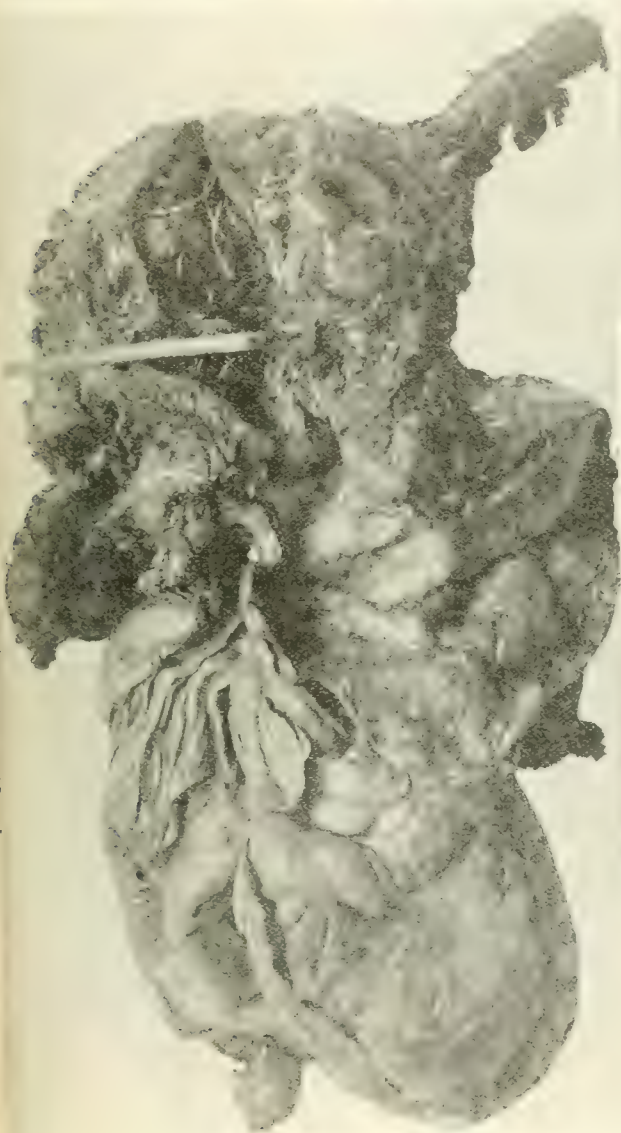


FIG. 3.



FIG. 4.

nately, through kinking of the wire in its introduction, but 2½ feet were passed. Through this a current-strength of upward of 70 ma. was passed for 65 minutes. The result was most gratifying, signs of solidification through active clot-formation becoming apparent during the passage of the current. At the termination of the electric session it was stated that "instead of the soft, pulsating mass, characteristic of an aneurysm, was felt a hard resisting tumor of much smaller dimensions."

The patient, who for some time previously to the operation had been incapacitated from work, and was usually compelled to keep abed, was soon afterward able to return to his vocation, that of prospecting. It was reported that he

remained free from symptoms for a year, when death occurred suddenly while the patient was in California; the exact cause of death could not be ascertained. In this case, doubtless, a more permanent result could have been obtained by the passage of a larger quantity of wire into the sac. It had been Dr. Hershey's intention to introduce 10 feet of wire, as I had in my previous case; but on the occurrence of kinking, as related, an effort was not made to insert more than had been passed, 2½ feet. It would have been perfectly easy to introduce more when kinking occurred by inserting a second needle into an adjacent part of the sac, and through it passing a further quantity, as I did in Case XI, to be related, the terminal parts of the wire from each needle being attached to the positive rheophore. This plan possesses advantages, in that with a large sac all parts can be reached by a moderate amount of wire.

The third case of my own has not been previously

7 See Dr. Hershey's paper, "Sacular Innominate Aneurysm Treated by the Introduction of Gold Wire and Galvanism," *The Philadelphia Medical Journal*, Sept., 1896.

published. It was one of fusiform aneurysm of the abdominal aorta, with coexisting retroperitoneal tumor. This case was not suitable for the operation, the existence of a retro-peritoneal growth causing a prominent pulsating mass that tended to mislead, suggesting as it did that the fusiform dilatation of the aorta, the lower part of which was encircled by the growth, was a large saccular aneurysm.

CASE X.—Edward McG., aged 40, an Irishman, and a day-laborer, entered my wards at the Episcopal Hospital, September 16, 1896, because of a pulsating abdominal tumor noted in the situation shown in the accompanying diagram.

Pains radiating from the spine into the abdomen had been present from the first. The patient had had syphilis; an abundance of circular depressed cicatrices was present on the limbs and trunk. The visible arteries generally were highly fibroid; the temporals, radials, and brachials were especially hard and tortuous. There was a moderate grade of cardiac hypertrophy, but no valvular lesion. The urine was highly albuminous and contained numerous epithelial, granular, and hyaline casts. The mass was very hard. It was situated a little to the left of the middle line and occupied a portion

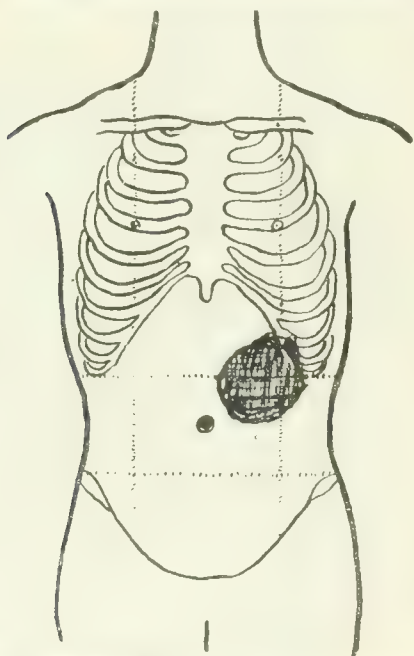


FIG. 5.—E. McG. Aneurysm of the splenic artery and of the aorta, associated with abdominal tumor.

of the epigastric, umbilical, and hypochondriac regions. A to-and-fro jog was easily evident; expansile pulsation was but slight. A systolic bruit was heard over all portions of the mass. The diagnosis lay between aneurysm of the splenic artery, partially solidified by clot, and abdominal tumor. No certain opinion was formed until the abdomen was opened. The appearance then to all of us was so suggestive of aneurysm that the operation was performed. The patient was seen by Drs. H. C. Deaver and Thomas R. Neilson, the attending surgeons, with the view of an exploratory section, and if the mass proved to be an aneurysm, the introduction of wire and the conjoined use of galvanism were to be tried. The section, performed by Drs. Deaver and Neilson, September 24, 1896, disclosed what appeared to be a saccular aneurysm springing from the left of the aorta in the situation of the celiac axis. Blood spurted on the introduction of a needle into the mass. Ten feet of coiled fine silver wire were introduced, and a current of 50 ma. was passed by the anode for half an hour. The operation was well borne, and the patient did well until the fifth day, when, shortly after taking a little food, he was seized with severe colic and dyspnea, and suddenly died. A necropsy was not permitted. Permission was, however,

granted to make a limited inspection of the interior of the abdomen through the wound made by the previous section. The incision was extended a little and thus a moderately satisfactory examination was made. The mass presented in the wound, pushing to the left and forward to the stomach, which was much distended with gas, and contained, as did the upper bowel, a large amount of blood. The tumor extended posteriorly, springing from the bodies of the vertebræ, and encircled the abdominal aorta. The anterior portion of the bodies of several vertebræ was considerably eroded and softened. The aorta above the mass was much dilated, the dilatation extending from about opposite the celiac axis to some distance into the thoracic aorta. A small saccular aneurysm of what appeared to be the splenic artery existed. The cause of the erosion of the vertebræ, other than the pressure of a much-dilated aorta, was not clear; nor could the site of rupture of the vessel that had caused the hemorrhage into the stomach be ascertained. The aorta appeared intact, as did also the aneurysm of the splenic artery. The wire had been originally passed through a part of the tumor into the small saccular aneurysm and had thence extended into the dilated aorta. No clots engaged the wire, which lay in the fusiform aneurysm.

This case was manifestly unsuitable for the operation. The presence of a retroperitoneal tumor encircling the aorta caused the small saccular aneurysm and the large fusiform dilatation of the aorta to appear as a single circular mass.

My fourth case, now published for the first time, was one of large aneurysm of the thoracic aorta. The aneurysmal swelling began at the junction of the transverse with the descending part of the aorta, involving chiefly the descending portions. The sac was of enormous size. There was accompanying bad aortic and mitral disease.

CASE XI.—J. C. T., aged 42 years, an Irish-American, of robust build, weighing about 190 pounds, and by occupation a railroad-engineer, was referred to me in December, 1896, by Drs. Didama and Van Duyn, of Syracuse, N. Y. Fourteen months before, while suffering from a severe attack of bronchitis, the cough of which racked him tremendously, he first noticed a pain about the left shoulder. He had contracted syphilis about twelve years before and had presented secondary lesions. Six years later he had two venereal sores. Otherwise he had always been in good health. He consulted Dr. Didama for the shoulder-pain at the time of its development. There was then noticed a pulsating prominence in the region of the left shoulder-blade. The man was placed on the Tufnell treatment, with moderate doses of potassium iodid. At the end of two months his condition had improved so much that he left his bed and returned to his work. Soon afterward the symptoms recurred and became more pronounced than at first so that he was finally compelled to abandon work. Pain had been constant and severe. For a few months before he came under my observation the pain had increased to an unbearable extent, coincident with rapid increase in the size of the aneurysmal swelling. When examined, January 1, 1897, the patient was found to be finely developed and well-nourished. The left side of the chest was more prominent than the right, and the left shoulder the higher, the last in consequence of his occupation. Pulsation of the vessels of the neck was marked, and there was extended precordial pulsation. The apex-beat was  $1\frac{1}{2}$  in. to the left of the left mammillary line. A to-and-fro murmur was audible all over the precordium, the systolic part of which was most distinct in the aortic area and the diastolic at midsternum. An apical systolic murmur, different in pitch from the basic, was transmitted by way of the axilla to and below the inferior angle of the left scapula. A pronounced jog of the whole shoulder was evident with each cardiac systole. Posteriorly a marked pulsating mass, of ovoid shape, extended from 2 in. below the inferior angle of the left scapula to 1 in. above the spine of that bone. The swelling measured 8 in. vertically and  $5\frac{1}{2}$  in. transversely at its center, the site of greatest prominence. The aneurysm lay chiefly below the



scapula, tilting the latter forward and outward. Expansile pulsation was evident over all of this region, when the scapula was rotated so far outward that the mass could be felt. Pulsation was accompanied by a decided jog and shock and a double harsh bruit. In addition, below, and heard most distinctly at and below the inferior angle of the scapula, there was a systolic murmur differing in tone and pitch from that heard over the body of the aneurysm. The water-hammer pulse was at times well marked. The arteries were not perceptibly thickened. A distinct thrill was appreciable in both brachials. The right brachial and radial were of larger volume than the left.

The patient was suffering intense pain, for the relief of which the constant use of morphin was required. Examination of the blood showed 5,400,000 red blood-corpuscles, 7,200 leukocytes and a hemoglobin-valuation of 90%.

Operation was undertaken January 17, 1897, 14 ft. of spirally wound fine gold wire being introduced into the more prominent part of the aneurysm through two insulated needles. The terminal ends of the wire from these were connected with the anode. There was now passed a current-strength rather rapidly raised to 80 ma. for 1 hour and 20

had not been originally passed. In order to determine the extent of the solidification, and at the same time, if possible, to introduce more wire, I made a thorough exploration of the sac three months after the operation, a large-caliber 3-in. needle being used. The sites of puncture selected were the most prominent and softer portions, at which little clot was supposed to be likely to exist. The needle was thrust in slowly to its hilt, without blood flowing. At only one of the four situations punctured did a few drops appear. An attempt to introduce the wire here was practically resultless; but 2 or 3 in. could be passed, and this was felt to engage clot.

The patient was under observation until July 15, 1897. On returning from my vacation in the autumn he failed to respond to an invitation to call on me. Subsequently I learned that he had died suddenly on October 4, 1897, eight and a half months after the operation. It was understood that a necropsy would have been forbidden, even had I had knowledge of his death.

As already remarked, the aneurysm in this case was much too large, and the cardiac condition much too unfavorable for a cure to be expected. If the amount of wire introduced had been greater, 20 ft. instead of 10 ft., more complete solidification might have been produced originally, but the persistently over-acting, hypertrophied heart, greatly disturbing, as it must have, with each systole, the conditions in the sac, gave little chance for organization of clot and subsequent obliteration of the sac-cavity. That the patient's life was undoubtedly prolonged and his condition made much more comfortable was unquestionable.

Case XII is of considerable interest. In this, in the opinion of both Dr. W. H. Noble, his attending physician, and myself, it is felt it may be justly claimed that a cure practically resulted by this method. The aneurysm was a large, increasing, sacculated one of the abdominal aorta. The pressure-symptoms were pronounced. The aneurysm was exposed by Dr. Noble, after which we introduced wire into the sac and passed a galvanic current, as in my other cases. The following is a brief history of the case, and an account of the procedure:<sup>8</sup>

CASE XII.—S. H., 40 years old, a native of Florida, had for years been of exceedingly dissipated habits; he was a hard drinker and had had syphilis when aged 21. He had had yellow fever and several severe attacks of intermittent fever, and he afterward suffered for a number of years from chronic paludism. He was an undertaker and embalmer, and had on more than one occasion suffered from infection from punctured wounds received in his occupation. Signs of aneurysm appeared 14 months before operation. He had severe continuous pains in the lower dorsal and in the lumbar regions and in the abdomen. These steadily increased, so that for a long time it had been impossible for him to lie comfortably in any position. In addition to a steady boring pain in the spine, there were pains shooting through the abdomen and legs. He had lost 55 pounds in flesh in the 14 months and was obstinately constipated. His symptoms had been viewed by several physicians whom he had consulted in the South as indicating a stricture of the colon, and an operation had been proposed for its relief. The man was exceedingly ill when he came under Dr. Noble's observation in the early part of July, 1897, being confined to bed, with constant pain; he was much prostrated physically. Rupture of the aneurysm seemed imminent. Dr. Noble performed celiotomy on July 14th, exposing an aneurysm of considerable size. We now introduced 9 ft. of spirally wound, fine gold wire and passed through it, by way of the anode, a

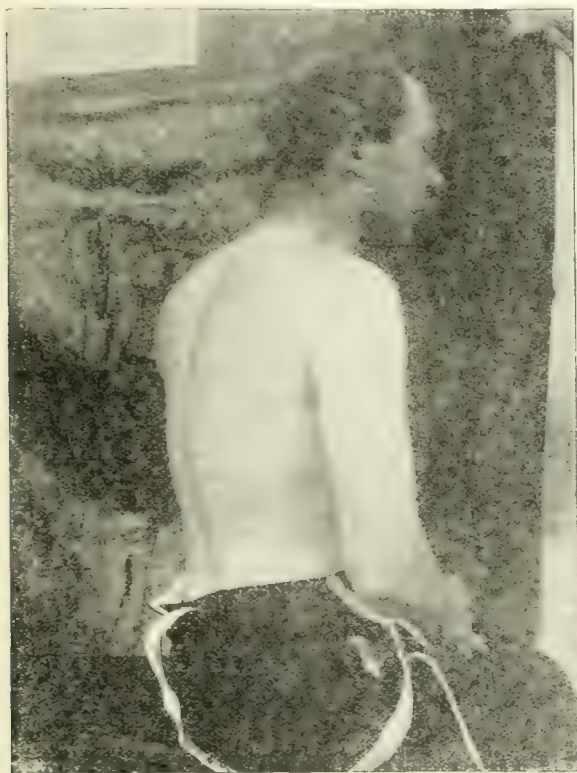


FIG. 6.—J. C. T. Large aneurysm, pointing posteriorly at the junction of the transverse and descending aorta.

minutes; the increase was from 20 ma. in a half-minute to 50 ma. in 9 minutes; 60 ma. in 15 minutes; 70 ma. in 20 minutes; to 80 ma. in 25 minutes. The operation was well borne.

After the operation the aneurysmal swelling was decidedly less prominent; there was much less to-and-fro pulsation; the bruit over the mass was not so apparent, and much less pain was complained of. Partial consolidation of the mass had undoubtedly occurred. Pain diminished considerably, and for the remainder of the patient's life it was never very severe. For periods it disappeared altogether; very little was usually felt when he was up and about. The patient was wont to have pain when supine or when lying on the affected side. He had unfortunately acquired the morphin-habit, which was maintained until his death, although the dosage after the operation was much smaller than he had previously been accustomed to. The aneurysm was so large and the cardiac condition so bad that complete solidification of the sac and subsequent organization of the formed coagula were scarcely to be expected. It was regretted afterward that more wire

<sup>8</sup> See the PHILADELPHIA MEDICAL JOURNAL, June 27, 1898, p. 1205.

current of 65 ma. for 57 minutes. At the expiration of this time, signs of shock being manifest, the current was slowly lessened, the needle removed, and the abdomen closed.

The improvement was immediate and progressive. Prior to the operation it was necessary to administer a great deal of morphin to ease the pain. None whatever was required afterward; the pain ceased almost entirely in a short time, and after a few months' rest the man was able to resume his occupation, all symptoms of aneurysm having disappeared. While under Dr. Noble's observation the patient had a growth on the jaw that had the appearance of sarcoma. This was not operated upon. In the early part of 1898 the growth increased much in size, and tended to greatly debilitate the patient. In the following April he was seized with acute dysentery, to which he succumbed. Symptoms of aneurysm had not recurred. The man remained to all appearances cured of this. Unfortunately, as the patient died in Florida, it was not practicable to have a necropsy.

This is thus the second case in which celiotomy preceded the introduction of wire and the use of galvanism, Case IX being the first. This form of the operation might be termed the *Loreta-Corradi*. Loreta was the first to introduce wire through an aneurysm exposed by celiotomy. In his case the aneurysm was cured by this method.

I have decried elsewhere the too early publication of cases of presumed cure of ailments, whether they be aneurysm or what not, by those eager to exploit a novel therapeutic method. Concerning this I have said that unfortunately too few trouble themselves to obtain information as to later developments in rare cases of "cure" in other affections than aneurysm. The report, I remarked, is too often made *ad captandum*—the wonder excited is the reward desired. I have hitherto refrained from placing on record a single case of aneurysm treated by this method until either death had occurred or the patient had survived a sufficiently long time for a definite opinion to be formed as to the probable ultimate outcome. Thus, of 5 cases (including that treated with Dr. Noble) 4 were reported after death only, and the fifth, in which an absolute cure could be demonstrated, was not published until 3 years had elapsed after the operation. Disappointment may easily result otherwise in consequence of early marked improvement suggesting a cure not being subsequently maintained. Thus the Burres-Corradi case was reported cured 25 days after the operation.<sup>9</sup> Death, however, occurred from the aneurysm at the end of 3½ months, preceding which signs of return of the symptoms were quite evident. That another result could have been expected with different technic is, I think, not unreasonable, although this had no bearing on the point at issue. It may, however, be justly permitted one at least to report the procedure and the apparent results immediately after operation.

Thus mention may be made here of Case XIII, a patient of Dr. H. A. Hare, in which recently Dr. Hare and myself carried out the procedure with seemingly most promising results.<sup>10</sup> The patient was aged 46 years, and was in Dr. Hare's wards at Jefferson Medi-

cal College Hospital. The following account is from Dr. Hare's introductory report of the case:

"He had an old specific history; a history of muscular strain and of a bad burn. On admission, he suffered from pain, dyspnea, and cardiac disturbance. The pain was typically cardiac, and radiated down his left shoulder and arm. On examining his chest, a well-marked bruit was heard over the precordium and well over to the right and left. The point of greatest intensity of thrill and bruit was the second left intercostal space anteriorly. Here auscultation revealed a loud bruit unmistakably aneurysmal, and palpation showed the characteristic expansile pulsation. No marked physical signs could be developed posteriorly. A diagnosis of aneurysm of the terminal portion of the transverse and the beginning of the descending aorta was made. The man now developed a brassy cough, and was slightly hoarse. Later, his sputum was tinged with bright blood, and the pain in the eroded ribs became excessive. As the patient had not improved under the use of ascending doses of potassium iodid, combined with aconite, to lower arterial tension and quiet the action of the heart, and as the persistently bloody sputum seemed to indicate that the growth was perhaps about to rupture into a bronchus, I advised him to submit to the introduction of wire and the use of electrolysis, although he was informed of its danger and possible failure of doing good."

Dr. Hare asking my cooperation in the case, I saw the patient with him, and the operation was decided upon. It was carried out on March 3d with my assistance, the exact technic I had pursued in the other cases being adopted. Approximately, 9 ft. of spirally wound, fine gold wire, such as I had used in the former two cases, were introduced into the sac through an insulated needle, and a current, rather rapidly increased from a few ma. to 70 ma., was passed through the anode for an hour. The operation was quite well borne. Signs of solidification were somewhat apparent toward the end of the electric session, in that there was less excursion of the mass and of the needle, and that the needle acquired the sensation of engaging a more solid mass. This, however, although undoubted, was much less than had been noted in the first two of my cases. In these the objective signs of clot-formation under the current's influence were really remarkable.

In the account of this case subsequent to operation, Dr. Hare reported that the aneurysmal bruit had greatly diminished. On the day following the operation, and at the end of 48 hours, it had disappeared. The expansile pulsation and the thrill had also greatly lessened. Dr. Hare states further:

"Five weeks later the patient is recorded as having been sitting up in a chair by the side of his bed for the past ten days. The expansile pulsation and thrill have entirely disappeared, and the impulse in the second left intercostal space feels like the apex-beat would feel if displaced. The bruit has entirely disappeared, and only a double aortic murmur is to be heard. The area over which these murmurs are heard is less than half that in which the bruit was distinguished before the operation. Blood-spitting has not occurred. Cough has ceased."

Dr. Hare now reports that the patient has left the hospital in good condition, and that he had gained 10 pounds in weight. The gain was due, in all probability, to the freedom from pain, permitting the man to eat and sleep well.

I cannot here enter into a history of the introduction of filiform material into aneurysms, of the employment of galvano-puncture, or of the conjoint use of electrolysis through introduced wire. Data bearing on the relation of the first two of these to the third are sufficiently detailed in my initial paper on the subject.<sup>11</sup> The vast superiority of the method of the application of galvanism through coiled wire introduced into the sac over the mere introduction of wire without galvanism, or over mere galvano-puncture is, I believe, convincingly stated in that paper, and is further demonstrated in my other

<sup>9</sup> *St. Louis Medical Journal*, April, 1879; *St. Louis Medical Journal*, May, 1888.

<sup>11</sup> *Journal of the Medical Sciences*, October, 1892.



publications cited. It need not, therefore, be now discussed.

Concerning the comparative value of this method and its technic as now employed by me, something should be said here, although it be in recapitulation of what I have previously published. This cannot be more succinctly given than the following excerpt from my last publication on the subject (*British Medical Journal*, August 14, 1897). In the earlier contribution I passed in review the various recorded cases in which wire alone was employed, the method first suggested and carried out, though faultily, by Moore, of the Middlesex Hospital,<sup>12</sup> in 1864. I remarked on the slightly appreciated though decided advantages possessed by this plan of treatment, and referred to the truly remarkable results obtained in certain of the cases, such as that of Loreta, of Bologna, and that of Morse, of San Francisco. I likewise pointed out that the exceedingly faulty technic had probably been the only source of failure in a number of cases in which the condition was at all susceptible of alleviation or cure, and especially in that of Moore, the originator of the method. This must be regarded as highly unfortunate, as it served to diminish the chances of recognition and a deserved place in the therapeutics of aneurysm for a second and far more promising plan of treatment of which the use of wire is an essential feature. This method I view, in consequence of thoughtful consideration of the details and now some practical experience, with the utmost favor; it is one, in experienced hands, devoid of danger and most promising of benefit if not of absolute cure; more promising, indeed, than the usual methods in vogue, save perhaps that of deligation. These errors, as the result of which failure occurred, and because of which the method of treatment of aneurysm by the introduction of wire became the subject of unfavorable criticism, as remarked, lay in the employment of faulty technic, from which failures cannot but be expected. In Moore's case, in which a great excess of wire had been introduced, death occurred from sepsis. In many of the other cases, although the operation was successful, so excessive an amount of wire was employed that it could not but surely interfere with the ultimate result desired, through which only permanent cure can be expected, that of obliteration of the sac-cavity.<sup>13</sup>

Briefly, the newer method, which can be regarded as a most decided advance on the older plan of treatment of aneurysm by the mere introduction of filiform material, as practised by myself, consists in introducing into the sac, under the strictest antiseptic precautions, a fine coiled wire, previously so drawn that it may be readily passed through a thoroughly insulated needle

of somewhat larger caliber than the wire, and, after introduction, assume snarled spiral coils; and that, with a moderate amount of wire, the entire caliber of the sac will be occupied, unless the cavity be already filled with coagula or the sac be of unusual size (as was the case with the first aneurysm I so treated).

The wire must not be too great either in amount or in caliber, nor too bulky nor too highly drawn, in order that the results desired be not interfered with; nor should the wire be of a material so brittle as steel, nor of hard drawn iron, lest fracture occur in the process of contraction of the sac, with danger of rupture; nor should it be of soft iron, as was recommended on theoretic grounds by Stevenson; for with the last, as I have shown by experiment, so great a quantity of detritus will result, from the decomposition of the iron and the formation of insoluble salts under the influence of the current, even with low ampérage, that there is danger of embolism.<sup>14</sup>

Silver, gold, or platinum wire is undoubtedly the preferable material. Silvered copper wire, as employed by Loreta in his case, in which wire alone—without galvanism—was used, possesses no advantage over wire of silver alone, and if it were used with aught but a low percentage of copper it might be provocative of toxic symptoms, through the copper dissolved under the current's influence.

The amount of wire required depends necessarily upon the caliber of the aneurysmal sac, and must be decided upon with the greatest nicety of judgment, as with too small an amount little or no result will be obtained, and with too great a quantity permanent cure through obliteration of the sac by contraction of the clot cannot be expected. For a globular sac of approximately 3 in. in diameter I regard from 3 to 5 ft. sufficient; for a sac of from 4 to 5 in. from 8 to 10 ft. How readily these amounts comply with the conditions may be shown by the introduction, through a needle, of a measured amount of spirally wound snarled wire into globular corked bottles of approximately the size stated.

The quantity of wire that was originally introduced into the aneurysmal sac, both when wire alone was employed and with wire reinforced by galvanism, was far in excess of that necessary to reach all portions of the cavity, and could not but be inimical to cure. The cases in which a moderate amount of wire was used, as in Loreta's (6 ft.) and Morse's (4½ ft.), resulted in cure. Loreta's case (one of an abdominal aneurysm the size of a fetal head at term) contracted to the dimensions of a walnut, with obliteration of the sac-cavity; death resulted from rupture of the aorta below the sac. In Morse's case ("abdominal aneurysm the size of two fists") all indications of aneurysm had disappeared within two months, a hard nodule replacing the pulsating tumor. In the cases in which the combined

<sup>12</sup> *Med. Chir. Trans.*, vol. xlvii. <sup>13</sup> It is within the meshes of the solidified coagulum that the wire must lie. Should the wire be excessive in amount or of undue firmness, or so highly drawn that it is likely to break, not only will contractions of the organized thrombus be interfered with, but rupture of the sac may be thereby induced. These imperfections in method I pointed out in detail in my first paper on the subject.

<sup>14</sup> As to this point, I would refer to the last part of my first paper, in which some experiments with soft iron-wire are detailed.

treatment was employed, the amount and character of the wire, the duration of the application of the electric current, and the polarity employed were as follows: Corradi (large aneurysm of the ascending part of aortic arch),  $1\frac{1}{2}$  ft. of No. 30 annealed wire; the material is not mentioned; the anode was active; 16 elements for 25 minutes. Barwell (large aneurysm of the ascending and transverse parts of the aortic arch), 10 ft. of the finest steel wire; the anode active; 10 ma. for  $1\frac{1}{2}$  hours. Roosevelt ("aggravated thoracic aortic aneurysm, threatening death"), 225 ft. of fine steel piano-wire; the polarity is not stated; 25 ma. for  $\frac{1}{2}$  hour. Abbe ("a rapidly advancing thoracic aneurysm at the root of the neck"), cavity 4 by 5 in.; 100 ft. of catgut were first introduced; 9 days subsequently 150 ft. of fine wire (the material is not stated); the anode was at first the active pole; 50 ma. for  $\frac{1}{2}$  hour; the kathode was the active pole for the second  $\frac{1}{2}$  hour; 100 ma. Kerr (fusiform thoracic aneurysm), 6 ft. of drawn silver wire; the anode was active; 50 minutes. Kerr (aortic intrapericardial sacculated aneurysm), 10 ft. of drawn silver wire; the anode was active;  $\frac{1}{2}$  hour. Rosenstern (aneurysm of the ascending part of the aortic arch),  $2\frac{1}{8}$  ft. of moderately thick, softened silver wire; the anode was active; 30 minutes. D. D. Stewart (enormous thoraco-abdominal aortic aneurysm),  $2\frac{1}{2}$  ft. of No. 23 silver wire; the anode was active; 70 ma. for 1 hour. D. D. Stewart (large innominate aneurysm), 10 ft. of fine gold wire, No. 30; the anode was active; 80 ma. for  $1\frac{1}{4}$  hours. E. P. Hershey (innominate aneurysm), gold wire, No. 28; attempted to pass 10 ft., but, through kinking of the wire,  $2\frac{1}{2}$  ft. only were introduced; from 40 to 70 ma. for 65 minutes; the anode was active. D. D. Stewart (fusiform aneurysm of the abdominal aorta), 10 ft. of fine hard-drawn silver wire; the anode was active; 50 ma. for 30 minutes. D. D. Stewart (very large aneurysm of the transverse and descending parts of the aortic arch), 80 ma. for 1 hour; the anode was active; 14 ft. of fine gold wire. Noble and Stewart (large aneurysm of the abdominal aorta), 9 ft. of fine gold wire; 65 ma. for 57 minutes; the anode was active. Hare and Stewart (aneurysm of the aortic arch), 9 ft. of gold wire; the anode was active; 1 hour.

The anode or positive pole should invariably be the active electrode. This is connected with the wire, and the negative rheophore, a large clay plate, or an absorbent cotton pad of equal dimensions, made after the method of Massey, is placed upon the abdomen or the back. The current is slowly brought into circuit and its strength is noted by an accurate milliampèremeter. The increase is gradual for a few moments until the maximum strength supposed to be required is reached. It is maintained at this until the approach of the end of the session, and then gradually diminished to zero, after which the wire is separated from the battery, the needle carefully withdrawn by rotation and counter-pressure, and the released external portion of the wire gently

pulled upon and cut close to the skin, the cut end being then pushed beneath the surface. This latter procedure is facilitated by using care in the introduction of the needle to first draw the skin at the site of puncture a trifle to one side, in order to procure a somewhat valve-like opening.

Experience has shown that the current's strength must be rather high—from 40 to 80 ma. and the session long—from three-quarters of an hour to one and a half hours. Thus used, the following effects may be expected: As before remarked, the mere introduction of coiled, snarled wire, without the conjoint use of galvanism, if practised judiciously, is in itself a method of value, since the presence of wire, if engaging all parts of the sac, acts both as an impediment to the blood-stream and at the same time offers to the eddies set up multiple surfaces for clot-formation. Hence this method had more to commend it than that by mere galvano-puncture with needles. By galvano-puncture, although firm coagula are produced, they are of such trifling dimensions and engage such small areas of sac-wall that, without impeding in the least the blood-current, their dissolution rather than their accretion quickly follows. By the application of a strong galvanic current through coils of wire, so disposed that all areas of the sac are reached, it follows without exception, as has been noted in all recorded cases, that consolidation by virtue of clot-formation is promptly and invariably produced. The solidification is rapid, and is generally manifest before the end of the electrical session, through changes apparent to the eye and the hand, in the pulsation and in the degree of consistence of the sac-wall. These changes become more decided in the course of a few days, until, after a time, in the most favorable cases a hard nodule, with a communicated pulsation only, replaces the previous expansible tumor. This was the history of four of the ten cases now recorded; that of Kerr, that of Rosenstern, the second case of my own, and the case of Hershey, and partially so in the case of Barwell, of Roosevelt, and in the first of my own, all of which latter cases were totally beyond the slightest hope of cure at the time of treatment, as was also the case of Abbe.<sup>15</sup>

A striking demonstration of the power of this method to promote clot-formation is shown in my second case. In this, as stated, 10 feet of fine gold wire had been passed and a current of 85 milliampères, employed for one and a quarter hours. Four weeks after this procedure a needle of quite large caliber was thrust into the sac to a depth of 2 in. in several situations, in which, at the time of operation, blood spurted at its introduction when apparently only beneath the skin. The needle in this second attempt was found to firmly engage the clot, though thrust perpendicularly up to its hilt in the sac. It could not be circumducted save

<sup>15</sup> An account of these cases will be found in my first and second papers.



with effort, and escape of even a drop of blood at any depth did not occur; nor was the needle or wire (which last it had been attempted to reinsert through the needle) blood-tinged when withdrawn. This beautifully demonstrated the apparent complete solidification of the aneurysm.<sup>16</sup>

One other effect possessed by the method in producing clot-formation should not be lost sight of. It is that through portions of the coils of wire, which must in small sections lie in direct contact with the sac-wall, an electrolytic effect is, under the current's influence, produced on the endothelial lining of the sac, such as Macewen has demonstrated is highly favorable to the subsequent deposition of leukocytes derived from the vessel-wall and by segregation from the bloodstream, resulting in the formation of organizable white thrombi, from which vascularized fibrous tissue readily springs. From these wall-thrombi, which in a fair number, if not in all cases treated by this method, are likely to result, organization may rapidly extend to the red thrombi formed directly about the centrally disposed wire, and thus solidification and organization of the sac promptly occurs.

The distinctive value of this method of treatment in selected cases of aneurysm, with the procedure intelligently carried out on the lines that I have laid down, its value not merely over the introduction of wire alone, or the now obsolete use of galvano-puncture, but beyond all other operative procedures now in vogue, will, I believe, be generally acknowledged before long.

## THE ETIOLOGY AND THE CLASSIFICATION OF PERITONITIS.

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THE causes of peritonitis have been investigated in various ways. The condition, as found in man, at surgical operations and at the autopsy-examinations, has been studied anatomically and bacteriologically. Numerous experiments have been made upon the lower animals with the view of reproducing the disease encountered in human beings; and there is at present amassed a number of important data that throw much light upon the conditions under which acute inflammations of the peritoneum tend to arise.

So far as I am aware, the only large series of observations in which systematic bacteriologic examinations were carried out has been published by Tavel and Lanz.<sup>1</sup> Their material had the advantage of being obtained at surgical operations. Of course, the literature contains many reports of examinations of single and several cases; but the advantages to be derived

from the study of a large number of cases of peritonitis under quite uniform conditions are considerable as compared with the results to be achieved by a comparison of those reported in the literature. This consideration will be found of importance when we attempt to answer the question whether the bacterial flora of the inflamed peritoneum bears any definite relation to the several conditions under which the inflammation arises.

The material at my command was derived exclusively from postmortem examinations. It has been thought that this fact might make the results less reliable and convincing than if it had been obtained from the living subject. I do not think that we are prepared to give a final answer to this question at the present time; indeed, I am of the opinion that the complication supposed to be introduced by this factor may have been overestimated. This belief is based upon the fairly sharp lines of demarcation that come out in a study of the several classes of peritonitides.

I am constrained to believe that the importance of the cases presented depends in part upon the fact that in their bacteriologic study plate-cultures were always employed. By this procedure mixtures of bacteria are separated, so that the relative numbers of the different kinds present may be estimated, and the weakly and slightly growing forms are not quickly overgrown and obscured by their more vigorous associates. The cases are taken from the pathologic records of the Johns Hopkins Hospital. It will be noted that all forms of tuberculous peritonitis have been omitted from consideration.

At the first glance it would seem improbable that the mere study of the bacteriology of fatal cases of peritonitis could be held capable of throwing additional light upon the etiology of the disease. Indeed, it is by no means certain that any essential advance can be made along these lines. Medical literature contains the records of many cases of peritonitis studied in this way by different observers, and we have already begun to associate certain microorganisms with certain kinds and sources of inflammation. Notwithstanding this fact it has seemed to me that a number of distinctions can be drawn more closely than has yet been done. This conclusion has been borne in on me by the study that forms the basis of the present paper.

One has not to go very far into the earlier literature of experimental peritonitis to be impressed with the fundamental importance of the work of Wegner and Grawitz and later Halsted, Pawlowsky, and others. This work has defined accurately the conditions that permit of the development of peritonitis in animals. Grawitz has, moreover, shown how nearly allied are the results thus obtained and the natural conditions found in man. The conceptions brought forward by Grawitz need very little alteration to make them fit into the scheme that we should propose to-day.

<sup>16</sup> An account of the exploration of the solidified sac with the needle is given in my second paper *American Journal of the Medical Sciences*, August, 1896.)

<sup>1</sup> Ueber die Etiologie der Peritonitis. Mittheilungen aus Kliniken und medicinischen Instituten der Schweiz, 1893.

Grawitz<sup>2</sup> divides peritonitis into primary and secondary forms. The first agrees with the so-called "idiopathic" or "rheumatic" inflammation of the peritoneum. Grawitz follows Leyden<sup>3</sup> in regarding all these as provoked by microorganisms; but he expresses more definitely the fact that besides the pyogenic bacteria (*causa proxima*) some favoring condition (*causa occasionalis*) is demanded. The latter he finds in wounds communicating with the abdominal cavity or the accumulation of fluid in such quantities that it cannot be absorbed in the natural manner and thus tends to stagnate in this situation. The pyogenic microorganisms may be introduced directly (through the wound, upon a trocar in paracentesis) or be brought by the blood-current or the lymph-current. Secondary peritonitis is a more common affection and occurs under a great variety of conditions, the pyogenic bacteria being introduced by contiguity. This group includes instances of puerperal infection, gangrene, and perforation of the intestine, etc.

If we examine critically the cases of primary peritonitis cited by Grawitz we shall have to dissent from a portion of his conclusions regarding what belong in this class. His first case, for example (diphtheric angina, ovarian abscess, peritonitis), is really of secondary nature. The reasons for considering it primary is stated to be the existence, in a recently ruptured Graafian follicle, of a *locus minoris resistentiæ*, in which the bacteria entering from the throat found an opportunity to develop, producing an abscess, which later infected the peritoneal cavity. Of great interest are the several cases of chronic renal, cardiac, and hepatic disease, associated with ascites, in which peritonitis developed. The infection-atrium was sometimes made out—an osteomyelitic focus; diphtheric dysentery; a leg-ulcer, and sometimes it was not discovered. Indeed, these cases, in which chronic disease preexisted, are alone, of the primary examples, convincing. The other examples of primary peritonitis given are either unverified or of secondary origin. Bacteriologic examinations seem not to have been made or they are too imperfect to help us at this time. This is true of all the cases reported by Grawitz.

The cases that are classed as secondary belong clearly to this group. They are such as leave no doubt that the infectious microorganisms reached the peritoneum from a neighboring diseased viscus.

There can, I think, be little doubt that the subject of the etiology of peritonitis has been much cleared up by the work of Grawitz and his demonstration of the essential identity of the conditions that lead to it in human beings with those discovered in experiments upon animals. Grawitz did not, however, consider the subject in its entirety; nor did he or Leyden fully appreciate the significance of the cases of primary peritonitis that they so accurately describe. It is only because in the

lapse of time since his writings up to the present some additional points of view have been secured that I feel justified in presenting the matter from the human pathologic side again.

Tavel and Lanz have, along with other things, attempted to answer the question whether peritonitis is a single infection or a multiple infection. Their conclusion is that the hematogenous varieties are mono-infectious, while those that proceed continuously from a diseased organ are usually poly-infectious. They found the majority of cases of circumscribed and diffuse peritonitis to be of the latter kind, although in both mono-infection was encountered. It may be observed that Tavel and Lanz tend to doubt their four cases of diffuse peritonitis in which a single microorganism was found. They are inclined to regard these as chemical forms, a class of which they make much, in which the bacteria played little part and perhaps entered secondarily.

Tavel and Lanz<sup>4</sup> have adopted a rather complex etiologic scheme of classification in which each portion of the gastro-intestinal tract, from the stomach throughout, is taken separately, and special kinds of peritoneal infection are derived from the gall-bladder and liver, the kidneys and urinary bladder and the female genitalia, while still other forms are supplied by operative procedures and hematogenous infections.

The statistics upon which the present report is based comprise 106 cases of peritonitis, which came to autopsy in the Johns Hopkins Hospital and in which bacteriologic studies were carried out, including examination of cover-glass preparations and the making of aerobic cultures. Only exceptionally were anaerobic cultures made. The isolated microorganisms were tested upon the different culture-media and identified as far as possible. Any discrepancies between the appearances observed upon cover-slips and obtained in cultures were noted. Only rarely were the bacteria isolated tested for pathogenesis.

It soon became evident that several classes of peritonitis could be distinguished. If it were desirable to retain the older names these might be divided into primary and secondary forms. Practically all were bacterial in origin; in our experience chemical peritonitis is of extremely rare occurrence.

By secondary peritonitis we should understand such conditions as follow operations upon the peritoneum or contained viscera, and those in which the abdominal cavity becomes inflamed through the mediation of diseased contained viscera. The numerous experiments made upon animals and many observations upon man, tend to prove that pathogenic microorganisms may find their way into the healthy peritoneum and even remain there for a time without setting up inflammation. Indeed, Tavel and Lanz think that they have shown that only an already inflamed peritoneum can be pro-

<sup>2</sup> *Charité Annalen*, x, 1886. <sup>3</sup> Cited by Grawitz, *op. cit.*

<sup>4</sup> *Op. cit.*, p. 7.



voked to peritonitis through the agency of pathogenic microorganisms. For this reason I prefer to call all such inflammations in which the microorganisms are brought by the blood-current or the lymph-current, without the mediation of some diseased neighboring organ or part, as primary. Some metastatic forms of peritonitis would then be primary in nature; and as it is probable that under normal conditions the same microorganisms might have reached this serous cavity without setting up inflammation it becomes necessary to inquire into the cause for this difference.

By primary peritonitis, according to this etiologic definition, is understood a condition in which an inflammation, usually diffuse, of the serous cavity takes place without the mediation of any of its contained organs, and independently of any surgical operation upon these parts. Such a primary peritonitis may arise as an independent affection, or it may develop in the course of infectious processes in distant parts of the body. The microorganisms associated with them, and to which they are chiefly due, may be brought by the blood-current or the lymph-current. It is conceivable that they may wander through the intact intestine, although convincing proof has yet to be supplied in support of this possibility. The portal of entry of the bacteria into the circulation may be at any distance from the peritoneum; but inflammations of this cavity that arise by extension, as in certain phlegmonous infections of the abdominal walls and perhaps certain acute pleurisies, are not included in this definition.

Of the 106 cases studied, 12 presented the characters of primary peritonitides. These cases will be recognized as corresponding in part with the idiopathic form of some writers. The protocols are abstracted so as to indicate the associated pathologic conditions.

- No. 2.<sup>5</sup> Healed dysentery; chronic nephritis; sero-fibrinous peritonitis. Microorganisms: Staphylococcus aureus; streptococcus.
- " 364. Chronic nephritis; sero-fibrinous peritonitis. Microorganism: Proteus vulgaris.
- " 482. Chronic endocarditis; heart-hypertrophy. Circumcision; acute endocarditis. General serositis. Sero-purulent peritonitis. Microorganisms: Streptococcus pyogenes; B. coli com.
- " 515. Cirrhosis of the liver; chronic endocarditis; arteriosclerosis. Acute endocarditis; general serositis. Fibrino-purulent peritonitis. Microorganism: Streptococcus pyogenes.
- " 517. Arteriosclerosis; hypertrophy of the prostate gland; purulent cystitis. Fibrinous peritonitis; very slight exudate. Microorganism: Staphylococcus albus.
- " 519. Cirrhosis of the liver; chronic nephritis. Sero-fibrinous peritonitis. Microorganism: Micrococcus lanceolatus.
- " 534. Chronic nephritis; cirrhosis of the liver; arteriosclerosis; chronic endocarditis; shallow ulcers of the large intestine. Sero-fibrinous peritonitis. Microorganism: Bacillus pyocyaneus.
- " 542. Arteriosclerosis; carcinoma of the stomach. Sero-purulent peritonitis. Microorganism: Streptococcus pyogenes.
- " 555. Carcinoma of the stomach and general carcinosis.

Sero-fibrinous peritonitis. Microorganism: Unidentified bacilli.

- No. 570. Chronic nephritis; chronic endocarditis; heart-hypertrophy. Fibrino-purulent peritonitis. No bacteria found.
- " 577. Chronic endocarditis; sero-hemo-fibrinous peritonitis. No bacteria found.
- " 626. Amyloid disease; cirrhosis of the liver. Fibrino-purulent peritonitis. Microorganism: Streptococcus pyogenes.

An analysis of the foregoing cases brings out the following facts: In all there was previous chronic disease, at one time involving one important organ, at another several organs. The peritoneum was the only serous membrane affected in 10 cases, while in two instances the pleura and the pericardium were involved at the same time. In 2 of the cases no bacteria were demonstrable upon films or in cultures. These would doubtless be regarded as examples of chemical peritonitis by Tavel and Lanz. I think that more evidence than we have at present is needed before this explanation can be accepted. There is at least a possibility that microorganisms were present at an earlier time. The microorganisms represented are both cocci and bacilli, the former predominating. In 9 instances single infection and in 1 instance multiple infection occurred. The organisms found were streptococcus pyogenes 5 times, 4 times alone and once in association with the bacillus coli com.; staphylococcus aureus and albus twice; while the micrococcus lanceolatus, bacillus proteus, bacillus pyocyaneus and an *unidentified* bacillus occurred once each.

The portals of entry were several, including a circumcision-wound, acute endocarditis and slight lesions of the intestinal mucosa.

If we turn our attention to secondary forms of peritonitis we shall find not only that these are far more common than the primary, but also that at least two classes of cases can be distinguished. These classes depend upon the mode of entrance of the pathogenic microorganisms, rather than upon their kind or the character of the inflammatory reaction. Yet there are differences in the kinds of bacteria found in each, or, at least, differences of predominance and of combination.

The first class of secondary peritonitides that I shall consider may be designated "exogenous peritonitis." In it the infectious microorganisms have, in large part, entered from without. They actually are examples of wound-infection. This fact is brought out by the clinical histories of the cases and is supported by the bacteriologic findings, which agree with those of ordinary surgical infections. In our series of 106 cases I found 34 belonging to this group:

- No. 45. Exploratory celiotomy; carcinoma of the liver. Suppurating abdominal wound. Microorganism: Staphylococcus aureus.
- " 52. Myomectomy. Microorganism: Staphylococcus aureus.
- " 89. Carcinoma of the kidney. Celiotomy. Microorganism: B. coli com.
- " 108. Ovariectomy. Microorganism: Staphylococcus aureus.

<sup>5</sup> The numbers given refer to the autopsy numbers in the records of the Johns Hopkins Hospital.

- N. 144. Ovariectomy. Microorganism: *Staphylococcus aureus*.
- " 160. Ovariectomy. Suppurating external wound. Microorganism: *Staphylococcus aureus*.
- " 214. Chronic peritonitis; exploratory celiotomy. Microorganism: *B. coli* com.
- " 218. Ovariectomy. Microorganism: *Staphylococcus aureus*.
- " 219. Chronic peritonitis; celiotomy. Microorganisms: *Micrococcus lanceolatus*; coarse liquefying bacillus.
- " 221. Ovariectomy. Microorganism: Unidentified peptonizing bacillus.
- " 243. Ovariectomy. Microorganism: *Streptococcus pyogenes*.
- " 273. Hysterectomy for carcinoma uteri; ligated ureter; Microorganism: *Staphylococcus albus* (perhaps epidermidis.)
- " 277. Ovariectomy. Microorganisms: *Staphylococcus aureus* and *streptococcus pyogenes*.
- " 288. Myomectomy. Slight peritonitis. Peritoneum sterile. *B. coli* com. in organs.
- " 292. Ovariectomy. Microorganism: *Staphylococcus albus*.
- " 380. Myomectomy. Purulent and hemorrhagic peritonitis. Microorganism: *Staphylococcus aureus*.
- " 382. Ovariectomy. Microorganism: *Staphylococcus aureus*.
- " 383. Ovariectomy. Microorganism: *Staphylococcus aureus*.
- " 385. Hystero-myomectomy. Fibrinous peritonitis. Microorganism: *Staphylococcus aureus*.
- " 446. Perforating carcinoma of the uterus. Fibrino-purulent peritonitis. Microorganisms: *B. pyocyaneus*; *streptococcus pyogenes*.
- " 487. Ovarian cystoma. Tapping abdomen. Sero-fibrinous peritonitis. Microorganism: *Streptococcus pyogenes*. Few bacilli in films; did not grow.
- " 549. Traumatic rupture of the bladder. Celiotomy. Fibrinous peritonitis. Microorganisms: *Streptococci*; *B. coli* com.
- " 635. Chronic pelvic peritonitis; celiotomy; fibrinous peritonitis. Microorganism: *Micrococcus lanceolatus*.
- " 644. Fistula between bladder and abdomen; chronic tuberculous peritonitis; acute fibrinous peritonitis. Microorganism: In cultures, *streptococcus pyogenes*.
- " 653. Sloughing myoma uteri; celiotomy. Fibrino-purulent peritonitis. Microorganism: *Streptococcus pyogenes*.
- " 666. Hysterectomy; fibrino-purulent peritonitis. Microorganism: *Staphylococcus aureus*.
- " 671. Hysterectomy; fibrino-purulent peritonitis. Microorganisms: *Streptococcus* and *staphylococcus albus*.
- " 700. Sloughing myoma uteri; celiotomy; purulent peritonitis. Microorganisms: Large unidentified coccus; films, bacilli resembling *B. aërog. capsulatus*.
- " 812. Hysterectomy; infection of an external wound; fibrino-purulent peritonitis. Microorganisms: *M. lanceolatus*; *B. coli* com.
- " 876. Perforating carcinoma uteri. Microorganisms: *Streptococcus pyogenes*. In films a few bacilli.
- " 895. Ovariectomy for carcinoma; fibrino-purulent peritonitis. Microorganisms: *B. coli* com.; in films a few cocci.
- " 914. Hysterectomy; fibrinous peritonitis. Microorganism: *Staphylococcus pyogenes aureus*.
- " 958. Suprapubic cystotomy; fibrinous peritonitis. Microorganisms: *Streptococci*; *B. pyocyaneus*; *B. coli* com.
- " 1015. Suprapubic cystotomy; fibrino-purulent peritonitis. Microorganisms: *Staphylococcus aureus*; *B. coli* com.

This group comprises 34 cases in all. Of these 25 are of the nature of single and 9 of multiple infections.

The bacteria concerned in their causation are chiefly the pyogenic cocci, either alone or, more rarely, associated with bacilli. The following tables give the microorganisms found and their combinations:

TABLE OF MICROORGANISMS FOUND IN CASES OF EXOGENOUS PERITONITIS.

	Total No. Cases.	Alone	Combined.
<i>Staphylococcus aureus</i> .....	15	12	3
" <i>albus</i> .....	3	2	1
<i>Streptococcus pyogenes</i> .....	10	5	5
<i>Bacillus coli communis</i> .....	7	2	5
<i>Micrococcus lanceolatus</i> .....	3	1	2
<i>Bacillus proteus</i> .....	1	0	1
<i>Bacillus pyocyaneus</i> .....	2	0	2
Unidentified organisms.....	3	0	0

TABLE OF COMBINATIONS.

	No. Cases.
<i>Staphylococcus aureus</i> and <i>streptococcus</i> .....	1
" <i>albus</i> ".....	1
" " <i>B. proteus</i> .....	1
" " <i>B. coli</i> com.....	1
<i>Streptococcus</i> and <i>B. coli</i> com.....	1
" <i>B. pyocyaneus</i> , and <i>B. coli</i> com. 1	
" and <i>B. pyocyaneus</i> .....	1
<i>Micrococcus lanceolatus</i> and <i>B. coli</i> .....	1
" " " liquefying bacillus 1	

What is especially striking in these tables is the similarity of the bacterial flora with that of ordinary surgical infections. The only important difference is afforded by the part played by the bacillus coli. This feature is, however, at once explained when the particular cases in which this organism occurred are considered. In 4 cases there was inflammation of the genito-urinary tract prior to operation, in 2 the operation (autopsies 958 and 1015) being directly upon the urinary bladder. As this bacillus is so commonly found in inflammations of these parts its entrance into the peritoneum is easily accounted for. Of the remaining three cases two were ovariectomies for carcinoma. It is extremely probable that adhesions to the intestinal coils, which necessitated handling of and perhaps more or less injury to these parts, opened the way for the penetration of this organism and for the provocation of an inflammatory reaction.

The cases in which the bacillus coli was the sole organism found in the exudate should be mentioned especially. There has been a radical change of opinion regarding the pyogenic activities of this organism in peritonitis. Undoubtedly the great majority of cases in which it is found are examples of multiple infection. That the bacillus coli may, however, be the only bacterium present in the inflammatory exudate must be admitted in the light of our present knowledge. In this group one certain instance only has been encountered (autopsy 214). In that case an exploratory celiotomy had been performed, the condition found being a chronic peritonitis. The exact character of the acute process is not given in the notes. The second instance (autopsy 89) is less convincing, as it dates from a period in which the same minute care was not exercised in searching for other bacteria, especially streptococci. In it there



was also a general invasion of the organs with the bacillus coli communis.

The next class of secondary forms of peritonitis may, I think, be termed "endogenous peritonitis." In it the bacteria come in part or wholly from the intestinal tract. This fact determines them to be chiefly multiple infections. The variety of microorganisms is greater than in the other classes. In our experience, and the same is generally true, the endogenous form is the commonest form of infection encountered in surgical practice and at autopsy. It is quite certain that our examination by cultures and films give us a more imperfect result in this group than in the others, for the reason that not all of the intestinal bacteria are capable of cultivation upon artificial media. This fact has been dwelt on by Tavel and Lanz.

This class comprises 60 cases, as follows:

- No. 55. Myoma uteri; volvulus of the intestine. Celiotomy. Fibrino-purulent peritonitis. Gelatin-culture sterile. No others made.
- " 84. Ovariectomy; myoma uteri; celiotomy; wound of the intestine. Fibrino-purulent peritonitis. Bacillus coli only isolated.
- " 176. Strangulated hernia; resection of the intestine. Bacillus coli alone isolated; present in large numbers.
- " 181. Extra-uterine pregnancy; perforation of the vermiform appendix; celiotomy; fibrino-purulent peritonitis. B. coli obtained in great numbers at operation and autopsy.
- " 229. Typhoid fever; perforation of the intestine. Microorganisms: B. typhi and coli com.; staphylococcus aureus; streptococcus and unidentified bacillus.
- " 234. Amebic dysentery; perforation of the intestine; hepatic abscess. B. coli in pure culture.
- " 250. Diphtheric dysentery; fibrino-purulent peritonitis. No perforation. Microorganism: Micrococcus lanceolatus.
- " 251. Removal of ovaries, oviducts and vermiform appendix. Microorganism: Streptococcus.
- " 255. Strangulated hernia; circular suture of the intestine. Fibrinous peritonitis. Microorganisms: In cultures, streptococcus; in films, a small number of bacilli also.
- " 275. Ovariectomy; volvulus; ulceration of the intestines. Microorganism: Staphylococcus albus (perhaps epidermidis) cultivated from wound and peritoneum.
- " 295. Perforation of the vermiform appendix. Microorganisms: B. coli and streptococcus.
- " 365. Typhoid fever; perforation. Microorganisms: B. coli and streptococcus.
- " 371. Perforation of the cecum; carcinoma of the uterus. Infection of the abdominal wound. B. coli isolated from wound and peritoneum.
- " 372. Typhoid fever; perforation of the vermiform appendix. Microorganisms: B. coli com.; B. aerogenes capsulatus; streptococcus.
- " 397. Paresis of the intestine; hemorrhagic peritonitis. Microorganisms: B. pyocyaneus and B. coli com.
- " 400. Intussusception; celiotomy. Streptococci and liquefying bacillus.
- " 408. Resection of the pylorus; fibrino-purulent peritonitis. Microorganisms: Streptococcus and B. coli com.
- " 411. Resection of the rectum for carcinoma; recurrence. Fibrino-purulent peritonitis. Microorganism: Streptococci.
- " 419. Suppurative appendicitis; purulent peritonitis; celiotomy. Microorganisms: B. coli and M. lanceolatus.

- No. 422. Perforating carcinoma of the stomach; purulent peritonitis. Microorganisms: Streptococci and B. coli.
- " 431. Perforation of a tuberculous ulcer of the intestine; fibrino-purulent peritonitis. Microorganisms: Streptococci and B. coli. Fine bacilli in films failed to grow.
- " 454. Typhoid fever; perforation of the vermiform appendix. Streptococcus in pure culture.
- " 468. Perforation of the vermiform appendix; fibrino-purulent peritonitis. Microorganism: B. pyocyaneus and coli com.
- " 500. Vaginal hysterectomy; hemorrhagic infarction of the small intestine; hemorrhagic and fibrinous peritonitis. Microorganisms: Staphylococcus albus; B. coli; orange sarcina.
- " 502. Traumatic rupture of the intestine; fibrino-purulent peritonitis. Streptococcus; staphylococcus aureus; B. coli. Other bacilli on cover-slips.
- " 529. Diffuse carcinoma of the stomach; peritoneal metastasis; no perforation; serous peritonitis. Streptococci in general cavity; B. coli also in pelvis, where fibrin was present.
- " 532. Chronic peritonitis; ovarian abscess; perforating ulcer of the intestine; sero-fibrinous peritonitis. Microorganisms: B. pyocyaneus and coli com.
- " 548. Strangulated hernia; sero-fibrinous peritonitis; celiotomy. Cultures negative.
- " 557. Typhoid fever; perforation; fibrino-purulent peritonitis. Microorganisms: Streptococci; unidentified bacilli.
- " 569. Gangrene of the vermiform appendix; fibrino-purulent peritonitis. Microorganisms: B. coli and unidentified cocci.
- " 571. Typhoid fever; perforation; sero-purulent peritonitis. Microorganisms: B. coli; streptococci; B. aerogenes capsulatus.
- " 591. Perforation of the vermiform appendix; fibrino-purulent peritonitis. B. coli alone found.
- " 622. Perforating carcinomatous ulcer of the duodenum; fibrino-purulent peritonitis. Bacillus aerogenes capsulatus.
- " 637. Hernia; operation; necrosis of the mucous membrane of the intestine; perhaps HCl<sub>2</sub> poisoning. Microorganisms: Streptococci and B. coli.
- " 649. Thrombosis of the portal and mesenteric veins; infarction of the intestine; sero-fibrino-purulent peritonitis. Microorganisms: B. coli; aerogenes capsulatus.
- " 660. Strangulated hernia; necrosis of the intestine; celiotomy. Microorganism: Streptococcus.
- " 672. Artificial anus; fibrino-purulent peritonitis. B. coli.
- " 674. Chronic adhesive peritonitis; artificial anus; fibrinous peritonitis. B. coli in culture; cocci in films.
- " 730. Intestinal obstruction; celiotomy. Microorganism: Staphylococcus aureus.
- " 732. Strangulated hernia; gangrene of the intestine; celiotomy. Staphylococcus albus only isolated.
- " 735. Amebic dysentery; necrosis of the vermiform appendix; fibrino-purulent peritonitis. Microorganisms: M. lanceolatus; B. coli com.
- " 737. Intestinal anastomosis; fibrinous peritonitis. B. coli in cultures; diplococcus in films.
- " 747. Suture of the gall-bladder. B. coli alone isolated.
- " 752. Intestinal anastomosis. Microorganisms: Staphylococcus aureus and B. coli.
- " 803. Appendicitis; fibrino-purulent peritonitis; celiotomy. Streptococcus alone isolated.
- " 814. Appendicitis; fibrino-purulent peritonitis; celiotomy. B. coli in cultures; other bacilli and cocci in films.
- " 825. Appendicitis; fibrino-purulent peritonitis. On films cocci and bacilli. Only B. coli in cultures.
- " 837. Strangulated hernia; fibrinous peritonitis. B. aerogenes capsulatus.
- " 838. Gangrene of the intestine; fibrino-purulent peritonitis. Microorganisms: various bacteria on cover-slips; in cultures B. aerogenes capsulatus.
- " 850. Thrombosis of the mesenteric veins; infarction of

- the intestine. Fibrino-purulent peritonitis. Proteus vulgaris in pure culture.
- No. 854. Teratoma of the ovary perforating into the rectum; purulent peritonitis; celiotomy. B. proteus in culture; cocci in films.
- " 889. Typhoid fever; perforation. Microorganisms: Streptococci; B. typhosus.
- " 869. Periproctal abscess, fibrino-purulent peritonitis. Pelvic abscess, B. coli and streptococci; general peritoneum, streptococci.
- " 909. Perforating tuberculous ulcer of the intestine, fibrino-purulent peritonitis. Films: various bacteria; culture: B. proteus.
- " 911. Appendicitis; perityphilitis; celiotomy. Abscess. Streptococcus pyogen.; B. aerogenes caps.
- " 947. General melanotic sarcomatosis; necrosis of the intestine; celiotomy. Bacilli in films; could not be cultivated.
- " 948. Perforating ulcer of the stomach; purulent peritonitis. Microorganisms. B. aerog. caps. B. coli com.
- " 954. Hysterectomy; removal of the vermiform appendix; perforation of the sigmoid flexure; fibrinous peritonitis. Microorganisms: B. coli com.; streptococci.
- " 974. Perforating ulcer of the intestine; purulent peritonitis; celiotomy. B. coli com. alone isolated.
- " 1028. Perforation of the vermiform appendix; celiotomy; fibrino-purulent peritonitis. Microorganisms: B. coli; streptococci.

Of the 60 cases in this list two only (autopsies 55 and 548) yielded negative bacteriological results. As No. 55 was tested in gelatin only, and no record was made of the examination of films, it should be excluded. The number of cases in which positive results were obtained is therefore 58. Single infections occurred in 21 and multiple infections in 37 instances. The following tables give the kinds and combinations of microorganisms met with:

TABLE OF BACTERIA FOUND IN CASES OF ENDOGENOUS PERITONITIS.

Bacteria.	No. of Cases.	Alone.	Combined.
B. coli com. ....	47	9	38
Streptococcus pyogenes.....	39	7	32
Staphylococcus albus.....	4	2	2
" aureus .....	3	1	2
Micrococcus lanceolatus .....	4	1	3
Bacillus proteus .....	4	2	2
" aerogenes caps.....	5	2	3
" pyocyaneus .....	3	0	3
" typhosus .....	3	0	3
Unidentified .....	3	0	3

TABLE OF COMBINATIONS.

	No. Times.
Streptococcus and B. coli com.....	16
" B. aerog. caps. and B. coli .....	2
" and B. aerog. caps.....	1
" " staphylococcus aureus.....	1
" " B. typhosus.....	2
" S. aureus, B. typhi, proteus and coli.....	1
" and B. proteus .....	1
" unidentified organism.....	1
Bacillus coli and M. lanceolatus.....	3
" " B. pyocyaneus .....	3
" " B. aerog. caps.....	2
" " S. aureus, and B. aerog. caps.....	1
Staphylococcus albus and orange sarcina .....	1
" " unidentified organism.....	1

In comparing this group with the secondary form of exogenous origin, several differences become apparent. Not only are single infections relatively more infrequent with the endogenous variety, but the microorganisms

found differ widely. The streptococcus in the latter plays the part of the staphylococci in the former, and the bacillus coli communis, as might be expected, assumes a much more important role. I do not intend to renew the discussion as to whether, after all, the bacillus coli may not in all cases have been associated at some stage of the pathological process with more usual pyogenic organisms. The question has been answered both ways by the studies of Barbacci,<sup>6</sup> who found in his experiments upon dogs that the colon-bacillus often overgrew the pyogenic cocci, and by French writers, Laruelle and Vendrick,<sup>7</sup> and in this country by Welch,<sup>8</sup> who believes in a primary bacillus-coli peritonitis. My own opinion is in favor of conceding this bacillus the possibility of acting as a pyogen, just as we have come to do for the bacillus typhosus.

What is further remarkable is the small part that the pathogenic staphylococci seem to play in the cases of intestinal origin. That this fact may have clinical significance is not improbable, especially in view of the fact that in several of the tabulated cases, a general streptococcous infection (bacteremia) had taken place.

The observation that the cases of primary or idiopathic peritonitis in our series were all examples of terminal infection suggests the question as to how far chronic disease may have been responsible for the results in the exogenous secondary infections. I have considered, in a previous communication,<sup>9</sup> the relations that exist between chronic disease and infection; and in view of the resistance offered to infection by the normal peritoneum it is necessary to recognize general as well as local predisposing causes. Of course, in instances of chronic disease it is a general rather than a local disturbance that makes these parts unduly vulnerable. It is, to say the least, remarkable that of the 35 cases of exogenous peritonitis in 26 (autopsies 45, 89, 144, 160, 214, 219, 273, 288, 383, 422, 446, 486, 635, 644, 700, 876, 895, 914, 929, 950, 1015) there should have preexisted more or less chronic disease, consisting of malignant tumors, chronic renal and cardiac disease, arteriosclerosis, cirrhosis of the liver, pulmonary tuberculosis, chronic peritoneal tuberculosis, and proliferative peritonitis.

The classification attempted in this paper is etiological only. Further subdivisions are possible in each class, according to the presence or absence of microorganisms, their relative numbers, and especially the kinds of reaction provoked. It remains to be seen whether the limits of the so-called "aseptic" peritonitis of Bumm and the "chemical" peritonitis of Tavel and Lanz have been correctly drawn. Our experience is somewhat at variance with that of the latter writers, which, however, may be due to the fact that the examinations recorded here were made after death. Accord-

<sup>6</sup> *Centr. bl. f. Pathologie*, iii, p. 129. <sup>7</sup> Quoted from Tavel and Lanz, *op. cit.*, p. 5. <sup>8</sup> *Medical News*, Philadelphia, 1891. <sup>9</sup> A Statistical and Experimental Study of Terminal Infections, *Jour. Exper. Med.*, Vol. I, 1896, No. 3.



ing, then, to the indications supplied by a rather large material, the primary or idiopathic forms of peritonitis are restricted to a definite and small number of cases of terminal infection, and unless the resistance of the peritoneum is broken down through local lesions or general disturbances this cavity is eminently capable of protecting itself against injurious chemical and living agents. A second variety of peritonitis conducts itself in every way like surgical infections; and the conditions that protect the tissues generally from, or predispose them to, infection may be seen in operation here. Finally, a third variety is dependent upon disease in an intraperitoneal organ that brings pathogenic micro-organisms and other extraneous (chemical?) substances directly or indirectly into the abdominal cavity, thus breaking down its resistance and exposing it to infection from within.

### THE OPEN-AIR TREATMENT OF TUBERCULOSIS.—A VISIT TO THE NORDRACH SANATORIUM.

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THE open-air treatment of tuberculosis is now generally accepted as the one that has given best results in the treatment of and in resisting the onset of this dread disease. It was first introduced and successfully carried out by the late Dr. Brehmer, at Görbersdorf, in Silesia, and has found great favor with the medical profession generally, but especially in Germany and Switzerland, where many other sanatoria have been founded on a similar plan. Among these may be mentioned Falkenstein, in the Taunus Mountains, until recently conducted by Dr. Dettweiler; Reiboldsgrün in Saxony; St. Blasien in Baden; Hohenhoneff, on the Rhine; Altenbrok and St. Andreasberg, in the Hartz Mountains; Nordrach in the Baden Black Forest; Rehberg in Hanover; Schönberg in Würtemberg; and Davos and Arosa, in Switzerland. All are situated at rather high altitudes, those in Switzerland being, on the whole, higher than those in Germany.

On this continent, where the number of such institutions is still far too small, considering the prevalence of tuberculosis, the Saranac Lake Sanatorium, in the Adirondacs (Dr. Trudeau) and the Gravenhurst Sanatorium, in Ontario, Canada (Dr. Hewetson), may be mentioned as representatives.

During the last summer, I had the pleasure of visiting the Nordrach Sanatorium, which is conducted by Dr. Otto Walther, who kindly showed me over the various buildings and described his method of handling his patients. For a few of the following facts, which it was impossible to obtain on a comparatively short visit, I am indebted to an excellent account written for Fowler and Goodlee's recent work on "Diseases of the

Lungs," by a former house-physician at the Brompton Hospital, who developed tuberculosis, and who was a patient at Nordrach for twelve months. During this time the patient gained 38 pounds, and his general condition and the local signs had so improved as to render him almost unrecognizable by his friends.

The Nordrach Sanatorium is situated in the Baden Black Forest, about 30 miles from Strasburg, at the northeastern extremity of a narrow and very pretty valley of the same name. The nearest stations are Biebrach-Zell and Gengenbach, on the Schwartzwald Bahn, 9 and 12 miles distant respectively. With these places the sanatorium is in telegraphic communication, and is reached either by hired conveyance, or, in the case of patients entering the sanatorium, by carriages sent to meet them at the station, when the time of their arrival has been previously announced.

The Nordrach valley is open at the southwest, the sanatorium being situated at the opposite extremity, 1,400 feet above the sea-level. The institution is surrounded on three sides by beautiful pine-covered hills, which rise another 1,400 feet and protect it from the north and east winds. It is extremely quiet and secluded, there being practically no traffic, excepting that to and from the sanatorium.

The climate resembles closely that of England, except that it is more changeable, being warmer in summer and colder in winter. The air is moist and free from dust by reason of frequent rains. The moist atmosphere is considered an advantage, as it tends to allay cough. Notwithstanding the frequent rains, the roads and paths are always available for walking, as, owing to the geological formation being soft, red sandstone, the water is rapidly absorbed.

The sanatorium proper consists of four frame houses and a separate dining-hall, all situated some little distance from each other. The isolated position of each building tends to lessen the patient's feeling that he is in a medical institution and renders life more home like. The four separate houses contain 42 bedrooms. Rarely is a room vacant throughout any part of the year. In fact, there are nearly always about 50 patients on the "waiting" list. This renders the director quite independent of his patients and enables him to enforce the rules on his patients in a polite but firm manner. The number of German and English patients in the Sanatorium is about equal, but I was informed that the institution is so well known in England that it could be kept constantly filled with English patients alone. Dr. Walther has no intention of increasing the capacity of his Sanatorium, as he does not wish to have more patients than he can conveniently keep under his own personal direction and supervision.

Two main objects were kept in view in fitting up the various buildings comprising the Sanatorium, viz., the obtaining of a constant and abundant supply of fresh air, and the lessening of the chances of creating dust or smoke.

Each room is provided with large casement windows, which are kept open practically all the year round, thus giving the least possible variation in the temperature of the air in and out of doors. As a result "colds" are practically unknown at Nordrach. Occasionally the windows are closed in order to warm the rooms when the patient is out of doors. The walls, ceiling and furniture of each room are of varnished wood, and the floors are covered with linoleum, which is swabbed with moist cloths each morning. The rooms are provided with central, hot-air heating, electric light, cold and warm water-supply for washstand and shower-bath. Concerning the use of cold or warm water for the latter, the patients are permitted to follow their own inclinations and desires. In only one house, with eleven rooms, for very light or nearly recovered patients, the bathroom is in common, but always at disposal.

The Sanatorium has its own steam-laundry, 10 cows, which are fed on barley and hay only, machine refrigerator for meats, etc., and for making ice.

The views of Dr. Walther on the objects of the Sanatorium and on the line of treatment that should be followed, can probably be best conveyed by quoting the following few paragraphs from the circular distributed by the Sanatorium :

"The object of the Sanatorium is the treatment of people suffering from diseases of the lungs, especially tuberculosis, and those disposed to tuberculosis or scrofula, following and completing the principles first laid down by Brehmer and Dettweiler.

"In opposition to cure of tuberculosis by medicine, which has been attempted in the greatest possible variety of methods, the constitutional treatment is here adopted, which is based upon a strengthening of the whole organism in order not only to overcome the existing disease, but to prevent relapses.

"It is sought to attain this object by removing the patient from home-surroundings, with their thousandfold injurious influences, into a healthy district, and into conditions that in every way meet the severest demands of hygiene; by keeping at a distance everything unpleasant and depressing, and by striving to offer as much as possible everything elevating and stimulating; and lastly, by a good diet suitable to the purpose, and an exact regulation of the individual habits of life (sleep, exercise, rest, etc.), calling into play again and strengthening the whole, often almost destroyed, vital energy by the use of all means, even the most trivial as they may seem, by constant personal guidance and supervision of the physician which alone can guarantee the punctual execution of all regulations and render suitable the way of living and actual personal want of the patient.

"On these lines of the medical treatment the cure of pulmonary tuberculosis makes the greatest demands. It does not suffice to study every single patient according to physical individuality and character and to lead him correspondingly; but the physician is set the task of forcing upon the, for the most part, matured organism quite a new period of development, of revolutionizing the whole constitution and giving it a new character. This complete reorganization means the destruction of the ruinous influence of the microbes on the lungs and the whole system, and the withdrawal of the soil for their further thriving.

"For this purpose it is, before everything, imperative that the physician remain always in contact with the patients, and share their whole mode of life.

"In accordance with this he visits them privately, even those who are nearly recovered, three times daily, takes meals in common with them, teaches them a reasonable

diet, advises them in everything, personal habits and occupations, dress, amusements, and even if necessary attends personally the meals of extremely severe cases."

The chief features of the treatment at Nordrach by which it is sought to effect a permanent cure of the disease may be summarized as follows: (1) An absolutely open-air life for every variety of case, whether acute or chronic, febrile or afebrile, in all weathers and seasons, by night and by day; (2) a regular course of overfeeding from first to last; (3) a proper combination of exercise, in the form of hill-climbing, carefully regulated so as to fall short of dyspnea or actual fatigue, with the maximum amount of physical and mental rest; (4) the personal supervision of each patient by the attending physician, a most important feature of the treatment.

Patients entering the Sanatorium with active disease and high fever are treated by rest in bed, over-feeding, and usually by isolation, any exertion such as talking being restricted as much as possible. When the temperature remains below 38° C. in the evening and 37° C. in the morning for a period of from a week to ten days, the patient is allowed to sit in a chair for a short time each day and then to take a short walk in the morning, beginning with 50 yards and gradually increasing the distance daily as the strength increases. If the temperature, after the walks are prescribed, tends to rise above 37° C. in the morning, rest is resorted to once more.

Throughout the surrounding pine-wooded hillsides, paths have been constructed, so that prescribed walks can be taken by the patients. The paths adjacent to the Sanatorium are provided with numerous benches and the more distant ones with shelter in case of storms. There are four sets of horizontal paths at different levels, with inclined paths with easy gradients here and there connecting them. The first walks are taken in the immediate vicinity of the Sanatorium, and all the walking exercises are taken in the morning, when fatigue is less likely to result. It is interesting to note that Dettweiler attaches most importance to rest in the open air, but Brehmer considers methodical hill-climbing as a factor of great importance in this method of treatment.

Walking must always be at a slow, uniform pace, and at first rests must be frequent, so as not to produce the slightest fatigue. When there is a tendency on the part of a patient to walk too fast, he is told to read a book or paper while walking, which naturally tends to restrict his pace. Talking, which is very fatiguing while taking exercise, is forbidden excepting during the intervals of rest. The daily walks are so arranged that the first portion should be an ascent, the next on a horizontal plane, and the return homeward, when the chances of fatigue are greatest, a descent. As the patient gets stronger he is given walks that will occupy most of the morning until 12 o'clock, involving a tour of several miles and an ascent of 500 or 600 feet, regard always



being had for the patient's temperature. Later on, all-day excursions are permitted, and still later, when the patient's condition permits it, trips to more distant points, lasting three or four days, are allowed. The afternoons are usually spent in rest out of doors or in taking a short walk. There are no sitting-rooms in the Sanatorium, so that the patients live in the open air practically the whole day. Sports of all kinds are discouraged, music being the only amusement, other than reading, permitted, excitement and irregular exertion of all sorts being considered hindrances to the absolute mental and physical quietude that are considered so necessary a part of the treatment. Patients usually go to bed between 9 and 9.30 P.M., and all lights must be out at 10 o'clock.

Patients take their own temperatures per rectum four times daily: on waking; at 12 M., immediately after the morning walk; at 5.30 P.M.; and again before going to bed. An average satisfactory morning-temperature would be 36.4° C., and after the walk a degree or more higher. This exertion-temperature should not exceed 38° C. and must be taken immediately after the walk, as experience has shown that there is a rapid fall in the temperature in the first few minutes.

As in all sanatoria for tuberculous patients, great importance is placed on the maintenance of the general nutrition. In most institutions food is given frequently, but in moderate quantities at a time. Dr. Walther, however, holds that food is better assimilated by giving more at each meal and having longer intervals between taking food, thus affording the stomach a period of physiologic rest. Accordingly only three meals are given daily at hours to be stated below. During the patient's stay in the Sanatorium the principle of over-feeding is consistently observed, that is, food is given in much larger quantities than the patient's appetite demands. The food is rich and varied, including moderate quantities of meat and milk, with abundance of fatty and farinaceous foods. An effort is made during the patient's residence to teach him to more or less restrict the amount of meat and milk taken and to eat farinaceous foods in greater abundance, so that when he leaves the institution he may have the former to fall back upon in case that he should begin to diminish in weight. The meals are taken in a large dining-room, from which the windows are actually removed for the greater part of the year, thus practically in the open air, irrespective of the nature of the weather, and regardless of the rain or snow that may be beating in upon them. Although a special diet is prescribed for each patient, the following is a fair representation of the food taken at the three meals:

*Breakfast*, at 8 A.M., consists of coffee, bread and butter, and cold meat, such as ham, tongue, sausage, etc., and a half-liter of milk. The latter in time is reduced to a quarter of a liter, according to the patient's capacity and need for putting on flesh.

*Dinner*, at 1 o'clock, consists of two hot courses of meat, or fish and meat, from 4 to 6 ounces being given to each patient, with plenty of potatoes and green vegetables, and sauces in which butter constitutes the chief ingredient. The third course may be pastry or some farinaceous pudding, fruit, and ice-cream, coffee, and a half-liter of milk.

*Supper*, at 7 o'clock, consists of one hot course of meat as at dinner and one cold course of meat as at breakfast; tea, and a half-liter of milk.

The patients are required to rest for an hour before dinner and supper, and both meals must be taken under the personal supervision of the physician, who actually takes most of his meals with the patients and thus enters more intimately into their life. The servants are not permitted to remove the plates until everything has been eaten. Each patient at first eats about twice as much as he wishes to. Febrile patients in bed have the same diet and are given, if anything, even larger portions than the convalescent ones. It has been the experience at Nordrach that absolute rest and overfeeding are the most efficient means of reducing temperature.

Patients are not infrequently sick during or immediately after a meal. In the former event they are required to return and finish their meal, and it is found that, as a rule, they are able to retain the remainder. With the rest before meals and the long intervals between eating, the assimilation of food is best favored, and as a result indigestion is rarely complained of.

With this method of treatment patients gain rapidly in weight, averaging from two to four pounds during the first few weeks, and afterward more gradually but progressively. Not only do the patients gain in weight, but the regular exercise that they are forced to take also develops muscle. Gains of from a quarter to a third of a patient's weight are not uncommon, and Dr. Walther, with justifiable pride, related one instance of a patient having gained 80 pounds during a 6 month's stay in the Sanatorium.

Constant effort is made throughout to draw the patient's mind away from his physical condition. Thus, he is not warned of the danger of catching "cold" from wearing damp clothes, etc. It has been demonstrated by experience that no amount of exposure to wet and draft, or any change in the weather, causes the weakest patient to catch "cold," so long as an open-air life is led. If a patient wishes to go about bare-headed, or to sit out in the evening-air, he is permitted to do so. The idea throughout is to harden the system and to increase the resistance to variations in temperature and climate, which are likely to follow, on a return to former surroundings. The majority of the patients are thoroughly tanned and of a good color, owing to the constant open-air life. To be sure, some of the patients still bear in their general appearance,

imprints of their disease. The whole arrangement of the institution and its surroundings gives one the impression more of a mountain-resort than of a curative institution.

Each patient is provided with a Dettweiler's pocket sputum-flask for use when walking about, and with an ordinary tin cup in his room. No antiseptic solution is used in these receptacles and the sputum is disposed of by burning. Expectoration about the institution or grounds is strictly forbidden, and any infringement of this rule is readily reported to the physician by the patients themselves.

Alcohol in all forms is strictly forbidden and only in very exceptional cases is it prescribed by the physician for very weak patients.

With the exception of the use of small doses of morphin and codein in cases in which cough is very irritable at night, drugs are not used. The various new tuberculins have not been given a trial.

The patient's chest is examined once a month and an examination of the sputum is made at the same time. Dr. Walther assured me that it is almost incredible how the progress of advanced, active disease of the lungs, with extensive cavity-formation, is often checked, and how, in the course of months, signs of the former extensive lesions almost entirely disappear. Indigestion soon ceases; an anemic appearance is followed by a healthy red color; cough and expectoration diminish, and a gain of from 20 to 50 pounds usually results. The tubercle-bacilli gradually diminish, and, finally, in the majority of cases, disappear altogether. As a final test, a guinea-pig is inoculated with some of the expectoration. If, after waiting 4 or 5 weeks, no tuberculous lesions develop, the patient, taking into consideration his general state, is considered in satisfactory condition to leave the Sanatorium and return to moderately light work at once.

Patients with relapses occasionally return, although this is comparatively rare. Former patients without relapses not infrequently return for a few weeks from year to year to enjoy the benefits of the bracing atmosphere at Nordrach.

The price for "Pension" at the Sanatorium is fixed at 10 marks per day. The patients receive for this everything; ordinary as well as extraordinary meals (tea, coffee, milk, etc.), lodging, heating, light, attendance, baths, bed, and bathing linen, as well as medical attendance and medicines. Excluded are only private washing and alcoholic drinks, which may be taken only on special medical permission, and the exclusive use of a nurse, if necessary.

Friends who accompany patients pay 7 marks a day, provided that they can be accommodated in the institution.

Provision is also made for regular and suitable instruction for children by a qualified teacher, without special charge.

## DO GROSS PATHOLOGIC CHANGES OCCUR IN THE EYE AFTER INJURIES TO THE SPINAL CORD?<sup>1</sup>

By DUNBAR ROY, A.B., M.D.,

Clinical Professor of Ophthalmology and Otolaryngology in the Atlanta College of Physicians and Surgeons; Oculist and Aurist to Grady Hospital; Oculist to the Southern R. R.; etc.

THE important relationship existing between the optic nerve and other portions of the central nervous system, especially the spinal cord, has long been recognized by both ophthalmologist and neurologist. In fact, most observers will readily agree with Gowers in considering the optic nerve in its development nothing more than an extension of the central nervous system and anatomically of the same structure as the brain and the spinal cord. The pathologic relationship between diseases of the optic nerve and those of the cerebrum are not so difficult of demonstration, but when we consider this same relationship in diseases of the spinal cord, pathologists must as yet acknowledge their inability to discover any direct anatomic connection.

Pathologic anatomy has not demonstrated the truth of the statement made by Landois and Stirling that "the discovery of the partial origin of the optic nerve from the spinal cord explains the occurrence of amblyopia (with partial atrophy of the optic nerve) in diseases of the spinal cord, especially in tabes." The only connection between the eye and the spinal cord is found in the sympathetic nerves, which come from the cilio-spinal center in the cervical region of the spinal cord, and whose connection with the iris is such that their stimulation will cause dilatation of the pupil. But this connection is anatomically so slight that it is impossible to imagine a process reaching the optic nerve from the spinal cord by means of this route.

In opening a discussion on this subject of "Eye-Symptoms in Diseases of the Spinal Cord," Gowers said that optic-nerve atrophy and internal ocular paralysis, as well as other pathologic changes, must be regarded as associations and not an effect of the spinal lesions; because (1) diseases of any nature may exist in any part of the spinal cord, without the occurrence of ocular symptoms, if we except rare paralysis of the dilators of the pupil in disease of the sympathetic tract in the cervical region; (2) the ocular symptoms that may be present when the cord-disease is advanced may exist in an extreme degree when such disease is in a very early stage; (3) with the single exception of the sympathetic symptoms just mentioned, we know of no anatomic mechanism by which the spinal cord can cause the ocular symptoms. This relationship between the spinal cord and the optic nerve is far different from that between the cerebrum and the same nerve. The fundus oculi is an excellent index in many cases of pathologic conditions in the cerebrum. There we have the terminal filaments, one might say, of a peripheral nerve, a cerebral artery, and the beginning of a cerebral

<sup>1</sup> Read before the Association of Southern Railroad Surgeons at Old Point Comfort, Va., June 23, 1898.



vein. Since the introduction of the ophthalmoscope, great strides have been made in the diagnosis of cerebral conditions that previously had remained obscure. Observation and experience up to the present have not demonstrated any causal dependence between pathologic conditions of the spinal cord and those of the eye. If there should be disease of the spinal cord, and later the eyes should become affected, we would certainly be compelled, in the light of our present knowledge, to hold such lesions as fortuitous.

Some observers have reported cases in which certain pathologic conditions of the eye have followed injuries of the spinal cord, and they have seemingly placed such cases in the light of a *propter hoc*. The lesion shown in all of these cases has been limited to the optic nerve, and the literature of such cases is exceedingly meager. Ever since Erichson gave to the medical world, and now the special property of the legal profession, his brochure upon "Spinal Concussion," the subject of spinal injury, or "railway-spine," has been a fruitful field for a large amount of medico-legal harangue. Injuries may occur to the spinal cord without any discoverable injury to the vertebral column (so-called concussion); yet, when this latter does happen, we can much more readily discover the relationship between the seat of injury and the spinal symptoms.

Involvement of the eye as the result of traumatism of the spinal cord is, in the opinion of nearly all workers in ophthalmology, exceedingly rare. Grave doubts should be entertained by any physician when a patient tells him that his dimness of vision or blindness is the result of an injury to the spine.

The only writer that I know of who speaks of the eye becoming affected as the result of spinal injury is Wharton Jones, and he says that such association is frequent. The changes that do occur, especially in cases of concussion, are referable to changes produced in the sympathetic system, which presides over the vasomotor functions of the eye. We know that there exists high up in the spinal cord a center known as the cilio-spinal, whose excitation causes dilatation of the pupil. In injuries of the spinal cord this dilatation of the pupil is the only condition ever noticed as the immediate result of such traumatism. Even this is not conclusive of spinal injury, for Claude Bernard has shown that painful stimulation of sensory nerves in any portion of the body will cause dilatation of the pupil and sometimes even protrusion of the eyeball. Other lesions in the eye that observation has so far shown to be limited to the optic nerve, and which are classed as the result of spinal injuries, are always of a most chronic character. I mean by this that the lesions themselves are of a chronic nature and that the time of their appearance takes on the same characteristic. The two lesions found classed as the result of spinal injuries are optic neuritis and optic atrophy.

Optic neuritis is acute and optic atrophy is chronic

in character. The latter condition is nearly always the result of a previous neuritis. Optic atrophy is especially common in association with like atrophic processes in the spinal cord. Especially is this the case with such sclerotic diseases as tabes dorsalis, insular sclerosis, lateral sclerosis of the spinal cord. This condition, however, I have shown in a paper read two years ago before the American Medical Association, to be an accidental association and not a *propter hoc*. As yet, no recorded cases are authentic enough to show that so-called spinal concussion has ever caused permanent injury of the eye. Several writers have expressed themselves in regard to the relationship between diseases of the spinal cord and those of the optic nerve, and incidentally, of course, traumatism. Most of them do not place much belief in any causal relationship between spinal injuries and subsequent pathologic lesions in the eye.

Fowler<sup>2</sup> has reported the case of a man who was thrown from a caisson during the war and run over, the wheel passing over the lower portion of the dorsal region. The lower extremities were paralyzed for a few months; his back was rendered weak; he perspired freely and his face flushed easily; there was no suspicion of syphilis. Sight gradually failed from optic atrophy of both eyes, and vision was finally lost altogether.

Gowers<sup>3</sup> says that various classes of ocular symptoms are met with in spinal diseases, viz., optic-nerve atrophy, internal ocular paralyses, optic neuritis, nystagmus, palsy of the extraocular muscles, etc. Optic neuritis is, however, extremely rare in association with spinal disease; and the significance of nystagmus is uncertain; and the subject of the palsies of the external muscles is large. Gowers says, further, that optic-nerve atrophy affecting vision falls chiefly under the notice of the ophthalmic surgeon, while the most common intraocular palsy, that of the iris, does not cause any symptoms of which the patient is aware, and therefore comes as an isolated eye-symptom to the attention of the physician. The only statistics on this subject that I have seen are those contained in de Wecker's *Treatise on the Eye*. This writer has collected 16 cases in which the optic nerves became diseased, seemingly as the result of traumatism of the spine. Eleven cases occurred in males and five in females. Wharton Jones has reported four cases of partial blindness of eighteen months' duration, believed by him to be produced through spinal concussion. However, this writer is over-enthusiastic in his belief as to the relationship existing between the eye and the spinal cord. A most interesting case has been reported in the *Practitioner* under the title of "Double Optic Neuritis with Paralysis of One Arm, Following an Injury to the Spine." I take the liberty of quoting this case rather fully because it is exceedingly interesting:

<sup>2</sup> *Journal of Ophthalmology*. <sup>3</sup> Transactions of the Ophthalmological Society of the United Kingdom, 1883.

A man, aged 33, presented himself to Dr. Robert H. Firth, House Surgeon to the East Lancashire Infirmary, relating that while chipping off a plank when he was working on an embankment, the earth gave way with it, and the plank fell upon him, striking him upon the back and shoulders. He complained of considerable pain at the nape of the neck and over the shoulders and scapular regions. There was extensive bruising and tenderness over the seventh cervical and upper three dorsal vertebrae. He complained of a sense of weakness in the right arm and in the legs. Being a heavy drinker, not much attention was paid to his statement and he was sent away. He reappeared five days later, complaining of weakness in the legs and general indisposition. He claimed not to have been able to move his limbs for two days, as though he had had a stroke. He seemed unwilling to exercise his muscles from fear of pain. He could not walk steadily, and fifteen days later he complained of not seeing well, although the eyes were examined at intervals while visiting the infirmary. During the latter few visits he persisted that something was wrong with his eyes, and, upon testing, it was found that he was unable to distinguish distant objects. Before this injury, sight had been good; so was his color-vision. Ophthalmoscopic examination showed a distinct neuritis in both discs. Vision in both eyes was  $\frac{1}{3}$  Snellen. There was no pain or photophobia. The man was then taken into the Infirmary. The family-history was good. The urine was normal. For ten days there seemed to be very little change in the eyes. Four weeks from the day that the man first appeared, his eyes were again examined. The discs were decidedly clearer. Up this time ophthalmoscopic examinations had been made every 48 hours. No hemorrhage was detected. No medicine was administered except mild aperients. Each temporal region was blistered twice. From that time the sight appeared to mend rapidly, and a week later, at his own request, the patient was discharged, but he reported weekly for five weeks. All symptoms of neuritis had disappeared and the man appeared strong and hearty.

From the sudden commencement of the paralysis after the reception of the contusion, it is believed that there must have been some hemorrhage into the cord at the lower part of the cervical enlargement. This evidently affected the transverse section of the cord and partially impaired its functions at that spot. Evidently if such were the case, absorption must have occurred rapidly, and the parts recovered. But the most important and striking feature in the case was the supervention of the optic neuritis. How comes it that a spinal lesion should give rise to such a symptom? No record of a similar case could be found. The constitutional condition of the patient did not account for the presence of the neuritis. There seem to be only two explanations: either there was mischief done to other nervous structures than the cervical cord, as, for instance, the sympathetic; or the retinal changes were due to some ascending irritation of the cord itself. The sympathetic hypothesis is unsatisfactory, inasmuch as in actual disease of the sympathetic, no ophthalmoscopic change has been noted. It is sometimes difficult to separate cause and effect, especially if they occur close together. If we have an injury to the spine and in a few days or weeks the eyes become affected and show some gross lesion, it is almost impossible not to consider these conditions in the light of cause and effect. Yet this should never be done until an absolute diagnosis can be made by exclusion. But so far this hypothetical statement has never reached a realization; for such ocular symptoms as have occurred

after a spinal injury have been entirely subjective, and are thus notoriously unreliable.

To sum up the points that I desire to emphasize in this article, I would say: (1) That there is no anatomic connection between the eye and the spinal cord, with the exception of the sympathetic system, which in itself is reflex; (2) that injury to the spinal cord causes no pathologic change in the eye, except in the size of the pupil; (3) that spinal injury might affect the vasomotor system, as evidenced in the eye by increased tension from dilatation of the bloodvessels, but even this would be transitory; (4) when gross lesions do occur in both the spine and the eye, it is always the optic nerve that is affected, and even this association must be considered as accidental and nowise in the light of cause and effect; (5) observation teaches that such symptoms as do appear in the eyes after injury to the spine are purely subjective and also very transitory.

### AN EPIDEMIC OF TYPHOID FEVER IN LAMBERTVILLE, N. J.<sup>1</sup>

By GEO. L. ROMINE, M.D., AND E. W. CLOSSON, M.D.,  
of Lambertville, N. J.

DURING the first week of March, 1897, ten men and boys were seized with what seemed to be a severe attack of influenza. Following these cases a number were taken sick in rapid succession and in the same manner. After three or four days' illness the first cases showed symptoms of a serious illness other than that of influenza, among which were continued high temperature, furred, red, dry tongue, at first constipation, later diarrhea, tympanites, and in some cases nose-bleed.

In most cases the nervous symptoms were very pronounced, including delirium, stupor and great prostration. The cases early created suspicion of typhoid fever and were treated as such, and by the end of one week the diagnosis was made sufficiently certain to report them to the Board of Health as typhoid fever, and a letter was written to the superintendent of the rubber-mill stating that a number of the men and boys were sick with typhoid fever, that their drinking-water was of the same source, and recommending the suspension of its use, pending investigation.

The matter was immediately taken up by the Local Health Board, who asked the assistance and cooperation of the State Board. An investigation set on foot pointed to the drinking-water, which was supplied from a well under a barn-shed near the mill. A sample of the water was submitted to Mr. Cochran for examination, who reported as follows:

LAMBERTVILLE, N. J., March 13, 1897.

GERVAS ELY, ESQ., President Board of Health.

DEAR SIR:—I enclose herewith report of analysis of specimen of water from well on premises of the Lambertville Rubber Co., delivered by you to me on 11th inst.

<sup>1</sup> Read before the Hantsdon County, N. J., Medical Society, Oct. 26, 1898.



Specimen—clear, tasteless and odorless.	
Total solids in one gallon (dried at 212°) 8.8 grains.	
“ “ “ (ignited)	3.2 “
Chlorine “ “	0.65 “
Free ammonia, parts, per 1,000,000	0.185 “
Albuminoid “ “	0.284 “
Nitrates—none.	
Nitrites—marked traces	

The yield of ammonia, both free and albuminoid, is much above the proportion considered allowable by sanitary authorities, and should condemn the water for drinking purposes.

Respectfully,

S. W. COCHRAN.

Acting on this report, the Health-Board ordered the well filled, and, unfortunately, before any specimen was obtained for bacteriologic examination. However, the history of the outbreak was sufficient to prove its source. While the rumors were wild, and various theories were given as to the cause and nature of the fever, it was learned that no case existed outside of the rubber-mill workers, and, further, no case existed outside of those who drank the water from this well, and in no one who was employed after drinking of the well-water was suspended.

The well, 23 feet deep, was situated under a shed north of the barn and within a few feet of the horse-stalls. The next nearest cause of contamination is a cesspool 20 yards north of and 6 feet above the top of the well. The water had been much used for a number of years by the employes of the rubber company and was highly lauded on account of its low temperature and supposed purity. The real source of the typhoid poison in the well is in doubt. No case of typhoid fever had occurred in the community since 1890 and then with no possible relation to the well. It was possible for the stable-drainage to contaminate the well, but a consideration of this point would lead to the discussion of the spontaneous origin of typhoid fever, which is not the intention of this paper.

The employes numbered about 225, all of whom drank from the well. Of these, 39 in Lambertville were reported as true cases of typhoid fever, while the mild or abortive cases and cases in New Hope, Pa., according to mill-report, run the number up to 61. A large number who remained at work suffered with rigors, flushings of heat, muscular soreness, disorders of digestion, and weakness. Some rarely took a drink of the water, while others drank large quantities, and here is a point worthy of consideration. The employes who worked in the hottest rooms and drank the largest quantities were the first to become ill, and among them nearly all the fatal cases occurred. It was further observed, as time elapsed, that after the cessation of drinking the well-water the new cases became less severe.

As to the stage of incubation no information was obtained from the early cases. Most authorities agree that the incubation-stage is from 10 to 14 days. Dr. Stillé puts it at 14 days; Trousseau cites cases to show that it may be as short as 3 and even 2 days; on the

other hand, it may exceptionally be as long as four weeks. The only cases of interest under this head are those of two patients taken sick on April 20th, or 41 days after being subjected to the influence of the drinking-water.

Each case was one of marked typhoid fever. The specimens of blood yielded the typhoid reaction, and the disease in each case ran a normal course. Twelve cases proved fatal: two from intestinal hemorrhage, one from perforation, the remainder from exhaustion. Postmortem examination was secured in one case, the subject having died in the fourth week of the fever. The autopsy showed an enlarged spleen and the characteristic lesions of Peyer's patches. The mucous membrane throughout the gastro-intestinal tract was greatly inflamed, with suppurating surfaces.

The various characteristics of typhoid fever were present in the victims of this epidemic, and especially the classification given in Reynolds' *System of Medicine*, was verified. Thus, we had the class with prodromal systems, the class in which the disease was ushered in with a chill, followed by high temperature, dry tongue, vomiting, sweating, great prostration and delirium. In fact the opportunity to study the disease in its various forms was presented. One case showing subnormal temperature, as described by Liebermeister, is worthy of more than passing notice. The onset was sudden; in three days the temperature reached 104°, with active delirium; the patient was admitted to the hospital about the fifth day, when his temperature soon went to subnormal, and remained so until convalescence was established. The low temperature was accompanied by muttering delirium.

In many of the cases there was a disposition to relapse, which not only prolonged the disease, but in some cases caused fatal results.

At first the patients were cared for at their homes, but later it was decided to erect a temporary hospital, equipped to better carry out the treatment and for the better care, at the expense of the city, and to which a number of the patients were taken. No especial line of treatment was followed, but it was mainly adapted to the symptoms in each case. The most successful treatment for high temperature was the cold plunge, but this could not well be carried out except in the hospital.

The serum-reaction of Widal was shown in about twelve cases and yielded most satisfactory results. Each clinical case of typhoid fever was thus verified by a positive reaction. The only negative case was one in which there were no clinical symptoms of typhoid fever, but the patient suffered for several weeks from the effects of drinking the water.

The lesson of this epidemic is the repetition of the one that is taught in nearly every epidemic of typhoid fever. There should be few, in official life at least, who remain to be convinced of the immediate connection

between a polluted water-supply and an epidemic of typhoid fever. Physicians especially should need no greater object-lesson than the epidemic at Plymouth, Pa., a number of years ago, which caused more than 100 deaths, all because the dejections from a single typhoid patient were allowed to be thrown on the surface of the ground, without disinfection, to be washed into the reservoir, whereby more than 1,000 people were made sick with typhoid fever; and the more recent epidemic at Maidstone, Eng., with its large fatality.

### EDEMA OF THE UVULA FOLLOWING HYPODERMIC INJECTION OF HYOSGIN.

By J. M. WARD, A.M., M.D.,  
of Oil City, Pa.

ABOUT noon on July 30th, a man 52 years old, 5 ft. 6 in. high, and weighing 200 pounds, came to my office with the following history. His mother was living and well, at the age of 95. His father had been addicted to the use of alcohol, and had died of apoplexy. One brother and several other relatives on the father's side died of apoplexy. The patient had been actively engaged in newspaper-work for twenty years, and when overworked had used both morphin and alcohol as stimulants, and frequently to excess. He had taken the *Keely cure* twice, and had been treated once for the morphin-habit. He had been treated two years for gastritis; but otherwise he had never been sick. The man came at the end of a week's debauch, on the verge of delirium, and asked to be straightened up. A fifth of a grain of apomorphin was administered hypodermically, and he was sent home to bed. At a visit half an hour later I found him exceedingly nervous, trembling, and seeing mice, etc., in various places. A hypodermic injection of  $\frac{1}{25}$  gr. hyoscin was given, and in fifteen minutes he was asleep. He slept peacefully for a few minutes, and then began breathing noisily through his mouth. His skin became red, and in a short time cyanotic. The temperature was 101°; the pulse 130, soft and weak. The tongue and mouth were dry; the pupils contracted; the respirations 40, short and labored. The man's condition generally became alarming, and it looked as if his breathing would be cut off altogether, unless tracheotomy were done. Before attempting this, however, he was rolled on his face, and immediately he breathed somewhat easier, and improved gradually, until, in about an hour, he became semiconscious, was able to sit up for a second or two, and greedily tried to drink some water; this attempt was futile and provoked another attack of dyspnea. Similar endeavors to swallow water were repeated unsuccessfully at intervals of a few minutes for several hours, when the man finally succeeded in getting down nearly a pint. Six hours after the administration of the hyoscin I found him perfectly rational, but still quite nervous, and entirely unable to articulate, and apparently in great distress from something in his throat. On examination it was found that the view of the pharynx was completely shut off by the uvula, which presented somewhat the appearance of a cone with the apex at its attachment to the palate and its base in contact with the root of the tongue. The base was divided by a vertical linear constriction into two lobes, each of which was covered with a whitish membrane resembling that seen in diphtheria. Considerable mucus seemed to be collected behind the uvula, but the mouth was quite dry. An application of cocain 3 ss in benzoinal f 3 i was made as thoroughly as possible to the uvula, and followed by silver nitrate, 4%. This was repeated three times a day, and an alkaline gargle used every half-hour for two days. At the end of this time the uvula had almost regained its normal condition. The man had slept practically none for three days and nights preceding this treatment; nor did he sleep any the night succeeding it, although, after the danger of suffocation had passed, I gave him, at about midnight, a hypodermic injection of  $\frac{1}{2}$  gr. of morphin, and repeated it at intervals of half an hour for five doses.

For several days after this attack the man received hypodermics of hyoscin, gr.  $\frac{1}{100}$ , every six hours, but beyond a slight dryness his throat became practically normal. The unusual and alarming condition that resulted on the first day of his treatment seems to have been due to the action of the rather large preliminary dose of hyoscin, with perhaps a relaxing effect from the emesis produced by the apomorphin.

### Selected formulas.

#### For Falling of the Hair:

Quinin hydrochlorid.....	1 dram.
Tannic acid.....	2 drams.
Powdered sandalwood.....	1 dram.
Vanillin.....	2 grains.
Tincture of cantharides.....	2.5 fluidrams.
Glycerin.....	1.5 fluidounces.
Cologne water.....	10 fluidrams.
Alcohol (7%).....	24 fluidounces.

Mix.—Shake well, allow to stand four days, and filter. To be rubbed into the scalp daily.

—*Revue de Thérapeutique.*

#### For the Neuralgic Pains of Tuberculous Patients:

Guaiacol.....	75 grains.
Methyl salicylate.....	75 grains.
Extract of belladonna.....	3 grains.
Extract of opium.....	3½ grains.
Vaselin.....	4 drams.
Lanolin.....	4 drams.

In very acute cases antipyrin, the bromids, or menthol may be added, thus:

Guaiacol.....	1 dram.
Methyl salicylate.....	1 dram.
Menthol.....	15 grains.
Potassium bromid.....	75 grains.
Antipyrin.....	30-45 grains.
Oil of turpentine.....	1½ fluidrams.
Vaselin.....	4 drams.
Lanolin.....	4 drams.

A small quantity to be lightly applied to the affected parts (but not rubbed in), and the part wrapped in cotton. If redness supervenes, the ointment is to be discontinued.

—CAPITAN.

#### For Atonic Dyspepsia:

Tincture of cascarrilla.....	2½ fluidrams.
Tincture of rhubarb.....	5 fluidrams.
Tincture of nuxvomica.....	2½ fluidrams.
Tincture of gentian.....	10 fluidrams.
Tincture of orange to make.....	4 fluidounces.

Mix.—Two teaspoonfuls in water a short time before each meal.

—BURNEY YEO.

#### For Epilepsy:

Potassium bromid.....	2 ounces.
Potassium iodid.....	1 dram.
Potassium bicarbonate.....	40 grains.
Ammonium bromid.....	2½ drams.
Infusion of calumba to make.....	6 fluidounces.

Mix.—A teaspoonful, in a little water, before each meal, and three teaspoonfuls at bedtime.

—BROWN SEQUARD.

Sodium bromid.....	3 drams.
Sodium bicarbonate.....	½ ounce.
Tincture of physostigma.....	1½-2½ drams.
Saccharin.....	3 grains.
Water.....	6½ fluidounces.

Mix.—A tablespoonful morning and evening, diluted with water; after four days, stop for three days; then commence again.

—*Centralbl. f. d. ges. Theraph.*



# The Philadelphia Medical Journal

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\$3.00 PER ANNUM

**Is the Degree of M.D. Necessary to Practise Medicine in Pennsylvania?**—From a Philadelphia newspaper-advertisement of the "Philadelphia Optical College" we extract the following paragraph:—

"We treat all diseases of the eye, and if glasses are found necessary we furnish them at a moderate price."

Perhaps this sort of thing may eventually turn the stomachs of the supporters of the "graduate opticians'" pretension. Have the genuine opticians also nothing to say? Have medical societies no attorneys?

**A trick of nostrum-sellers** is to pretend to introduce their secret drugs through the profession, bribe physicians by presents of pocketbooks (and means of filling them), trinkets, and many sorts of presents, all with the sharp concealed knowledge that the modern soda-water, crockery-ware, candy drug-stores will sell direct to the self-drugging people the article supposed to be distributed by professional methods. There are two means whereby this evil can be met: 1. The medical profession should close up its ranks and in common action refuse by several methods, *e. g.*, black-listing, directing where prescriptions shall be filled, etc., to help such stores to live. 2. The reputable pharmacists should put the ban of their professional disapproval upon their erring brethren.

**Defend Yourself, "Allopaths"!**—The *Medical Era* (homeopathic), in chronicling the return of "Our Volunteer Surgeons" of the First Regiment of Illinois volunteer infantry, notes that the three regimental surgeons were members of the faculty of the Chicago Homeopathic Medical College, "and are able to make the very exceptional report that, in spite of all the trying conditions of the campaign, the main body of the First Illinois had a mortality-rate of but one-half of one percent. This is believed to be a better record than can be shown by any other regiment." In a footnote to the term "main body," the editorial adds that "this does not include a small body detached from the regiment and placed in a hot-bed of yellow fever, far removed from the main body in charge of the regimental surgeons. Seventeen deaths from yellow fever occurred in this small detachment."

**"The Philadelphia Polyclinic."**—By an agreement concluded between the Trustees of the Philadelphia

Medical Publishing Company and the Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, the journal published by the latter under the title of *The Philadelphia Polyclinic* will, on January 1, 1899, be merged with THE PHILADELPHIA MEDICAL JOURNAL. Unexpired subscriptions to the *Polyclinic* will be completed by us for the full time with our journal, and in case a *Polyclinic* subscriber is already a subscriber to the JOURNAL, one-third of the unexpired period of the *Polyclinic*-subscription will be added to that for which the JOURNAL has been paid. The *Polyclinic* journal has been a brave and excellent one, fulfilling a clear mission with the courage and ability worthy a larger and richer field. By reason of these very characteristics it now recognizes, among other reasons for discontinuance, that concentration of effort is a prerequisite of great influence in medical journalism, and that this unity and power of the medical press is absolutely necessary to effectively carry out a hundred medical reforms and to disseminate a higher and worthier professional literature. *The Polyclinic*, thus finding two journals unnecessary in the same work and edited for the same ends, gives to us the standard to carry.

**Thyroidectomy.**—In a recent paper, a complete abstract of which will be found elsewhere in these pages, Kocher, of Berne, reports 600 thyroidectomies, in addition to 1,000 previously reported. A few facts from this report seem deserving of special mention. In spite of the large number of operations, it is stated that about 90% of the cases treated at the Berne Poliklinik recover, without surgical interference, under the use of preparations of iodine, or thyroid extract, between which there seems to be little to choose. Operation under local anesthesia is strongly advised, as giving a much lower mortality. With regard to the technic of the operation, Kocher prefers a curved skin-incision, with its convexity downward; the muscles are separated instead of divided; the gland is dissected free from its capsule and turned out before ligating its vessels, care being taken to separate the recurrent laryngeal nerve from the inferior thyroid artery. In cases of simple colloid struma the mortality is placed at 0. This series of 1,600 cases from the little city of Berne, all but 150 of them operated upon by one man, is as remarkable as the prevalence of goiter in Switzerland is unexplainable. Fortunately, the affection is not

so common in this country, even though the mortality is small. Section of the cervical sympathetic, suggested by Jonnesco, of Bucharest, as a substitute, in certain cases, for thyroidectomy, has been favorably commented upon by certain French surgeons; but, for the present, the opinions of Swiss surgeons, who seem to have practically a monopoly of the disease, would seem to carry most weight.

**"Substitution"** by druggists of an article of a different manufacture from that ordered by the physician is a thing so impudently fraudulent that we are continually surprised to find it so prevalent,—because prevalent it must be when so many reputable manufacturers complain. This custom is doubtless responsible for much of the secrecy as regards the correct formulas of preparations. It would seem easy for the local pharmaceutic and medical professions to put an end to it if they desired. It is squarely against every principle of ethics and professional honor. Even a black-list prepared by the wholesale manufacturers of those proved to have been guilty of the practice as regards nonsecret preparations, would certainly soon end the scandal. The physician must be the judge as to the exact ingredients of the things he orders in his prescriptions. Judge he cannot be so long as manufacturers keep secret the constitution of the articles they manufacture. Hence no physician of any character will order nostrums. If the manufacturers of drugs come out squarely and tell the physician the whole truth as to the construction of the articles made, and if they deal only with the physician and druggist, never with the lay-public, then they have a right, and it is their duty, to demand that substitution shall stop. But as to nostrums and drugs sold directly to the patient, we think that substitution is advisable. There seems no other way of breaking up the riot of self-drugging and quackery at present so dangerous and pernicious. In both aspects the honor and interests of the pharmaceutic and medical professions are at one. With nonsecrecy assured, substitution should be punished; with secrecy it should be encouraged.

**Castration of the Idiots.**—The question of the desirability of unsexing certain of the criminal classes has been given considerable attention in the editorial columns of the medical press for some time, but the possibility of preventing the multiplication of the mentally unfit seems to have received less consideration than it deserves. Anyone who has taken the pains to observe the pauper-classes, whether in large or small towns, is aware that its ranks are being increased from year to year, mainly by multiplication of its own kind; it is true that immigration has added to the numbers and that some degenerates have fallen into the ranks from the higher classes of society, but the greater part of the pauper-tax is for the support of

sons and daughters of paupers. Reports of boards of charities show that the number of paupers is steadily increasing, and with this increase is a corresponding increase in the burden of taxation for their support. Criminals of any given class are not all totally depraved, sometimes they have been led astray by evil associates, and it is difficult to see how a law could be framed suitable for all cases, but there is no great difficulty in determining at the age of puberty whether a child has sufficient intelligence to be able to support itself. Inasmuch as the State has to provide for the vast majority of imbeciles, why should its officers not be given power to prevent the multiplication of this class? This matter is by no means as novel as it may first seem, as is evidenced by the fact that a prominent surgeon in one of our large cities has several times been consulted with regard to this matter and has performed castration at the request of intelligent but unfortunate parents upon their imbecile children. Whilst there is an occasional imbecile child born of intelligent parents, the vast majority illustrate the law, "like begets like." Not only would castration prevent procreation by these unfortunates; it would also do away with masturbation and venereal disease among them, conditions horrible for the patient and loathsome and disgusting for attendants. Nature weeds out a considerable proportion from these classes by the tedious and painful process of disease: unsexing of both males and females would be a swift and merciful way of accomplishing the same end.

**The English Law as to Criminal Abortion.**—Lloyd Whitmarsh, the Brompton surgeon, who was recently condemned to death for the murder of a girl who died as the result of his attempts to procure criminal abortion, has been reprieved. The term of imprisonment for which the sentence is commuted is not yet made public, but it is certain to be a lengthy one. We have recorded during this year two cases of medical men in London who have been convicted of procuring criminal abortion at the expense of the lives of their wretched accomplices, and we have no hesitation in confessing that we cannot follow the English legal procedure under which one of these convicts, William Maunsell Collins, was sent to penal servitude for seven years, and the other, Lloyd Whitmarsh, who to our mind was the lesser offender of the two, was sentenced to death. Our difficulty is shared by many eminent English jurists, both legal and medical. The following is stated to be the reason for the discrepancy, but although it is ingenious it is not convincing. In the prosecution of Collins the Attorney-general for the Crown told the jury that if they were satisfied that Collins when he performed the illegal operation did not consider the act *a dangerous one necessarily* they would be at liberty to bring in the more merciful verdict of manslaughter. To medical men this reading of the law was quite a new one, for it had always previously been accepted by them that whoever



being engaged in an unlawful act killed another person was guilty of murder. The judge raised no objection to the Attorney-general's statements, and the jury naturally jumped at the opportunity of not hanging a man, whose crime, however revolting, had not had murder as its object. So Collins escaped with a sentence of penal servitude. But in the prosecution of Whitmarsh the judge instructed the jury to a slightly different effect. He told them that if Whitmarsh, while procuring abortion, was not perfectly certain that his act was *under no conditions a dangerous one* they must find him guilty of murder. The jury unable to imagine a qualified medical man who thought that the injection of caustic solution of mercury into the pregnant uterus could never be otherwise than harmless, brought in a verdict of murder, and Whitmarsh was sentenced to death. Of course the jury knew that he would be reprieved.

**Death, Insanity, and Taxes.**—There is an old saying that nothing is certain in this world but death and taxes. Sydney Smith once drew a striking picture of a sick man, in over-taxed England, lying on a taxed bed in a taxed house with taxed windows, taking his taxed medicine out of a taxed spoon, and barely escaping further taxation by the intervention of death. We believe, however, that it has remained for our American law-makers to put a tax upon death itself. A man may no longer die unless he and his friends are prepared, under some circumstances, to put a stamp on his death-certificate.

The question was recently raised in Philadelphia by some of the strict constructionists of the revenue law as to the liability of death-certificates and insanity-certificates to taxation. A strict reading of one portion of the law seems to indicate that such certificates are thus liable. In order to settle the question in one of our large hospitals, it was referred to the revenue collector of this district. That official has replied that death-certificates, when given in pursuance of a State law and for the use of a State or municipal corporation, do not require to be stamped, but when given to be used merely for a private purpose, they require a ten-cent documentary stamp. The collector also says that, according to the ruling of the Commissioner of Internal Revenue, certificates of insanity are not taxable.

We are not quite sure, from the wording of this decision, what the collector means by a "private purpose," but suppose he refers to death-certificates given to insurance and other strictly private companies and societies. The distinction should be made clear, because a failure to comply with the law might, for all we know, lead to embarrassment and even, in cases in which a claim for money is involved, to some legal question or complication. As such certificates have to be signed usually by the attending physician, it might be well for him to bear this subject in mind, and by making

inquiry determine whether the particular certificate requires a stamp. The company itself, we should suppose, would furnish this information.

As for certificates of insanity, they go unstamped. It may be some consolation for certain persons to know that they may go insane, or even die, without being taxed for it; unless they happen to leave some insurance-money for the benefit of their heirs, in which case the latter need not grieve too much about the taxes.

**The Adulteration of Coffee.**—A New York firm recently sold to a Baltimore firm 500 bags of Rio coffee, which, under the contract, was to be of a certain grade. When the coffee was offered for delivery it was refused by the Baltimore firm, on the ground that it had been artificially colored. The nature of the coloring-matter is not stated in the report. It was not asserted that this coloring-matter was injurious, but only that it rendered the coffee unsalable within the provisions of the health-laws of the State. Suit was brought, and the defendants averred that the coffee had been colored in such a way as to appear better than it really was and of greater value, in contravention of a public health-law. Upon trial, the issue was whether the coffee was really adulterated within the provisions of the statute, so that it could not be legally sold. The jury found in favor of the plaintiff, *i. e.*, that the coffee, although colored, was not adulterated. The case was then appealed.

In the appellate court the judge decided that the mere fact that an article of food is colored is not of itself sufficient to make the sale of it illegal. The sale of a colored article is not forbidden, unless by means of the coloring-matter damage is concealed, and the article is made to appear better than it is, or of greater value. The judge did not discuss the question of health at all, but merely the commercial value of the coffee. If this latter was unfairly enhanced by the artificial coloring, then the sale was illegal. The judgment of the lower court was finally reversed, merely on a technicality as to the non-admission, by the lower court, of certain testimony.

From a sanitary standpoint this case is not satisfactorily settled. The matter used to color coffee is said to be some ferric salt. Whether or no this salt is injurious, we cannot say, as we do not know what it is; but certainly this is a question of greater importance than the commercial value of the coffee. Coloring-matter is used, we believe, in making winter butter, but it is innocuous. It must increase the commercial value of the butter, else it would not be used; but, on the other hand, it does not necessarily make the butter appear better than it really is. In other words, it merely caters to public taste, which demands a rich, golden color in butter. It is a matter of esthetics. Hence, such a coloring-matter could hardly be said to be an adulteration. It seems to us, however, that if an inferior grade of coffee is colored to look like a better

grade, a fraud is perpetrated on the purchaser, even though the coloring-matter is innoxious. If, however, the coffee is really as good as it is made to look, then the offense, if any, is less. But the whole business looks suspicious; and the most important phase of it concerns the possible effect of the coloring-matter on health.

**Manslaughter by Christian Science.**—The coroner's jury in the case of Harold Frederic, the American novelist and correspondent, who died recently in England, has rendered a verdict of manslaughter against Kate Lyon, a member of Frederic's household, and Mrs. Mills, the Christian scientist, who had charge of the case. It is to be hoped, now, that the proper court will take up the matter and proceed to convict the aggressors and inflict a severe penalty. The woman "healer" is said to have acknowledged that she did not know what Frederic's disease was, and that she had not attempted to make a diagnosis. In her opinion, evidently, this was superfluous. She also stated that she had taken her "patient" for a carriage-ride a few days before his death, when apparently he was in no condition for such exposure.

The significance of Frederic's case, as a display of crass and lamentable mental perversion on the part of a man of some intellectual power, is no longer of first importance. The novelist himself chose to remove his case from the sphere of wholesome influence and sympathy. His death may have paid the penalty for his folly, and nothing remains now but a feeling of pity for the victim.

It is not so, however, with reference to the public bearings of the case. As a man of some note, Frederic by his example might have influenced many deluded people, especially if by some luck he had got well; hence the case is to be discussed not as a mere personal affair, but as a public menace. From this aspect it demands vigorous treatment and swift condemnation. Frederic is dead, but his folly lives after him. Not only adults, who follow his lead, and mislead others, are as sheep in this slaughter, but innocent children of half-crazed fanatics are the victims on this altar of nineteenth-century idolatry.

The right of government to interfere with a religious delusion that threatens life cannot be even plausibly denied. The world to-day presents many problems of this kind that are assuming vast proportions and must be met in the near future with all the resources of advanced statesmanship. The problem of Christian science sinks into comparative insignificance alongside of those that are presented by such scourges as cholera, plague, and leprosy. These diseases are entrenched in the social and religious prejudices of great populations, and they must be combated by a civilization that is able to demonstrate its superiority to the effete creeds and superstitions that had their origin in bygone ages. The principle is the same, whether it

applies to faith-cure in Philadelphia and Christian science in London, or to leprosy in Japan and plague in India. The methods may differ, but statesmen and the general public must recognize the danger at hand.

It is a curious subject for speculation, and one too wide for full discussion here, that the law of the survival of the fittest may apply to religious systems as well as to organic forms. As the world grows older, and more compact and unified by the resources of modern civilization, the competition between existing systems of belief will doubtless become more active; and, perhaps, unconsciously those that oppose the progress of humanity along the lines of even material prosperity and hygiene, will be gradually eliminated, or at least held in check. But this natural progress is too slow to meet all the demands of modern states, especially when they are imminently threatened by delusions as well as pestilence in the health and welfare of their peoples. Every case like that of Frederic is but a text for a much wider theme.

**The Lecture-system.**—In a brief and interesting paper in a recent number of the *Edinburgh Medical Journal*, James Finlayson strongly inveighs against systematic lectures in medical schools, since their chief effect is to cramp the student and prevent him from working to the full extent in laboratories, wards, and libraries. Finlayson speaks truly when he says that the student has no opportunity to learn the business of his life; he has to learn most of it after his graduation. Lecturing, he says ironically, has advantages of a kind—a system in which a student can give back to the professor the *ipsissima verba* of the examiner as taken down by dictation may result in a wonderful percentage of passes and a high standard of marks, but such a method of lecturing is beneath contempt, and its true value would no doubt appear at any independent examination. With systematic lectures five days a week, the time and energy of the student are used up, and the power and even the desire to learn anything beyond what his professor tells him is apt to be lost. At the Johns Hopkins University, the lecture-system has, according to the author, been abolished, and with good results. Dispassionately considered, it does seem to be a sheer waste of time to compel the student to spend many hours a week at lectures, when without difficulty he could get all the knowledge which the professor seeks to convey to him from his textbooks. Objective teaching is the keynote in pedagogy, and should everywhere supersede as much as possible didactic instruction. The majority of important diseases can be discussed clinically with a patient as the text. Only a few of the rarer diseases or of the epidemic maladies, as cholera, plague, etc., cannot be thus illustrated. A student will recall a case that he has seen in the clinic, and, by association, the information given him by the lecturer, much longer and much more vividly than any



didactic instruction, however lucid the expounder. We have known men on leaving a clinic or a practical demonstration of some special topic to discuss the subject among themselves. Such a thing, which is certainly beneficial and stimulating, is not likely to follow mere didactic lectures.

Finlayson touches upon another matter which is interesting and timely, namely, the stimulation among students of a desire for collateral reading. The majority of students is content to read the textbooks and nothing more; some even satisfy their conscience with the diligent perusal of the manual or quiz-compend, unaware of the opinions of other authorities or of the fact that medical views are changeable and changing and that medicine is not crystallized into unalterable form, but is intensely living. Medicine has had its development along the lines of evolution just as any other branch of human knowledge, and only one who knows its past history, its errors, and its truths, can thoroughly understand the attitude of medical science at the present day. Finlayson recommends that the students receive regular instruction in a medical library in which the practical use of catalogs, indexes, and books of reference could be shown. Dr. Bayard Holmes, of Chicago, has long been urging a similar plan. In a city like Philadelphia, with its magnificent library of the College of Physicians, and with a fair collection of medical books in the library of the University of Pennsylvania, such instruction could readily be given and would be of great value to the student. Robert Watt, whose biographer Finlayson is, had the habit, when lecturing on any topic, of naming the best books on the subject and urging the students to read them for themselves. Finlayson occasionally makes a demonstration of the leading books in the various languages on some special subject like children's diseases, physical diagnosis, etc., placing them on the table for personal examination. He may invite a student to read aloud from the original treatise the description, for example, given by Sydenham of chorea. How much more interesting the student's work would be if all teachers of medicine would adopt such methods. They would thereby cultivate in the student the historic instinct and a love for those fascinating traditions which give to our science a peculiar and indescribable charm.

**Editor and Reader, No. 3. The "Reading-Notice."**—Whenever an honest reader sees a puff of an article in the reading-columns, he at once knows his editor is dishonest, and a trickster. The man is selling stolen property and pocketing the proceeds. The property is the advertisement, the theft is from his subscribers who have paid for the reading columns for other purposes, and the trickery—a poor, slovenly job, by the way—consists in the attempt to humbug the subscriber into a belief that the puff is genuine editorial and scientific opinion, when it is plainly mere sale of space to the advertiser that is supposed to be reserved free of his influence. The strange thing about this whole immoral proceeding is that the

advertiser should think it of advantage to himself or his article. It may generally be presumed that when advertiser and editor combine to push the sale of a product by deceitful methods, they are pretty sure that the thing itself has but little value; moreover, people who are so easily hoodwinked as the game supposes are few and worth little as customers. Confidence in the value of a preparation would find better methods of publicity than the old-fashioned reading-notice. Those who have this confidence confine themselves to legitimate methods of inducing sale, and look upon the reading notice of the old crude sort as a stupid and ineffectual proceeding.

But there is a class of advertisers who have not so far and who have not yet learned plain, outright honesty. They have only tried to become more subtle in the trickery. They hire physicians to deceive the editor. The reading-notice is introduced in the guise of a signed paper by some "most reputable practitioner." It becomes a sort of race of wits in which the reward is not to the strong or the swift, but to the cunning. The object is to make the language so pseudo-scientific and so moderate in tone as to deceive even the elect. Woe to him who acts as agent! Circulars and quotations will infest even his dreams.

Sometimes, indeed, the editor teaches the manufacturer a lesson. There lies before us a letter written by an editor who encloses an editorial written in enthusiastic praise of a certain drug. The editorial justifies an uneasy conscience by abuse of those who think this sort of thing ethically or esthetically bad. The animus is shown by the letter to the manufacturer which we quote:

GENTLEMEN:—The enclosed article regarding your ——— has been prepared for the editorial columns of our Journal, and will be published in the reading matter without any cost to you. We thought you would like to look it over before it is printed. If you desire copies of the number in which this will appear, please let us know how many when you return the article. Papers will cost you — cents each in five hundred lots or — cents each by the thousand. Less than five hundred at the regular price — cents a copy. It will be necessary to let us know in advance if you intend to use a number of copies so that we can print the extra number required. We have sent you a copy of Journal under separate cover. Please return article without delay as we wish to use it in next issue.

Yours, very truly,

Then, there is the last, and, we hope, the largest, class of companies who have good non-secret preparations made by improved pharmacologic methods, with the distinct therapeutic value which are assured by modern advances in skill, business enterprise, capital, machinery, etc., and which, by strictly professional means of distribution, aim to be and are genuine additions to the physician's materia medica. The men who manufacture such things have no desire to push their sale by disreputable methods, and they have the intelligence to see that the reading-notice, crude or refined, is bad journalism and poor policy.

**The Series of the Lane Lectures by Clifford Allbutt**, recently delivered in San Francisco, Cal., our readers will be glad to learn, have been promised to THE PHILADELPHIA MEDICAL JOURNAL, and publication will begin so soon as Mr. Allbutt has completed the revision of the manuscripts.

**The Biologic Basis of Ethics and Religion** is the title of a paper by Dr. George M. Gould. The pamphlet will be sent upon request to those interested in the subject.

**Correction.**—In the description beneath Fig. 1 on p. 1011 of the JOURNAL for November 12th, the word "healed" should have been "treated."

## Reviews.

**A Manual of the Practice of Medicine.** By FREDERICK TAYLOR, M.D., F.R.C.P., Physician to and Lecturer on Medicine at Guy's Hospital, etc. Fifth Edition. 8vo, pp. xvi, 1002. London: J. & A. Churchill. 1898. Philadelphia: P. Blakiston's Son & Co. Price, \$4.

The popularity of this well-known Manual is testified to by the exhaustion of four editions in eight years; and it has come to be looked upon as a standard work on the subject with which it deals. The text is well and concisely written and the statements made can be accepted as authoritative and complete. In the preparation of the current edition the work has been subjected to careful revision, some sections (diseases of the nervous system, diseases of the blood, aphasia, ringworm) having been largely rewritten, and numerous additions made (glandular fever, divers' paralysis, erythromelalgia, angioneurotic edema, hypertrophy, pulmonary osteo-arthritis, tubercle of the skin). After a brief introduction, the various subjects are considered in the following order: Infectious diseases, diseases of the nervous system, diseases of the muscles, diseases of the organs of respiration, diseases of the organs of circulation, diseases of the organs of digestion, diseases of the ductless glands, lymphatic system and blood, diseases of the urinary organs, chronic intoxications and the effects of heat, diseases of the bones and joints, diseases of the skin. The index occupies thirty pages. In a work otherwise so complete it might have been well to include a consideration of accidents due to electricity, resuscitation of the apparently drowned, and phosphorus-poisoning. Altogether, however, we have only words of praise for the book, which will continue in the favor it has earned.

**A Textbook of Pathology.** By ALFRED STENGEL, M.D., Instructor in Clinical Medicine in the University of Pennsylvania; Professor of Clinical Medicine in the Woman's Medical College; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. With 372 Illustrations. 8vo, pp. 848. Philadelphia: W. B. Saunders. 1898. Cloth, \$4 net; half Morocco, \$5 net.

Pathology has not always received in American medical colleges the attention it deserves, but the last decade has witnessed a remarkable change in this connection. We can, however, never hope to attain the high scientific position in this department of medicine that our German and French confrères occupy until a sentimental and emotional public shall have been educated to the importance of systematic postmortem study, for which opportunity has, in the past, been only grudgingly afforded. It is true that pathology is not concerned alone with dead tissues, but morbid anatomy and histology must ever be the basis of its scientific evolution and development. It is time that all the world recognized that the physician's best weapon in the battle with disease, in both its prevention and its cure, as well as in its amelioration, consists in a knowledge of disease, its causes, processes and results. And so we hope for greater liberality of spirit on the part of individuals and communities in the matter of postmortem examination. The volume before us may be looked upon as a fruit and an exemplar of our progress in pathology. It represents an attempt to present the subject in a "practical" form and from the point of view of the clinical pathologist, and the outcome of the effort is a source of satisfaction and congratulation. The work is divided into two parts, general and special. The former is subdivided into eight chapters, which embrace consecutively the following topics: The etiology of disease, disorders of nutrition and metabolism, disturbances of the circulation of the blood, retrogressive processes, inflammation and regeneration, progressive tissue changes, bacteria, and diseases due to bacteria, animal parasites and diseases caused by them. The subject of special pathology is covered by fourteen chapters, which take up in order the diseases of the blood, of the lymphatic tissues, of the circulatory system, of the respiratory system, of the gastro-intestinal tract, of the ductless glands, of the urinary organs, of the reproductive organs, of the bones, of the joints, of the voluntary muscles, of the brain

and its membranes, of the spinal cord and its membranes, of the peripheral nervous system. The text is supplemented with an index of 38 pages. The illustrations are numerous and in general admirable. Some of them are exquisite and most realistic. Altogether, the work is in every way to be cordially commended, and we predict for it a most cordial reception and deserved success.

**A Clinical Text-Book of Medical Diagnosis for Physicians and Students.** By OSWALD VIERORDT, M.D., Professor of Medicine at the University of Heidelberg, etc. Authorized translation with additions by FRANCIS H. STUART, A.M., M.D. Fourth American Edition from the fifth German, revised and enlarged. Philadelphia: W. B. Saunders. Cloth, \$4.00; Sheep or half Morocco, \$5.00.

The appearance of repeated editions of this work, with an average time of less than two years between each edition, until the fifth German and the fourth American have been reached, serves as sufficient evidence that the book is highly acceptable to both students and practitioners. The plan of the work differs in some degree from many others of the recent publications upon medical diagnosis, as the author concerns himself with the study of general questions of diagnosis, investigation of special symptoms and physical signs, and presentation of methods of laboratory investigation, rather than with the differential diagnostic study of special diseases. The opening chapter comprises instructions upon the proper methods of eliciting the medical family-history of the patient and the history of the patient himself; this is followed by instructions as to the general points to be sought for in examining a patient. The general considerations, such as the attitude, the degree of nutrition of the patient, and changes in the color of the skin surface, are taken up, and are followed by a study of the various forms of fever and of their diagnostic importance. Throughout this portion of the work, the author constantly endeavors to arouse a spirit of study of the individualities of patients rather than devotion of the attention exclusively to the limited symptoms or signs that may be present. The remainder of the work, by far the larger part, is filled with a study of special diagnosis; this division in this work meaning a study of those signs and symptoms arising from special organs and not a study of special diseases. Abnormalities found upon inspection, palpation, percussion, and auscultation of the thoracic organs are studied at length, and there are interesting chapters containing very satisfactory instruction upon the examination of sputum, and the chapters on the circulatory apparatus also include a description of the preparation and interpretation of sphygmograms. The description of the examination of the blood, both as to its morphology and as to the possible presence of certain bacteria, is given much space and care. The translator has wisely introduced a note upon the Widal reaction, the importance of which was not yet sufficiently established when the German edition was written to allow of its introduction, but we feel obliged to protest that the brief note on this reaction is scarcely sufficient for proper instruction in its use. The examination of the digestive apparatus includes methods both of physical examination of these organs and of chemic and microscopic investigation of the stomach-contents and of the stools. It is unfortunate that on page 320 a decinormal solution of sodium hydrate is spoken of, in brackets, as a 0.1% solution, since the two are very different, and this error, unless noted, may lead the clinician into serious mistakes. The examination of the urine is treated of at very considerable length, and very satisfactorily, although the author remains somewhat old-fashioned in his views upon peptonuria, and it seems that he might well have mentioned the importance of albumosuria in malignant skeletal tumors. The chapters on the nervous system contain remarks upon anatomy and physiology which are brief but sufficient to make the following pages intelligible to the student. As a whole the book is surely greatly to be recommended. The author's personal style is unfortunately a little obscure at times, and the translation smacks so strongly of German construction that the sense is occasionally a little misty, but this is notably less marked than in earlier editions. The translation is earnestly done and the translator's inserted notes are usually valuable and often important.



## Correspondence.

## A GOOD EXAMPLE OF PECILONYMY (TERMINOLOGIC INCONSISTENCY).

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL :—

YOUR desire to improve methods of presentation is so well understood that I venture to cite from the issue of the JOURNAL for November 5th, p. 941, the report of an interesting and instructive case of tumor at the base of the brain as an unusually perfect illustration of a common and, as it seems to me, undesirable literary habit, viz., the use in one and the same article of different names for the same part, structure, or tissue. *Pituitary body* occurs 12 times, and *pituitary* 5 times in conjunction with other words. *Hypophysis* is used twice, and its adjective, *hypophyseal*, once. *Gland* alone occurs once.

The replacement of *corpus pituitarium* and *glandula pituitaria* by *hypophysis* is one of the points upon which there is agreement between the American Neurological Association, the Association of American Anatomists, and the Anatomische Gesellschaft. Why not, then, use *hypophysis* throughout, adding the synonym, pituitary body, in parenthesis, at the beginning?

Respectfully,

BURT G. WILDER.

Ithaca, N. Y.

## WAR-LESSONS NOT TO BE LEARNED.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL :—

MAJOR CLARK's comments, on pp. 872 and 873 of the JOURNAL for October 29th, on the better convalescence of soldiers in tents, leads me to warn against a contrary conclusion that might be drawn from the practice many commanders and surgeons have made in sending their sick in large numbers from their camps to city-hospitals, even when there was no overcrowding and before the advent of cold weather. The reason given for this action was that the men could not be properly cared for in the field, and that they rapidly got worse there. Now, the experience of the profession for centuries, as well as the *a priori* conclusions of physiologists, is that health is much more rapidly regained in the open air, and one of the most brilliant lessons of the civil war was the same point. It is to be hoped that this firm and valuable principle will not be obscured by the mistaken course referred to, which, if defended at all, must be on the ground of expediency alone.

Leading newspapers and the laity have fallen into the natural mistake of concluding that the probing of gunshot-wounds has been abandoned, because of the discovery of the X-rays, and it is not impossible that some medical men have fallen into the same error. The truth, of course, is that for 20 years, ever since antiseptic surgery became formulated, practical and enlightened surgeons have given up the probe. It did not remain for the war of 1898 to show the accruing great benefits, for this was done in the Turko-Russian war of 1877-78, when Esmarch insisted on this practice, and upon grounds of asepsis, not of location.

The war-investigation committee will have an opportunity to place the blame for the present considerable amount of smallpox in American and Philippine camps. This is a wholly preventable disease, the large Prussian army having had no death from it in 22 years.

While wheeling on the towpath near Camp Meade in September I enjoyed daily a bath in the canal there. The canal is wide, deep, swift, cool and clear, very enticing, and I presumed the camp had been selected because of the opportunities for bathing that this structure with clean banks afforded the 30,000 men. Not only for the advantages of cleanliness and health would such a place to swim in be welcomed by a commander, but as affording an attractive outlet to the surplus energy of idle young men. So imagine my surprise when told by a non-commissioned officer that no one was allowed to swim in either the canal or the river. Later, I corrected this statement to the extent that men were occasionally marched by companies the two miles to the Susquehanna to swim. The reason given for this prohibition was that sewage from Harrisburg existed in the canal-water. If it did, and if its external application could do the men any harm (and in Ohio thousands swim without harm in canal-water that is thick with sewage), why was not the camp placed on one of Pennsylvania's thousand clean streams and canals?

Respectfully,

Dayton, O.

J. C. REEVE, JR., M.D.

## THE STATE LABORATORY OF MINNESOTA.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL :—

SIR:—In the JOURNAL for November 5th, page 921, under the heading "Establishment of a State Laboratory by Vermont," you do Minnesota an injustice. You state that only three States have such a laboratory as the one just established in Vermont (Michigan, Massachusetts, and New York). Literally, this may be true, but in fact, no. In 1894, Dr. C. N. Hewitt, who for nearly twenty-five years was secretary and executive officer of the Minnesota State Board of Health, equipped a laboratory in one of the buildings of the University of Minnesota for doing the laboratory work that would naturally fall to the Board which he represented. In January, 1896, the Board, feeling that Dr. Hewitt could not do justice to his work both as an executive and as a bacteriologist, appointed Dr. F. F. Westbrook (a member of the Board) bacteriologist, and set aside a sum of money sufficient to start a laboratory on a sound basis. This laboratory has been an exceedingly active factor in State sanitation, especially during the past two years, as will be shown by our biennial report, which will soon be published, and also by the various papers which have been presented by members of its staff, before various societies. While this laboratory was not legislated into existence, it is a State institution.

Very truly,

H. M. BRACKEN,

Secretary and Executive Officer.

St. Paul, November 8, 1898.

## ENEMAS OF SALINE SOLUTION IN TYPHOID FEVER.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL :—

SOME weeks ago I was called to see a patient in the sixth week of typhoid fever. For the first 4 weeks the man had not suffered much, but in the seventh week he had low delirium, with high fever, and beginning subsultus. With the man living miles in the country and the nurses not the best, the condition was a grave one. I ordered a pint of normal saline solution to be thrown into the rectum every 6 hours, and retained. In 24 hours the delirium had disappeared and the subsultus was hardly perceptible, and, in addition,

the character of pulse was much improved, whilst a spot that had threatened to slough into a bed sore became well. The solution being given at about 80° F., had a decided influence in reducing the temperature. As it was quite inconvenient to give the enemata they were discontinued after 4 days, to be resumed with happy effect when the patient had several severe hemorrhages from the bowel.

Living in a community where I may not see another case of typhoid fever in a year or two I wish to mention this, so that others may try the same expedient. When the heart-beat is poor, with much sordes, marked nervous depression and high fever, I think from this trial that the saline solution can be used with benefit. From 1 to 2 pints may be given at a temperature of from 80° to 90° F. from every 4 to 6 hours; and when convalescence is established, I believe the patient will be found to have lost less of both flesh and strength than if the enemata had not been employed.

Yours very truly,

W. M. HOLLODAY.

Hampden Sydney, Va.

### INSANITY FROM EPILEPSY.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

In the issue of the JOURNAL for October 8th, Dr. Frederick Peterson states that less than 10% of epileptics become insane. Possibly he refers to those ordinary types of insanity, such as are observed in the general insane population, and he does not intend to include the dementia that is so common in chronic epilepsy. Even with these limitations his proportions seem too small.

The insanity, and the almost infinite degrees of mental perversion, that result from epilepsy are in many important respects unlike the ordinary insanities; indeed they are so unlike them that it is hardly permissible to consider them as more than distantly related.

A man who has a fit once in six months, and who for a day afterward is depressed and suicidal, or who has no recollection of anything that has occurred for a day or two after a fit, may not possibly be considered technically a lunatic, but certainly he cannot be held to be mentally sound and responsible. It is these peculiar and perplexing forms of mental perversion that are common in epilepsy, and that defy our classifications and make many of the terms of psychiatry seem meaningless.

Epileptic mental disorders comprise (1) the ordinary types of insanity, as seen among the non-epileptic insane; (2) a condition of dementia more or less marked and found in a large proportion of chronic epileptics; (3) and most important and most frequent of all is a class of mental perversions peculiar to epilepsy, generally but not always closely related to a fit, appearing at one time as alternations of mild depression, excitement, and dulness, or consisting of brief attacks of depression or exaltation, or of mental automatism and forgetfulness of events, or of quiet confusion, with groundless suspicion and revengefulness for fancied wrongs, fitful brilliancy or dulness amounting to temporary incapacity, sudden development of schemes for speculation or investment or extravagance, or impulses to injure others, to commit homicide, to burn buildings or to shoot animals. This is a brief and partial list of the mental perversions peculiar to epilepsy, and which occur in a large proportion of cases. There are few chronic epileptics who do not exhibit some of these states at some time or many times. There is a certain small percentage of epilep-

tics who have their fits at long intervals, and who, like Cæsar, are not habitual epileptics, and who may pass through life without perceptible mental impairment. These are exceptions that are so rare as hardly to be worth considering in a discussion of epilepsy. It is these occasional epileptics that may sometimes occupy positions of responsibility. I have now two under observation who are managers of large corporations, and yet in both cases, in spite of the infrequency of the fits, the epilepsy has been mentally harmful, and, sooner or later, they will both "break down from overwork," and the fact of their epilepsy will never be known to the public. Such instances as these do not, however, count for much in estimating the efficiency of the epileptic, for people who are insane sometimes occupy responsible positions. It is true that some epileptics are good mechanics, some are ingenious, and under the direction of others work with success, but this, too, may be said of insane people.

There are many epileptics who are self-supporting, and there are many more who have the credit of being self-supporting only because of the steady force supplied by relatives, and without which they would drift as wrecks upon the world's charity. Epileptics, because of their disease, are refused employment and in a measure denied the society of their fellows, all of which is injurious to them.

Aside from their fits, however, *there is a special mental character of epileptics*, even those passing as quite sane, which makes the great majority of them unsuited for the more desirable kinds of employment, except under most indulgent supervision. Epilepsy very early impairs the perceptions and the judgment and reduces to zero that elusive but essential quality—personal initiative. This is indicating in a sentence what needs a chapter for its proper statement, but I am convinced that it epitomizes some of the characters of a mental condition that, *without the fits*, would make the epileptic a failure in life.

I believe that, with rare exceptions, habitual epileptics suffer sooner or later from some degree of mental impairment. This does not amount in all cases to insanity, but it usually suffices to incapacitate from any independent occupation. One is, I think, justified in saying to the friends of an epileptic that if the fits are not arrested within two or three years mental failure is to be expected. The fits of the epileptic are not, of course, the whole of his disorder; they are but a part, and often a minor part, of the pathologic history of the epileptic, a conspicuous symptom of the continuing process that involves every function of the brain, and especially the higher mental faculties. The fit is thus only an exhibition of a morbid condition that, whatever it is, never leaves the epileptic and mixes with all he does and is.

If in our ordinary investigation of such cases we fail to discover past evidence of these less conspicuous mental perversions, it is probably in most cases from lack of proper observation by those who supply the history. The statements of friends or relatives who have not been advised how to observe an epileptic are not to be relied upon. A mother, whose 7-year-old boy has had epilepsy for 6 years, said in answer to my question that nothing wrong mentally had been noticed in him. I instructed her how to observe him, and after the next fit she found that he had no recollection of anything that had occurred for 24 hours, though during this time he was taken 25 miles to the seashore and saw much that was unusual to him. The mother is a highly intelligent and vigilant person, who has watched the boy constantly, and yet she has probably overlooked for several years a constant and important feature of his disease. My own expe-



rience is that automatism with forgetfulness, during which complex acts are performed, is common in epilepsy and it is exceptional that I fail to find it.

Such cases support the statement made that the mental perversions of epilepsy, while clearly morbid phenomena, are different from the ordinary forms of insanity in many respects, chiefly in their periodicity, in their transient character and in their obscure and subtle manifestation. To say that these people are insane may be to do them injustice part of the time; to say they are sane is to stretch the word sanity to a dangerous tenuity.

The cases upon which I base my conclusion of an all but universal morbid mental element in the epileptic are not in persons seen in public institutions, but in those seen in a private institution and more frequently in private families, and often, too, in the early stages of the disease. The character of much of epileptic mental disorder is such that these patients can be endured at home and their true condition concealed and denied by friends. Though their insanity is often transient, though it is obscure in its manifestations and usually eludes the search of the untrained, though we cannot unpack our line of definitions and easily fit one to each case, still the mental perversions are frequent and terribly real. The character of much of epileptic insanity makes its intelligent study possible only to the specialist, and it is probable that only a small proportion of epileptics are ever seen by specialists.

It is doubtful if reliable conclusions can be drawn in regard to the mental harmlessness of epilepsy from the reputed epilepsy of historic characters. Cesar's attacks seem to have occurred at such long intervals that he could hardly be called an habitual epileptic. The evidence that Napoleon had epilepsy seems to me unreliable. Swedenborg and Mahomet were epileptics and they were talented. The former was, however, several times insane, and the latter, had he lived in this century, would surely have been caught in the net of the lunacy-commission. In former times, when men lived by imagination, they took the demagog at his own estimate. Pretentious and empty-headed characters easily became leaders; men were not only tolerant of the self-assertive lunatic, but if he was bold and noisy they called him a genius and perhaps helped him to get a crown. And because his insanity caught the fancy of the mob and the mob made him a ruler, the historian writes him down as great. In our own day such men are measured by a different and juster standard, for the gentle hand of official restraint now consigns them to obscurity.

I have great respect for Dr. Peterson's opinion and would be glad if he would give in some detail his views on the mental effects of chronic epilepsy. Accepting the mental characteristics of epileptics mentioned as being morbid phenomena and as belonging to the insanities, I should say that the proportion of insanity from epilepsy as stated by Dr. Peterson is but a fraction of the true proportion. I realize, however, that there are no reliable statistics on the subject, and, from the nature of the subject, it would be next to impossible to collect any.

It is easy to see that employers would not care to hire epileptics, but there seems no reason why the fits themselves should prevent the epileptic from employing himself as a farmer, tradesman, mechanic, etc. It is doubtful, however, if among the 11,000 epileptics in New York State outside of institutions there is more than a very small proportion engaged in self-supporting work without oversight. The reason for this lies in the fact that the epileptic lacks the self-direct-

ing capacity that is necessary to success in any independent occupation. It is not pleasant to have to believe this; one might well wish it were otherwise. All other ills of life seem trivial in comparison to the blight of epilepsy, even under its mildest aspects, but when we consider its mental characteristics, which shut out from the world's work and its interests those who are yet keenly sensitive to their condition, I know of nothing that is quite so sad. That New York at least has provided for these unhappy people a colony-home suited to their needs, is an achievement that one can hardly speak of as he would like without seeming to use extravagant language.

Respectfully,

J. H. McBRIDE.

Pasadena, Cal.

### TO RUDOLPH VIRCHOW.

Thou Grand Old Man of Medicine,  
Immortal is thy fame;  
One blessing grant we yet may win,—  
How to pronounce thy name!

Before thou quittest this our sphere  
Give us at least to know,  
Our waiting world is fain to hear  
If we should say Veerko?

Would not oblivion better be,  
Sage, scientific searcher,  
Than to be famed, yet by decree  
Of fate called Rudolph Vircher?

When the chill hand of death is laid  
Upon thy learned brow,  
At that sad time shall it be said,  
Has passed the great Virkow?

When History on her glowing page  
Thy name as one shall show  
Who glorified his guild and age,—  
Should she pronounce, Veersho?

Wouldst thou be pleased in after-days,  
Revered, omniscient Prof.,  
To have thyself in words of praise  
Referred to as Virchoff?

Is't Vir-, or Veer-? -sh-, -k-, or (cough!)?  
Vouchsafe to tell us now,—  
Vircho, Virsho, Virchov, Virchoff,  
Vircher, Virko, Virkow?

BERNARD WOLFF.

Atlanta, Ga.

**Achillo-bursitis.**—Samuel Lloyd (*Medical Review of Reviews*, October 25, 1898) states that the edematous swelling attending achillo-bursitis is most noticeable about the margins of the tendon, which may be obliterated, and extending over the entire posterior portion of the heel. The condition may be produced by traumatism or infection, but the pressure of tight shoes rubbing above the insertion of the tendo-achillis is the most common cause; tuberculosis of the os calcis is a rare cause. The first symptom is usually pricking, stabbing pain in the bursa, which increases with exercise, and may become so severe as to prohibit the use of the foot. It is usually more marked on the outer side. There may be marked tenderness on pressure, and sometimes fluctuation. Lloyd has found hot baths, iodine, blue ointment, and other local applications, useless in treatment. He prefers the method of strapping advocated by Gibney for sprains of the ankle. In one case, after this treatment had failed, a plaster-of-Paris bandage, with firm pressure over the heel, yielded a successful result. Should these measures fail, an incision may be made and the bursa thoroughly cureted and tamponed. The prognosis is good, if the treatment is systematically carried out.

## American News and Notes.

**University of Tennessee.**—Dr. W. H. Nance, of Gunnison, Miss., has been elected professor of physiology in the medical department of the University of Tennessee.

**Death from Sneezing.**—Dr. J. W. Tufts, of Parkersburg, W. Va., died on November 11th in consequence of exhaustion due to incoercible sneezing lasting for two hours.

**Return of Convalescents from Porto Rico.**—The Transport *Obdam*, from Porto Rico and Santiago, with 72 convalescent and discharged soldiers and several civilians, arrived at New York November 14th.

**Sickness at Santiago.**—According to Colonel Wood's report of November 12th, the total number of sick at Santiago was 1,115, of these 571 were fever cases. The death of one soldier from typhoid fever is reported.

**The Third Pan-American Medical Congress,** which was to have been held in the city of Caracas, Venezuela, December, 1899, has been postponed for one year, in consequence of the prevalence of war and then of smallpox.

**The Alumni Association of the University of Maryland** recently held a memorial meeting in honor of the late Dr. N. S. Lincoln, with addresses suitable to the occasion, and the adoption of resolutions of condolence and respect.

**Dr. F. C. Hoyt,** of Chicago, formerly superintendent of the Hospital for the Insane at Clarinda, Ia., has consented to assume for the present the superintendency of the Hospital for the Insane at Mt. Pleasant, left vacant by the sudden death of Dr. Gilman.

**Cincinnati University.**—Mr. Asa van Wormer has made a donation of \$60,000 to the university for the erection of a library-building. A gift of a like sum was made recently by Mr. Briggs Cunningham, for the addition of a left wing to the main building.

**Wayne County (Mich.) Medical Society.**—At a meeting held October 7th, the following officers have been elected: Dr. R. H. Honner, president; Dr. Albert E. Carrier, vice-president; Dr. C. Henri Leonard, treasurer; Dr. Walter J. Cree, secretary. The society is next in size and importance to the State Medical Society.

**The New York Board of Health** has asked the Corporation Counsel to commence a suit against Dr. Beaman Douglass, of No. 121 East Fifty-sixth Street, for violation of the health code in not reporting the death of Henry C. Barnett, who died at the Knickerbocker Athletic Club, Forty-fifth Street and Madison Avenue, November 10th, of diphtheria.

**Chicago Society of Internal Medicine.**—There will be a regular meeting on Thursday evening, November 24, 1898, at 8 o'clock, in the hall of the Chicago Medical Society, 92 State Street. Program: Dr. Henry F. Lewis, "Musical Heart-Murmurs;" Dr. Charles W. Purdy, "The Principles of the Dietetic Treatment of Diabetes Mellitus;" Dr. Isaac N. Danforth, "Report of a Case of Typhoid Fever, with Unexpected Termination." The subject of the annual discussion at the January meeting will be "Acute Articular Rheumatism." Gentlemen desiring to participate in the discussion by reading papers, or otherwise, are requested to apprise the secretary of the scope of their contributions and probable time required for presentation.

**Suit for Malpractice.**—Dr. George C. Burton, of Washington, D. C., has been sued in the sum of \$25,000 for malpractice by a woman who charges "gross neglect, carelessness, and want of skill in the treatment of a fracture of the leg, in consequence of which the bones overlapped, with contraction and shortening of the member, with impairment of health and great bodily suffering."

**St. Louis Academy of Medical and Surgical Sciences.**—At a meeting held November 8th, the following officers were elected: President, Dr. G. C. Eggers; senior vice-president, Dr. John C. Murphy; junior vice-president, Dr. J. C. Spohn; secretary, Dr. James Moore Ball; treasurer, Dr. Emery Lanphear; orator, Dr. A. H. Ohmann-Dumesnil; curator and librarian, Dr. George F. Hubert.

**Waring Hospital.**—The Chamber of Commerce of New York City has decided upon a memorial in honor of the late Colonel George E. Waring, Jr., to consist of a fund of \$100,000, for the benefit of Colonel Waring's widow, with some provision for the creation, on her death, of a permanent memorial in testimony of his sterling worth and integrity, and the conspicuous services he rendered to his country and especially to New York City.

**State Hospital for Insane in Connecticut.**—The legislative committee of Connecticut have reported the necessity of erecting another hospital for the insane, and that in consideration of one-half the patients being admitted to the State hospital from Fairfield and New Haven counties the hospital should be located in Bridgeport. A commission has been again appointed by the last Legislature, of which Dr. Amos J. Givens, of Stamford, and Dr. C. B. Adams, of New Haven, are members. This commission is in search of good locations.

**The Miami Valley Medical Society** held its forty-second semi-annual session at Loveland, O., on November 1st. Dr. J. C. Oliver, of Cincinnati, read a paper on "Cerebral Compression and Concussion"; Dr. E. S. Stevens, of Lebanon, one on "Collapse and Shock from Hemorrhage"; Dr. Philip Zenner, one on the "Causes of Insanity"; and Dr. F. W. Langdon, one on "Treatment of the Insane." The Committee on Malpractice-suits reported in favor of asking for legislation requiring persons bringing malpractice-suits to give security for the costs. The next meeting will be held at Loveland on May 9, 1899.

**From Dr. Huidekoper's Testimony before the War Inquiry Commission.**—Col. Huidekoper referred frequently during his testimony to his difficulties in securing nurses. He said he had once secured an approach to the necessary number through an arbitrary order from Gen. Brooke, and when this order was issued the Colonels had insisted on supplying the worst men they had in their regiments for members of the hospital corps. One was an epileptic and another a confirmed drunkard. Yet the men who had given him the poorest nurses were generally the first to make complaint of lack of attention.

**Memorial to Surgeon Gibbs.**—A brass memorial tablet was unveiled on November 10th, in Kirkpatrick Chapel, at Rutgers College, in honor of Dr. John Blair Gibbs, assistant surgeon United States Navy, who was killed on June 12th, at Guantanamo Bay. The memorial was a gift to the College of the Class of '78, of which the dead surgeon was a member. Dr. Austin Scott, president of Rutgers College, presided, and Professor R. W. Prentiss, a graduate of the class, presented the memorial to the College. William K.



Van Reyphen, surgeon general of the United States Navy, delivered an able address on "Colonial Expansion;" and Captain George F. Elliott, a companion-in-arms of Dr. Gibbs, told of the San Juan campaign. An address was also made by Professor Henry D'B. Mulford.

**The Presbyterian Hospital, Cincinnati**, erected at the expense of Mr. and Mrs. Alexander McDonald, was opened on November 1st. The building is four stories high, with a basement, and is constructed of brick and stone. An elevator is accessible from the sidewalk, and to it a patient brought in an ambulance can be taken on a cot and thence to any floor. On the first floor are the chapel, clinical room, and drug-room. Two free wards, male and female, occupy the entire second floor, and on the third and fourth are 25 private rooms. On the third floor are also the operating-room and X-ray compartment, with the latest apparatus. A sun-room for convalescents is on the fourth floor. All of the plumbing is outside of the walls. The building is fireproof throughout.

**Another Victim of Christian Science.**—Thomas Greenwood Kershaw, leader of the Christian Science Church of Tacoma, died of acute pneumonia on November 12th, as a result of his refusal to receive medical treatment. According to reports, he was a man of the highest education and intelligence, and until identifying himself with Christian Science was one of the most active and successful business men of Tacoma. Since embracing that doctrine, although a sufferer himself from a broken hip, he had devoted his entire time to promulgating his faith and ministering to the afflicted. When taken ill, Mr. Kershaw, despite the entreaties of his family, refused to see physicians, and placed himself in the care of a woman Christian Science healer in Savannah, Ill., who, he said, was able to relieve him regardless of distance. He was visited by several of his Christian Science followers, and at their suggestion he rose from the bed and took a step forward. He would have fallen had he not been caught. It was then found that he was dead.

**A new army hospital**, the largest under the control of the Government, is to be constructed of Georgia pine, at Savannah, Ga., at a cost of \$150,000. There will be 149 buildings, all designed and constructed with a view to permanency. The ground plan of buildings will be rectangular, with covered ways connecting all of the buildings with each other, and with the administration-building in the center. Each of the four sides of the quadrangle will contain a ward with a capacity of 250 beds. One ward will be devoted to surgical cases, and an enclosed passage-way will connect it with a modern operating-room. In addition to the general wards there will be private rooms for the accommodation of invalid officers. An unlimited supply of artesian water will be provided. Coal base-burners will supply heat. An ice factory is situated within 50 yards of the site, and the cost of ice is inconsiderable. The officers' quarters will be of two stories. The dormitories for the nurses and the hospital-corps will occupy two buildings. The chief surgeon will have a private residence.

**Obituary.**—DR. A. H. ROBINSON, October 31st, at Concord, N. H., aged 85 years.—DR. J. UNDERWOOD HALL, a prominent physician of San José, Cal., aged 85. Dr. Hall was a native of Kentucky. During the war he had charge of the Union Hospital at Glasgow, in that State.—DR. DAVID RANDALL, Morrisville, Vt., October 25th.—DR. ALBION P. SNOW, Winthrop, Me., October 25th, aged 69.—DR. J. D. AMES, De-koven, Ky., October 31st, aged 80.—DR. PETER H. BROOKS, Lima, Ohio, October 28th.—DR. J. W. DAVIS, Smyrna, Tenn.,

October 31st, aged 77.—DR. ROSWELL FOX, Wethersfield, Conn., October 26th, aged 73.—DR. S. E. GIVAN, Burney, Ind., October 25th.—DR. J. H. HEAD, Centralia, Mo., October 29th, aged 58.—DR. B. H. PASCHALL, Arrington, Tenn., November 1st, aged 73.—DR. F. A. TODD, assistant superintendent of the Toledo State Hospital, was recently attacked by a rabid dog, and received a lacerated wound of the hand. Although the injury had received prompt surgical attention and was thoroughly cauterized, and subsequently the Pasteur anti-rabid inoculations were resorted to, Dr. Todd died on the 30th of September, of hydrophobia.—DR. JAMES M. SMITH, Cheswold, Del., November 12th, aged 82.

**Smallpox in Cuba.**—General Wood, commanding at Santiago de Cuba, sent, on October 6th, a cable dispatch to the Central Cuban Relief Association, which reads:

"I find in the Holquin district, just evacuated by Spaniards, long-standing smallpox, scattered throughout the district, and am making every effort to stamp it out. Dr. Woodson, of the Army, is in charge of the work. Please send him to Gibara, by first Government transport, one thousand cots and two hundred half-ounce bottles of vaccine-lymph."

Agent Warner, of the Red Cross, who reached Gibara the latter part of September on the schooner *Mary E. Morse*, reported on his arrival the terrible spread of smallpox, which had been raging unchecked for a long time, and called for vaccine-virus. Enough for one thousand vaccinations was at once sent, as well as a quantity of quinin. The facts were telegraphed to General Wood, in reply to his message, and he was told that the supplies asked for would be sent to the Red Cross agent at Gibara for Dr. Woodson's use.—[*Medical Review*.]

**The Beecham Habit.**—The Family Papers teem with warnings that we must invest good money in Fig Syrup, Early Risers, Little Liver Pills and Base Ball Boluses in order to have good complexions and sweet thoughts. Very many people believe this. The habit begins by gentle dallyings with the Lady Webster Dinner Pill. It grows & grows. One pill is enuff at first, but two are soon required where only one grew before, then three are demanded, and soon a change is required from Pills to Fig Syrup, then Mother Shipley's Tea & back to Pills—from Carter's to Pierce's, then Ayers', Beecham's, Billson's, and at last a frantic dash is made for Ripum's Tablets. It is very plain to every unprejudiced reader that the prime motive of the fin de siecle Religious Press is to prove that man has liver trouble & salvation can only be found by patronizing Dr. Pierce's Pungent, Pugnacious, Pollywog Perquisites. Whether these things be dictated by Bishop, Presbytery, or Ecumenical Council, I cannot say. But Col. George Batten, Expert in Advertising, advises me that the proper cathartic is usually dictated by the Committee of Seventy. However this is, I find that the "Outlook" gives prominence and publicity to Tarrant's Seltzer, the "Churchman" to Fig Syrup, the "Christian Register" to Acid Phosphate, while strong leanings are shown by the "Christian Leader" for the wares of Dr. Pierce. "The Christian at work" Works Pierce and Ayer's, the "Presbyterian" likes Prune Juice, while the "Christian Advocate" lustily advocates Early Risers and Ripum's Tablets. The "Baptist Standard" goes off on a new track and favors Dr. Hall's Water Cure Self-Treatment, while the "Examiner" falls back to Fig Syrup and Prunes. The "Christian Herald," edited by Rev. Dr. Talmage, seems to conduct itself rather loosely, for it coquettes its favors between Hood, Beecham & Dr. Hall. As one goes south of the Ohio River, matters

grow worse, for the "Southern Pulpit" of Louisville not only favors Pierce, Carter & Beecham, but introduces "a sure cure for flatulence," in the presence of one Doctor Jingle, whose wares are voucht for by seven clergymen, three of them D. D's. —[*The Philistine*.]

#### An Opinion by the Kansas City Court of Appeals.

—According to an opinion handed down by the Kansas City Court of Appeals, November 7, 1898, a medical college may sell a diploma without more than a technical violation of the law. The Court decided that it was not necessary to attend a medical college in order to secure a diploma from it. Should the officers of a college decide any one qualified to practise medicine or surgery they may issue a diploma, and, though guilty of a technical violation of the law, can not be prosecuted for the illegal act.

The case was the suit brought against the National School of Osteopathy by Attorney-General Crow, and it has attracted wide attention in medical circles throughout the country. It was a quo warranto proceeding to take away the corporate franchise of the school for its alleged abuses. The evidence was that the school had sold Dr. William Smith, of Kirksville, Mo., a certificate that he had completed a full course of study at the institution. Dr. Smith paid \$150 for the certificate, after having called at the school but twice. In the opinion the Court said (Judge Gill having written the opinion):

"The violation of the law was that the diploma was issued when there had been no personal attendance for the time specified by the Missouri laws. This was a legal wrong, but not sufficient to warrant the forfeiture of the school's franchise. It was not a wilful abuse of the law, nor an improper neglect of the duties prescribed for such colleges."

When the laws of a State are in such a condition of primordial barbarism, it is high time that doctors enter politics and see to it that the laws be changed or amended.—[*Medical Review*.]

**Suffolk District (Boston) Medical Society: Surgical Section.**—At a meeting held November 2d, Dr. J. W. Elliott was elected chairman for the ensuing two years. Dr. P. C. KNAPP read a paper on **the Treatment of Cerebral Tumors**. From a study of over 400 collected cases of cerebral tumor, besides the 38 recently reported by Ferrier, he concluded that (1) less than 10% of all cases are operable; (2) the chances of complete recovery are probably not more than 1% of all cases; (3) the other cases linger on, paralytic, epileptic, or blind, and some recur. Drs. J. J. PUTNAM and M. H. RICHARDSON reported a case of **cerebral sarcoma** of considerable extent, occurring in a man, 38 years old, who came under observation with the following symptoms of three months' duration: impairment of speech, mostly defect of vocabulary; awkwardness in movements of his pen; and optic neuritis. A flap of bone was turned back, but no tumor was found. The patient was discharged, but returned after 2 months with bulging of the bone-flap, to be again discharged after a second operation, with some relief of the symptoms. A year after the first operation patient walked a mile and a half, but fatal coma soon followed. The lesson of this case and of others is that operations for the relief of symptoms, even without hope of permanent amelioration, are justifiable in some instances. Dr. M. H. Richardson considered progress in brain surgery to have been very slight in the last 10 years, the tumors that offered most hope for operation being fibromas starting from the dura mater, and brain-cysts, if of the dura. Dr. KNAPP thought cysts unfavorable,

because they are often found in the center of gliomatous tumors.

**Health Reports.**—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Supervising Surgeon-General of the U. S. Marine Hospital Service, during the week ending November 12, 1898:

#### SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
INDIA:			
Lake City . . . . .	Nov. 2 . . . . .	1	

#### SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Oct. 8-15 . . . . .	4	1
BRAZIL:			
Bahia . . . . .	Oct. 15-22 . . . . .	20	2
INDIA:			
Bombay . . . . .	Oct. 7-11 . . . . .		1
RUSSIA:			
Moscow . . . . .	Oct. 1-8 . . . . .	10	5
Odessa . . . . .	Oct. 8-15 . . . . .	4	1
St. Petersburg . . . . .	Oct. 8-15 . . . . .	1	
	Oct. 15-22 . . . . .	3	2
Warsaw . . . . .	Oct. 8-15 . . . . .		3
VENEZUELA:			
Valencia . . . . .	Oct. 22 . . . . .	150	

U. S. Consular report, of October 22d, states that the epidemic is decreasing, and will doubtless soon be extinct.

#### YELLOW FEVER—UNITED STATES.

MISSISSIPPI:			
Jackson . . . . .	Nov. 2-10 . . . . .	2	
Madison . . . . .	Nov. 2-10 . . . . .	4	1
Yazoo City . . . . .	Nov. 2-10 . . . . .	2	

#### YELLOW FEVER—FOREIGN.

MEXICO:			
Tampico . . . . .	Oct. 16-23 . . . . .		2
Vera Cruz . . . . .	Oct. 20-27 . . . . .		13
Monterey . . . . .	Oct. 28-Nov. 6 . . . . .	1	5

#### CHOLERA.

INDIA:			
Calcutta . . . . .	Sept. 17-24 . . . . .		2
Madras . . . . .	Sept. 24-30 . . . . .		35
" . . . . .	Oct. 1-7 . . . . .		22

#### PLAGUE.

INDIA:			
Bombay . . . . .	Oct. 7-11 . . . . .		240
Calcutta . . . . .	Sept. 17-24 . . . . .		2

**Chicago Medical Society.**—At a meeting held November 9th, Dr. WELLER VAN HOOK read a paper on an **Operation for Hernia** designed to do away with the need of splitting the aponeurosis of the external oblique muscle, in order that, in case of suppuration, the state of the patient need not be aggravated by the enlargement of the external ring. After treating the sac by partial amputation and drawing the stump back up the canal by means of curved artery-forceps, and fastening it, after Kocher's plan, to the tissues above the cord, Dr. Van Hook dissects up the aponeurosis of the external oblique from its muscle and frees Poupart's ligament with a finger introduced into the canal. A handled, curved needle, unarmed, is then passed under Poupart's ligament at a point sufficiently below the cord to prevent the pinching of the cord at the internal ring. The point of the needle is received upon the finger in the inguinal canal and is carried under the cord (raised by an assistant) to a point behind the inner pillar. The needle is then passed through the internal pillar and its point appears projecting through the aponeurosis of the external oblique. The needle is then threaded and withdrawn. The forefinger is next passed up the canal behind the cord until the inner portion of the thread is felt



between the external oblique muscle and its aponeurosis. The finger is hooked around the thread in order to pull it out of the external ring along with the finger. Then the needle is introduced at a point about  $\frac{1}{4}$  inch inside the first point of introduction through the aponeurosis of the external oblique into the canal; it is guided with the finger down the canal to the external ring, and is there again threaded with the suture-end, which was brought out by the finger. It will be seen that when the needle is withdrawn there results a suture by which the internal pillar and the most posterior portion of Poupart's ligament can be drawn together. As many such sutures as may be desired are thus introduced and the external ring is closed by sutures in the usual way. This operation would be impossible only in those rare cases in which Kocher's and MacEwen's operations could not be performed, viz., when an inspection of the internal ring is imperative. There is no risk of injury to important structures and the amount of time required for the operation is scarcely more than would be needed for an ordinary Bassini operation.

DR. CARL BECK read a paper on **Retromaxillary Growths and their Treatment by Surgical Methods**. He pointed out that the most interesting and for the surgeon the most important tumors are the fibromata or polypi. Malignant growths and rare tumors are also operated upon, but the prognosis is bad. The technic of the operations and a critique of the different methods used at the present day was the subject of the paper. (1) It was contended that destructive methods with the ecraseur or loop-instruments of different construction ought not to be used by the modern surgeon; (2) that electrolysis is a slow and uncertain method, and will not be consented to by the patients except in countries where experiments may be performed; (3) operations are the method of choice. The methods of operating through the mouth (Gussenbauer, etc.) are not sufficient, the best method being apparently the wide splitting operation of Liston Ferguson, osteoplastic resection of the upper jaw. Two measures, are, however, necessary to insure a satisfactory result and to prevent unpleasant sequels: Roser's method of hanging the head, and preliminary ligation of the external carotid. Dr. Beck demonstrated one patient operated upon two years ago with hardly any traces of the operation and perfect functional results. He showed photographs of other cases operated upon by this method. He has observed, however, a peculiar affection, a corneal ulcer, in some cases, which he at first could not explain, but now he thinks it due to pressure of the dressing upon the exposed structure, perhaps precipitated by vasomotor changes. In cases of malignant growths the results have been unsatisfactory, though they were advanced cases.

DR. JAMES B. HERRICK read a paper on the **Treatment of Ulcer of the Stomach by Rest and Rectal Feeding**. He referred to the natural tendency of ulcers to heal. Mechanical irritation of the ulcer induced by ingestion of food, or by movements of the stomach excited by movements of the body, direct irritation by contact of food, or chemic irritation by the acids of the stomach, oppose obstacles to the healing of the ulcer. The treatment by rest in bed and by rectal feeding reduces these obstacles to a minimum, and is, therefore, the most rational. It is indicated for another reason, and that is that medicinal treatment is wholly unsatisfactory. Objections to rectal feeding are that the rectum will not tolerate this treatment for any length of time. This, however, is not true when suitable enemata are properly administered. Another objection that nourishment

is not absorbed has been disposed of by experiments and by clinical experience. It is not true, as some have contended, that the patient cannot stand the treatment. Many patients do so well and without complaining. The claim of some that it is inconvenient and will not succeed is contradicted by the experience of physicians who have given the method a fair trial; and the trend of modern medical opinion is setting toward rectal alimentation in all cases of ulcer. In carrying out this line of treatment, the consent of the patient should be secured after a clear explanation of the reasons for it and of the method of carrying it out. The bowels should be emptied by a preliminary laxative and a cleansing enema. Absolute rest in bed for from 2 to 6 weeks should be insisted upon. Nothing should be allowed by the mouth, not even water, for from 3 days to 3 weeks. Patients tolerate the lack of food and water surprisingly well after the first 24 hours of abstinence. Nutriment should be administered at regular intervals of about 4 hours, the enema being given through a soft-rubber tube inserted high into the rectum. A period of rest of 8 hours should be allowed in every 24. A simple water-enema should also be given once during the 24 hours for the purpose of cleansing the bowels. As pain, tenderness, and vomiting cease, the enemata can be gradually stopped and light diet substituted, the patient being allowed to get out of bed only after rectal feeding has been entirely stopped. At this time iron may be advisable for the chlorosis. The results of this method of treatment are an almost immediate lessening of the pain, vomiting, and nausea. There is some emaciation and weakness that is quickly overcome so soon as light diet is begun. In almost every recent case a cure can be effected. In old cases there is usually improvement, oftentimes a cure. Deep ulcers, very extensive ulcers, a large amount of scar-tissue or adhesions may prevent the perfect working of the cure. This treatment should be instituted in every case of ulcer and not reserved, as has been advocated in many text-books and by many physicians, for the severe cases, or those accompanied by complications, *e. g.*, hemorrhage. The earlier it is employed the fewer will be the severe cases.

**New York Academy of Medicine—Section on Pediatrics.**—At the meeting held November 10th, Dr. EDWARD S. PECK reported a case of **traumatic cataract in an infant's eye from pressure of forceps**. He said that on October 14, 1890, he had been hastily summoned to see an infant that had just been delivered by a high forceps operation. The right blade of the forceps had rested just below the inferior lid of the right eye. The inferior cul-de-sac of the conjunctiva was filled with blood, the cornea was steamy and the pupil enlarged. In the space of twenty minutes the pupillary field changed from a dull gray reflex to an opacity due to the development of a soft cataract which entirely filled the lens. The treatment of the first forty-eight hours consisted in instillations of weak solution of mercuric chlorid and of atropin, and the local application of ice. By the next day a fully formed milky cataract filled the pupillary area. On the ninth day the eye first opened without aid, but the corneal opacity was still present. On November 16th, both eyes were equally open and the cornea had regained its clearness and reflex. When six months old, the pupil responded to light, the ophthalmoscope showed the retinal vessels and a spot of diffused cataract. When examined in May of the present year, the vision in this eye was  $\frac{2}{30}$ , and it seemed probable that perfect vision would ultimately be secured.

DR. HENRY DWIGHT CHAPIN opened a discussion on the treatment of pneumonia in children, in hospital and general practice, taking for his special theme the management of the fever. He said that in many instances it would be found that a judicious treatment of the disease would constitute the best management of the fever, and that where antipyretic measures were called for, the indication was not so much the exact degree of fever, but the amount of constitutional disturbance which it produced. All depressing remedies should be avoided, and, as a rule, this excluded the coal-tar derivatives. Cold to the head would be found efficient, and was conveniently applied in the form of the "ice poultice," made by mixing finely-cracked ice with flaxseed meal in oil-silk. Where more energetic treatment was demanded, the child should be stripped and a compress wrung out of water having a temperature between 70° and 95° F. should be wrapped around the chest, and changed every quarter of an hour until the desired effect was produced—i. e., reduction of the temperature of about 102°.

DR. L. EMMETT HOLT spoke of the hospital treatment of pneumonia. He said that from his own hospital experience he would say that 60% of the deaths from pneumonia in children were due to exhaustion, 25% to complications, and 15% to acute toxemia. These patients in hospitals should have not less than 1000 cu. ft. of air each, and should be frequently changed from one ward to another. Water should be given freely, but medicine only when distinctly indicated. The cough was best controlled by inhalations of creosote or eucalyptol. It was often wise to give food during the day and stimulants at night, but it should ever be borne in mind that these children are in great need of rest. Strychnin, nitroglycerin, oxygen, alcohol, and caffeine, are useful as cardiac and respiratory stimulants, and in the order named. The dose of strychnin for a child of one year should rarely exceed  $\frac{1}{300}$  gr. every three hours. For a brief period, nitroglycerin might be given in doses of  $\frac{1}{100}$  gr. every hour, and then at longer intervals. It was rarely necessary or desirable to give more than an ounce of brandy during the 24 hours. In cases showing a well-marked toxemia, caffeine, in doses of  $\frac{1}{10}$  gr., sometimes acts better than strychnin. Speaking of the treatment in general, DR. HENRY KOPLIK said that he considered strychnin the most valuable of the stimulants, the action of caffeine, ammonia, camphor, and musk being very transient. Frequent baths of any kind were to be deprecated, and they should never be resorted to when the temperature had already started to fall. In tenement-house practice, where hydrotherapy was difficult to carry out, small doses of phenacetin would answer very well in controlling excessive fever. An infant from six months to one year old might be given half a grain, together with half to one minim of tincture of digitalis, every three hours. Alcoholic stimulants are prone to excite nausea and vomiting and to interfere with digestion, and hence he did not use them except in asthenic cases.

DR. WALTER LESTER CARR discussed the treatment of pneumonia complicating measles. He advised keeping the little one in a well-ventilated room, the air of which was kept moist with steam and at a temperature of 65° to 70° F. The nares should be kept clean by irrigations of saline solution at a temperature of 100°. Counter-irritation by means of weak mustard paste or mustard baths relieve the difficult breathing and are greatly superior to the old treatment by the use of heavy poultices, which must be frequently changed. In his opinion the hyperpyrexia was best controlled by frictions with water at 90° to 95° F., and baths

of a temperature below 60° should not be used. When there was much nervous excitement, he would give codeia in doses of  $\frac{1}{16}$  to  $\frac{1}{4}$  gr. Alcoholic stimulants should not be given as a routine, but most children suffering from broncho-pneumonia would derive benefit from their administration at some stage of the disease. To assist convalescence, he gave codliver-oil, unless the temperature was quite high, and also malt extract with half to one-minim doses of creosote, or two to eight drops of the carbonate. As children do not expectorate, he could see no good reason for filling their stomachs with nauseating expectorants.

DR. SIMON BARUCH spoke of hydrotherapy in pneumonia. He said that the secondary effect of the application of cold to the body-surface was dilatation of the cutaneous vessels, and consequently the heart was relieved of much of its work, while the excretory activity of the skin and kidneys was augmented. For children under three years, the tub-bath with continuous friction would be found most efficacious, but for older children it was too disturbing. For a body-temperature of between 101° and 103° F., the bath-water should have at first a temperature of 95°, and should be gradually cooled down to 85°. He did not favor the excessive reduction of the temperature of the bath advocated by some of the previous speakers; it should not be lower than 75° or last longer than eight minutes. In the intervals of the baths, a compress, consisting of three folds of old linen wrung out of water at 70°, should be applied to the chest, and renewed every hour unless the patient were asleep. If the patient became chilly and blue after the bath, it was good evidence that the bath had not been properly given. In the general discussion, DR. FLOYD M. CRANDALL spoke of the value of counter-irritation by means of mustard, and of inhalations of steam and creosote in a steam-tent. DR. W. P. NORTHRUP spoke of the importance of carefully differentiating at the beginning between meningitis and pneumonia, and of the harm often done by the time-honored poultice-treatment, particularly when the little patient had a temperature of 104° or 105°. DR. H. W. BERG also inveighed against the "barbarous poultice-treatment," including the oil-silk jacket, as that was, in effect, a thin, light poultice. He had found that when small doses of sulphate of quinin were mixed with milk-sugar and given on the tongue, so as to get the bitter effect, the result was very beneficial in broncho-pneumonia, though he did not know why.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

MAJOR WINIFRED TURNBULL is relieved from duty at the U. S. General Hospital, Santiago, and is assigned to duty in charge of medical-supply depot, relieving Acting Asst. Surgeon E. F. GEDDINGS.

Acting Asst. Surgeon W. J. FREEMAN is relieved from duty in the chief surgeon's office, Santiago, and will report to Major WINIFRED TURNBULL, in command of medical-supply depot, for duty as his assistant.

Acting Asst. Surgeon E. P. HAYWOOD is assigned to duty with the 5th U. S. Infantry.

Leave for 10 days, on account of sickness, is granted Acting Asst. Surgeon R. M. MYERS, Oct. 15.

Captain R. S. WOODSON is relieved from further duty with the 5th U. S. Volunteer Infantry.

Acting Asst. Surgeons G. B. HENIECKE and E. F. HERR are assigned to duty with the 5th U. S. Volunteer Infantry, Santiago de Cuba.

Acting Asst. Surgeon G. B. LINDSEY is relieved from duty with the 5th U. S. Volunteer Infantry, and will report for duty at the transportation-office, Santiago, Cuba.

Captain R. S. WOODSON, A. S., medical inspector at headquarters, Department of Santiago, will proceed to San Luis for the purpose of inspecting the hospitals and camps of the 23d Kansas Volunteer Infantry, 8th Illinois Volunteer Infantry, and the 9th U. S. Volunteer Infantry.



Leave for 30 days, with permission to return to the United States, is granted Acting Asst. Surgeon E. F. GRIEDINGS.

Captain R. S. WOODSON, A. S., will proceed to Gibara, Sagua de Tanamo and Baracoa, Cuba, for the purpose of making a thorough medical inspection of the commands stationed at these points.

Captain THOMAS U. RAYMOND, A. S., will make a special sanitary inspection of the posts of Angel Island and Fort Baker.

Leave for 10 days, on surgeon's certificate of disability, granted Acting Asst. Surgeon H. B. EMERSON, is extended 20 days on surgeon's certificate of disability. Oct. 24.

Acting Asst. Surgeon AUGUSTUS HUSSEY, now at Fort Columbus, will proceed to Fort Ethan Allen for temporary duty.

Acting Asst. Surgeon G. B. LINDSEY will report at Morro Castle for duty.

Acting Asst. Surgeon S. LUNT HANNON is assigned to duty with the 4th U. S. Volunteer Infantry, at Manzanillo, Cuba.

Acting Asst. Surgeon JOHN S. MACK is assigned to duty with the U. S. Volunteer Infantry, at Manzanillo, Cuba.

Acting Asst. Surgeon SALVADOR G. ROS will report at Santiago, Cuba, to Acting Asst. Surgeon J. M. PENA, for duty.

Acting Asst. Surgeon MEYER HERRMAN is relieved from all duties previously ordered, and assigned to duty with the 5th U. S. Volunteer Infantry.

Acting Asst. Surgeon DUDLEY W. WELSH is assigned to Morro Castle, Santiago, Cuba, for temporary duty.

S. O. 64, C. S., so far as they concern Major SEATON NORMAN, surgeon, is revoked. Major Norman will report to the president of the board of officers appointed by par. 9, S. O. 57, for duty.

First Lieutenant DEAN C. HOWARD, A. S., will proceed to Fort Hancock and make the physical examination of officers and men of Battery A, Colorado Light Artillery, preparatory to muster out.

Acting Asst. Surgeon G. W. DAYWALT is assigned to temporary duty at the Division Field Hospital, Presidio.

Acting Asst. Surgeon WM. H. BLOCK is assigned to duty with the 9th U. S. Volunteer Infantry, at Santiago, Cuba.

Acting Asst. Surgeon J. G. McNAMARA is relieved from further duty at Fort Snelling and will proceed to St. Paul, Minn., for duty in connection with the physical examination of the 14th Minnesota Volunteer Infantry.

Major J. D. GRIFFITH, surgeon, will proceed from Lexington, Ky., to Cincinnati, Ohio, and report to the Army Investigating Commission for examination.

Leave for 1 month on surgeon's certificate of disability is granted Acting Asst. Surgeon HENRY R. CARTER, JR. Nov. 3.

Acting Asst. Surgeon FRANK I. DISBROW is relieved from further duty in Porto Rico, and will proceed to New York City for annulment of his contract.

Leave for 1 month, on account of sickness, is granted Acting Asst. Surgeons JOHN HORN and RAY A. WILSON. Nov. 3.

Acting Asst. Surgeon WILLIS J. RAYNOR is detailed as a member of the examining board appointed to meet at Fort Logan, vice Acting Asst. Surgeon JOHN A. MURTAGH, relieved.

Acting Asst. Surgeon JOHN S. SCHAUB will proceed from Leeburg to Middletown, Pa., for assignment to duty.

The following transfers are made: Hospital-Steward FRED R. ELSMER, Fort Porter to Fort Riley; Hospital-Steward ANTON GUMNESS, Fort Riley to Augusta, Ga., for duty with the 1st Division, 2d Army Corps.

Major SAMUEL T. ARMSTRONG, brigade-surgeon, will proceed to Savannah, Ga., and report to Brigadier-General Louis H. Carpenter for duty.

Major JAMES M. JENNE, chief surgeon, is honorably discharged, to take effect Dec. 3.

Acting Asst. Surgeon VOLNEY McR. SHOWALTER is ordered to accompany Battery B, 1st Artillery, from camp at Hiltonhead, S. C., to Key West Barracks, as medical officer, and from the latter point proceed to Fort Morgan for duty.

Acting Asst. Surgeon B. C. LEONARDI is relieved at Fort Grant and assigned to duty at Fort Huachuca.

Lieutenant-Colonel ALBERT HARTSUFF, D. S. G., will proceed to Chicago, Ill., and resume his duties as chief surgeon, Department of the Lakes.

The following-named officers are honorably discharged from the Volunteer Army, to take effect Nov. 5: Lieutenant-Colonel JOHN VAN R. HOFF, chief surgeon (major and surgeon U. S. A.); Lieutenant-Colonel VALERY HAVARD, chief surgeon (major and surgeon U. S. A.).

Major JOHN W. BAYNE, brigade-surgeon, having been placed on duty Sept. 1, in charge of all sick men of the Army arriving in Washington, D. C., is assigned to duty in that city.

Major MARTIN L. FOCHT, brigade-surgeon, is honorably discharged, to take effect Nov. 5.

Major R. EMMETT GIFFIN, chief surgeon, will proceed to Washington, D. C., about Nov. 15, and report to the Adjutant-General of the Army.

Major OSCAR LE SEURE, brigade-surgeon, is relieved from further duty at the Sternberg U. S. General Hospital, Chickamauga Park, and will proceed to Macon, Ga., for duty with the 1st Army Corps.

Leave for 14 days is granted Captain WILLIAM F. LIPPITT, JR., A. S. H. Q. A., Nov. 5.

Leave to include Dec. 1 is granted First Lieutenant OTWAY W. RASH, A. S.

Resignation of First Lieutenant OTWAY W. RASH, A. S., has been accepted, to take effect Dec. 1.

Acting Asst. Surgeon JAMES L. BEVANS will proceed from Decatur, Ill., to Fort Thomas, for duty at the U. S. General Hospital.

Acting Asst. Surgeon CHARLES F. CRAIG is relieved from further duty at the Sternberg General Hospital, Chickamauga Park, and will proceed to Fort Monroe for duty in the Josiah Simpson U. S. General Hospital.

Acting Asst. Surgeon F. A. E. DINSEY will proceed from Fort Ringgold to Waterbury, Conn., and on arrival will report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon RAFAEL ECHEVERRIA is relieved from duty with the 7th Army Corps, Savannah, Ga., and will proceed to Huntsville, Ala., for duty with the 8th Cavalry.

Acting Asst. Surgeon CHARLES C. MARBURY is relieved from duty at the Leiter U. S. General Hospital, Chickamauga, and will proceed to Washington, D. C., and report to the Surgeon-General of the Army.

Leave for 7 days granted Acting Asst. Surgeon FRANK ROBERTS is extended 8 days, with the understanding that he return to Fort Caswell before the departure of Battery I, 2d Artillery, from that post.

Major LEWIS BALCH, brigade-surgeon, will proceed to Meadville, Pa., for assignment to duty as chief surgeon, 2d Brigade, 2d Division of the 2d Army Corps.

Major EZEQUIEL DE LA CALLE, brigade-surgeon, is relieved from duty with the 7th Army Corps and will proceed to Havana, Cuba, and report to Major-General James F. Wade for assignment to duty as sanitary inspector.

The following changes in the assignment of officers are ordered: Major GEORGE R. FOWLER, chief surgeon, is relieved from duty as chief surgeon, 2d Division, 7th Army Corps, and will report to the commanding general, 7th Army Corps, for assignment to duty. Major PAUL CLENDENIN, brigade-surgeon, now on duty with the 7th Army Corps, is assigned to duty as chief surgeon, 2d Division of the 7th Army Corps.

So much of S. O. 256, Oct. 26, this office, as relieves Major CHARLES M. GANDY, brigade-surgeon, from duty at Fort Mason, is revoked.

Major HENRY S. TURRELL, surgeon, is detailed as a member of examining board at Huntsville, Ala., vice Major CHARLES M. GANDY, brigade-surgeon, relieved.

Major JOSEPH K. WEAVER, brigade-surgeon, is honorably discharged, to take effect Nov. 5.

The following changes in the stations of officers are made: First Lieutenant BASIL H. DUTCHER, A. S., is relieved from further duty at Fort Grant, and will report at Fort Du Chesne for duty, to relieve First Lieutenant IRVING W. RAND, A. S.; Lieutenant Rand will proceed to Manila, Philippine Islands, for duty.

Acting Asst. Surgeon FRANK E. ARTAUD, now on duty with the 7th Army Corps, will report to the commanding officer, 15th Infantry, upon its arrival at Savannah, Ga., for duty with that regiment.

Leave granted Acting Asst. Surgeon ISAAC W. BREWER is extended 16 days, on account of sickness.

Acting Asst. Surgeon FRANCIS A. HOLLIDAY is relieved from duty at Willets Point, and will report in person to the Surgeon-General of the Army.

Acting Asst. Surgeon B. C. LEONARDI is relieved from duty at Huachuca and will proceed to Augusta, Ga., for assignment to duty in the 2d Army Corps.

Acting Asst. Surgeon GUSTAVE C. THIEME is relieved from duty at Huntsville, Ala., and will proceed to his home, Baltimore, Md., and report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon NELSON W. WILSON, in addition to his duties as assistant to the surgeon at Fort Porter, is assigned to duty as examiner of recruits in Buffalo, N. Y.

The board of medical officers appointed by par. 40, O. S. 194, Aug. 18, this office, will, in addition to the other duties thereby devolved upon it, give special consideration to the subject of the disposal of excreta in camps where sewers are not available, and make specific recommendations upon the subject at as early a date as practicable. The board is authorized to construct or purchase necessary apparatus for making a practical test of proposed methods of disposal of the material referred to, the bills to be paid by the Quartermaster's Department.

First Lieutenant WESTON P. CHAMBERLAIN, A. S., will return to his proper station, the U. S. General Hospital, Fort Monroe.

Acting Asst. Surgeon ARTHUR JORDAN will return to Washington, D. C.

Acting Asst. Surgeon GEORGE G. MORRIS is relieved from duty at Ponce, Porto Rico, and will proceed to Washington, D. C., and report in person to the Surgeon-General of the Army, for annulment of his contract.

Extension of leave granted Acting Asst. Surgeon WILLIAM E. WEST is further extended 1 month, on account of sickness. Nov. 8.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon D. B. KERR, when duty under orders of October 27th is completed, ordered home to wait orders.

Passed Asst. Surgeon L. L. YOUNG, detached from the "Baltimore," when discharged from treatment at hospital, Mare Island, Cal., ordered home and granted sick leave for 3 months.

Passed Asst. Surgeon W. F. ARNOLD, detached from the "Resolute" and ordered home to wait orders.

## Foreign News and Notes.

**Dr. Sigmund Exner** has been made extraordinary professor of physiology in the University of Vienna.

**Typhoid Fever in Nürnberg.**—Thirty-three cases have been reported in that city during September.

**Surgeon-General Robert Harvey** becomes Director-General of the Indian Medical Service in succession to Surgeon-General Cleghorn, retired.

**Dr. Ernst Mehnert**, first assistant in the Anatomical Institute at Strassburg, has been called to the position of extraordinary professor at the University of Halle.

**Dr. Heinrich Obersteiner**, the extraordinary professor of psychology and pathology of the central nervous system in the University of Vienna, has been made ordinary professor.

**The Plague in Russia.**—In the district of Iskander, in the Samarcand territory of Russia, there have been some cases of plague. The Russian Government is taking precautions against the spread of the disease.

**Pasteur Institute for Berlin.**—A Pasteur Department for the Treatment of Rabies by protective inoculation has been recently opened, and has commenced active work in Berlin, in connection with the Institute for Infective Diseases.

**Typhoid Fever from Ice-cream.**—Some fifty cases of typhoid fever have occurred at Batley, England, the outbreak being attributed, on apparently somewhat inadequate data, to ice-creams sold on stalls at a local fete, which took place about the middle of last month.

**The City of Edinburgh and Tuberculosis.**—It is reported that a movement has been set on foot to induce the corporation of Edinburgh to establish a municipal hospital for the care and treatment of cases of pulmonary tuberculosis, and that steps have been taken to induce the Town Council of that enterprising city to make tuberculosis a notifiable disease.

**The London Hospital** is said to make a charge of three pence for medicines or for surgical dressings in the out-patient department. It is found that those who can afford this nominal charge give it willingly, the sum being remitted in the case of those really unable to pay it. It is thought that the adoption of this plan will benefit the hospital to the extent of some \$5,000 a year.

**"Progrès Médical"** seems to be as accurate in its report of Austrian news as in its recent criticism of President McKinley and the medical affairs of the United States Army. In discussing the plague at Vienna a notice of the death of Professor Nothnagel, with an extensive obituary, is given. Our German contemporaries inform us that Prof. Nothnagel is still living in very good health.

**Filth to Eat in London.**—During the month of October, in the city of London proper—a central portion of the metropolis which does not include any of the suburbs or residential quarters, and only a comparatively small part of the commercial area—60 tons of meat were seized at the markets and slaughter-houses as unfit for human food and destroyed. No wonder the London County Council is anxious to do away with private slaughter-houses and substitute public *abattoirs*.

**Quarantine Against the Plague.**—In consequence of the cases of plague in Vienna the American Government has instructed our consul at Hamburg to require 15 days' quarantine of all steerage passengers coming from that city, and already a large number of Austrian passengers have been prevented from boarding one of the mail steamships.

**The Flannel-shirt Club.**—The Flannel-shirt Club, of which the Countess of Strafford is president and Mrs. W. H. Courtney vice-president, has already distributed nearly 700 flannel shirts to patients discharged from the medical wards of general hospitals in the metropolis. The shirts are bestowed exclusively upon necessitous workingmen who require warm clothing on returning to work after serious illness, exchanging the shelter and comfort of the hospital for exposure in inclement weather and other hardships. The club, which was only started last year, has 183 members.—[*Lancet*.]

**Dr. K. N. Bahadurjee**, who died recently at Bombay, was the first native of the Bombay Presidency to obtain the degree of M. D. in London. Before returning to India he worked for a time under Professor Koch at Berlin. Lord Reay, then Governor of Bombay, recognized his ability, and placed him in a position that permitted him to engage in original research. He became a Fellow of the Bombay University, and an extra professor of clinical medicine and pharmacology in the Grant Medical College. He had been president both of the Medical Union of Bombay and of the Medical and Physical Society.

**Obituary.**—**DR. BOUCHACOURT**, former professor of obstetrics at Lyons.—**DR. KOSTIURIN**, professor of pharmacology in the medical department of the Military Academy at St. Petersburg.—**DR. V. A. SHUBBOTIN**, professor of hygiene at the University of Kiev.—**DR. PILLIET**, a well-known histologist, has just died at Paris after a long illness. He was curator of the Pathological Museum at the Faculty of Medicine (the Musée Dupuytren) and head of the laboratory of clinical surgery at the Charité Hospital.—**DR. CHIPAULT**, whose son is so well known for his researches on the nervous system and its bony coverings, died suddenly at Orleans while he was performing an operation.—**LIEUT.-COLONEL JAMES RING, M.D., R.A.**, Indian Medical Corps, died October 16, 1898, from illness contracted during the Mohmand and Tirah campaigns.

**School Physicians in Berlin.**—According to the *Deutsche medicinische Wochenschrift* a great advance has been recently made in the medical inspection of schools in Berlin. A school physician is engaged by contract by a magistrate, for each common school. His duties are to examine the children upon entrance in the schools to determine their physical capacity, the examination including tests of the special senses and both the mental and physical condition of the children. At intervals of 14 days the physician examines the children in the different schools; in the meantime the physician may be called in at the request of the teacher if thought necessary. The oversight of the general hygienic condition of the schoolhouse is also included among his duties. The salary for these services has been placed at 500 marks per year.

**The Disinterestedness of Dr. Calmette.**—Dr. Calmette, Pasteur's well-known pupil, who was recently appointed as chief organizer of the Pasteur Institute at Lille, and who has won much fame by his researches into the question of immunity for the serpent venom, has made an-



other discovery of a more purely commercial nature. By this discovery he was enabled to manufacture alcohol very much purer and stronger than is usual at a distillery and at the same time much more cheaply. He sold his secret to a large factory near Lille and very soon realized the handsome sum of 250,000 francs. This sum he has handed over absolutely to the Pasteur Institute, over which he presides, although he is not personally a wealthy man. This act of munificence, which has been noticed solely by the medical press and ignored by the political journals, is considered as a protest against the recent action of Dr. Behring.—[*Brit. Med. Journal.*]

**The Physician and the Doctrine of the Resurrection.**—"I confess that for my own part the prospect opened to the medical man by this suggestion of the Bishop of London is not merely marvellous but appalling. Have we not responsibilities enough thrust upon us here by patients and their friends, by our profession, and by the public as represented by the feather-brained 'New Journalism,' without having to look forward to a further criticism of our handicraft at the resurrection? If the marks of our skill are stamped on our patients' frames, will not the marks of our bungling be stamped equally deep and carried like the others into eternity? A great oculist confessed in an unguarded moment that he had destroyed a hatful of eyes before he had acquired the skill which made him a successful operator. Fancy his feelings on meeting the owners of those eyes in the sweet by-and-by! And the victims of the "triumphs of surgery"—will they rise in judgment against the operators, *sans* stomach or intestine, *sans* womb or Fallopian tubes or ovaries, *sans* spleen or kidney or liver or bladder? The Bishop of London has added a new terror to medical practice."—[*The Practitioner.*]

**The manufacture of cripples** to be let out to tramps as decoys for the alms of the charitable is said to be a flourishing industry in some parts of the Pyrenees. It would appear that this is not one of the many inventions which make this "so-called nineteenth century" famous in the records of the ages. Fabricius Hildanus, in his chapter on Preternatural Tumors, relates the following story: "In the year of 1593 there was seen in Paris a boy of 15 or 18 months, the skin of whose head was so much stretched that it greatly exceeded the size of a natural hydrocephalus. The father and mother of the child carried him about from place to place as a monster. As the concourse of people was great, the magistrate suspected that there was some fraud in the matter, and clapped the father and mother into prison. Being put to the question [a euphemism for the torture] they confessed their crime, to wit, that they had made on the top of the head right down to the muscles a small hole, through which having pushed a syringe they blew air between the skin and the muscles, in such fashion that little by little, and repeating the process every day, they had made the swelling. The syringe being taken out, they stopped the hole with wax or something of the kind."—[*Brit. Medical Journal.*]

**The Water Supply of London.**—As was foretold in these columns by a correspondent, the question of the water-supply of London bids fair to occupy the early attention of Parliament. The London County Council have now decided by an overwhelming majority to promote a bill in Parliament authorizing them to purchase, by compulsion if smoother means fail, the existent companies and their undertakings, and to acquire also a site in the valleys of Wales for the formation of a practically inexhaustible reser-

voir to reinforce or perhaps to supersede the present sources of supply. Important as the matter is to the whole nation, it does not seem certain that the Government will give countenance to such a bill, and without the assistance of Government so revolutionary a measure is foredoomed to failure. The Conservative Government has a liking for monopolies, and it has, moreover, an excellent excuse for doing nothing at all in the fact that a Royal Commission is now sitting on the subject. It is, therefore, almost certain that the Government will ask the County Council to wait until the Royal Commission has reported, but it is equally certain that such a course will lose the party a great many votes. Sanitarians, aghast at the result of the infusion of politics into preventive medicine as evidenced by the new Vaccination Act, are asking themselves whether party considerations will be allowed to prevail to the extent of subjecting parts of London to a water famine every summer; in which connection it is noticeable that the East London Waterworks Company, in spite of three weeks' wet weather, have not yet provided their customers with a full supply.

**A special commission to inquire into the plague in India** has been appointed by the British Government, and consists of Dr. T. R. Fraser, Professor of Materia Medica and Clinical Medicine in the University of Edinburgh, who is to act as president; Dr. M. A. Ruffer, president of the Sanitary, Maritime, and Quarantine Council at Alexandria; Professor A. E. Wright, Professor of Pathology at the Arner Medical School, Netley; and two members of the Indian Civil Service, Mr. J. P. Hewett, C.I.E., and Mr. A. Cumine. The scope of the commissioners' inquiry will include (1) the origin of the different outbreaks of plague; (2) the manner in which the disease is communicated; and (3) the effects of certain prophylactic and curative serums that have been tried or recommended for the disease. The commission is decidedly a strong one and has been chosen with an eye to the terms of reference. The two civilians who have been appointed to the commission by the Indian Government have had much to do with the organization of preventive measures in India during the outbreaks at Bombay and Calcutta, and will be particularly able to sift local evidence as to the origin of different outbreaks. Dr. Ruffer, before accepting his present appointment in Egypt, was Director—the first—of the British Institute of Preventive Medicine, and is the author of some excellent research work into the action of intestinal microorganisms, so that he is marked out as a first-class authority on the way that infectious diseases are communicated. Professor Fraser's labors in connection with immunization against serpent's venom, and Professor Wright's experiments with "vaccination" against typhoid fever, no less than his contribution to the study of blood-coagulation, stamp these two scientists as particularly able to estimate the value or otherwise of the various protective serums. Professor Fraser and Professor Wright have already left London for India, although the formation of the commission was only published on November 4th, in London, so that it is clear that the British Government consider the question to be one of real urgency.

**Lumbar Varix.**—D. M. Moir (*Indian Medical Gazette*, October, 1898) reports the case of a man, 29 years old, who presented a painful fluctuating, irregularly nodulated swelling, the size of a hen's egg, in the left lumbar region close to the middle line, without history of accident or of sudden and violent strain. An incision was made, opening the aponeurosis of the latissimus dorsi, and a flattened vascular mass resembling a large varicocele was removed. Uneventful recovery followed.

## Philadelphia News and Notes.

**Germantown Hospital.**—A new isolating ward, erected at the expense of Mr. Stephen Greene, as a memorial to a member of his family, is about completed.

**More Sick Soldiers.**—Two cars containing 24 sick men arrived in this city on November 12th, from the Division Hospital at Camp Meade. The majority of the cases were typhoid fever, and they were taken to St. Agnes' Hospital.

**Home for Crippled Children.**—The sixteenth anniversary of the Home of the Merciful Saviour for Crippled Children was observed November 12th at the institution, Forty-fourth and Baltimore Avenue. There are now about 64 children in the home.

**Leprosy.**—A young Russian sailor, 25 years of age, was taken to the Municipal Hospital November 12th, who was believed to be suffering from leprosy. He is a native of the coast region of the Baltic Sea, a locality in which leprosy is said to be prevalent. Bacteriological examination has not yet been made.

**Meetings of Philadelphia Medical Societies** for the week ending November 26th:

Wednesday, November 23—Philadelphia County Medical Society.

Thursday, November 24—Pathological Society of Philadelphia.

**Mutual Aid Association of the Philadelphia County Medical Society.**—The latest report of this society shows assets of \$12,435.42. One widow, one orphan daughter, and a life-member were beneficiaries during the year. A society with such worthy objects and with such capability for good should have a larger membership-list, and should be the recipient of generous benefactions, both by gift and by bequest.

**Against Patents for Chemic Products.**—At a recent meeting of the Alumni Association of the Philadelphia College of Pharmacy a resolution was unanimously adopted that in view of the fact that product-patents are obtainable by aliens in the United States, which is foreign to the idea of patent-legislation and tends to discourage domestic industries, a protest should be filed with the commission appointed by President McKinley to report to Congress necessary changes in the present patent-laws and the reasons therefor.

**Some Causes for Bad Spelling.**—At a recent meeting of the Biological Club of the University of Pennsylvania, Dr. Lightner Witmer discussed the causes of bad spelling exhibited by some school-children. He related that in addition to backward children who were unable to learn anything, there were others who learned to spell with difficulty on account of ocular defect, as, for instance, diplopia; and still others who failed because of verbal deafness—that is, an inability to hear words with or without want of hearing for other sounds.

**Philadelphia Pediatric Society.**—At a meeting held November 8th, DR. S. M. HAMILL exhibited a boy, 5 years old, who presented hypertrophy of the right heart, with a systolic murmur at the second interspace to the left of the sternum. In the absence of any history rendering an infectious endocarditis probable, the case was considered to be one of **congenital stenosis of the pulmonary orifice**. DR. J. P.

C. GRIFFITH mentioned the absence of cyanosis as the only element tending to throw doubt on the diagnosis.

DR. W. S. NEWCOMET exhibited an infant in whom there existed a meningocele, an epispadias and a pouch-like protrusion of the abdomen between the umbilicus and the symphysis pubis, thought to be the posterior wall of the bladder, but which was sacculated so that a small amount of urine could be retained.

DR. J. P. CROZER GRIFFITH read a paper, illustrated by diagrams, in which he discussed the different **weight-charts for children** and the difficulties in preparing one to suit all cases. One devised by him was shown.

DR. F. A. PACKARD reported a case of **carbon dioxid convulsions** from congenital heart disease, the lesions found after death consisting of a patulous ductus arteriosus and a patulous foramen ovale. No other cause could be found for the convulsions, and the only agent that could control them was oxygen by inhalation.

**Vital Statistics of Philadelphia**, for the week ending November 12, 1898.

Total mortality, 307.

Children under 5 years, 102.

Diseases.	Cases.	Deaths.
Pulmonary tuberculosis.....	.....	55
Diphtheria 112, membranous croup 3	115	24
Nephritis 17, uremia 9.....	26	26
Pneumonia 35, congestion of lungs 3...	38	38
Heart-disease.....	.....	37
Senility .....	.....	25
Typhoid fever .....	115	5
Casualties .....	.....	5
Apoplexy 16, paralysis 7, softening of the brain 5.....	28	16
Eclampsia .....	.....	9
Scarlet fever .....	27	5
Carcinoma 16, tumor 3.....	.....	19
Marasmus 11, inanition 10.....	21	10
Whooping-cough.....	.....	11

**Pathological Society of Philadelphia.**—At a meeting held November 10th, DR. J. H. JOPSON presented a specimen of **epithelioma of the penis**, removed by operation from a man, aged 50 years. It encircled the meatus and extended 2.5 cm. upward along the spongy body. As it was first noticed at the tip of the meatus, it was suggested that it might possibly have appeared primarily in the urethra. DR. JOPSON presented also a specimen of **recurrent osteosarcoma**, removed by operation from a lad, aged 18 years. The primary growth had affected the left clavicle, which had been previously removed, and the secondary nodule appeared 16 months later in the right pectoralis major muscle.

DRS. G. E. DE SCHWEINITZ and J. D. STEELE presented: (1) An **unpigmented sarcoma of the choroid**, showing the mushroom-form of the development of the sarcoma after rupture of the choroid; (2) a **metastatic carcinoma of the choroid**, developing 6 months after the removal of a breast for carcinoma; and (3) a **glioma of the retina**, of the tubular variety, which was thought to have developed from the neuroepithelial layer of the retina.

DR. J. M. SWAN presented intestines showing an **anomalous position of the cecum**, which was situated in the umbilical and epigastric regions. DR. H. A. HARE referred to the frequency of malpositions of the intestine, and bearing this in mind, to the clinical importance to be attached to pain referred to various portions of the abdomen, with especial reference to appendicitis. DR. W. M. L. COPLIN spoke of



the frequency of malformations of the intestines in insane persons.

DR. SWAN presented also a **valve-like rudiment in the wall of the right auricle** of the heart. DR. ROBERTSON spoke of the varieties of *columnæ carneæ*, and of an aberrant one that he had observed in the right auricle. DR. DAVID RIESMAN pointed out that a case similar to Dr. Swan's had been reported by Chiari, who called the condition one of netlike-formation in the auricle, the result of error in embryonic development.

DR. JOSEPH SAILER reported a case of **strongylous pneumonia** in a sheep, presenting microscopic sections illustrating the various stages of the organism, and giving an account of its life-history and the pathologic changes that it induces. Dr. Sailer presented also specimens of **ectopic gestation** and **gall-stones**.

DR. J. A. SCOTT presented a specimen of **hypertrophied and dilated heart**.

**Philadelphia County Medical Society.**—At a meeting held November 9th, DR. J. M. SWAN reported five cases of **diphtheria** occurring among members of the same family. The good effects of diphtheria-antitoxin were dwelt upon, as was also the efficacy of the local application of a solution of silver nitrate, 60 grains to the ounce of water, in quickly ridding the throat of diphtheria-bacilli after the disappearance of the false membrane. In the discussion DR. ALFRED HAND, JR., spoke of the great length of time that diphtheria-bacilli have been reported as persisting in the throats of patients after recovery from diphtheria, mentioning one case in which they remained for 15 months. He pointed out the promptness with which they might be banished by the local application of a strong solution of silver nitrate. One or two applications usually suffice.

DR. JOHN B. ROBERTS presented three patients illustrating the results of **plastic surgery of the face**. The first was a colored woman, an epileptic, who had suffered destruction of the left side of the nose and the left cheek from falling into the fire during an attack. The second patient was a white woman, also an epileptic, who had lost her left upper and lower eyelids, a portion of the left side of her nose, and portions of her left upper and lower lips likewise from falling into the fire. The resulting deformities in both cases had been repaired by plastic operations. Dr. Roberts presented also a young man with congenital hypertrophy of the skin of the left side of the face, forehead, and scalp. The enormous overgrowth of tissue had been in part removed and replaced by a large flap of skin from the neck. It was expected to ultimately remove all the redundant tissue.

DR. H. A. HARE read a paper on "**Pain in the Diagnosis of Cardiac Disease**," in which he pointed out that pain in the region of the heart may be due to either functional or organic disease of the heart or neighboring structures. Among functional causes he mentioned intercostal neuralgia, gas in the colon or stomach, excessive use of tobacco, gastric disorders, false angina pectoris, and vasomotor disturbances; among organic causes, actual heart-lesions, particularly mitral stenosis, acute and chronic aortitis, aortic regurgitation, general cardiac dilatation, fatty degeneration of the heart, fibroid heart (though pain is rather uncommon in the last two), angina pectoris, aortic aneurysm, and pericarditis. The treatment appropriate to each case was briefly referred to, and illustrative cases were detailed. DR. JOHN H. MUSSEY spoke of the fact that true angina is much more common in the well-to-do than in the poorer classes, and that the probable explanation is that the poorer nutrition

among the latter induces dilatation of the heart; it being his experience that dilatation favors the recession of true angina pectoris. In some cases the administration of digitalis favors the development of cardiac pain by increasing the intraventricular pressure, the pain not being relieved until the drug is discontinued. DR. H. S. ANDERS narrated a case of acute dilatation of the heart following exertion during convalescence from typhoid fever, that promptly subsided under the administration of digitalis. He spoke also of the many conditions of extracardiac disturbance with which pain in the region of the heart is associated. DR. J. G. JELKS, of Hot Springs, Ark., spoke of the inadvisability of administering digitalis in the presence of renal disease, whether heart-lesions are associated or not. He thought that the occurrence of angina pectoris among the well-to-do rather than among the poorer classes is to be explained by the fact that the former are the sufferers from the uric-acid diathesis, that the attacks of angina are "uric-acid storms," and that they are much improved by the exhibition of salicylates. DR. HARE emphasized the influence of the excessive use of tobacco in causing heart-pain, and drew attention to the indications for, and the value and relative strength of, the various preparations of digitalis.

DR. JAY F. SCHAMBERG read a paper on "**The Nature of the Leprosy of the Bible**." To determine whether the leprosy of the Bible is identical with modern leprosy, he instituted a comparison between the ancient description of the disease and the disease as it is known at present. The absence in the Bible of all reference to the hideous facial and other deformities of the disease was viewed as indicating the nonexistence, during Biblical times, of the tuberculous variety of the disease. The Biblical description mentions especially white spots and white hairs, both of which are particularly uncommon at the present time; while no mention is made of areas of anesthesia, of the intense pains, nor, as mentioned, of the deformities that characterize the disease to-day. The diseases are therefore distinct. It was thought that the Biblical disease has not disappeared, but that under the designation leprosy many different diseases had been included, particularly vitiligo and psoriasis. It may be urged against this view that the practice of segregation is indicative of the contagious nature of the Biblical disease, but the continuance of the practice became in a sense an established custom, although not applied to equally transmissible diseases, such as syphilis and tuberculosis. Leprosy is transmitted with difficulty by contagion, but one experimental inoculation having proved successful. DR. M. B. HARTZELL thought also that the term plague had been used in the Bible to indicate a number of intractable diseases, and that these were quite distinct from modern leprosy, although the latter also might have been included in the term.

**Three Cases of Recurrence of Measles in One Family.**—K. Fischer (*Correspondenz-Blatt für Schweizer Aerzte*, Sept. 15, 1898) reports the occurrence of measles in three children aged 4 years, 8 years and 1 year, all of whom presented characteristic symptoms and the eruption of the disease. After intervals of 17, 8 and 13 days, during which the first eruption faded and the general symptoms became ameliorated there was a second rise of temperature, accompanied by severe general manifestations and followed by the reappearance of the characteristic rash. An attack of diphtheria, which resulted fatally, followed that of measles in the child 1 year old; the other two children recovered, although one suffered for a long time afterward from a severe cough and the other from acute inflammation of the middle ear, with perforation of the tympanic membrane.



## The Latest Literature.

British Medical Journal.

October 29, 1898. [No. 1974.]

1. On Thyroidectomy in Exophthalmic Goiter. WILLIAM STOKES.
2. Intestinal Obstruction. KOCHER.
3. Partial Hepatectomy for Primary Cancer of Liver, with a Report of Three Cases. A. W. MAYO ROBSON.
4. The Origin, Effects, and Treatment of Septic Infection of the Urinary Tract. DAVID NEWMAN, THORALD ROY-SING, C. MANSELL MOULLIN, MAX MELCHIOR, W. BRUCE CLARKE, W. H. BATTLE, JAMES H. NICOLL, D. MAC EWAN, and KOCHER.
5. The Treatment of Chronic Enlargement of the Prostate. JAMES H. NICOLL.
6. Cases Illustrating some Points of Interest in the Etiology and Treatment of Renal Hematuria. DAVID NEWMAN.
7. A Discussion on Injuries of the Elbow-joint. EDWARD H. BENNETT, JOHN B. ROBERTS, JOHN CHIENE, THOMAS BRYANT, T. KENNEDY DALZIEL, JORDAN LLOYD, and JONATHAN HUTCHINSON, JR.
8. Three Cases of Esophagotomy for Foreign Bodies. W. THELWALL THOMAS.
9. Two Cases of Strangulated Hernia; Enterectomy; Murphy's Button; Recovery. HENRY G. RAWDON.
10. A Contribution to the Treatment of Empyema. W. MENZIES HUTTON.
11. The Treatment of Diseases of the Stomach. GEORGE HERSCHELL, C. A. EWALD, ROBERT SAUNDY, T. LAUDER BRUNTON, FENTON B. TURCK, J. CRAWFORD RENTON, WILLIAM CALWELL, A. LOCKHART GILLESPIE, and A. SYMONS ECCLES.
12. The Value of Bacteriological Examination before, during, and after Surgical Operations. W. S. MELSOME.
13. Two Cases of Intestinal Obstruction; Laparotomy; Recovery. W. M. BARCLAY.
14. A Case of Esophagotomy for Impacted Artificial Teeth. LUDFORD COOPER.
15. Primary Tumor of Right Auricle of Heart, Rupture of Inferior Vena Cava. NATHAN RAW.
16. Case of Excision of a Large Tuberculous Mesenteric Abscess. GEORGE THOMAS BEATSON.
17. Perinephric Abscess, with Coma. JOSEPH WILLIAM LEECH.
18. Case of Puerperal Eclampsia. H. DARWIN HEY.
19. A Case of Sulphonal Poisoning. D. RICHMOND.
20. Case of Landry's Paralysis in a Girl. WALTER LATTEY.
21. A Case of so-called Idiopathic Tetanus; Antitetanus Serum; Death. EDGAR TREVITHICK.

1.—The researches and records of cases of **exophthalmic goiter** made by various observers justify the belief that two distinct forms of the disease may be recognized, the complete and the incomplete; for the purpose of prognosis and as a guide to treatment a distinction should be made between the cases commencing with tachycardia and those in which thyroid enlargement precedes the palpitation. As regards the treatment only temporary benefit may be derived from internal medication, whereas partial removal of the gland is likely to be followed by distinct improvement, if not perfect recovery. Total extirpation of the gland should never be practised. The operative results seem to favor the theory that the disease is due to toxic substances secreted by the thyroid. The neuropathic and central theories are not looked upon with favor.

2.—Kocher's experience with **intestinal obstruction** of all varieties is a large one. He pleads for the early submission of the case to the surgeon, who alone can decide whether or not operation is advisable. The high mortality that attends surgical interference in these cases is not due to the operation *per se*, for many cases have terminated fatally when the manipulations required to relieve the obstruction were of the simplest kind; and, on the other hand, many patients have recovered after the performance of a serious operation. Another explanation of the high mortality must be sought, and Kocher attributes it to general or local intoxication, which is traced to the increased virulence of the

microorganisms normally occupying the intestinal tract, a phenomenon that follows over-distention of the gut. When the gut becomes over-distended, certain nutritive and circulatory changes take place in its walls. Ecchymosis and ulceration, perhaps perforation, follow, allowing the toxic products of the now virulent microorganisms to gain entrance, either into the circulation, producing general intoxication, or into the peritoneal cavity, with its inevitable result. In the treatment of these cases the indication is clear; the over-distention must be relieved, even if this involves the performance of enterostomy. If the patient's condition will not permit of a formal anastomosis, simple enterostomy should be performed under cocaine anesthesia, thus emptying the bowel of its septic contents.

3.—Mayo Robson has seen only three cases of **mal-igniant disease involving the liver and bile-ducts** in which it appeared feasible to attempt complete removal by performing **partial hepatectomy**. Of these three, one proved much more extensive than it promised, and the patient only survived a few hours; the other two recovered from the operation, to die within a few months from recurrence. As statistics show the frequent association of gall-stones and primary carcinoma of the gall-bladder, it is desirable that these cases should be submitted to operation at the earliest possible moment. In all cases of tumor of the gall-bladder, even if unaccompanied by symptoms, operation should be advised and the obstruction removed. If these rules were followed primary carcinoma of the gall-bladder and liver would be less frequent. Early operation is, therefore, clearly indicated, and it has been demonstrated that partial hepatectomy is not only a perfectly practicable procedure, but that it may be attended with complete cure.

5.—Nicoll regards prostatectomy as the established operation for the radical **treatment of enlarged prostate**, an operation whose results are well understood and not a matter of conjecture. Castration and vasectomy, on the other hand, are viewed in the light of innovations, which have not yet been attended with such results as warrant their taking the place of prostatectomy. It is a well-known fact that simple rest in bed, with proper catheterization, will afford the greatest and sometimes permanent relief. The danger, therefore, of attributing to certain operative procedures results with which they should not be credited, is evident, and can only be avoided by the most careful observation. Of all the methods of performing prostatectomy Nicoll still prefers to remove the gland through a perineal wound, claiming that by this route, there is less hemorrhage, and avoidance of risk of tearing out portions of the neck of the bladder or urethra, and of infiltration by septic and putrescent urine of the cavity left by a thorough enucleation of the prostate through a suprapubic wound.

6.—**Renal hematuria** may be due to passive hyperemia arising from pressure on or torsion of the renal veins, and from reflex spasm of the arterioles. Disturbance of the venous circulation is usually accounted for by displacement of the kidney in various directions, and if it led to hyperemia, the latter will be indicated by diminution in the amount of urine excreted, albuminuria and hematuria with blood-casts or other tube-casts. Occasionally the symptoms attending torsion of the renal vessels will give rise to symptoms simulating those of renal calculus, *e. g.*, severe paroxysmal renal pain, sickness, vomiting, emaciation, hematuria, and occasional suppression of urine. Reflex spasm of the arterioles may be followed by suppression of urine and hematuria. Such reflex inhibition occasionally follows the passage of a sound or a catheter. The treatment of hematuria from torsion of the renal veins, associated with movable kidney, is clearly indicated, namely, fixation of the kidney, nephrorrhaphy. If spasm of the arterioles is accountable for the hematuria, wet cupping will give the most rapid relief.

7.—The poor results that follow treatment of **injuries of the elbow-joint** are in many instances due to errors in diagnosis. Bennett suggests some explanations to account for these mistakes. The uncertainty of the terms used to describe the lower end of the humerus is partly responsible; one has only to turn to the pages of different *Anatomies* to appreciate what confusion exists. Secondly, the rapidity with which the swelling of the soft parts sets in after injury to the elbow prevents recognition of the exact relation of the osseous projections. Thirdly, many modern surgical writers fail to include the incomplete dislocation of both



bones of the forearm backward in discussing the symptoms of dislocation. Lastly our knowledge of the epiphyseal separation of the lower end of the humerus lacks completeness. In Bennett's opinion, in contrast to the generally accepted view, the elbow-joint is not necessarily involved in this injury. The explanation lies in the fact that when the diaphysis is thrust out through the skin, it is displaced out of its sheath of periosteum, which intervenes between it and the synovial membrane and cavity. In the separation of epiphyses generally the lesion takes place between the cartilage of the epiphyseal line and the diaphysis, and into this line the periosteum is deeply inserted. The proper title, it is suggested, would be dislocation of the diaphysis out of its periosteal investment.

8.—Thomas calls attention to the importance of resorting to **esophagotomy**, once it is discovered that a foreign body is too firmly fixed to be removed with ordinary esophageal forceps. Brute force will cause extensive ulceration of the mucous membrane, and even of the muscular tissues of the larynx, as well as the esophagus. Operation should, therefore, be performed before ulceration sets in, the incision being sufficiently large to extract the foreign body without laceration of the mucous membrane. Drainage, preferably by glass tubing, should be resorted to; otherwise the anterior margin of the sterno-mastoid muscle will prevent the escape of serum.

10.—A material advance would be made in the **operative treatment of empyema** if some method could be devised that will not only allow of good drainage, but also aid in the expansion of the lung. When an opening exists in the chest-wall the respiratory acts are reversed, the lung collapsing still more with inspiration, and expanding with expiration. Hutton has devised a drainage-tube, so constructed that, in coughing, air is expelled with the pus, and in inspiration a valve attached to the tube closes tightly and prevents the ingress of air. Experience with the use of this tube has shown that expansion of the lung is materially hastened; breathing becomes much easier and slower, and the danger of septic infection, which inevitably follows the admission of the air into the chest-cavity, is avoided. Hastening the expansion of the lung will obviate in many cases the necessity for Estlander's operation.

11.—In discussing the **treatment of disease of the stomach** Herschell relates that he treats cases of atony mainly by the application of a continuous current to the solar plexus and to the ganglia of the sympathetic and vagi in the neck. He rarely makes intragastric application of electricity, as he thinks it is the galvanization of the ganglia that is beneficial. He considers of great benefit in atony of the bowel and constipation, as well as in atony of the stomach, a primary coil wound with very thick wire capable of giving very slow interruptions. He thinks it causes peristaltic action in the intestines, its application on several occasions having been followed by an immediate stool. It also acts in restoring tone to the abdominal muscles. An indifferent electrode is placed on the buttocks and the other pole applied with a roller electrode over the abdominal muscles and intestines, following the curve of the colon and using interruptions of from 120 to 200 per minute. Vibration of the stomach is recommended as a mode of treatment. In the treatment of atony, much benefit has resulted from douching the stomach alternately with hot and cold water by means of a Turck's double-current stomach-tube. A seance of ten minutes' duration is given, the temperature of the water being changed every 60 seconds. As to diet in cases in which the secretion of hydrochloric acid is in excess, a carbohydrate diet partially dextrinized is advised, the greater part of the hyperacidity of the stomach being at the same time neutralized with large doses of alkalis. The use of peptones and albumoses is limited to cases in which the ordinary diet is found to be insufficient to preserve the nitrogenous equilibrium of the body. Pepsin by the mouth is never indicated, as when pepsinogen is really absent there is also such a deficiency of hydrochloric acid that a sufficient quantity of the latter could not be given by the mouth to digest even a small meat-meal when combined with the pepsin administered. Pancreatin can only be given in rare cases in which there is complete absence of hydrochloric acid in the stomach, as the ferment is completely destroyed by normal gastric juice. When mastication is imperfect or the teeth defective the proper amount of salivary

flow is lacking. In such cases and when the presence of an abnormal amount of hydrochloric acid occurs in the stomach, taka-diastase is recommended in order to admit of the administration of a diet containing a large proportion of carbohydrates. In cases of hyperchlorhydria hopeful results have been obtained from preparations of tannic acid and from lavage of the stomach, first with a solution of sodium carbonate and then with a 1% suspension of calcined magnesia, and finally with a 0.5% solution of tannic acid or a suspension of bismuth subnitrate. When hydrochloric acid is wanting large doses of the dilute acid are administered. Strychnin, vegetable bitters, and salts of orexin are also used in this condition. None of the germicides have been found useful. Hydrochloric acid acts in this way, as most cases of gastric fermentation are due to its deficiency or to defect in the motor power of the stomach. The stomach is washed out sufficiently to keep the patient comfortable when the hydrochloric acid and regulation of the diet fail to stop the abnormal fermentation. [Ewald's paper was published in the PHILADELPHIA MEDICAL JOURNAL, Aug. 13, 1898, p. 331.] In discussing the indications for surgical treatment in diseases of the stomach, Renton said that in all cases of doubt as to tumors or hardness suspected to be in or near the stomach, the patient should be etherized and examined. When improvement under dietetic and medicinal treatment is delayed, an exploratory incision is advised. In cases of dilatation of the stomach from fermentative dyspepsia, if washing out with antiseptic fluids and massage are not efficient, gastro-enterostomy is advised. If irritation be due to simple tumor of the pylorus, either gastro-enterostomy or removal is recommended. If due to cicatricial contraction at the pylorus, this should be split vertically and united transversely. These operations should not be too long delayed. If a gastric ulcer ruptures, the sooner it is operated on the better. In malignant diseases of the cardiac and of the stomach, with narrowing of the entrance, relief may be afforded by using Simon's tubes or by gastrostomy, thus resting the diseased part and prolonging life. If there is malignant disease of the pylorus, the tumor may be removed or gastro-enterostomy be performed, according to the state of the patient and the size of the tumor. In connection with the treatment of any form of dyspepsia, Calwell urged the necessity of absolute rest, bodily and mental, and not trying to force the stomach to continue digestion when it is repeatedly indicating that it cannot, but to devise means of removing the contents after a certain period, without actually passing the tube. Eccles considers megagastria due to atony and atrophy not going on to degeneration of the mucous membrane nor ending in general fibrosis on the increase. When atony has not developed into atrophy, cure may be effected by putting the patient at rest in bed, and feeding him at first on proteid foods and milk. The abdominal wall should be manipulated three or four times daily and the contents of the stomach be mechanically expelled into the duodenum three-quarters of an hour after the principal meals of the day. The patients should assume a tilted position with the buttocks on a higher level than the shoulders, as often as possible without causing undue fatigue. This plan of procedure decreases the size of the stomach, improves the powers of assimilation, and increases the body-weight. A similar plan of treatment is valuable for gastropnoia.

15.—Raw reports the case of a charwoman, aged 43 years, who had suffered from pain in the chest and severe dyspnea for 3½ years. Two months before coming under observation she was seized with a sudden severe pain in the right chest, which prevented breathing for a time. She had been an alcoholic for years, but there was no history of syphilis. At the time of observation the woman was unable to lie down in bed, and had spasmodic dyspnea, with moderate ascites and edema of the legs. The superficial veins of the thighs, abdomen and thorax were enormously enlarged. The right pleural cavity was filled with effusion. The heart was displaced to the left, its action regular; there was a soft, blowing, systolic murmur heard at the base, conducted up the sternum and upward into the axilla and back. The liver was pushed down in the epigastrium; its lower edge was rough and nodular, and reached to within an inch of the umbilicus. Sixty-one ounces of apparently pure blood were withdrawn from the right pleural cavity, but the dulness soon recurred. The urine was normal. The diagnosis made was a new-growth of the mediastinum or lung, with secondary deposits in the



liver, and that the growth in the chest was pressing on the inferior vena cava near its entrance into the auricle. The precordial pain and dyspnea increased, and the patient died after about 4 weeks. At the autopsy the right pleural cavity was found full of dark-colored fluid blood and some clots. The heart was displaced to the left. The right lung was collapsed; the left was emphysematous in front and congested at the base. The liver was enlarged, nodular, and typically cirrhotic. There was great enlargement of the lumbar veins, while the inferior vena cava was almost empty in the greater part of its course. The latter contained a large organized thrombus in its upper third, almost occluding its lumen, and it presented a distinct rent just before its entrance into the auricle and above the diaphragm. The right auricle was distended by a large hard tumor measuring  $3\frac{1}{2}$  inches by 3 inches in diameter, firmly adherent to the auricular wall in its upper half and free below, with a thin calcareous plate on its inner side, and extending into the inferior vena cava as a dense hard mass  $1\frac{1}{2}$  inches thick, quite nodular, and terminating at the under surface of the liver as distinct and separate hard nodular masses the size of walnuts. These growths were not connected with the primary growth in the auricle. The tumor was hard, and histologically composed of fibrous tissue, with cells elongated or spindle-shaped and very unevenly distributed. In places, especially near the margin of the growth, there were numerous clusters of round cells. The distinct metastasis in the form of separate growths on the surface of the liver, together with the rich distribution of small round cells, led to the diagnosis of fibrosarcoma. Sections of the secondary growths were similar to those of the primary.

18.—Hey reports a case of **puerperal eclampsia**, in a primipara, aged 21, who complained of severe headache, was listless and heavy, and was seized with severe abdominal spasms. The woman was found in convulsions, with her tongue half bitten through, and her temperature  $104^{\circ}$  F. There was a breech-presentation and delivery was effected immediately. Chloroform was administered and later chloral and bromid. The convulsions continued and death occurred on the fourth day.

19.—Richmond reports the case of a middle-aged woman to whom 2 drams of **sulphonal** were administered accidentally. The patient became unconscious, with the eyes fixed, the pupils dilated, the conjunctival reflex absent. The breath-sounds were inaudible, the heart-sounds faint, from 47 to 50 per minute, the radial pulse absent. The extremities were cold and livid, the lips blue and the general surface of the body cold and clammy. Stimulant treatment resulted in complete recovery in 6 hours.

20.—Lattey reports a case of **Landry's paralysis** in a girl, aged 16 years, in which death occurred after an illness of 10 days.

21.—Trevithick reports a case of **tetanus** occurring in a girl, aged 8 years, in which it was impossible to discover any superficial wound or abrasion in any part of the body. The child had pediculosis capitis, but the scalp was not sore. The mucous membranes were intact, and there were no carious teeth. The tonsils and larynx appeared normal. The child was treated with anti-tetanus serum, with no influence upon the disease. Death occurred at the end of the third day. The postmortem examination yielded entirely negative results. There was no lesion of the brain or meninges.

### Lancet.

October 29, 1898. [No. 3922.]

1. The Prevention of Consumption and other Forms of Tuberculosis. WILLIAM BROADBENT.
2. Some Considerations of the Life and Work of the General Practitioner. S. D. CLIPPINGDALE.
3. A Case of Chronic Infantile Meningitis with Basal Drainage. WALKER OVERTEND and W. FOSTER CROSS.
4. On Combined Pleural and Pericardial Adhesion. FREDERICK TAYLOR.
5. Uncommon Cases of Operation on the Brain. JAMES H. NICOLL.
6. Summary of Gunshot-Wound Cases Treated in No. 2 Native General Hospital at Rawal Pindi. CAPTAIN D. M. MOIR.

7. The Influence for Evil of the Midden-Privy in the Dissemination of Typhoid Fever. CHARLES PORTER.
8. A Case of Chronic Constipation ending Fatally and Associated with Enormous Dilatation of the Sigmoid Flexure. PEVERELL S. HICHENS.
9. A Note on Ptomaine Poisoning. JOHN CAHILL.
10. Suppuration in an Old Hernial Sac. A. S. NAKASHIAN.
11. Membranous Laryngitis, with Hyperpyrexia from Malarial Poison. CHARLES LLOYD WORRALL.
12. A Case of Extra-uterine Foetation; Removal of a Fully Developed Child, the Placenta being Left; Recovery. (Under the Care of MR. FREDERICK PAGE.)

1.—Broadbent recommends the following measures for the prevention of consumption: The careful inspection and testing of all herds of cattle, and the inspection of stables, and until this is universal, the sterilization of all milk. To prevent the spread of consumption from persons suffering from the disease, all sputum should be collected in vessels containing some disinfectant, the contents to be burned or powerfully disinfected and thrown into water-closets. The Japanese pocket handkerchiefs may be used and immediately destroyed. He does not advise a compulsory notification of tubercular cases. All houses in which tuberculosis cases have lived should be thoroughly disinfected after death. In families in which there is inherited susceptibility to tuberculosis all its members should live as far as possible in the open air day and night, summer or winter. For the treatment of consumptive cases he advises the construction of sanatoria within easy reach of every large town. These should be located in the driest soil, should have a southern exposure, should be protected from the east and north, absolutely free from dust, and if possible from fog. A maximum of sunshine and a minimum of wind and wet are the essential features to be attained. It should be impossible to close the windows of any room by day or night. They need be but little more than sleeping sheds. The entire day should be spent in the open air, wet or fine, warm or cold. Movable shutters should be located so as to protect the patient from cold winds and rain. Under no pretext must the patient sit indoors. The amount and kind of exercise to be taken is regulated by the patient's body temperature and strength. The sanatorium is best composed of a number of small separate pavilions.

3.—A female child, 10 months of age was taken with convulsions after a fall on the head. There was well marked opisthotonos, retraction of the head, carpo-pedal contraction, vomiting, increased size of the head with separation of the fontanells, nystagmus and a slight degree of strabismus. An incision was made extending from the external occipital protuberance to the mastoid process and a skin flap turned down. A piece of bone  $\frac{1}{2}$  inch in diameter was removed from between the curved lines, the dura was opened and a probe was passed along the tentorium into the fourth ventricle. About  $2\frac{1}{2}$  oz. of clear fluid escaped and the child appeared somewhat better. But on the 12th day after operation the child became weaker and death followed on the 23d day. Evidences of chronic meningitis were found at the necropsy.

4.—Taylor reports a case of **combined pleural and pericardial adhesion** occurring in a woman, aged 40 years. Clinically, the features of the case were abolition of the action of the bases of both lungs without certain evidences of liquid in the pleura, cardiac weakness without marked local evidences of the heart's failure, with early and somewhat pronounced ascites. Pathologically there existed adherent pleura with extensive collapse of the bases of the lungs and some dilatation of the bronchial tubes, adherent pericardium with dilatation of the right auricle and ventricle, chronic mediastinitis (non-suppurative), and ascites with evidences of chronic peritonitis. As to the origin of these cases, rheumatic fever is the most common condition giving rise to pericarditis and pleurisy. They occur also in pleuro-pneumonia, pyemia, and in tuberculosis. The first symptom in the present case suggested was a swelling of the abdomen which the author thought to be probably due to adherent pericardium accompanying cardiac failure. As to the relation between the postmortem lesions and the clinical symptoms, the author thinks dullness and deficient entry of air into the lungs was referable to the thickened pleura and collapsed lung. He takes this opportunity to express the view that the dullness



which so commonly persists after pleuritic effusion has disappeared is due to the still unexpanded lung. The collapse of the lung and dilatation of the bronchial tubes contributed in part to the edema, while the dilatation and hypertrophy of the right heart together with the pericardial adhesions were the chief factors in its production. The dilated bronchial tubes were possibly due to the pleural adhesions. The explanation of the coexistence of adherent pericardium and dilatation of the heart is that there coexisted some myocarditis. The heart dilates as a result of this and is subsequently maintained in the dilated condition by the fibrous pericarditis. The right ventricle suffers more often in this manner than the left. A number of similar cases have been reported in literature. Some authorities have considered the mediastinitis the primary condition or coincident with pleuritis and pericarditis, the peritonitis and ascites and fibroids of the liver which sometimes exists occurring secondarily as the result of interference with the circulation through the vena cava from mediastinal pressure. The peritonitis and ascites have sometimes been considered secondary to a cirrhosis of the liver. This lesion has sometimes been looked upon as the primary factor. Again the condition has been looked upon as a simultaneous chronic involvement of all the serous membranes, the ascites being due to eventual degeneration of the cardiac muscle, the cirrhotic processes in the liver being explained on the ground of an extension of the inflammatory irritation from its capsule as well as by the marked hyperemia of the organ. The recognition of these cases is very difficult. They are oftentimes far advanced before there is any manifestation of the disease. In the absence of any lesion in the left side of the heart or of any pulmonary lesion competent to produce failure of the right ventricle, the proofs of such failure would suggest the existence of an adherent pericardium. The mediastinitis adhesions or matting could only be suspected if the upper limbs, face, or neck were quite exceptionally or perhaps quite early involved. He records another case where pleuritic lesions existed where signs of cardiac failure were not explained by recognizable local evidences of cardiac disease, where nevertheless the pleuritic or pulmonary lesions were not such as to cause in themselves dilatation of the right ventricle, and where finally the implication of the pleura suggested a simultaneous and associated implication of the pericardium as the cause of the heart's incapacity.

5.—Ligature of a cerebral artery, probably the ascending frontal branch of the middle cerebral, is reported in a woman, aged 62, for spontaneous hemorrhage. There had been symptoms of cerebral compression and epileptiform convulsions for several days previous to the operation, and on opening the skull a cavity the size of a pigeon's egg was found lined with a grayish shreddy material resembling a bleached blood-clot. Into this cavity an artery was spouting. A fine ligature was applied. The patient made a good recovery, and remains in good health 2 years after the operation. A second case, that of a man, 21 years old, who had acute symptoms of intracranial pressure following some months after a blow on the forehead, is reported. The skull was trephined, the lateral ventricle tapped and drained, and a permanent recovery followed. A third case is reported, that of a boy, aged 12, who was suffering from a malignant tumor of the brain, originating in the middle ear. Symptoms simulating temporo-sphenoidal abscess were relieved by removal of the intracranial portion of the tumor, but death resulted from continued growth of the mass 2½ months after the operation.

6.—A large number of cases are reported illustrating the character of the wounds resulting from the Lee-Metford and spherical bullets.

7.—Porter gives statistics showing a very high percentage of typhoid fever cases occurring in houses having the *midden-prive*.

8.—Hichens reports a case of a young man aged 20 years who had been persistently constipated since the day of his birth. He never had natural bowel movements. They were always induced by the administration of laxatives and cathartics, or by enemata. The effort at defecation often induced nausea and was followed by a condition of semi-collapse. His abdomen was always greatly distended, especially in the lower segment. Five days prior to death he was seized with general body pains and slight swelling of the legs.

His death occurred from some unknown reason very suddenly during an effort to get out of bed. At the autopsy an enormous distention of the abdomen was seen. On opening the abdominal wall, the abdomen was found occupied by a tense, shining viscus presenting the appearance of a sack rising out of the pelvis and passing under the ribs, where it doubled on itself and returned to the pelvis again. This proved to be an enormously distended sigmoid flexure. At the point where it left the descending colon it returned on itself and passed directly up the left side of the abdomen, its summit passed behind the ribs and xyphoid cartilage and then descended along the right side of the pelvis to join the rectum. Some little distance above the junction with the rectum there was a distinct constriction. On being opened it was found to contain an enormous amount of gas and a large quantity of semi-liquid feces of pea-soup consistence. Its total length when opened and laid flat was 22½ inches. At 14 inches from its upper end there was a large cicatrix formed by an almost healed ulcer which had caused the constriction referred to. The circumference above this constriction was 14 inches, at the constriction, 7½, below it, 10 inches. The constriction at the site of the ulcer was not sufficient to prevent onward passage of feces. The walls of the flexure were greatly thickened which was shown microscopically to be due to great hypertrophy of the circular and longitudinal muscle fibres with slight thickening of the submucosa. The author considers the case one of idiopathic dilatation of the colon.

9.—Cahill reports three cases of "ptomaine poisoning" from eating soup in which had been placed some of the bones of a wild duck. Other portions of the bones of this duck given to a cat induced symptoms similar to those occurring in the human beings, which were violent vomiting commencing about half an hour after taking the poison and lasting for about 20 minutes.

10.—A man, 22 years old, who had had a right inguinal hernia for 10 years was taken with symptoms of inflammation in the scrotum and on opening it about a pint of pus was evacuated. The hernial sac did not enclose intestine and was closed without communication with the abdominal cavity.

12.—Page reports a case of **extra-uterine fetation** in which he removed a fully developed dead child, the placenta being left in situ and removed gradually later. The danger of severe hemorrhage after the removal of the placenta in these cases results from the fact that the tissues of the placental site have no power of contraction, so that the vessels continue to bleed freely. When the fetus dies the circulation in the placenta ceases, first in the fetal vessels and later in the maternal vessels, so that after a certain time the placenta may be removed without risk of severe loss of blood. In Page's case this thrombosis of the placental vessels had not occurred, although a fortnight had elapsed since the death of the fetus; for severe hemorrhage threatened when removal of the placenta was attempted. A further point of interest in the case was the absence of any lochia of decidual cast. The operation was performed July 19th. After the removal of the child, the placenta was found closely adherent to the left side of the sac wall; it was not disturbed; the edges of the opening of the cyst were closely sutured to the lower part of the abdominal incision and the cavity packed with gauze. On the second day the packing was removed, no hemorrhage occurring the cavity was repacked; the wound was dressed daily and the cavity douched with corrosive sublimate (1 in 10,000) and subsequently with a solution of permanganate of potassium. On the fifth day the finger was gently inserted under the edge of the placenta and the cavity at once filled with dark venous blood. The packing was again firmly introduced. On July 31st a further attempt was made to separate the margin of the placenta with the same result. The placenta gradually came away piecemeal, the last remnant separating on August 11th. On August 26th the patient was discharged in good condition with a minute sinus at the lower extremity of the wound which later healed.

New York Medical Journal.

November 12, 1898. [Vol. lxviii, No. 20.]

1. Is Appendicitis a Surgical Disease? CARL BECK.
2. The Diagnostic and Therapeutic Relation of Electricity to



- the Diseases of the Central Nervous System. A. D. ROCKWELL.
3. The General Health and the Upper Air-passages. J. C. MULHALL.
4. Two Cases of Pernicious Anemia treated with Nucleo-albumin. EPHRAIM D. KLOTS.
5. The Significance of Uric Acid in the Nasal Reflex Neuroses. WALTER A. WELLS.
6. Adenoids and their Complications in Children. F. E. KITTRIDGE.

2.—In considering the **diagnostic and therapeutic value of electricity in diseases of the central nervous system**, Rockwell calls attention to the fact that muscular paralysis is due to changes somewhere along the path between the cortical motor cells of the brain and the muscular fibers, and that quite different effects follow according to the location of the pathologic change along this path. If the paralyzed muscle contracts normally to the faradic current, the muscular fibre is well nourished and the central pathologic change (eliminating, of course, a peripheral causation) involves either the brain or the white substance of the cord. If farado-muscular contractility is lost or distinctly diminished, it is probable that there is degeneration of the muscular fibre due to disturbance of nutrition somewhere in the tract between the multipolar cells in the anterior cornua and the peripheral nerve-distribution. In organic brain-disease the limited indications for the use of electricity are found mainly in the later stages of hemiplegia from cerebral hemorrhage. In structural diseases of the cord, electricity is most useful in the paralysis depending upon conual myelitis. It is only in the early stages that there is any difficulty in diagnosis. Within 10 days diminution, then complete loss, of faradic irritability supervenes, and this, together with the characteristic muscular atrophy, makes the diagnosis unmistakable. The faradic current is sufficient for diagnosis, as complete loss of faradic irritability is sure to be associated with reactions of degeneration elicited by the galvanic current alone. Faradic irritability is lost from many causes; notwithstanding, however, the similarity of the electric reactions in myelitis and multiple neuritis, their other symptoms are so dissimilar that there ought to be little difficulty in distinguishing between them. Muscular fiber deprived of its nerve-supply reacts only to galvanic stimulation and the progressive degrees in galvano-muscular irritability indicate the stage of muscular degeneration. In paralysis from diseases of the motor cells of the cord there is at first a distinct increase of irritability. The fact that this increase develops slowly is evidence that it is due to a progressive degeneration of the nerve-endings rather than to loss of nerve-impulses. If the muscle-fibers preserve their transverse striations, as indicated by their reaction to galvanic stimulation, there is hope of ultimate recovery, or, at least, of improvement. When this reaction is lost, the transverse striations have been replaced by granular and fatty degeneration and treatment is futile. The electric treatment of poliomyelitis in adults and children is superior to other remedies. There is more hope of improvement or recovery in the child than in the adult. Direct spinal galvanization aids nutrition in these cases and in a slight degree acts directly on the diseased nerve-tissue. Absence of galvanic irritability alone is positive indication of damage to the muscular fiber, and it is this current that in any way influences favorably the nutrition of the trophic cells.

3.—Mulhall makes the statement that, barring atrophic rhinitis, the general health of every child having **chronic rhinitis** is at fault, and in the majority of cases dependent upon faulty hygiene. He contends that disease of the upper air-passages may produce disturbance of the general health, and the reverse, especially emphasizing the latter. He corroborates the statement of Bulkley that from 60 to 100 grains of sodium bicarbonate taken in 24 hours in the early stage of rhinitis, especially in subjects of the uric-acid diathesis, will completely abort the attack. The uric-acid diathesis and self-intoxication of gastro-intestinal origin are the chief causes of the prevalence of nasal catarrh among Americans. Careful dieting and abundance of out-door exercise are factors that should enter into the treatment of the inflammatory diseases of the upper air-passages. Without perfecting the general health a cure need not be expected in these cases. Neglect of this and the application only of the surgi-

cal treatment and simple cleansing are useless. The beginning of prophylaxis in childhood is recommended. Children should not sleep in artificially heated bedrooms, especially such as have furnace-heat, the respiratory mucous membrane is thus debilitated. Much out-door life should be insisted upon. The head-covering should permit the air to touch the scalp. Heavy woolen should not be worn next to the skin. Three meals a day are sufficient; candy should never be permitted except just after a meal. Hot breads should be restricted; whole wheat-flour should be used; rubber shoes and throat-mufflers should never be permitted. Of all problems concerning the general health, that of diet is the most important. Neurasthenics are liable to affections of the upper air-passages, and in such cases the treatment should be directed to the general nervous constitution, as well as to the local condition.

5.—Wells believes that **uric acid** bears no causative relation to the **nasal reflex neuroses**. Uric acid, from the evidence of many authorities, is derived from the leukocytes present in excess in all nasal reflex neuroses, and its presence is therefore only an incidental phenomenon. The same statement applies to xanthin, paraxanthin, and, in fact, to all the so-called alloxuric bodies, as their origin is the same as that of uric acid. The source of the uric acid in these cases is found in the existing pathologic condition in the nose, which directs the impulse that sets the sympathetic ganglia in action, and produces an increase in the number of eosinophilic leukocytes.

### Medical Record.

November 12, 1898. [Vol. liv, No. 20.]

1. Technic and Use of Saline Infusions. THOMAS F. REILLY.
2. Subnormal Temperature. LE ROY J. BROOKS.
3. Senility. F. W. HIGGINS.
4. A Case of Apparent Absence of the Spleen, with General Compensatory Lymphatic Hyperplasia. EUGENE HODEN-PYL.

1.—The field for the employment of **saline infusion** is daily growing larger. Of the various methods of introduction, direct intravenous injection is in the majority of cases the most efficient. There is a certain prejudice against the employment of saline infusions by this method, on the ground that some danger attends it, especially from the introduction of air into the veins. Experiments have proved, however, that this fear is unfounded. The simplest method of intravenous injection requires but a short superficial incision over the vein, which is hooked up on an ordinary uterine tenaculum, and a small incision in the vessel allows of the introduction of the cannula. The most widely known field for the employment of the saline solution is in the anemia due to hemorrhage, in which the indications for its use are two-fold; it raises the blood-pressure in the vessels, and has a hemostatic action. For this reason it is especially efficient in controlling internal hemorrhages, such as hemoptysis and hemorrhage from typhoid ulcers. Among the other indications for its employment are uremia, diabetes, sepsis, cholera, pneumonia, ulcerative endocarditis, pyelitis, carbon-monoxid poisoning, mushroom-poisoning, alcoholism, toxemia due to the colon-bacillus, painter's colic, carbolic-acid poisoning, arsenical poisoning, tetanus and epilepsy. Cases have been reported in which favorable results have been obtained in each of the conditions mentioned. The increased temperature that follows the introduction of the solution is believed to stimulate the production of antitoxins. The universal rise in temperature, the chill and crisis, the marked improvement that follows, all seem to indicate that antitoxins of sufficient quantity have been produced to neutralize, temporarily, at least, the toxins. It is contended that a part of this beneficial action may be accounted for by the fact that the solution is usually introduced at a temperature several degrees higher than that of the blood, and that probably the increased heat stimulates the production of the antagonistic principles.

2.—Brooks urges that **subnormal temperature** should receive more consideration from clinicians than is at present devoted to it. He divides subnormal temperatures into four groups; those normal to the individual; those occurring as prodromes; those developing in the course of disease; and



finally, those following an infectious process. He reports the case of a woman, 39 years old, well developed and well nourished, who suffered from extreme languor. There were no physical signs excepting smallness of the heart, but the temperature was only 96.8° F. Upon rest-cure the patient recovered, but subsequently had similar attacks. An interesting feature was that several suicides had occurred in her family. The case is reported of a woman who became extremely nervous and excited when her temperature was low. Cases are cited indicating that persons of deficient energy ordinarily have small hearts. It is believed that subnormal temperatures are possibly due to some form of toxemia. It is stated that this condition occurs in hemiplegia, from surgical shock, and in chronic rheumatism. The following summary is made: subnormal temperature frequently precedes disease; if continued, it acts injuriously upon the nerve-centers; and if it occurs in diseases usually characterized by fever, it is a grave symptom. The causes are probably two: (1) disease or injury of the nerve-centers; (2) autotoxemia.

3.—Higgins discusses the changes of **old age**, calls attention to their similarity to those produced by certain poisons and infections, *e. g.*, alcohol and syphilis, and suggests the possibility that they are also due to an intoxication.

4.—Hodenpyl reports the case of a colored man, 32 years of age, who was suddenly seized 7 days before death with severe pains throughout the body, and headache, then swelling of the abdomen, profound jaundice, followed by death. At the autopsy, the mesenteric lymph-glands were greatly enlarged, and pressed upon the common bile-duct, causing obstruction. These glands, as well as those surrounding the roots of the lung, were the seat of cheesy degeneration. The liver was enlarged, and the bile-ducts distended. No spleen could be found. Hodenpyl has collected 9 cases of absence of the spleen from literature. Analysis apparently indicates that only one of these can be accepted as an undoubtedly true case of this condition. In the present case, unfortunately, the branches of the celiac axis were not carefully examined.

### Medical News.

November 12, 1898. [Vol. lxxiii, No. 20.]

1. A New Urinary Disinfectant. REYNOLD W. WILCOX.
2. Clinical Observations in Regard to General Anesthesia by the Schleich Mixtures. HENRY J. GARRIGUES.
3. Simple and Malignant Jaundice of Pregnancy; Report of Three Cases. WM. B. YOUNG.
4. Clinical Notes from the U. S. General Hospital, Fort Monroe, Va. DONALD MACLEAN.
5. Calculous Pyelitis with Perinephric Abscess. Nephrotomy; Death after 27 Hours. H. H. STONER.

1.—Wilcox urges the use of **urotropic acid** as a **urinary disinfectant**. This is a substance formed from the union of ammonia and formaldehyd, with the formula  $C_2(H)_6N_4$ , and appears in the form of colorless crystals. The drug causes alkaline urine to become acid, thereby clearing its turbidity, and has such an inhibitory effect upon the development of microorganisms that they do not grow in urine in which it has been excreted, even after artificial inoculation. The important question is, whether it irritates the kidney, and Wilcox reports a number of cases, one of enlarged prostate and heart-failure, another of phosphaturia, a third of acute specific urithritis, and a fourth of cystitis with renal disease, in all of which excellent results were obtained. He concludes that, in doses of 30 grains per day, it renders alkaline urine acid, prevents the development of bacteria, and it is indicated as a disinfectant before operations on the urinary tract.

2.—From personal observation of 100 cases Garrigues speaks unqualifiedly in favor of **general anesthesia**, induced by the **Schleich mixture**, as compared with either ether or chloroform. If the safety of the anesthetic, the rapidity with which anesthesia is induced, the comfort of the patient, the simplicity of the technic, and economy are taken into consideration the evidence will weigh in favor of the Schleich mixture, which may be used in every case in which general anesthesia is not contraindicated. It is questionable whether the composition of the mixture should be decided by the patient's temperature. The Allis ether-

inhaler was found the most convenient, the top being kept closed or open according to the condition of the patient. The average amount used to produce anesthesia has been 17.45 cu. cm., and the average total amount used during the whole operation has been 50.91 cu. cm., for an average of 52 minutes. The average time required for anesthetizing the patient has been 6 minutes. The real danger of the Schleich mixture lies in its influence on the respiration. The frequency of the respiratory movements was invariably increased, and in 3 cases artificial respiration was required. One of the greatest advantages of this method is the rapid return to consciousness, which usually occurs within 15 minutes.

3.—Young reports three cases of **jaundice occurring during pregnancy**, one of them simple, and the other two of the malignant type. Jaundice is a somewhat rare complication of pregnancy, Karl Braun having observed the grave form only once in 28,000 pregnant women, and Winckel only once in 16,000 cases. The prognosis is serious and should be guarded. Three cases are reported that developed within a few days of each other, the patients living in the same village not more than 100 yards apart. Two of the women were twin-sisters and lived in the same house. The other, aged 35 years, a multipara, was 6 months pregnant when the jaundice first appeared. In a short time, in spite of energetic treatment, the patient became comatose and died in a few days. The other patients recovered.

5.—Stoner records a case of **calculous pyelitis** with perinephric abscess containing 16 ounces of pus. From the history it might be inferred that the patient had a renal calculus for at least 5 or 6 years, during the greater portion of which time she had pyuria, but not until septic absorption became pronounced did she seek relief, when her condition was such that she succumbed 37 hours after nephrotomy was performed.

### Boston Medical and Surgical Journal.

November 10, 1898. [Vol. cxxxix, No. 19.]

1. Fatty Degeneration. CHAUNCEY REA BURR.
2. The Williams Murder Trial. H. K. FOSTER.
3. Two Cases of Adipocere; One Occurring Under Remarkable Circumstances. LOUIS J. MITCHELL.
4. A Case of Puerperal Fever Treated with Antistreptococcic Serum; Recovery. C. EARLE WILLIAMS.
5. A Case of Puerperal Sepsis Successfully Treated by Antistreptococcic Serum. T. H. O'CONNOR.

1.—Burr believes that a cellular digestive ferment is the cause of **fatty degeneration**, and in proof he mentions the fact that some organs, particularly the liver, sometimes become fatty after death, and that postmortem digestion from ferments occurs in the stomach in the condition known as gastromalacia. [Other ferments than those furnished by the cells might readily cause the fatty degeneration in dead organs, and the occurrence of gastromalacia proves nothing, as it is probably due simply to the action of the gastric juice.] He considers fatty degeneration dependent upon variations in the normal processes of life. The tissues may in the first place, be supplied with an excess of glucose, glycogen, and nuclein, while oxygen is insufficient so that combustion is therefore deficient and obesity results. In the second place, there may be too little of the nutritive material, and then excess of combustion results, the body wastes and the tissues become fatty; or there may be too much glucose or glycogen and too little nuclein and oxygen, so that the protoplasm of the cells is not renewed. Again, there may be too little glucose or glycogen and too much nuclein, resulting in too much combustion. Finally, the deficiency may be purely in the oxygen, so that there is too little combustion, and there is again the result first mentioned, namely—obesity.

3.—Mitchell reports two cases of **adipocere**. The first body was found in Lake Michigan by a Chicago policeman. The spinal column, the pelvis, and the femora remained and were partly converted into adipocere, which was so hard as to remind one of the rind of an Edam cheese. The time that the body had been in the water was unknown. The second case was interesting from a medico-legal point of view. A large box, marked "household-goods," had been sent to a Chicago freight-house from Salt Lake City, and after



remaining for over 3 years, it was sold with unclaimed freight. It was found upon examination that there was a trunk within the box, the space between the trunk and the box being filled with saw-dust, and inside the trunk was a zinc case within which was a body, which had undergone conversion into adipocere. The zinc case had been partly but imperfectly soldered. The odor from the body was ammoniacal and intolerably unpleasant.

4.—Williams reports a case of **puerperal fever** occurring in a primipara, aged 20 years, who was delivered with instruments, with a laceration of the perineum extending to the sphincter ani; this was repaired at the time. The strictest antiseptic precautions were used. On the third day the patient had a rigor, followed by a rise of temperature to 102.6° F., with a pulse of 120. By the fifth day the symptoms were exaggerated, with hurried respiration, a temperature of 104.6°, and a pulse of 140. The uterus was thoroughly curetted, without disclosing any placental tissue or debris. On the sixth day the patient was worse, with a temperature of 105°, a pulse of 150, respirations of 48; vomiting, diarrhea, tympanites, and jaundice. Twenty cu. cm. of antistreptococcic serum were injected into the buttocks, and the next day the symptoms were greatly ameliorated. Similar injections were continued every other day until four doses had been given, with gradual improvement and ultimate recovery. No local trouble could be found to account for the condition, the manifestations of disease being entirely systemic.

5.—O'Connor reports a case of **puerperal sepsis** occurring in a primipara, who was delivered under anesthesia by internal version of a male child which had occupied the R. O. P. position. All secundines were removed and a 2% lysol intrauterine douche was given. Sepsis developed later, and antistreptococcic serum was injected. In addition to the serum-injections, the treatment consisted in intrauterine douches of mercuric chlorid, 1 to 4,000 twice daily; quinin sulphate, 2 grains every 2 hours; and peptomangan one-half ounce in milk every 4 hours. The patient made a rapid convalescence.

### Journal of the American Medical Association.

November 12, 1898. [Vol. xxxi, No. 20.]

1. The Relations of Pelvic and Nervous Diseases. ROBERT T. EDES.
2. The Methods Employed in Examining the eyes for the Detection of Hysteria. CASEY A. WOOD.
3. Hysteria in Children. J. G. BILLER.
4. Official Irritation in Relation to Neural Disturbances. GEO. V. I. BROWN.
5. Nervousness an Element in Hyperpyrexia. C. C. HERSMAN.
6. Discordant Sounds a menace to Nerves. JOSEPH A. GUTHRIE.
7. Moral Insanity in Inebriety. T. D. CROTHERS.
8. Some Medico-Legal Aspects of Senile Dementia. WM. B. FLETCHER.
9. Some Experiments in Uric-Acid Urea. F. SAVARY PEARCE.
10. The Pulse: Its Diagnostic and Prognostic Value. T. S. DABNEY.
11. A Case of Adiposis Dolorosa. AUGUSTUS A. ESHNER.
12. Some Considerations of the Symptomatology in the Diagnosis of Tabes. J. M. AIKIN.
13. The Therapeutic Value of the Various Anti-Malarial Agents. J. R. GILBERT.
14. Treatment of Congenital Talipes. HARRIET B. E. GARRISON.
15. Recent Experiences in Military Surgery after the Battle of Santiago. N. SENN.

1.—Diseases of the **pelvic-organs** influence the **nervous system**, either in the same way as do other wasting painful diseases, or in an indirect way less easily explainable. Removal of normal ovaries has the same effect upon the patient as any other form of faith-cure and the operation is nearly always a failure. Removal or treatment of diseased organs may take away the reflex cause of serious nervous disturbances.

2.—See this JOURNAL, Vol. i, p. 1180.

3.—Cases of **hysteria in children** may be divided into

two classes: (1) Including those in which the disease is fully developed before puberty; and (2) those in which the seeds of the disease are sown but it does not develop until later in life. Biller reports a case of paralytic hysteria. This condition is not so common as some of the psychic forms. The night-terrors and peculiar fears of childhood are often manifestations of hysteria. Punishment, although it seems a cruel form of treatment may be necessary in some cases. One of the best instructors in self-government is association with other children, as in the public schools. Neurotic children are, as a rule, poor eaters, but they should be forced to take a sufficient amount of plain and nourishing food. Competitive work in school is to be avoided. Drugs are seldom indicated and their value is questionable.

4.—Brown reports two cases in which severe reflex pains were relieved by proper treatment of the teeth.

5.—See this JOURNAL Vol. i, p. 1182.

6.—Guthrie emphasizes the many evils attributable to the numerous and unnecessary noises of our large cities.

8.—Fletcher believes that much time and expensive legislation could be saved by the calling of **expert witnesses** in medico-legal cases. None but practical alienists should be called as experts in insanity-cases and they should be paid by the State or County and not allowed to take fees from either the prosecution or the defense.

9.—Pearce reports a case of **melancholia** in which an extensive series of careful observations were made as to the excretion of uric acid and urea. A tendency to the lessening of both was evident when the proteids were cut off or the bodily tissues were suboxidized. The ratio of urea to uric acid was not held at a fixed proportion. The patient improved gradually after regularly avoiding an excess of proteids, and by care to avoid bodily chilling to which he had been previously exposed in his occupation.

11.—See this JOURNAL, Vol. ii, p. 737.

13.—In those rare cases of **malaria** in which there is an idiosyncrasy to quinin, Gilbert has found salicin and sodium salicylate of great advantage. In the treatment of chronic cases there is usually some weakened organ in need of special treatment. General alterative and tonic treatment is of greatest importance and arsenic and iodine are the drugs of greatest value.

### Practitioner.

October, 1898. [Vol. lxi, No. 4.]

1. Notes on the Technic of Skin-Grafting by Thiersch's Method. ARTHUR E. BARKER.
2. Hysteria and Epilepsy. F. GRAHAM CROOKSHANK.
3. Three Cases of Richter's Hernia. A. WILLIAM SHEEN.
4. Operative Interference on the Drum and Ossicles in Chronic Middle-Ear Suppuration. ARTHUR H. CHEATLE.

1.—To insure successful results from **skin-grafting** after the method of Thiersch, not only the surface upon which the graft is to be placed, but also the tissues surrounding must be in a state of active vitality. Should the field of operation be septic, and require preparation, it is not advisable to employ too strong germicidal solutions, as they will lower or destroy the vitality of the granulation-cells. The grafts should be as thin as possible, and should consist only of epidermis, down to the papillary layer. It will greatly facilitate matters if the blade of the razor is dipped in a lubricant, composed of glycerine 25%, spirit 25%, boiled distilled water 50%. The dressing should be a pad of sterile gauze or salicylic wool, firmly applied, in order to squeeze out the moisture under the grafts and to bring all the surface of the latter in close contact with the underlying tissues. The dressing should not be removed for a week. If the deeper layers of the graft have united to the wound, nothing but the superficial or dead layers of epidermis should stick to the dressing on its removal.

2.—Crookshank refers to the subject of **autohypnosis in hystero-epilepsy** and describes with extreme brevity a case under his care. The man had a fixed idea, namely, that his eyes were the cause of his trouble. This persistence of one idea is termed mental catalepsy, and it is believed that St. Theresa and the disciples of Gautama, who, by voluntary abolition of self, try to achieve Nirvana, are examples of this same autohypnosis and mental catalepsy.



3.—Sheen reports **three cases of Richter's hernia**, and calls attention to the following general facts: This condition is more commonly met with in women, is more frequently of the femoral variety and on the right side; it is usually of long standing, has been reducible, but in most cases escapes observation. The lower portion of the ileum directly opposite the mesentery is usually involved, not more than half the circumference being, as a rule, strangulated. The mortality is 62%. The mode of formation is doubtful, but it is supposed to be due to adhesion of bowel at the site of the ring. The history of the cases reported conforms to that of this variety of hernia. Early operation is indicated, since taxis is inadvisable, owing to the risk of reduction *en masse*.

### Annals of Surgery.

October, 1898. [Vol. xxvii, No. 24]

1. On the Cause and Mechanical Treatment of Subluxation of the Semilunar Cartilages of the Knee-joint. NEWTON M. SHAFFER.
2. A Contribution to the Study of Hip-disease. On the Ultimate results of the Mechanical and Operative Treatment, with an Analysis of 150 Cases observed at the Hospital for Ruptured and Crippled. VIRGIL P. GIBNEY, JEROME HILTON WATERMAN, and W. G. REYNOLDS.
3. The Use of Egg-membrane in Trephining Operations upon the Skull. LEONARD FREEMAN.
4. The Treatment of Fractures of the Nose. GWILYM G. DAVIS.
5. Separation of the Upper Epiphysis of the Humerus. HENRY R. WHARTON.
6. Remarks on the Treatment of Tuberculosis of the Uterus and Fallopian Tubes. WILLIAM WOOD RUSSELL.
7. How to Prevent the Dangers and Disagreeable Symptoms of Ether. JOHN D. RUSHMORE.
8. Removal of Biliary Calculi from the Common Duct by the Duodenal Route. CHARLES MCBURNEY.
9. Report of Eight Cases of Penetrating Gunshot-wounds of the Abdomen, with Injury to the Hollow Viscera. RANDOLPH WINSLOW.
10. Report of a Case of Stab-wound of Colon, Diaphragm, and Lung, terminating in Recovery. WILLIAM H. FISHER.
11. A Case of Excessive Bone-atrophy Complicating an Ununited Fracture in Both Forearms of the Same Individual. EUGENE R. CORSON.
12. Report of a Case of Cervical Rib, with Remarks on Mistaken Skiagraphical Diagnoses. HOWARD J. WILLIAMS.
13. Note on Dr. Williams' Paper. SAMUEL LLOYD.

1.—While it is the generally accepted view that **subluxation of the semilunar cartilages** occurs while the knee is flexed and the leg rotated, Shaffer contends that there are other factors that play a more important part in the etiology. These are (1) considerable lateral mobility of the joint, and (2) an elongated ligamentum patellæ. In order to prevent a recurrence of this condition the lateral mobility of the joint must be corrected and rotation of the tibia upon the femur must be prevented. To meet these indications Shaffer has devised a brace, which he has employed in numerous instances, with perfect satisfaction. Not only are the patients free from the dangers and likelihood of a recurrence of the subluxation, but in many instances they were ultimately able to dispense altogether with the brace.

2.—Gibney, Waterman and Reynolds have made an analysis of 150 cases of **hip-disease** observed at the Hospital for Ruptured and Crippled Children. In order to assure an estimate of the permanency of the results obtained no case is included in this report in which the patient had not been discharged from the Hospital at least five years previously. The conclusion is reached that hygienic and constitutional measures exert a powerful influence in the control of the disease. An early diagnosis is an important factor in attaining a successful ultimate result. During the acute stage rest in bed, with the usual mechanical appliances, is preferable to ambulatory treatment. In the second stage the deformity must be corrected as early as it is deemed advisable, operative procedures being resorted to if necessary; before attempting reposition by femoral osteotomy,

forcible correction, followed by fixation, should be tried. When there is absolute ankylosis or only a few degrees of motion subtrochanteric osteotomy is the operation indicated. The injection of various chemic substances into abscesses and sinuses has not proved beneficial.

3.—Various methods have been recommended to prevent the formation of adhesions after trephining. Keen suggested a pedunculated flap of periosteum, Beach gold foil, and Abbe rubber tissue, but experience has demonstrated that all of these materials are unsatisfactory, as they eventually become surrounded by connective tissue. After a series of experiments on animals with egg-membrane, Freeman claims for it the following advantages: (1) it is cheap and can be easily obtained; (2) it is not, in the full sense of the term, a foreign body, but it seems to incorporate itself with the surrounding tissues without the formation of noticeable cicatricial deposits; (3) there is no danger of subsequent infection requiring a second operation, and leading to extensive formation of connective tissue.

4.—The treatment of fractures of the nose has not received in the average textbook the attention it deserves. The nose should be examined both externally and internally by means of a head-mirror and speculum, in order to determine accurately the seat of fracture and the nature of the deformity. If the fragments are depressed, they may be elevated by introducing a flat steel director, and be retained in their proper position, preferably by a pin transfixing the nose from side to side. If lateral deformities occur, and are properly reduced, the fragments may be retained in position by the dressings of Adams, Gangee, or Cobb. Davis prefers the following dressing: a strip of gauze, the end of which is fixed to the side of the nose by means of collodion, is made fast at the other end to the opposite cheek, which is drawn forward before the collodion fixes the dressing. The dressing may be renewed every other day, and it may be dispensed with at the end of from 3 to 7 days. If there be any deviation of the septum this is preferably treated with transfixion-pins.

5.—Wharton reports four cases of **separation of the upper epiphysis of the humerus**. He considers the reduction of the deformity usually a matter of the greatest difficulty, despite the opinion of Moore to the contrary. The method that Moore recommends for reducing the deformity may diminish it somewhat, although when it is marked reduction by these manipulations is not perfect. The treatment adopted by Wharton is the dressing recommended by Ferguson for fractures of the upper extremity of the humerus. The functional results following epiphysal separation are as a rule good, although sometimes non-union occurs. Osteomyelitis, arrest of growth, and premature ossification of the cartilage are occasional sequelæ.

7.—Rushmore has found that the dangers and disagreeable symptoms resulting from **ether-inhalation** may be materially diminished, if not altogether abolished, by careful preparation of the patient, and careful administration of the anesthetic. Six minims of Magendie's solution, with atropin sulphate  $1\frac{1}{15}$  gr., are injected hypodermically, as a routine procedure from half an hour to an hour before the anesthetization. The advantages of this treatment are pronounced. The morphin quiets the nervous system renders the patient more susceptible to the ether, less of which will thus be required, and insures a more quiet recovery from the anesthetic; furthermore it lessens the disposition to nausea and forestalls pain that the patient might otherwise suffer. The atropin limits the amount of secretion from the bronchi, larynx, and pharynx, stimulates the heart, prevents undue leakage from the skin, and thereby lessens or prevents shock. With regard to the method of administration, the so-called open method is much to be preferred. If the ether is administered drop by drop, not more than 7 minutes, on an average, are required to induce complete anesthesia, and but 3 or 4 ounces will be necessary for the entire operation. With this mode of administration ether may be safely used in pulmonary, cardiac, or renal disease, without undue risk. Less than 10% of cases personally so treated are troubled with nausea, and these only to a slight degree.

8.—McBurney is convinced that in many instances **biliary calculi** may, to the best advantage of the patient, be removed from the common bile-duct through an incision in the anterior wall of the descending



**duodenum.** This is an exceptionally good route, if the calculus be situated in the lower third of the common duct, which is particularly inaccessible, especially when bound by adhesions. The orifice of the duct may if necessary be incised for  $\frac{1}{2}$  inch, with perfect safety, and the duct itself is easily dilated. This method of procedure is more rapid of execution and is attended with less risk, as the incision in the intestine can be closed with greater precision and will unite more rapidly, than if the bile-duct be incised, especially if the walls of the latter are particularly thin. McBurney has employed the method described on six different occasions, and in each instance the intestinal wound healed kindly.

**10.**—Fisher has reported the case of a patient who was stabbed below the ribs on the left side, sustaining an **incised wound of the transverse colon** at its attached borders between the layers of the mesocolon, an **incised wound of the diaphragm**, 2 inches in length, and a **penetrating wound of the lung**. Owing to the critical condition of the patient no attempt was made to close the intestinal wound; that in the lung was packed; 4 sutures were inserted in the diaphragm, and a gauze drain was introduced down to the wounded bowel. One month later the patient was dismissed, cured. The remarkable features of the case were the closure of the wound of the colon, without the development of a fecal fistula; the absence of the grave constitutional disturbances that usually attend wounds of the diaphragm; and the ease with which the hemorrhage from the lung was controlled by packing.

**11.**—Corson reports a case of **excessive bone-atrophy following ununited fractures of the forearm** to a degree rarely observed and apparently supporting the theory that ununited fractures are the result of some neuropathic change, due to an injury to the nerve. The patient, a woman, 70 years of age, had sustained a fracture of the right ulna, 10 years previously, and a fracture of both bones of the left arm 5 years later, non-union resulting in each instance. A radiograph revealed remarkable atrophy of the three bones concerned, with much loss of bone substance, the free ends having tapered down to fine points, the bones seeming to have melted away like icicles. The pathology of non-union is still a matter of dispute, although the preponderance of evidence seems to weigh in favor of the theory of impairment of nerve-supply, rather than that of insufficient blood-supply. No matter how bountiful the blood-supply, if the nerves that control nutrition are injured, repair cannot take place. The fact that union takes place in numerous instances in which the general malnutrition of the subject is marked, and the fact that non-union occasionally happens when the vitality of the part is up to par are strong evidence in favor of the neuropathic theory.

#### Journal of Nervous and Mental Disease.

October, 1898. [Vol. xxv, No. 10.]

1. On Scleroderma and Chronic Rheumatoid Arthritis. F. X. DERCUM.
2. Family Periodic Paralysis. EDWARD WYLLYS TAYLOR.
3. A Case of Katatonic Melancholia. J. E. COURTNEY.

**1.**—Dercum believes that all forms of local and general **scleroderma** are identical, and that the process may include other structures as well as the skin. He reports the case of a woman, 44 years old, who noted at the age of 26 that the middle and ring fingers of the right hand had become swollen and stiff. Later, other fingers became involved, and also the face. Trophic changes, in the form of small ulcers, appeared at the ends of the fingers. The teeth of the upper jaw loosened and came out, and ulceration took place over the left olecranon. Sensation was normal. The reflexes were not altered, and examination of the blood and urine yielded negative results. Scleroderma is to be distinguished from Morvan's disease by the absence of sensory disturbances. In a second patient there was typical and extreme rheumatoid arthritis. The disease began with swelling of the knee at the age of 15, and progressed to almost total ankylosis of all the joints. The muscles in general appeared to be harder and denser than normal, even those of the abdomen presenting this peculiarity. Upon the skin of the scalp, the neck, ears and limbs, there were numerous masses

of yellow epithelial cells or incrustations that when removed with difficulty exposed a raw sensitive surface. The skin was much less movable and was normal, and in some places it was pigmented. In the middle and lower thirds of the legs, the skin was tense and shiny and the veins were prominent. There were no disturbances of sensation; and no pain, excepting upon movement. The urine, aside from slight diminution of the solids, was normal; and the blood-examination yielded negative results.

**2.**—Taylor continues his discussion of Goldflam's **family periodic paralysis**. 53 cases have been reported, 35 of which occurred in 3 families; but altogether only 16 have been carefully described. The disease is distinctly hereditary, but does not appear to develop as the result of the so-called neuropathic tendency. The periodicity does not seem to follow any rule. The symptoms are absolutely confined to paralysis of the muscles, with the exception of some doubtful subjective sensory disturbances, such as numbness and tingling. The mind is invariably clear; the muscles show diminution of response to direct and indirect electric excitation, and there may be some electric changes during the intervals. The reflexes disappear during the attacks, to reappear during the intervals. Occasionally slight permanent atrophy of some of the muscles has been observed. Prodromes are present in some instances. The first attack usually occurs about puberty, but not invariably. Fewer instances have been reported in females, but this seems to be accidental. The paralysis usually attacks the muscles of the lower extremities. Sometimes there is hemiparesis, and occasionally involvement of the muscles of the face or jaws. Mechanical irritability is lost. Power returns inversely in the order of involvement, and both involvement and recovery are usually gradual. The paralysis usually sets in at night during sleep, and the attack may last for from an hour to a week. In some cases there may be only one attack during life, while in others there may be two or three in a month; but such a thing as recovery is not known. Neither abortive attacks nor equivalents have been described. The heart is often involved; the pulse may be arrhythmic and the area of cardiac dulness increased. There is often involuntary retention of urine and feces. In one case, slight alteration of superficial temperature was noted. Examinations of fragments of muscle have yielded contrary results; but it appears that there may be slight degeneration of the muscle-fibers. Leukocytosis has been observed during the attack. The etiology of the disease is unknown. Fatigue or cold may be the exciting cause of an attack. The disease is usually classified with the dystrophies, but Taylor prefers to group it with the congenital myotonias. The prognosis is good as to life, bad as to recovery, and no treatment is efficient. In the discussion Sinkler reported three cases of the disease.

**3.**—Courtney reports a case of **katatonic melancholia** occurring in a woman, 35 years of age, after a miscarriage. The patient remained constantly with her head pressed between her knees, and her hands in the popliteal spaces. When disturbed, she always repeated in a peculiar sing-song voice a request to send for her husband to take her home.

#### Bristol Medico-Chirurgical Journal.

September, 1898. [Vol. xvi, No. 61.]

1. Melancholia. LIONEL A. WEATHERLY.
2. Hysterical Paroxysmal Edema. F. H. EDGEWORTH.
3. Fifty Consecutive Intraabdominal Operations. JAMES SWAIN.
4. A Case of Laparotomy in which a Large Pyosalpinx Simulating a Suppurating Tuboovarian Cyst was Removed. J. LACY FIRTH.

**1.**—Weatherly enters into a more or less general discussion of the treatment of **melancholia**. For the sleeplessness, he especially recommends phenacetin. He notes the importance of providing pleasant surroundings for the patients and of insisting upon their taking exercise, the bicycle being in his mind the most suitable form of exercise for those patients who have no suicidal tendencies. The patients should be encouraged in having hobbies. It should be seen that they take sufficient food, the amount taken being carefully estimated.



2.—Edgeworth reports 3 cases of **hysterical paroxysmal edema**. The first was in a man, 24 years old, who had paroxysmal swelling of the foot and arm, usually coming on at night, lasting through the day, and then subsiding. It was accompanied by some pain, itching and burning. The parts did not pit upon pressure. Occasionally parts of the face or other portions of the person were affected. There was no organic disease to account for the trouble. Owing to the sharply marked limits of the swelling, which were at right angles to the axis of the limbs, and therefore, corresponded to the frequent distribution of hysterical anesthesia, it was believed that the case was hysterical. The second case was a similar one and also occurred in a man. The attacks of swelling came on frequently and lasted usually but a few hours. There was total analgesia over the affected areas and the senses of touch and temperature were imperfect during the presence of the swelling. The third patient was a woman, 37 years old, in whom the swellings were accompanied by some pain, always came on at night, and disappeared before morning. There were analgesia and thermoanesthesia while the tactile sense was normal. [None of the cases presented any real hysterical stigmata, and the use of the term hysteria, in connection with them, seems scarcely justified, as they correspond closely to angioneurotic edema.]

4.—Firth reports a case of large **pyosalpinx** which closely resembled a tuboovarian cyst. A tuboovarian cyst is usually understood to be an ovarian cyst, generally unilocular, which communicates by a considerable aperture with the adherent fimbriated extremity of a dilated oviduct. In this case the ovarian tissue could be separated from the cyst-wall, and the distended portion of the tube was sharply flexed on the other part. Microscopic examination confirmed the diagnosis of pyosalpinx. Cullingworth states that many specimens that had for a time been thought to be tuboovarian cysts have, on further examination, been found to be dilated tubes. Bland Sutton believes that many specimens described as tuboovarian cysts are really cysts formed by the collection of fluid in a peritoneal tunic, which sometimes surrounds the human ovary, forming a complete ovisac, which communicates with the oviduct. Rats and mice present normally complete ovisacs of this kind, and specimens exist in which hydroceles and abscesses have been formed by their distention with fluid.

### Edinburgh Medical Journal.

September, 1898. [Vol. iv, No. 3, N. S.]

1. The Movements of the Heart in Health and Disease. JAMES MACKENZIE.
2. Hemianopia. GUSTAVUS HARTRIDGE.
3. On Movable Kidney, with Special Reference to its Influence on the Nervous System. C. W. SUCKLING.
4. The Clinical Aspects of Arterial Pressure—Some Physiological Data bearing on the Clinical Observation of the Blood-pressure. GEORGE OLIVER.
5. Functional Irregularity of the Heart's Action. J. STITT-THOMSON.
6. Migraine and the Vasomotor Theory. HENRY HANDFORD.
7. Nuclein in a Case of Malignant Disease, with a Note on the Uric-Acid Excretion. CARSTAIRS DOUGLAS.
8. Trophoneurosis of the Uterus. JAMES OLIVER.
9. The Climate of Teneriffe—Orotava as a Health-Resort. FREDERICK LISHMAN.

1.—Mackenzie describes cardiograms; the apex-beat being considered due to the forward thrust of the left ventricle and causing the upstroke. The needle is retained at this point while the ventricles are emptying, then falls while the muscle relaxes, and again rises gradually during diastole. It is insisted that during the ventricular systole, the neighboring tissues are drawn in, and this is believed to affect the skin and subcutaneous tissues, resembling the condition usually described as occurring with adhesive pericarditis, but taking place at times without the faintest sign, postmortem, of pericardial adhesion. The liver moves as a result of cardiac aspiration, but Mackenzie contends that it moves upward during the ventricular systole, and downward during the diastolic filling of the ventricle. With a dilated right heart there is pulsation due to the ventricular systole of the

right heart. The epigastrium retracts just at the time of the carotid pulsation.

3.—Suckling states that he has found in a series of 100 women and 100 men 42 instances of **movable kidney** in the women and 6 in men. He prefers to examine the patients while they are standing, and to grasp toward the kidney with the extended fingers rather than to lay the flat hand on the abdomen. The symptoms described as due to movable kidney are pain, mental depression, inability to walk, or ataxia in walking, disturbances of the liver, vertigo, enlargement of the spleen, dyspepsia, sometimes albuminuria, a feeling of exhaustion, and a tendency to tire readily, a difficulty in maintaining the upright position, severe attacks of abdominal colic, and sometimes attacks of epilepsy. It was noted that a number of girls who served beer, and were, therefore, obliged to stoop and immediately stand upright with considerable frequency, were likely to have movable kidney. The only treatment that was found of use, excepting surgical intervention, was the application of a proper belt, having a pad on the inside over the situation of the kidney. If this is used, surgical treatment is rarely necessary.

4.—Oliver has found that muscular exercise causes increase in the blood-pressure by causing increased energy of ventricular contraction; by increasing the amount of blood in the peripheral vessels, as shown by the actual increase in the diameter of the limbs; and, also, by exhilaration of the blood-flow; the chief factor being the increased energy of the heart's action. These effects of exercise soon disappear, and the blood-pressure sometimes drops below normal for a time afterward, but this does not persist, and the drop is followed by a rise. The pressure rarely goes below the normal at any time. Massage was found to cause slight increase in blood-pressure. Resisted exercises yielded much the same effect as ordinary muscular exercise. Emotion and excitement increase blood-pressure, and it is always necessary to eliminate these factors before attributing high pressure to any other cause. Fatigue causes a loss of vasomotor adjustment of the circulation to the various needs of the economy, so that if the body is erect, the blood tends to drain into the lower extremities and into the large veins of the abdomen, being thus practically withdrawn for a time from the circulation. This is best managed therapeutically, and overcome physically, by horizontal rest. Rest, itself, lowers the blood-pressure, but it does away with the force of gravity.

5.—Thomson reports the case of a man, 44 years old, who suffered repeatedly from attacks of bradycardia, the pulse occasionally falling to 30°, together with dyspnea, cold extremities, and evident serious disturbance of the circulation. The condition was thought to be gouty. Exercise and remedies directed toward a gouty condition were followed by cure. In a second case there occurred seizures of "tremor cordis." This patient also was gouty, and recovered after treatment for gout. In a third case, in a young married woman, the pulse was irregular, but during pregnancy it became steadier, while after labor it returned to its former character, and so it had persisted for several years. The pulse was extremely irregular, but there were no other symptoms, and it did not in any way interfere with an active life. *Cactus grandiflorus* is considered a most valuable drug for such conditions as those described.

6.—Handford believes that **migraine** is due to vasomotor spasm, and in support of his theory he brings forward the fact that worry, fatigue and emotions, as well as cold and dietetic indiscretions, will bring on attacks, as will also sudden severe exercise. It is also noted that in some of these attacks there is spasm of the urethra, and he makes an analogy between this and the supposed spasm of the vessels of the brain. The frequent paleness of the face, the coolness of the surface, the smallness of the pulse, and the discharge of pale urine of low specific gravity in considerable quantity, are referred to as evidences of arterial contraction. Treatment should, therefore, be directed to the relief of this spasm, and may consist in application of warmth to the extremities and the ingestion of warm drinks; such measures have proved superior to drugs. Antipyrin, phenacetin, and the nitrites are also often useful, and are considered further proof of the vasomotor theory. [It is not stated whether the vasomotor contraction supposed to exist, is due to reflex irritation, intoxication, or to some other cause.]



7.—Douglas reports the case of a woman with **carcinoma of the uterus**, who exhibited marked cachexia, was very anemic, with distinct leukocytosis, and was feeble. Examination of the urine showed diminution of the urea, while the uric acid was largely increased, and there was slight increase of the phosphoric acid. After the use of nuclein, the amount of uric acid increased, to again decrease when the nuclein was stopped. The use of the nuclein seemed to cause a little general improvement, but this may have been entirely the result of suggestion.

9.—**Orotava** is described as an attractive town, with very gentle winds, which rarely become severe. The temperature is equable; the lowest point reached in the past 9 years being 48.4° F., and the highest 90.1° F. The humidity is remarkably slight; the rainfall moderate, rainy days being rare. Social attractions are numerous and pleasant. The climate is also favorable to rheumatic cases as well as to tuberculous.

October, 1898. [Vol. iv, No. 4.]

1. The Malaria-problem in the Light of Epidemiology. ANDREW DAVIDSON.
2. The Operative Treatment of Myopia. W. ADAMS FROST.
3. The Influence of other Diseases upon Cancer. W. ROGER WILLIAMS.
4. On the Treatment of Some of the More Common Eye-affections. G. A. BERRY.
5. Medical Bibliography and Medical Education—Dr. Robert Watt's Library for his Medical Students in 1812. JAS. FINLAYSON.
6. The Alleged Retardation of the Pulse in Aortic Regurgitation. JAMES MACKENZIE.

1.—Davidson brings forward a number of instances in which it is known that **malaria** developed in localities in which it had previously been practically unknown, and also instances in which individuals acquired malaria in regions not previously settled by human beings. After reviewing the previously promulgated theories of the propagation of the disease, he expresses the belief that the parasite cannot be dependent upon man for its existence because it is sometimes present in regions that were previously uninhabited. This cannot be explained by simply stating that the plasmodium lives and multiplies in the soil, and that man is merely an accidental host, for it would then be difficult to see how such a soil-parasite could adapt itself so perfectly to an animal organism, such as that of man; and it cannot be assumed that a mosquito or a gnat may serve as the host, for the introduction of one malarious patient into a district will not suffice to start an epidemic of the fever unless the suitable mosquito is at hand to carry the disease about. If the existence of the plasmodium is dependent upon the mosquito alone, it may be asked why should it attack man at all? Davidson makes an analogy between the plasmodium and the proteosoma, which latter runs a double cycle between the sparrow and the mosquito, and states his belief that the plasmodium probably runs a double cycle also, and that, as the proteosoma may have other birds than the sparrow as its alternate host, so may the plasmodium have other animals than man as the alternate host. He admits that it is not proved that animals ever have malaria, but he mentions the statements of Parke that donkeys had the disease during his expedition into Africa, Lawes' observations upon dogs which he believed had malaria, and the statements of others who have observed the disease in various domestic animals.

2.—The **operative treatment of myopia** is now a well-recognized procedure. Frost considers it of great benefit to myopes of no less than 15 D., enabling them to go about without glasses, and as a rule, giving them better vision than they formerly had with glasses. The treatment usually extends over a period of three months, but the patient is not confined to his room during the whole period. While some risks are incurred in the operation, they are no greater than those in operations for soft cataract. It is possible that the liability of myopic eyes to suffer from opacity of the vitreous and detachment of the retina is increased by this operation. In view of these facts it would seem advisable to confine the operation to one eye, at any rate until it is seen that the results remain good after a lapse of several years.

3.—It has been urged by Lambotte and others that erysipelatos and suppurative affections are rare in the carcinomatous, and inferences have been drawn that these maladies exert a vaccinal action on the carcinoma. Williams has examined statistically the publications of some of the large London Hospitals, and from his data it appears that the carcinomatous instead of being immune from erysipelas are more than twice as liable to it as the non-carcinomatous. The carcinomatous, furthermore, are just as prone to suppurative diseases as the non-carcinomatous. Williams believes that most of the alleged cures of malignant diseases by erysipelas-inoculations, etc., are attributable to diagnostic errors. Carcinoma is, however, very rare in spilitic persons and the liability of insane persons and idiots to carcinoma is also below the average. This may be due to their debilitated condition, as enfeebled vitality is unfavorable to the growth of carcinoma. The statistics do not show that the carcinomatous are immune to acute infectious diseases. Active tuberculosis and carcinoma are rarely associated. Obsolete tubercle is more frequently found with carcinoma than with most other diseases. The development of carcinoma often follows or coincides with the healing of pulmonary tubercle. The latter disease is by far the most prevalent affection among carcinomatous persons, who are much more prone to it than are the rest of the community. It is concluded that those who survive the kind of degeneracy associated with tuberculosis are at a later period of life especially prone to carcinoma.

5.—See Editorial.

6.—Mackenzie states that he has been unable to observe the **retardation of the pulse** that is commonly said to be present with **aortic regurgitation**, and after making careful tracings of the heart-movements and of the pulse, he has reached the conclusion that there is no more retardation of the pulse with aortic regurgitation than there is in health. He gives simultaneous records of the apex-beat, of the radial pulse, and of the radial and carotid together. For this purpose he used either a Dudgeon's or von Jaquet's sphygmograph, to which he attached a tambour in such manner that the lever of the latter would inscribe its movements on the same paper at the same time that a tracing of the radial pulse was being taken. This was accomplished by connecting an India-rubber tube with the tambour, and having at the other end a shallow cap. The cup was placed over any pulsating part, and the air contained within the cavity of the cup conveyed the movements to the tambour, thus making a record of a distant pulsation on the same paper and at the same time that it recorded the movements of another pulsation. By comparing the two readings obtained in this way, the conclusion was reached that retardation does not exist in aortic disease.

### Deutsche medicinische Wochenschrift.

September 29, 1898. [24. Jahrg., No. 39.]

1. Operation for Elevating an Eyelid that had Drooped in Consequence of a Gunshot-wound in the Temporal Region. J. HIRSCHBERG.
2. The Color and the Histology of Nerve-cells. H. ROSIN.
3. Malt-soup as a Food in Gastro-intestinal Diseases of Children. ARTHUR KELLER.
4. The Value of the Röntgen Rays in Obstetrics. ROBERT MÜLLERHEIM.
5. A Case of Rare Nerve-injury. GÖRTZ.

1.—Hirschberg reports five cases of ptosis, in which he performed **Birnbacher's operation**, with results that exceeded expectation. In the after-treatment care must be taken that the eye-lashes do not irritate the cornea, and to this end the lids may be closed by superficial suture. After the dressing is removed, the lashes may be sealed to the skin by collodion and cold cream applied to the eye to prevent friction. The efficacy of this operation depends, first, upon transference of the strength of the muscles of the brow, by means of the sutures, to the paralyzed muscles of the upper lid, and, secondly, upon insuring elevation of the lid by means of the firm attachment of the eyebrow to the underlying bone.

2.—The best fixing-fluid for the nervous system is a 4% solution of formol, which is prepared by diluting the concen-



trated formalin-solution (40%) with a tenfold quantity of water. The advantage of this fluid is, that all methods of staining can be applied to the tissues that have been fixed in it. For purposes of staining, Rodin has found neutral-red most valuable. It has the peculiar property of staining all basophilic substances red and oxyphilic substances a pale yellow. It brings out beautifully the structure of the ganglion-cells, and has shown conclusively that there is no lymph-space around nerve-cells. The application is as follows: The pieces of tissue are hardened for three days in formol, and for three days in absolute alcohol. They are then imbedded in celloidin and cut. The sections are placed in concentrated watery solution of neutral-red, where they may remain for from half an hour to 24 hours. They are then washed in distilled water, dehydrated in absolute alcohol, cleared in xylol, and mounted in xylol Canada balsam.

3.—Keller states that he has obtained good results in infants suffering from digestive disorders with a malt-food (Malzsuppe), prepared as follows: 50 grams of wheat-flour are mixed with one-third of a liter of cow's milk and strained through a sieve. In another vessel 100 grams of extract of malt are dissolved in two-thirds of a liter of water at 50° C.; 10 cu. cm. of 11% solution of potassium carbonate are added. The malt-solution and the milk-mixture are poured altogether and boiled. For very sick children the solution is diluted with water. Of 28 infants fed with the soup only 5 died.

4.—Müllerheim has investigated the value of the **Roentgen rays in obstetrics**, both during pregnancy and in the absence of gestation. He maintains that by the use of the rays the various forms and degrees of pelvic deformity, such as arise from rachitis, osteomalacia, and spondylolisthesis may be detected and appropriate treatment instituted in case of subsequent pregnancy. It is possible by this method to determine accurately the distance between the posterior superior iliac spines, the breadth of the os sacrum, the distance of the lumbosacral crista spinosa from the posterior superior iliac spines, and the distance from the middle of the promontory of the sacrum to the sacroiliac symphysis. Not only can the presentation of the fetus be determined, but also the size of the fetal head and the dimensions of the pelvis. The article is illustrated by interesting woodcuts of fetal and pelvic skiagraphs.

5.—Görtz reports the case of a man, who while working in a shaft, had his right hand penetrated from the dorsal aspect by one of the prongs of a pitchfork that fell from the ground above. The wound healed without any trouble, and the patient claimed sick-benefits from his society on account of inability to hold small objects. As there was no diminution in gross strength or any disturbance in sensation, benefits were withheld. The man entered suit, and Görtz was detailed to examine him. It was found that the fork had undoubtedly torn the deep volar branch of the ulnar nerve, which supplies the dorsal and palmar interosseous muscles, the adductor pollicis, the deep head of the flexor pollicis, the fourth lumbrical, and all of the muscles of the hypothenar eminence. On the strength of this evidence the patient received a percentage of the benefits.

### Berliner klinische Wochenschrift.

September 19, 1898. [35. Jahrg., No. 38.]

1. The Surgical Opening of a new Collateral Circulation for the Blood of the Portal Vein. S. TALMA.
2. Unilateral Lesions of the Spinal Cord. FRIEDRICH V. REUSZ.
3. Hysteria in the Male, with the Clinical Picture of Chronic Stenosis of the Intestine. STRAUSS.
4. The Question of Serum-therapy. KASSOWITZ.
5. A Reply to the Foregoing Article. A. BAGINSKY.

1.—When atrophic cirrhosis of the liver is attended with ascites the latter may be relieved by the establishment of a **collateral circulation** for the blood of the portal vein. This may be effected by suturing the great omentum to a wound in the abdominal wall. This plan was adopted in the case of a 9-year-old boy, suffering from acute hemorrhagic nephritis, together with atrophic cirrhosis of the liver. In addition to the ascites, the body and limbs were markedly edematous. It was determined that the ascites was not due

to the nephritis, but altogether to the obstruction to the portal circulation. The operation as suggested was carried out, and the establishment of a collateral circulation between the veins of the portal system and those of the abdominal wall was demonstrated by the visible enlargement of the subcutaneous veins of the abdominal wall. After the operation the ascites rapidly diminished and eventually disappeared. The spleen was enormously enlarged, also as a result of the obstruction to the portal circulation, and, not being appreciably affected by the first operation, a second celiotomy was performed and the spleen sutured to the abdominal wall, with the result that the organ at once began to diminish in size. This operation is indicated when there is an obstruction to the portal circulation, as evidenced by ascites and spleen enlargement. It is contraindicated when there is functional disturbance of the hepatic cells.

2.—Reusz reports the case of a patient, 42 years old, who had received, 18½ years before, a stab-wound in the back, which was followed by complete paralysis of the right leg and loss of pain-sense in the left leg. Considerable improvement in the motion and temperature-sense of the right leg took place, but the member always remained stiffer and less flexible than the left. Tactile sense and pressure-sense were good everywhere, as well as the muscle-sense and the localization-sense. The fact that the residual paralysis was less than the original palsy was explained on the theory enunciated by Mann, that fibers connected with the cells of one anterior horn run not alone in the pyramidal tracts of the same side, but some of them cross over to the cells of the other side. Thus it is possible for motor cells to be innervated from both sides. This is especially true of those of bilateral function as, for example, those governing the muscles of the legs used in standing. A second case presented Brown-Sequard palsy of syphilitic origin. Here also there was paralysis of the one side, with contralateral loss of pain-sense and temperature-sense. Reusz believes that pain-sensations and temperature-sensations first enter the gray matter of the cord and then run in the lateral columns close to the anterior horns, and thus easily become involved in lesions of the pyramidal tract. In the second case there was some hyperesthesia on the paralyzed side, and contralateral analgesia and loss of temperature-sense. A theory is propounded to explain the origin of pain-sensations based on the facts that posterior roots give off collaterals, and that pain-sensations in the gray matter are transferred to another neuron.

3.—Strauss reports the case of a shoemaker, 29 years old, who, while serving in the army, was thrown from his horse, his left side coming to lie under the body of the animal. There was fracture of some ribs on the left side. While the patient was in the hospital, obstinate constipation developed, which continued for years. On two occasions it was so intense that celiotomy was performed, with improvement for a period of time, although at the operation no stenosis of the bowel had been found. Some time after the second operation symptoms of intestinal obstruction again occurred. At that time the man was passing large quantities of urine free from sugar and albumin, and with a specific gravity not above 1015. There was excessive meteorism, with tenderness in the left iliac region, occasionally retention of urine, obstinate constipation scarcely yielding to any medication, and frequent vomiting, not stercoraceous in character. In addition there was evidence of hysteria. On one occasion the patient had a typical hysteric attack during which the symptoms of meteorism completely disappeared, and which was followed by a spontaneous bowel-movement. Astasia-abasia, anesthesia of the left leg, hysteric hiccup, absence of the pharyngeal reflex of the left side, and other phenomena established the diagnosis of hysteria. Under proper treatment the man improved materially. Various factors are operative in the causation of hysteric meteorism—at times enterospasm and enteroparalysis, paresis of the abdominal muscles, abnormal position of the diaphragm, perhaps also swallowing of air with co-existing pyloric insufficiency.

4.—Kassowitz continues to assail **serum-therapy**, referring to the experience in Trieste and St. Petersburg, where the mortality, despite the use of antitoxin, has constantly increased. The reduction in mortality in other cities, as Berlin, London, Paris, is explained on the ground that all epidemic infections vary in their malignity and often show a sudden declination in their virulency. Kassowitz claims to have used the serum in adequate doses, and never to have



observed any influence whatsoever on the course of the disease or on the course of any individual symptoms.

5.—Baginsky characterizes Kassowitz's arguments as sophistry, and answers them by referring to his own previously published papers.

October 3, 1898. [35. Jahrg., No. 40.]

1. Extirpation of the Vagina. A. MARTIN.
2. The Occurrence of the Smegma-bacillus in Sputum. A. FRÄNKEL.
3. Phesin and Cosaprin. O. LENTZ and B. TENDLAU.
4. Lessening the Size of the Nose by Operation. JACQUES JOSEPH.
5. Toxic Tremors. A. ADAMKIEWICZ.

1.—Martin reviews the methods of, and indications for, **extirpation of the vagina**. He states that in recent years this operation has been performed for the relief of carcinoma and to cure proctiditis of the genital organs. Extirpation of the carcinomatous vagina was first performed by Freund 20 years ago. There are two methods of performing this operation, namely, through the vulva, as done by Zuckerkandl, and by total extirpation of the uterus, as done by Frommel. Olshausen has suggested a special method of total extirpation of the carcinomatous vagina, and Fenger another. Dührssen suggested the removal of the vagina through a perineal incision, while Peters has employed the Paquelin cautery for carcinomatous involvement. Martin reports a case in which he excised the vagina throughout its entire course for carcinoma, and also a case in which the vagina was excised for prolapse of the genital organs.

2.—Fränkel reports the presence of smegma-bacilli in the sputum, particularly in several cases of pulmonary gangrene, admitting, however, that practically the differentiation between the tubercle-bacilli and smegma-bacilli is not often a matter of importance. In ordinary cases of pulmonary tuberculosis the method of sputum-staining in vogue suffices fully, and Fränkel has never found in the ordinary mucopurulent sputum bacteria of the character of smegma-bacilli. On the other hand, he considers it absolutely essential in all cases with putrid sputum, rich in fatty acids and myelin, in which bacteria resembling tubercle-bacilli are found, to make a thorough investigation. He employs Honsell's method. In this the preparation, stained with carbol-fuchsin, is immersed for ten minutes in a solution of HCl in absolute alcohol, and afterward stained with alcoholic methylene-blue solution. If by this method the bacteria previously noted disappear, they are probably smegma-bacilli. In some cases it may be necessary to resort to animal experimentation.

3.—Lentz and Tendlau have found **phesin** and **cosa-prin**, two new antipyretics, of very little value.

4.—Joseph has devised a **plastic operation to diminish the size of the nose** for cosmetic purposes. A triangular flap, with its base downward, is dissected from the ridge of the nose, the skin on the tip of the nose being left intact. The second step of the operation consists in chiseling off the nasal bones and cartilage to the desired level. Finally, a triangular section is removed from the septum, and the sutures are introduced, first through the septum, then through the cutaneous wound.

5.—Two currents pass along the spinal cord to the ganglion-cells of the anterior horns from which the nerves for the muscles arise. One of these currents passes along the posterior columns, the other along the pyramidal tracts. The former arises in the cerebellum and keeps the muscles in a state of tension; the other originates in the cerebral cortex and conveys voluntary impulses to the muscles. When both currents are properly balanced, they act upon the muscles as a stimulus and as a check like whip and rein. If the excitation along the posterior columns is insufficient the muscles deprived of their check become unruly and produce ataxia. When, on the other hand, the muscles are controlled by the current along the posterior columns and the regulating action of the pyramidal tracts is absent, as, for example, in lateral sclerosis, the muscles of the lower extremities are in a state of excessive tension so that the joints become immovable, the gait stiff, labored and dragging. If the patient attempts to move, the hypertensioned muscles develop a state of tremor. In the beginning this tremor is slight, but in proportion as the tension of the muscles increases it becomes augmented, until finally a tremor-

paroxysm develops. It thus appears that tremor arises from disturbances in the equilibrium of the two innervating stimuli. These disturbances consist in a weakening of the pyramidal tracts and a pathologic increase of the tension of the muscles. The lesions in the pyramidal tracts are organic and functional, and tremors may be divided into corresponding varieties. The functional type of tremor is highly important, as it acts as a herald of diseases amenable to treatment. Adamkiewicz refers especially here to the tremor of chill. Hitherto chill has been falsely interpreted. It has been assumed that contraction of the peripheral vessels was the basis of every shaking chill. Adamkiewicz believes, however, that the chill is nothing more than a disturbance in the equilibrium of the antagonistic nerve-currents, and depends on toxic enfeeblement of the pyramidal tracts, the poison causing the chill being a nerve-poison that attacks the cortical centers of the pyramidal system especially. If it induces a discoloration of the skin this is due to stimulation of the vasomotor centers along the spinal cord. As the chill weakens the patient materially, it is important to find some remedial measure. If it is true that the chill is the result of the action of toxins of the infectious diseases, there must be an antitoxin to antagonize them. The preparation of this antitoxin Adamkiewicz refers to the bacteriologists. He himself has found that **neurin** in subcutaneous injection produces a distinct chill in man, not followed by rise in temperature, but by exhaustion and debility lasting several hours. When the neurin was mixed with carbolic acid and then injected the chill did not occur, whence it is concluded that carbolic acid must be considered as the antitoxin to neurin. Upon the other physiologic effects of neurin the addition of carbolic acid had not the slightest influence. It may be possible to separate in the toxins of acute infectious diseases the chill-producing property from the others, and to paralyze it in a similar manner.

#### Neurologisches Centralblatt.

October 1, 1898. [17. Jahrg., No. 19.]

1. Changes in the Nerve-centers after tearing out of the Nerves, with some Considerations of their nature. G. MARINESCO.
2. Histotechnic of the Earliest Stages of System-degeneration. CARL SCHAFER.
3. A Hypothenar Reflex. F. HOLZINGER.

1.—Marinesco divides the changes occurring in the nerve-cells after resection of their axis-cylinders into three phases: Reaction, repair and degeneration. Reaction is characterized by solution of the chromophilic bodies and dislocation of the nucleus. During repair, the body of the cell swells and the nucleus returns to its normal position. The hypertrophy reaches its maximum in about 90 days, and the cells appear perfectly normal, excepting that they are somewhat darker than usual, and they may, therefore, be spoken of as in the pycnomorphous state. In the course of 20 days more, the distinction between the normal cells and those in a state of repair has almost disappeared. When the nerve is torn out, and its repair, thereby, prevented, the reaction-period is complete in the course of about 20 days. Then, instead of swelling and becoming pycnomorphous, the cells lose their chromophilic substance, and become smaller, and in the course of a month may have disappeared and the others are atrophic. The protoplasm has become translucent, the nucleus smaller, and deformed, and occasionally, the achromatic substance shows alterations. A few cells are very dark in color, partly from the retention of the chromophilic substance, and partly from the staining of the cell in mass. The staining of the achromatic substance is perhaps the result of retraction of the fibrillary net. The paper is based upon experiments made upon the hypoglossal nerve and nucleus of rabbits, and is illustrated by some excellent drawings.

2.—Being dissatisfied with the ordinary methods of demonstrating the early stages of degeneration in the columns of the spinal cord, particularly beginning degeneration in the posterior columns, Schaffer has modified the Marchi method in such a manner that he applies it only to tissue that has been over-hardened in Muller's fluid. By this method, the healthy nerve fibers are stained a dark brown, the degen-



erated nerve fibers remaining a transparent yellow. Sections from the spinal cord of a man suffering from parietic dementia showed a remarkable agreement between the areas involved and the postero-median rootzone of Flechsig.

3.—Holzinger calls attention to the fact that pressure upon the pisiform bone is associated with the appearance of a fold in the skin on the ulnar side of the hand, the intensity of which varies in different persons. This reflex is probably due to a contraction of the palmaris brevis, which persists as long as pressure is maintained, and depends in intensity upon the degree of pressure. The same reflex may, however, be obtained by sticking the skin over the pisiform bone with a needle, preferably one that is blunt, showing that cutaneous irritation plays a subordinate part. The reflex is obtained best when the hand is slightly flexed, differing, therefore, from other reflexes in the fact that the muscle reacts best when relaxed. [It can be elicited also by similar irritation of other portions of the hand and especially of the fingers on both palmar and dorsal aspects, though much more readily from the palmar, and also by pinching.]

October 15, 1898. [17. Jahrg., No. 20.]

1. Contribution to the Pathology of Myxedema. W. MURATOW.
2. The Central Course of Gowers' Bundle. G. J. ROSOLIMO.
3. A Case of Bilateral-sciatica in the Course of Acute Parenchymatous Nephritis. MICHAEL LAPINSKY.

1.—Muratow reports the case of a girl, 6 years old, born of young and healthy parents without constitutional disease, who shortly after birth was noticed to be abnormally stout, while her hair was scanty, and the skin dry and cold. The child grew but little in length, at the end of 6 years measuring 73 cm., but weighing 20.7 kg. The frontal region was notably smaller than normal. There was increased mechanical and electric irritability of the muscles. The patient in all respects resembled a typical **cretin**. Death occurred as a result of pneumonia. At the autopsy, the thyroid gland was not found. Microscopically, a few gland-like tubes were found just above the first cartilage of the trachea, which may represent atrophic thyroid tissue. The cells of the cortex were stained without abnormal intensity, but the processes were swollen and varicose. The tangential fibers stained faintly. The short arciform fibers seemed to be thinner, fewer than normal, and they stained faintly also. The neuroglial net was thick, and there seemed to be an excess of neuroglia-cells. The fibers of the voluntary muscles were slightly swollen. The results of a study of the conditions found are summarized as follows:—The cells of the brain-cortex exhibited the changes characteristic of an intoxication, while the arciform fibers displayed a secondary alteration due to interference with their development. These changes explain the psychic alterations and the diminished irritability of the cortex which has been described by Horsley.

2.—Rosolimo studied the spinal cord and brain from a girl, 12 years of age, who had suffered for 3 months from a **total transverse lesion of the cord**, as a result of sarcoma. Sections stained according to the method of Busch showed complete degeneration in the lumbar region, with typical ascending degeneration in the rest of the cord. Gowers' bundle was found in the region of the decussation to maintain its normal place, but beyond, it passed along the lower olive, still at the periphery between the restiform body and the ascending root of the fifth nerve. At the level of the fibers of the trapezoid body, it left the periphery and approximated a dorso-lateral position. At the level of the lateral tegmental nucleus, it turned sharply and entered the lateral fillet; some of the fibers decussating with those of the opposite side. It gave fibers to the posterior corpus quadrigeminus, and at the level of the anterior corpus quadrigeminus it turned in a ventro-lateral direction and entered the fasciculus longitudinalis intermedius, finally breaking up in the substantia nigra. From these observations it is believed that the fibers of Gowers' column have their termination in three places: First, the posterior quadrigeminal bodies; second, the substantia nigra; and third, the globus pallidus. The other columns appeared to be normal.

3.—Lapinsky reports the case of a man, 22 years of age, suffering from **acute nephritis**, who complained of severe pains in both legs in the course of the **sciatic nerves** and extending into the toes. The nerves were very tender, but the pain disappeared when the knees were flexed. Muscu-

lar movement in the legs was normal. The electric reactions were not altered. The patient died in the course of two weeks, and examination of the nerves showed hyperplasia of the cells in the vessels of the peri-neurium and a condition of periendoarteriolitis. Similar changes were found in the vessels of the endoneurium. Some of the nerve-fibers exhibited peculiarities in the staining of the myelin, and the case indicates that the neuralgias of acute nephritis are due, not only to the toxins circulating in the blood, but also to anatomic changes in the nerves themselves.

## Centralblatt für innere Medicin.

October 1, 1898. [19. Jahrg., No. 39.]

1. Rheumatic Laryngitis Circumscribed. UCHERMANN.

1.—Goldscheider, Hirsch and Ephraim have objected to Uchermann's description of **circumscribed nodular rheumatic laryngitis** as a disease-entity; that one of his cases was an instance of acute rheumatic swelling of the cricoarytenoid joints, and the other one of ordinary acute catarrhal rheumatic laryngitis. To this Uchermann replied that he did not describe a condition that occurred in conjunction with acute rheumatism, so that it was not an acute swelling of the joint; and he further says that catarrh does not occur with the affection that he has described; and, therefore, instead of his having made a mistake in this way, the absence of catarrh is really a good point in the differential diagnosis. The affection that is most easily mistaken for this nodular rheumatism of the larynx is gummatous infiltration; and Uchermann reports one case in which, with a history of syphilis, there was marked edema of the left vocal band, which remained in the cadaveric position. The trouble did not improve with the use of salicylates, so iodids were administered, and the difficulty vanished entirely after a time. Uchermann states that he has seen the same nodular rheumatic affection in the pharynx, and he relates briefly the case of a girl who had nodules the size of hazelnuts in her pharynx, and these he would have considered gummatous but for his knowledge of the rheumatic nodules that occur in this situation. Complete cure followed upon the use of sodium salicylate. Uchermann closes his paper by saying that general acute rheumatism may be accompanied by rheumatism of the larynx. It is then usually an inflammation of the cricoarytenoid joint; but there is a distinct rheumatic affection of the larynx that occurs in people of a rheumatic disposition, but usually not in conjunction with an acute attack of rheumatism. This may show itself in the form of localized swellings of the mucous membrane, with irritability and injection; or of infiltration; or as nodose rheumatic laryngitis *sui generis*. Uchermann finally says that it may occur also as a rheumatic edema. He further notes that he has seen an intermittent, double, serous inflammation of the middle ear in alternation with rheumatism of the larynx, and he suspects that this was rheumatic also. He has no doubt that rheumatism is a general infection that may localize itself in almost any portion of the organism.

October 8, 1898. [19. Jahrg., No. 40.]

1. A Remark Concerning Pichler's Suggestion as to Visibility of the Lower Border of the Liver. M. LITTEN.

1.—Litten confirms fully Pichler's description of a shadow to be seen following the edge of the liver upward and downward with expiration and inspiration. Contrary to Pichler's statement that this is seen but seldom, Litten states that he finds it quite a common phenomenon. It is most marked when the tension of the abdominal walls is not very great, and when the patient is not excessively fat. Litten notes that he has spoken of this previously in writing of the diaphragm-phenomenon, and he also calls attention to the fact that this phenomenon and the liver-shadow are entirely synchronous. He states that he has already considered the liver-shadow of much importance, because it gives an exact impression of the size of the liver and of the range of its motion upon respiration. The shadow is marked in proportion to the sharpness and thinness of the lower edge of the liver.

October 15, 1898. [19. Jahrg., No. 41.]

1. The Question of Edema with Nephritis. OSKAR REICHEL.

1.—Reichel has previously expressed the belief that in nephritis the insufficiency of the function of the kidneys causes a physical alteration in the tissues, through the re-



tention of toxic substances, and that this causes edema as well as increase of the arterial pressure, owing to increased resistance, with resultant hypertrophy of the heart. In order to determine if the tissues of nephritic subjects show actual physical alteration, he injected about 50 cu. cm. of salt-solution into the subcutaneous tissues of a number of patients with nephritis and into those of a number of others with cardiac dropsy, or with local stagnation of the circulation owing to varices and the like, and also into the tissues of healthy individuals. It was found that the fluid was absorbed fairly rapidly in all instances, except in the cases of nephritis. In these the infiltration of the tissues persisted oftentimes for from 5 to 10 days before its complete disappearance, while in healthy individuals, or in those the subjects of other affections than renal disease, the infiltration always disappeared within 2 or 3 days; and with a persistence throughout this length of time there was never more than slight edema. The conclusion is reached that this experimental work proves that the tissues of nephritic subjects are altered as to their power of absorbing the fluid in the tissues, and it is believed that this is a strong support for Reichel's earlier theory of the causation of nephritic edema.

### Centralblatt für Gynäkologie.

October 1, 1898. [22. Jahrg., No. 39.]

1. Lysol-poisoning from Intrauterine Douching. HEINRICH CRAMER.
2. Anomalous Course of the Ureter in a Case of Pelvic Tumor, and its Practical Significance. WILH. RÜHL.

1.—Cramer reports a case of **lysol-poisoning** in a primipara, 22 years of age, following a normal labor, after a vaginal douche of 4 liters of 1% solution of lysol had been used. On the afternoon of the same day there was a slight rise of temperature, and a second douche was given. After 1½ liters of the solution had been used the patient became suddenly restless, her breathing heavy, her eyes rolled, and she lost consciousness, and her pulse was very rapid and feeble. The douching was stopped and the patient regained consciousness after three minutes, but complained of feeling dizzy, and sank into a condition of stupor. On the next day the urine was dark brown, contained blood-casts, numerous broken-down red blood-corpuscles and 0.3% of albumin. The general condition became worse from day to day, and death resulted after a week. Upon necropsy, endometritis, parametritis, and endophlebitis of the uterus were found, with hemorrhagic inflammation of the kidneys. Cramer mentions a considerable number of cases of lysol-poisoning and believes that the drug should be used with care, and that the amount of fluid used should be taken into consideration, as well as its concentration.

2.—Rühl reports a case of operation for **intraligamentous fibroid tumor of the uterus** occurring in a woman, 43 years of age, in which the right ureter was found to pass directly through the tumor for a distance of 7 cm. The ureter was dissected out with great care and the tumor was then removed in a typical manner. Only one similar case has been reported in literature.

October 8, 1898. [22. Jahrg., No. 40.]

1. The Technic of the Removal of Vaginal Pessaries. MAX MALLER.
2. Floating Kidney and Appendicitis. G. M. Edebohls.

1.—Madlener states that there are 364 cases on record in which deleterious results have followed retention of vaginal pessaries. In many cases the instruments have grown into the vagina or have become incrustated or produced perforation and have been removed with difficulty. The use of Gigli's wire saw is suggested in the removal of such retained pessaries. An aneurysm needle threaded with silk, is carried about the pessary, the saw is tied to the silk, by means of which it is then drawn around the pessary. Madlener reports two cases in which he used this procedure successfully. In one case the pessary had become encrusted after 2½ years' constant retention; in the second it had been retained 5½ years.

2. Edebohls reports the coexistence of **appendicitis and floating kidney** in 58 cases. He believes that the pressure of the floating kidney results in venous stasis in the region of the appendix and cecum, and this belief seems con-

firmed by the fact that 12 cases of appendicitis have been relieved by nephropexy, without further treatment. This operation will bring relief in cases of coexistent appendicitis only when the floating kidney is of recent occurrence. Several cases are briefly reported.

### Semaine Médicale.

1. Sclerosis of the Thyroid Body in Tuberculous Subjects. ROGER and GARNIER. August 3, 1898.
2. The Serum-diagnosis of Tuberculous Effusions. P. COURMONT. August 10, 1898.
3. Melanoderma in Epileptics. LANNOIS. August 17, 1898.
4. Lumbar Puncture. ALBERT HEYDENREICH. August 17, 1898.

1.—At a meeting of the Société de Biologie Roger and Garnier reported four cases of chronic or subacute **pulmonary tuberculosis** presenting **sclerosis of the thyroid body**. The sclerosis was not appreciable to the naked eye; but microscopic examination disclosed the lesions of periarteritis and endarteritis. The thyroid tissue itself was slightly altered; but the organ seemed to be in a state of functional activity as indicated by the accumulation of cells in the acini. Neither the formation of tubercles nor the appearance of giant-cells, nor the presence of bacilli could be demonstrated. No like condition was found in the examination of 18 thyroid bodies taken from subjects dead of other diseases. The sclerosis is somewhat analogous to tuberculous cirrhosis of the liver and is probably due to the action of toxins circulating in the blood.

2.—Courmont has endeavored to diagnose the **tuberculous nature of effusions** by the specific agglutinating property of the fluid when added to liquid cultures of the tubercle-bacillus. Of 11 cases of pleuritis with effusion, clinically of a tuberculous nature, a positive reaction was obtained in 10. The negative result was seen in a case that did not present tubercle-bacilli in the sputum. Of 9 cases of pleuritis with effusion not of a tuberculous nature clinically positive reactions were noted in 4 of "cold" effusions. The 5 negative results were obtained in cases of hydrothorax due to cardiac disease and in cases of pleuritis that were recognized at autopsy as nontuberculous. Of 13 specimens of ascitic fluid examined, 5 obtained from cases of tuberculous peritonitis yielded a positive reaction, while the other 8 specimens, from cases of cirrhosis of the liver, yielded negative results. In 8 cases of tuberculous synovitis the agglutination was noted, but it was less well-marked than in the fluid form cases of tuberculous pleuritis and of tuberculous peritonitis. The tuberculous serum was mixed with the culture in the proportion of 1 to 5, 1 to 10, and 1 to 20. Stronger dilutions than 1 to 5 caused agglutination with nontuberculous effusions. On account of the negative results of the direct bacteriologic examination of these effusions, and because of the length of time required in inoculation-experiments, this method appears to be of practical diagnostic importance.

3.—Lannois reports 5 cases of **epilepsy** in which the patients presented **melanoderma** characterized by small, rounded points in size from the point of a pin to a pea. These points were dark, brown, or almost black at the circumference, and were sometimes coalescent. The pigmentation was noted on the trunk, from the neck to the thighs, and it was particularly well marked in regions in which friction occurred (axillæ and waist), but it did not extend to the face or the limbs. The phenomenon is considered a trophic manifestation dependent upon the sympathetic system for its production.

4.—Heydenreich concludes: (1) With regard to lumbar puncture that it is impossible to form a positive opinion as to its value; (2) the operation is not without danger and it should be performed cautiously; whenever there is a grave affection the procedure is justifiable, and it is in such cases that the question of the advisability of the attempt suggests itself; (3) from the therapeutic standpoint, lumbar puncture seems to have been of service in some cases; in the majority of instances, however, it has not been efficient; (4) lumbar puncture may or may not throw light upon the diagnosis; a negative result of the examination of the fluid obtained at the operation does not warrant a conclusion; but, on the other hand, a positive result often indicates the existence of a grave affection against which therapeutics is powerless.



## Original Articles.

### THE MINUTE PATHOLOGY OF ACUTE HEMORRHAGIC PANCREATITIS ASSOCIATED WITH MULTIPLE FAT-NECROSIS.<sup>1</sup>

By ALDRED SCOTT WARTHIN, M.D., Ph.D.,

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THE unsatisfactory position which the pancreas holds in the minds of clinicians is shown by the scant attention which the best modern works give to a consideration of its diseases. In the majority of our textbooks the ground is covered in two or three pages, and the student is left to gather the impression that the part played in disease by this organ is one of slight importance. Many authors make the definite statement that such is the case, and so dismiss the subject. Yet the bibliography of the pancreas is an extensive one. A study of it, however, reveals the fact that it is the purely physiologic aspect which has been discussed to any great extent, while the clinical and pathologic sides remain in the background.

Within the last decade the study of the diseased conditions of the organ, both clinically and in the postmortem-room, has received a greater amount of attention. The relations of morbid conditions of the pancreas to diabetes mellitus, as shown by Lancereaux and Hanseemann, and confirmed by the experimental work of von Mering and Minkowski, and the classical paper of the American, Fitz, on acute pancreatitis, have given a great impulse to the clinical observation and pathologic study of this organ. This is strikingly shown in the great increase of the literature upon the pancreas since the appearance of Fitz's article in 1889. It is, indeed, chiefly due to this work that the organ has assumed a more important clinical position, and that the pathologic study has been greatly stimulated.

In the Middleton-Goldsmith lecture for that year, published in all of the leading American medical journals, Fitz reviews the literature of inflammatory conditions of the pancreas, and from an analysis of 70 cases, established the clinical entity of acute pancreatitis, of a hemorrhagic, a suppurative, and a gangrenous type. The great interest excited by this able paper led to the diagnosis and report of numerous other cases falling into this category, and the conditions have come into the most recent textbooks on medicine, notably Osler, as recognized and accepted clinical forms.

In the first year after the publication of Fitz's article, 11 well-established cases were added to the literature; and I have been able to find in the literature, from 1890 to the close of 1897, 92 cases of acute pancreatitis, with or without fat-necrosis, and, for the greater part, of the hemorrhagic type. This gives, then, 103 cases reported in the 8 years following Fitz's work in contrast

to the 70 cases he was able to glean from the entire literature previous to 1889. These cases include those of fat-necrosis in which no changes could be made out in the pancreas. When the nature of the disease is considered, its quick course, the manner of death, the liability to incorrect diagnosis, and the relative rarity of postmortems in this country where a large majority of the cases have been reported, the disease itself cannot be placed among the curiosities of medicine, but must be looked upon as occurring frequently enough to give it a position worthy of emphasis.

In spite of this recent access of interest in the morbid conditions of the pancreas the organ, in some respects, may still be regarded as an almost untrodden field of research. So far as ordinary postmortems are concerned, this is true; the examination of the organ being usually very brief and superficial. I have, in fact, seen able and noted prosectors, who, in the usual postmortem, overlooked it entirely; and when the examination is made, as a matter of routine, it is frequently performed in a very incomplete and unsatisfactory manner. While the diagnosis in the cases of pancreatitis reported has in all cases been confirmed by autopsy or operation, the thorough microscopic study of the pancreatic conditions has been carried out in but relatively few of the cases. In the majority of the cases the gross lesions only are described. In about one dozen of the cases there has been a thorough study of the changes in the pancreas and the necrosed fat, but in no case has the microscopic investigation of all the organs and tissues been systematically carried out. I have been able to make such study during the past winter of the material obtained from a case of acute hemorrhagic pancreatitis, the autopsy of which was made by me a little more than a year ago. The report of this case may be of some value as a contribution to our knowledge of the minute pathology of the pancreas. The limited extent of our knowledge of the microscopic changes in this organ, as shown by the last editions of such works on special pathology as Ziegler and Kauffmann, was, in itself, an inducement to this study and to the report of the findings.

The history of the case to be described is as follows:

Mr. J. M., an American, aged 40, married and by occupation a switchman, was admitted to the surgical clinic of the University Hospital on the afternoon of April 16, 1897. At the time of admission the patient was suffering from extreme abdominal pain with frequent attacks of vomiting and showing symptoms of collapse. The history given at this time was as follows: Two days previously the patient had returned from his night duties in the railroad to his boarding-house complaining, as he entered the door, of severe pain in his right side. He ate a good breakfast and for some time felt better, but the pain soon returned with renewed severity. Attacks of vomiting occurred. The pain became so severe and colicky in nature that the patient repeatedly expressed alarm for his life. The first physician who was called found him in an attack of great severity, which was only temporarily relieved by large doses of morphia. He was alternately quiet and in great pain during the day. To the attending physician's question as to any injury or blow received he gave a negative answer, and did not ascribe his

<sup>1</sup> Read before the Michigan State Medical Association at Detroit, May 6, 1898.

attack to any previous event or condition. This is important because of the medico-legal questions raised later in regard to this case.

On the next day the patient's family-physician was called, who found him in the early stages of collapse. Nothing was said by the patient at this time of any previous injury bearing by any possibility upon the case. The sudden attack of severe pain and its almost incessant continuance were the only points elicited. It was thought that a tumor-mass existed in the region of the appendix, and a diagnosis of probable appendicitis was made, and the man was removed to the hospital with a view to operation. Operative interference was, however, deferred until the next morning, the patient's moribund condition at that time rendering it out of the question. A clinical diagnosis was made of acute intestinal perforation with general peritonitis. Death occurred on the morning of the 17th, about 50 hours after the inception of the pain.

After the death of the patient it was learned that he had been taking treatment for impotency. Just what was the nature of his symptoms I have been unable to discover, but the point may be of some importance in the consideration of the pancreatic condition and a possible connection with diabetes. No examination of his urine was made in the hospital, and I could not find that any had been made by his physicians. The patient was formerly a very heavy drinker, but for some time had abstained. In the last six months before death he had suddenly taken on a large amount of fat.

About six months after the patient's death new points in regard to his history were brought out in the controversy with an accident-insurance company regarding the payment of the accident-policy which the man carried at the time of his death. The medico-legal point raised was one regarding the cause of death, and its possible relation to an accident. On behalf of the family of the deceased a fellow workman had sworn that on the early morning of the 16th of April, 1897, the patient after pushing against the lever of a turn-table, held on about the level of his abdomen, had complained of severe pain in that region. Nothing was said at this time of a fall, but later the same man testified that the deceased while pushing at the turn-table had fallen from the stone-coping into the pit below, a distance of about 35 in. He further stated that the man had fallen against him, thus breaking the force of the fall. The patient, however, if he had received the alleged fall attached no importance to it, as to his medical attendants he denied that he had received any injury. The medico-legal side of this case has already been published by Dr. Hitchcock, of Detroit, the surgeon for the insurance company.<sup>2</sup> It is sufficient to say here that the case was compromised.

The autopsy was conducted by myself on April 17th, about two hours after death, in the presence of Dr. Dock, and the hospital surgeons, Dr. Nancrede and Dr. Darling. Because of some difficulty in obtaining permission to open the body the autopsy was conducted under unfavorable circumstances in an undertaker's shop. Permission was given to open the abdomen only, but the thoracic organs were examined through the diaphragm. I give here my section-protocol in full.

**SECTION-PROTOCOL.**—The body is large, well-built, the musculature well-developed and in good condition. There is a large amount of fat. The skin is in good condition. Slight edema exists with marked congestion of the superficial veins, almost cyanotic over the upper extremities and thorax. Hypostasis is very marked. Rigor mortis is present in the upper portion of the body. Body heat is present. The head was not opened, the spinal cord not examined.

*The abdomen* is distended, tympanitic. On making the section into the abdominal cavity all bloodvessels are found to be congested. The tissues bleed very freely. The muscles are very edematous, yellowish, and soft. Abdominal fat is very thick, and full of congested vessels. No gas escaped on opening the peritoneal cavity.

*The peritoneal cavity* contains about one liter of a dark-brown fluid, containing many apparent blood-clots, and seems to consist chiefly of broken-down blood. It has a marked odor of acetone. The fluid contains also much liquid fat. *The diaphragm* is on the fourth intercostal space

on the right; on the fifth rib on the left. The thorax was opened through the diaphragm. There is a large amount of clear fluid in the pleural sacs, but the amount cannot be measured.

*The pericardial fluid* is greatly increased, clear, and cannot be measured. The subpericardial fat is greatly increased; there is a small grayish area in the fat on the anterior wall of the left ventricle. Otherwise the pericardium is normal.

*The heart* is of normal size; the ventricles filled with jelly-clots. There are white clots in the auricles and great vessels. The valves are normal. There is a moderate amount of arteriosclerosis in the aorta. The heart-muscle is very soft, very moist, and yellowish.

*The pleuras* are cloudy, but there is no fibrinous exudate. The lungs are almost black-red; on section they drip with blood and a foamy exudate. No areas of pneumonia are visible to the naked eye. There are numerous small firm thrombi throughout the smaller veins, but no infarcts are seen. The examination of the bronchial glands is negative.

*The abdominal organs* are in normal position. Throughout the fat of the mesentery and the epiploic appendages and in the omentum there are numerous areas of necrosis. The fat is very thick and of a bright yellow color. Scattered through it are areas light-gray to a deep-brown or even black color, and varying in size from a pin-point to that of the hand. Most of these are anemic; others are hemorrhagic throughout, while others have hemorrhagic borders. Many of the areas look as if the fat had been touched by a hot iron. All of the fat-tissue is very edematous, and all bloodvessels are greatly engorged.

Because of the suspicion of perforation the intestines were first removed. The serosa is very edematous, much swollen, and covered with blood-stained fibrin. Fresh adhesions easily separated are found between the coils. The fat-necrosis is found throughout the thick fat of the mesentery and the epiploic appendages. Careful search of the entire intestine, large and small, fails to reveal any perforation or lesion of the intestinal wall beyond an intense injection of its vessels. The appendix is apparently normal.

*The stomach* contains about 500 cu. cm. of fluid having the odor of whisky and containing milk-curds. There is an intense injection of its wall, otherwise it is normal.

*The liver* weighs about seven pounds. It appears greatly swollen and edematous, and is dark-red in color. On section it drips with blood. The surface is cloudy, moist, deep-red; the lobules are not clearly defined. There is a cavernous tumor about the size of a small walnut on the anterior surface of the lobe. It contains a dark coffee-ground like broken-down blood. The bile-ducts are filled with bile. The lower edge of the organ is enormously swollen and edematous.

*The gall-bladder* is full of bile. No gall-stones are found. The walls of the gall-bladder are so swollen and edematous that it was mistaken at first for a tumor.

*The spleen* is enlarged and deep-red in color; very soft; the pulp flows on section. The stroma and follicles cannot be made out.

*The kidneys.* In both kidney-regions, but especially on the right side, there are large swollen, spongy masses which were at first thought to be tumors. The fatty capsule of both kidneys is greatly thickened. The fat is edematous and necrosed, and in many places infiltrated with blood, so that when the organ with capsule and adrenal is removed the mass resembles a large hemorrhagic tumor. On section the kidney is found in the central portion of this mass of necrosed and edematous fat. The kidneys are small, edematous, much congested, but otherwise present no marked change. The fatty capsule of the right kidney is black almost throughout, with here and there areas of yellow fat. The fat-tissue bleeds very freely, and is very moist and spongy. Fresh hemorrhagic areas are found throughout. The surrounding retroperitoneal tissue is infiltrated with blood, edematous, and resembles a black sponge. This edema extends into the psoas and the lumbar muscles, and the muscle-tissue looks necrotic. These changes are more marked on the right side than on the left.

*The adrenals* appear normal. They are surrounded by necrosed and edematous fat, containing hemorrhagic areas.

*The pancreas* is much enlarged, weighing 320 g. It is about three times the normal size. It is abundantly infiltrated with fat, which shows the same necrosis as that in the omen-

<sup>2</sup> *Medical News*, February 10, 1898.



turn and mesentery. The organ is hemorrhagic throughout, a large hemorrhage being found about 2 in. to the left of the head; the blood forming a large clotted mass having a sour odor, and extending retroperitoneally on either side toward the kidneys. On the right side it is apparently confluent with the hemorrhagic areas in the fatty capsule of the kidney. The pancreatic tissue varies in color from pale-lemon to dark grayish-yellow. It is cloudy and much softer than normal. Each lobule is outlined by a zone of hemorrhage varying in degree in different areas. The largest areas of hemorrhage are adjacent to the areas of necrosis in the fat-tissue. A large clot lies just beneath the middle of the organ raising it about  $1\frac{1}{2}$  in. The necrotic areas in many places are finely cheesy, crumbling in the fingers like fine ashes. They have everywhere the peculiar sour odor noticed in the fluid in the abdominal cavity. The head of the pancreas presents an appearance resembling the normal organ; the hemorrhage is most marked in the body, while the tail shows but little hemorrhage, but much more parenchymatous change.

The bladder contains about 200 cu. cm. of turbid urine. The bladder-wall is somewhat thickened.

The prostate is enlarged. There is no evidence of new growth.

The examination of the external genitals is negative.

The retro-peritoneal lymph-glands are very much swollen and edematous.

The mesenteric glands are also greatly swollen, soft and edematous. The region of the solar plexus is hemorrhagic and very edematous. All the tissues surrounding this region in connection with the pancreas and abdominal blood-vessels were removed in a mass for farther study. The more careful examination of the apparent blood-clot behind the pancreas made it evident that the chief part of the enlargement is due to edema and not to hemorrhage.

Unfortunately no chemical examination was made of the abdominal fluid, as under the circumstances in which the autopsy was made it could not be saved.

It contained much liquid fat in the form of large and small droplets. From the appearance of the fibrin upon the peritoneum it seems almost certain that the apparent blood-clots in the fluid were only masses of fibrinous exudate stained dark brown with broken-down blood pigment. Close at hand the odor of the fluid was peculiarly disagreeable and sour, but at a little distance the odor of acetone only was perceived.

**MICROSCOPICAL EXAMINATION.**—Material was taken from all organs and fixed in bichlorid, alcohol and Müller's fluid. It was imbedded and cut in both celloidin and paraffin, and besides the ordinary stains many especial stains and reactions were applied in the study of the sections.

**The heart.** Sections were made through the heart-wall at the location of the small area of fat-necrosis in the sub-pericardial fat. The pericardium is thickened here and very edematous, having the appearance of undergoing solution. The sub-pericardial fat has lost its nuclei; the cells retain their shape and size, some are finely granular, others have coarser granules. There is a curious brownish-yellow homo-

geneous substance in the lymph-spaces between the fat-cells, probably a disintegration-product of hemoglobin. It gives the iron-reaction. There is a very marked edema of the interstitial connective tissue, especially around the larger vessels. The veins are greatly dilated and all contain masses of degenerated red cells, forming in some places compact brownish-yellow masses containing fibrin threads, evidently recent thrombi. That these changes in the blood are not artefacts is shown by the fact that in the arteries the red cells preserve their form, and no brownish masses are found. In one large vein a hyaline thrombus formed of agglutinated leukocytes was found. The walls of the veins and smaller vessels are very edematous, and small extravasations of blood occur from the capillaries. The endothelial cells of the smaller vessels show many important changes. Some of them are undergoing necrosis with disintegration of their

chromatin; others have a great excess of chromatin and appear as if hypertrophic. In some vessels the nuclei are crowded closely together, in others they are scanty and the nuclei are small and shrunken, becoming in some cases small, irregular points of chromatin. The heart-muscle is light and hazy, evidently a fatty degeneration, but as no sections were treated with osmic acid this could not be proved. The outlines of the cells are less distinct than normal, and the striations do not show. The nuclei in many places show vacuolation.

**The lungs.** The sections of lung show a very marked edema and extreme congestion. Many vessels are filled with opaque-brownish masses, probably broken-down red cells. There are also firmer, older thrombi in the moderate-sized vessels. No infarcts were found and no severe hemorrhages. The bloodvessels show the same changes in their walls that are found in those of the heart. The alveoli are filled with desquamated and swollen cells. No areas of pneumonia were found. Some appearances suggest the possibility of fat-embolism being present, but as no portion of the lung had been fixed in osmic acid, this could not be decided with certainty.

**The spleen.** The sections show an extreme acute congestion. There are areas of necrosis surrounded by a zone of hemorrhage resembling anemic infarcts. The large bloodvessels show numerous changes in the endothelial cells, and a marked edema of their walls. Some of them contain masses of blood-pigment. The arterioles of the follicles show amyloid deposit. The outlines of the follicles are indistinct, the central portions of the majority are edematous and necrotic, resembling the changes found in the spleens of severe diphtheria-intoxications.

**The liver** shows a very marked acute congestion, especially of the portal system. The liver-cells are somewhat atrophic. There is a slight amount of fat-infiltration, but no necrosis of the fat-containing cells was observed. The liver-cells are unusually granular, but the majority of the nuclei stain well. The cell-protoplasm stains much more deeply than usual with hematoxylin. The capsule of Glisson is very edematous throughout, and there is a slight small-cell infiltration in it. The bloodvessels show changes



Fat-Necrosis of the Capsule of the Right Kidney.

similar to those mentioned above, being by far the most marked in the portal veins. The endothelial cells of the intralobular capillaries show also in places a hypertrophy of the nucleus; in other places a retrograde change is evident. Sections taken from the lower border of the organ show great edema and hydropic degeneration both of the liver-cells and of the connective tissue. The small tumor found on the surface is a cavernous angioma with enormously dilated blood-spaces containing thrombi of degenerated blood.

*The kidney.* Both kidneys show practically the same conditions. There is a slight chronic change, especially about some of the glomeruli. Some of these are completely obliterated, being replaced by hyaline connective tissue; in others the capsule of Bowman is greatly thickened. The interstitial connective tissue is also increased in a few places. The smaller arteries show sclerotic changes. There is an extreme acute congestion, both arterial and venous, more marked in the veins. There is also the same marked edema of the connective tissue that was seen in the other organs; this is greatest around the vessels. The brownish masses of pigment are found here also in the smaller veins. The endothelium shows changes similar to those described, but not so marked as in the other organs. There is a very slight cloudy swelling of the cells of the convoluted tubules. There is also a hemorrhage into some of the glomeruli, and some of the glomeruli are compressed by the collection of the edema inside of Bowman's capsule.

*The prostate.* The sections of this organ show no abnormal condition. It contains numerous corpora amylacea.

*The adrenals.* The sections show the usual postmortem change, but otherwise are negative.

*The intestine.* There is marked edema of the outer coat with here and there patches of fibrinous exudate on the surface. The bloodvessels of the wall are extremely congested and contain an excess of leukocytes. There is also a moderate degree of small-cell infiltration throughout the wall. The muscle-coats are edematous. The mucosa shows throughout an early stage of necrosis, most probably a post-mortem change, but the solitary follicles show a much more advanced stage of necrosis than the epithelium. This is just the reverse of the usual postmortem change. The follicles are also larger than normal and very edematous. The cells show a simple necrosis. The fat-cells in the submucosa are also necrosed. The complete necrosis of the adenoid tissue extends throughout the stomach and intestine. It is found also in the appendix, where the epithelium is relatively well-preserved. No hemorrhages are found in any part of the digestive tract.

*The stomach* presents the appearance of a beginning post-mortem necrosis with complete necrosis of its adenoid tissue. There is marked congestion. No hemorrhages were found.

*The mesenteric glands* are all enlarged, showing a marked hyperplasia of the reticulum as in chronic lymph-adenitis. There is hyaline deposit in the follicles and to a less extent in the stroma. The most striking change, however, is a liquefaction-necrosis of the follicles. This is seen in all stages from a slight edematous condition in the central portion of the follicle to a complete liquefaction. The trabeculae of the glands show the same extreme edema amounting almost to a liquefaction which is found in other parts, especially in the interlobular connective tissue of the pancreas. The lymph-vessels in and about the glands are enormously dilated and are filled with a clear, very finely granular or homogeneous mass which takes no stain. In many cases it looks like the substance of which hyaline casts are composed, and in other places it resembles exactly the appearance presented by the neighboring necrotic fat-cells. I am inclined, therefore, to believe that it is a fat-product. Numerous leukocytes lie in little groups at the periphery of these masses next to the wall of the lymph-vessels. The fat-tissue surrounding the glands is entirely necrosed, and in it are nerve-bundles showing various stages of necrosis. Some of the larger nerve-trunks are hemorrhagic in their centers, while others are surrounded by areas of hemorrhage.

*The retro-peritoneal glands* show changes similar to those found in the mesenteric glands.

*Fat-tissue.*—The pictures presented by the dead fat-cells are so varied that for the sake of brevity I shall make the description as brief as possible.

1. The dead fat-cells may appear as normal fat-cells without nuclei. They may be colorless or yellowish.

2. They may be heavily granular, the granules staining deeply with hematoxylin.

3. They may contain a dark brown homogeneous substance which does not stain with any of the ordinary stains.

4. They may appear to be made up of fine fibrillae, the fibrillae staining well with eosin.

5. They may be finely granular. In some cases the fine granules stain deeply with hematoxylin, in other cases they take a peculiar bright pink with borax carmine.

6. The outline of the fat-cell may entirely disappear and the cells break up into fine granules or into fine fibrillae.

7. The cell may acquire a hyalin appearance, waxy and homogeneous, with high refraction, staining with Van Gieson's stain exactly similar to hyalin deposit. In other cases they stain a deep blue with hematoxylin.

8. Areas of fresh necrosis may stain a deep blue because of diffused chromatin, but in some cases the blue color seems to be due to the presence of limesalts.

9. The areas of necrosis may be hemorrhagic or anemic. In the former case the areas of necrosis are most marked nearest to the bloodvessel, and the vessel wall shows edema and varying degrees of necrosis. The hemorrhage appears to be in all cases by diapedesis.

10. No fat-crystals were found in the dead fat-cells in this case. There was no appearance of crystals anywhere in the necrosed tissue.

11. There is no small-cell infiltration or proliferation of cells about the dead fat-tissue. The entire process seems very recent, so that no attempt at sequestration or encapsulation is found.

12. The most common picture in the necrosed fat is that of a partial liquefaction-necrosis, the cells losing their outline and passing into a clear, slightly stringy fluid containing here and there a brownish blood-pigment which contains iron.

13. The staining by Gram's or Weigert's method is negative, so far as germs are concerned, but the fibrin-stain produced a curious green coloration in certain of the dead fat-cells. There is but little fibrin present in the areas of necrosis. In the hemorrhagic areas it is present; few of the red cells retain their form, the blood being broken up into yellowish-brown masses of pigment which gives the reaction for iron with potassium ferrocyanid and hydrochloric acid. The bloodvessels show the same changes seen elsewhere. The nerve-trunks running through the fat-tissue show also varying stages of necrosis, edema, and hemorrhage.

14. The picture presented in many of the areas of fat-necrosis is that of an anemic infarct with hemorrhagic borders. The shape and distribution of the necrosed areas is, however, opposed to this view.

15. The areas of necrosis appearing black to the naked eye are made up of coarsely granular cells. The granules of these cells are opaque, brownish in color, and in the hardened material are not affected by any of the ordinary stains or reagents. Unfortunately the chemical nature of the changes in the fat was not studied in the fresh material, and the conclusions drawn from the study of the hardened material are of necessity unsatisfactory. I have thought it worth the while, however, to describe the appearances presented in the sections. The most common picture is that of a liquefaction-necrosis of the fat-tissue, associated with changes in the bloodvessels, hemorrhage, and breaking-down of the blood-cells into pigment masses.

*The pancreas.* Sections were made of every part, from the head to the tail. The pictures obtained here are infinite in their variety, and there are hardly two regions that resemble each other. The entire organ was examined very carefully in its fresh state after being taken to the laboratory. Especial attention was given to the bloodvessels and to the pancreatic duct. The splenic artery and its branches supplying the pancreas showed a very high degree of arteriosclerosis, but no rupture of the wall was found, only a diffuse injection of the intima with here and there a minute hemorrhagic spot. The artery-wall was very edematous. Careful examination of all the vessels near the large hemorrhage showed no tear or lesion of the wall. The duct of Wirsung was patent and empty. Examination at the post-mortem of all of the remaining abdominal vessels failed to reveal any source of hemorrhage per rhexis.

Since the pancreas undergoes postmortem changes very quickly it became a matter of importance to decide how



much of the changes present could be ascribed to the ante-mortem condition. The autopsy was made two hours after death, while the body was yet warm. Comparing portions of the pancreas taken from cases whose autopsy ranged from 6 to 12 hours after death I find that in 15 cases the post-mortem changes are so slight as to be negative. In 5 cases whose post-mortem was made 12 hours after death there was a slight cloudy swelling. Moreover, the head of the pancreas in this case contains areas showing no change at all. It is fair then, I think, to ascribe the greater part of the changes observed to the diseased condition.

Briefly, the most striking changes in the pancreas are as follows: 1. A universal increase in the interlobular tissue. In one area this amounts to a sclerotic process involving the lobules, the atrophied gland-structure being replaced by connective tissue. This is the only evidence of any chronic change in the organ. The interlobular tissue is everywhere saturated and partly dissolved in a clear, slightly stringy fluid. The connective tissue nuclei are for the most part necrosing. The walls of the large interlobular vessels partake also in this liquefaction-necrosis. Where there is interlobular fat-tissue it also shows necrosis. The edematous connective tissue is poor in leukocytes in the greater part of the organ, but in some areas the small-cell infiltration is so great as to be called purulent. The nuclei of the leukocytes are granular and contracted and in many places show diffusion of their chromatin.

2. Hemorrhages are found in many parts of the organ both in the lobules and between them. In all cases the blood seems to come from the smaller vessels. In some places it is fresh, especially in the lobule where the red cells are well-preserved; but in the large extravasations into the edematous connective tissue there is a breaking-down of the red cells and a diffusion of the hemoglobin into yellowish-brown masses of iron-containing pigment. Many of the bloodvessels contain recent thrombi and masses of broken-down blood. In many places the hemorrhage seems to arise from small vessels in and about the areas of Langerhans. In many lobules the only hemorrhage found is in these areas. The hemorrhagic areas are found chiefly in the body of the organ, both the head and the tail being relatively free from extravasations.

3. The interlobular ducts are for the most part empty, and their epithelium appears normal. Some are filled with a golden-yellow pigment, most probably bilirubin. The walls of the ducts are edematous.

4. The interacinous stroma of the lobules is everywhere extremely edematous, and its bloodvessels are all congested. This is especially marked in many cases about the areas of Langerhans.

5. In the head of the organ the pancreatic cells are for the most part well-preserved, and their nuclei stain well. There is an interlobular edema and congestion with small scattered hemorrhages. The most striking change is a hyperplasia of the areas of Langerhans, which in many cases are three to five times their normal size, though preserving their usual structure. In some of them small cysts are found. In some lobules several large cysts containing blood or a clear fluid are seen apparently occupying the places of these areas. As the sections pass to the tail of the organ there is found a cloudy swelling and simple necrosis of the cells of the periphery where the cells are in contact with the fluid in the interlobular spaces. In many of the sections taken from the body there is a simple necrosis or a liquefaction of the greatly enlarged areas of Langerhans. The remaining portions of the lobule may show relatively slight change, or a great degree of cloudy swelling. These areas of Langerhans, which show such marked change can be easily seen with the naked eye in the hardened material or in the stained sections. They appear as lighter areas. Apparently different stages of liquefaction of these areas can be made out. Some are hemorrhagic, almost all are congested.

Toward the tail of the organ the entire lobules are found to be completely necrosed. Various stages and appearances of degeneration are seen. In the largest part the cells are granular and formless, their nuclei entirely gone or barely showing. In some places many nuclei are crowded together in thick masses, and there is much diffuse chromatin. In some areas the entire pancreatic structure seems to be dissolving in the fluid exudate. There are very few hemorrhagic areas in the tail of the organ.

The examination of the structures about the celiac axis show that the nerve-tissues there have suffered serious damage. Many of the nerve-trunks are involved in the necrotic process, either a simple necrosis or a liquefaction in the fluid which everywhere bathes the connective tissues. The nerve-trunks, however, seem more resistant to the necrotic process than the other tissues of the part. Many of them are completely surrounded by necrotic and edematous tissues and do not show much of any change, others are partly necrosed, while others show a complete destruction of nuclei. There are large central hemorrhages in many of the nerve-trunks; others are surrounded by fresh extravasations. The Pacinian corpuscles show very interesting changes. Some are greatly enlarged from the extreme edema. There are numerous small local hemorrhages extending into and about the corpuscles. Some of the bodies are completely necrosed, in others the nuclei are indistinct. About several there is a very marked small-cell infiltration, in one place amounting in degree to a purulent infiltration. There is also in several small areas evidence of some chronic proliferation of the connective tissue surrounding the nerve-structures. Small vessels with thickened walls and partly obliterated lamina are found in the neighborhood of the corpuscles, and the surrounding tissue is of a fibro-blastic type. It contains numerous leukocytes. There are lumps and droplets of hyaline in the interstices of the connective tissue. The semilunar ganglia are completely necrosed and surrounded by liquefying tissue containing local hemorrhages. The neighboring lymph-glands show very marked changes. Two processes are present, one a chronic lymphadenitis with hyperplasia of the reticulum of the gland and deposit of hyaline and a small amount of amyloid. In addition to these changes of a chronic nature there is a more or less complete necrosis of the cells of the glands associated with edema and hemorrhage. Many of the smaller vessels about these glands show a high degree of sclerosis.

6. The staining for germs was successful in some sections from the body of the pancreas and from the tissues surrounding the solar plexus. A short thick bacillus and groups of a large coccus were found.

It is not my desire to overburden this paper with technical descriptions, so I shall refrain from going into the minute changes found in cells and nuclei. Nor does it seem to me expedient to compare these findings with those of the other cases reported, or to enter upon the discussion of the various theories as to the causation of the conditions found. It seems to me at this stage of our knowledge concerning hemorrhagic pancreatitis that it is best to give an exact description of the most important microscopic features of the case without theorization. In the main, so far as the changes in the pancreas and fat-tissue are concerned, other observers have found the same appearances. The points I wish to emphasize as not having been noted before are these:

1. The evidences of degenerative changes in the bloodvessels, especially in the veins and capillaries, found in all parts of the body. The changes in the endothelium, the edematous condition of the walls with local diapedesis, all point to the presence of some destructive agent in the circulation. Further, the masses of broken-down red cells in the vessels and the numerous thrombi speak for the marked hemolytic nature of the poison.

2. The evidence that in the fluid-exudate everywhere poured into the tissues, but especially in the pancreas and its neighborhood, there exists some substance which causes necrosis of all the tissues bathed





estimable value. This seems evident enough. Yet there are some worthy and eminent men in the profession, notably those whose business is confined to office-practice, who assert, with great vehemence, that it is of no importance what the superstructure of an edifice may be, so long as the foundation is strong and the corner-stone in position; that, if the tree be of goodly appearance and perfect in body and branch, it is all one whether it be barren, or bear apples of Sodom or fruit for the healing of the nations. But the man, the high-toned, all-round physician, who is jealous of the honor of his profession, who practises his art, not for revenue only, not for the ducats he can extract for himself, but for the good he can do his patients, has the assurance of faith in scientific, progressive therapeutics.

Hygiene is exceedingly valuable. It is the medicine of the future. It always will be so long as men and women are not omniscient—no, not that, for omniscience would be of little value to those who do not exercise the feeble wisdom they already possess.

"Happy little Mary Wood  
Always did the best she could."

But *big* Mary Wood *did not*. She *would not*. She wore corsets warranted to make her an inch smaller than any other corset in the world. She crowded her shapely number 7 feet into number 5, high-heeled shoes, and went crippling around with rings on her fingers and corns on her toes all the rest of her fashionable life. Hygiene is of no good for the army of this kind of Marys; nor for the men who not only know that their vicious habits will bring rottenness into their own flesh and bones—a personal matter of no great consequence to the world—but also that their sins will be visited upon their innocent offspring to the third and fourth generations. Hygiene is for those who are inclined to do right and avoid the wrong, and who sin through ignorance. Still, in spite of us all, hygiene will remain the science of the future. What I have said is introductory to a few miscellaneous memoranda, illustrating the value of diagnosis and how it was made, and the crowning importance of therapeutics.

#### I.—"COLD"—DESTROYERS.

A hot whisky-sling taken at bedtime is frequently prescribed (as some of us may know), and joyfully employed to break up a cold. Sleep and profuse perspiration are induced by the heat and alcoholic sedative, but the patient is likely to awaken with a severe headache. Now the sling known as Imperial, made by dissolving a teaspoonful of cream of tartar in a glass of boiling water, sweetened to the taste, is equally effective in securing free diaphoresis without the drawback of a morning cephalalgia. Then, if the sufferer in subsequent attacks takes this medicine without the physician's order, or even if he resorts to it as a preventive, he runs no risk of forming a pernicious habit. It

becomes us in selecting remedies to consider whether in their far-reaching outcome they are not prone to establish a malady worse than the trouble for which they were prescribed.

#### II.—ULCUS VACUUS.

Indolent ulcers of the leg, even when quite large, deep and numerous, may be treated very successfully by painting with tincture of iodine, filling to the surface of the surrounding skin with bismuth subnitrate, strapping with slitted strips of adhesive plaster, extending almost around the limb, covering the strips with clean cotton to absorb any pus that might ooze through the slits and then bandaging snugly from the feet up above the sores; the bandages to be made of thick elastic flannel. The dressing is to be renewed daily after washing the affected parts with soap and water. Marked improvement in the appearance of the parts is usually manifest at the first dressing, and granulations soon spring up and fill the ulcers. Laboring men who are afflicted with this distressing complaint are permitted to continue their work as usual. Rubber-webbing bandages may be used after the sores are healed, not the black rubber, which keeps the parts wet. When varicose veins are present the elastic stockings may be worn permanently, if needed.

#### III.—A SINGULAR CASE OF PSORIASIS.

Mr. W. P., who had seen his sixtieth birthday, called at my office several years ago at the urgent solicitation of friends. He was a resident of H. in Madison County. For 15 years he had been under treatment for spinal disease, which caused so much suffering that his pain was administered every day and sometimes three times a day. For 5 years, numerous round, elevated patches of psoriasis, varying in size from half an inch to an inch and a half in diameter, had appeared on his limbs and other portions of his body. The intense itching and burning of these patches, especially at night, made life itself almost insupportable. The man's naturally cheerful disposition had changed to such a savage moroseness that his neighbors often crossed the street to avoid meeting him. To obtain relief from the intolerable itching, so that a little sleep might be secured, he sliced off the thick scabs every second night to the level of the skin. Some severe and painful smarting followed these operations, but the smarting subsided after an hour or more, and fairly comfortable rest followed. All the ointments and soaps, soothing and irritating, that had been commended proved on trial utterly useless. After a thorough examination of the broken-down and hopeless old gentleman, who had been assured by eminent authority that these great, itching crusts were of such benefit and necessity to him that if they could and should be cured he would not survive a single month, the confident statement was made to him that if he ever had any spinal disease it no longer existed, and that the psoriasis, with all its attendant mental and physical misery, was the outcome of the morphin-habit that resulted from the treatment of his supposed disease. A favorable prognosis was made, conditioned on his strict compliance with all orders possible. A week was given the man in which to give up entirely and perpetually the use of the drug that he had employed constantly for 15 years. Tonics, such as iron, arsenic, and strychnin, with lupulin and other sedatives, were administered and galvanism was applied. In less than a week the morphin was entirely withdrawn; the itching had so subsided that cutting off the crusts was no longer necessary to secure sleep; and the mental condition had markedly improved. In 6 weeks the psoriasis-crusts had disappeared, and the immense improvement of

the patient was so obvious that his family and some of his religious neighbors did not hesitate to express their belief that the restoration to his long-lost normal condition was little if any less than miraculous. Yet the only miracle in the case consisted in inspiring in the mind of the patient such a conviction that the cause of his suffering had been discovered and that relief might be expected, that he gracefully yielded to the prescriptions and the proscriptions of his medical attendant.

But a single similar case in which the psoriasis was the result of a denied opium-habit has since come under my observation. An emphatic proscription and prompt discontinuance of the use of the drug resulted in speedy recovery. (This patient, I am sorry to relate, was a lady.)

#### IV.—URINE-SEDIMENTATION.

A profitable scare. There is of late a renewal of advertisements in the newspapers stating that a sediment found in urine that has stood a few hours is a certain indication of nephritis, which, of course, can be cured only by the free use of a newly-discovered kidneyne. Multitudes of the dear people void their morning-urine into a goblet and subject it to an anxious and critical inspection. To their horror, they find in the goblet after suitable waiting, more or less of a sediment, cloudy in appearance, to be sure, but clear enough in its deadly forebodings. Many of the victims of the insidious complaint hasten to the nearest pharmacy and procure a supply of the genuine, safe and infallible kidneyne. A few alarmed but cautious individuals report the results of their investigations to the intelligent family-physician and are comforted by his assurance, after an examination of the specimen presented, that there is no renal or other disease present, and that if they had drunk a glass of water at bedtime, as he himself always does, and everybody should, the waste-material, which is formed at night as well as in the day, would have been held in solution and no sediment would have appeared. Those who take kidneyne with an abundance of water hasten to furnish certificates that, after enduring—as the sediment demonstrated—the worst form of nephritis for an unknown period, they had been entirely cured—as the absence of the sediment proved—by a single bottle of this miraculous remedy, but that they should continue its use for a long time to guard against a possible deadly relapse; and they are not only willing but anxious to have their affidavits and large-size photographs displayed in the newspapers.

#### V.—A CURIOUS CASE OF CONSTIPATION.

Sixteen years ago this spring, my friend, Dr. E., of Chittenango, invited me to visit in consultation a patient of his, Mrs. L., a lady of 40 odd summers. When 15 years old, she had had an alarming attack of typhoid fever, with a prolonged and tedious convalescence. After this she had a severe fall, which injured her back, and occasioned agonizing headaches and attacks of prolonged delirium. Obstinate constipation supervened, which, for quite a long period, yielded to active cathartics. These at length seemed ineffectual, so that at the time of my visit the intervals between movements of her bowels were from two to four weeks,

although she retained and gratified a good appetite. Every day or two she visited the closet and made straining and persistent efforts to secure a free passage, but with so little success that only a tablespoonful of mucus tinged with blood ever made its appearance. Her digestion seemed undisturbed, as was indicated by her becoming more and more fleshy. A pretty constant bloody vaginal discharge called for an examination and this resulted in the discovery of a greatly enlarged uterus, which we thought might be malignant and the mechanical cause of the constipation. Rectal exploration showed, however, that there was a stricture of the colon just above the rectum, which interfered with the passage of a small bougie. Under ether, graduated bulb-dilators were introduced and a large glycerin-enema was employed with such success that fair but gradually diminishing movements continued for several days, when occlusion recurred and persisted for two or three weeks. Then successful resort was had again to the ether, the bulbs and the enema. This course was followed for a pretty long period, the doctor employing the bulbs under ether 18 times, and several times without ether. On one occasion, when there had been no movement for four weeks, the use of the dilators and repeated enemas was an utter failure. After waiting two weeks longer the doctor kindly requested me to come to his assistance. The anesthetic was administered, dilation accomplished and a mammoth enema introduced, containing, among other active laxatives, 8 ounces of glycerin. While waiting at the tea-table in an adjoining room for the effect of the ether to pass away, we were hastily summoned by the nurse to the bedside, where we discovered that something besides the ether had passed away and that the patient was floating in the liquefied accumulation of six complete weeks of a full diet. A course of efficient tonic cathartics was instituted and continued for a long period, with no return of the stricture.

I have only to add that the uterus returned to its normal size, showing that the constipation was the cause and not the effect of the great enlargement.

#### VI.—A SOLUBLE MYSTERY.

The proprietor of a celebrated spring in New England claims that as the most careful chemic and microscopic examinations fail to discover the minutest quantity of vegetable, animal or mineral material in the water, its undeniable and universally acknowledged potency must be owing to some mysterious principle. The salutary manifestation of this principle, he assures his visitors, is proportioned to the quantity of water imbibed. While three pints a day scarcely disturb the quiet dreams of the healing mystery, six quarts rouse the giant powers of the panacea and it sweeps away all rheumatic, cystic and hemic enemies with the besom of destruction. . . . And yet there are people of average intelligence who, while freely admitting that large potations of this remarkable fountain are sometimes of astonishing efficacy, still hesitate to confess a belief in the existence of any mysterious remedial power. And alas! there be scientific scoffers who brazenly liken the circulation in the human body to a street-sewer, which dribblets of water merely moisten, while floods thoroughly flush and cleanse.

#### VII.—GRATITUDE REPRESSED.

Some years ago, a spare, six-foot-four man entered my consulting-room, when his turn came, and asked somewhat abruptly:

"Do you pretend to cure cancer of the stomach?"

"No."

"I've been watching you for half an hour as you came into the front office, and you don't look like that kind of a



"Who has cancer of the stomach?"

"I have."

"You don't look like that kind of a man."

"But the best doctors in Cortland and Oneida counties say I have. Do you know Dr. H. of Cortland County?"

"Yes; he is a warm friend of mine."

"Good doctor?"

"One of the best."

"Well, he examined me three years ago, and told me I had cancer."

"Possibly I might have told you so then, but now I say you haven't. You don't look like it, and a cancer ought to have killed you before this time."

"Well, at any rate, I have vomited every particle of food I have eaten in three years."

"I think this is no nearer the truth than your other assertion about having a cancer. Dr. Turner pretended to live 40 days without food—and we have serious doubts—but three years total abstinence would have killed you with starvation. A little of your food must have been retained at each meal. Now, as vomiting is neither useful nor agreeable, why not take just the little you retain and no more?"

On examination, the pyloric end of the stomach was found enlarged and indurated, but only slightly tender. The poor man had been suffering with an ulcer at the gastric outlet all these years, and had given it no opportunity to heal by resting.

I did not use lavage for diagnosis or treatment. It was entirely unnecessary for the former purpose, and it seemed as uncalled for as a therapeutic measure then as it does in the majority of cases in which it is employed to-day. I ordered that the stomach be made thoroughly alkaline, once at least daily, by the use of sodium bicarbonate; and prescribed frequent doses of bismuth subnitrate. I directed the patient to begin his reformed dietary by taking a teaspoonful of milk every 20 minutes and increasing the quantity and the length of the intervals gradually to a tablespoonful every half-hour, a gill every hour, and so on; dropping back to the smaller quantity on the first appearance of vomiting. At the end of six weeks I received my first and only letter from him: "I have not vomited since I left your office. I am taking four quarts of milk a day. I have gained nine pounds in the last ten days."

This case also illustrates the importance of correct diagnosis and the crowning glory of suitable therapeutics.

A sequel to this case may be amusing if not instructive. Three years after receiving the letter from the patient I had a personal call from him. He was in perfect health. You can imagine with what fervor he clasped me in his strong, grateful arms and declared, with an emotion that he did not attempt to conceal, that he owed me health, happiness, and even life itself; but, in reality, he did nothing of the kind. He exhibited no emotion; he expressed never a thank; he kept his hands in his pockets. He simply said that as he was visiting our County Fair he thought he would run in a moment to let me see him.

A month later, a poor, emaciated wretch, assisted by his wife, slowly crawled up my front steps and dropped into a hall-chair. He seemed in great distress, and said:

"Mr. S. of Cortland sent me to see you."

"I remember him. He was a patient of mine."

"He told me so, and said I had the same disease he had, and he could cure me."

"Ah, S. has become a doctor, has he?"

"No, he said he wa'n't no doctor, but he knew what cured him."

"What was it that cured him?"

"Milk."

"Well, milk did have something to do with it. How much did he tell you to begin with?"

"Four quarts."

"I see, S. wished you to begin where he left off. Did you do it?"

"No, I couldn't. I was all the forenoon trying to swallow a pint. I couldn't get it down. It hurt me so I tried to vomit, but I couldn't. I strained and strained and thought I should die. I sent for Mr. S., and he told me to come here right away, for he guessed there was something in my case he did not understand."

I found a contracted esophagus, which admitted only a No. 7 catheter and required a whole fortnight's gradual dilatation at the hospital before the finest kind of hash could be swallowed.

Here, again, intelligent diagnosis and therapeutics were useful copartners. The good Mr. S. undoubtedly thought that I had practised some imposition on him in ordering slowly increasing portions of milk when I must have known that a gallon a day would have made him a strong and well man at once. No wonder that he did not overwhelm me with gratitude!

#### VIII. FIBRILAR CALCULI.

These painful neoplasms are still treated by some practitioners with caustic and cautery. A method much more satisfactory to doctor and patient is to inject into the growth, through a very fine hypodermic needle, a 4% solution of cocain. This will secure anesthesia, not only of the sensitive neoplasm, but of the surrounding parts as well, so that with delicate scissors painless removal of the caruncle and a thin layer of adjacent mucosa can be effected.

#### IX.—EPISTAXIS.

Nosebleed can be arrested in many instances by the administration of opium. This has succeeded so well, even after the failure of astringent injections and plugging the nostrils, that I have had no occasion to employ any other treatment for more than 30 years. The dose for an adult has been a grain or more, repeated if necessary in two or three hours; but the repetition has seldom been needed.

#### X.—BRONCHIECTASIS.

It was a warm day early in the summer of 1892 when I visited Mrs. H., of C., who was suffering from a disease that had been named by the attending somewhat irregular physician "cancer of the lungs and stomach," and by a competent consultant, gangrene of these organs. I found the patient, a lady on the bright side of 40 years, lying in bed with flushed cheeks and a distressing cough, attended with an expectoration whose intolerable fetor spread far out through the doors and windows, which were kept open night and day. I learned the history of the case. Hectic symptoms had existed for several weeks, preceded by a cough that had troubled her for many months. This cough had become quite constant and offensive the greater part of the day and night, but it was not very violent. Two or three times daily, however, there would be paroxysms lasting from 30 minutes to two hours, during which the cough would be incessant and attended with a profuse discharge of fetid pus from the lungs and still more fetid from the stomach. The violence of the paroxysm would subside at length and the exhausted patient would have an interval of comparative ease. Profuse bronchial hemorrhage had occurred several times, but emaciation was not extreme. There was some circumscribed dulness in the left infra-axillary region, with abundant coarse rales. There was no tenderness in the gastric region, and the patient informed me that the little food that she ate did not cause distress. She never vomited except when she had

the preceding paragraphs. Her stools were of normal color and entirely free from the loathsome smell of what she vomited.

The diagnosis of the case was now comparatively easy. (The subsequent history strongly indicates that a local tuberculous deposit was present at this time.) I took the patient into my confidence and talked to her after this manner:

"You have no disease whatever of your stomach, and you have no cancer or gangrene anywhere. You have what doctors call bronchiectasis; that is, in one of the tubes of your left lung a pocket has been formed which holds half a tea-cupful or more. This pocket has thick walls, so that it is not easily compressed. Once or twice a day, or oftener, it becomes filled and running over with this horrible stuff, which is not only fragrant but very irritating. Its overflow excites the violent fits of coughing, which continue till the cup is partially emptied. The odor sickens you so that you vomit, and the vomiting helps mechanically to empty the pocket. What comes from your stomach has no bad odor, but it seems to you that it has because it is mixed with the disgusting contents of the cup.

"If there was any disease of the stomach, the smell from the passage of your bowels, instead of being natural, would have been strong enough to drive the dog we hear so much about out of a kennel."

Then I explained to her, what I have already published, how she could empty this dreadful cup in five minutes by putting her hand upon the floor as she was lying on the bed and bringing her head nearly to the same position, thus turning the cup bottom side up and coughing down hill before the hard fits came on, instead of coughing her head off for an hour and a half.

Improvement—loss of odor, mitigation of cough, cessation of vomiting—took place speedily. Suspicious dulness, however, remained, and hemorrhages have occurred several times within the last six years. At present, although she still persists in taking tonics and tablets of cubebs, copaiba, iron and Venice turpentine, she declares—and her robust looks verify her statement—that she is the healthiest woman in her village.

#### EXPERIMENTAL STUDIES ON THE ORIGIN OF THE CHARCOT-LEYDEN CRYSTALS, WITH AN ACCOUNT OF THEIR CHEMISTRY, OCCURRENCE AND DIAGNOSTIC IMPORTANCE.

By THOMAS R. BROWN, M.D.,

of Baltimore, Md.

THE part played by the Charcot-Leyden crystals upon the medical stage has been a most varied one. Though at first regarded as mere pathologic curiosities, rarely seen and of no especial significance, later observations, by showing their tendency to occur frequently or even constantly in certain diseases and morbid conditions, have given them a much more important position and, in some cases, some diagnostic significance. In the present communication, I shall give the results of a series of experiments bearing upon the origin of these crystals, together with a brief but complete account of their occurrence, properties and importance.

The first definite notice taken of the crystals under consideration dates from their discovery, in 1853, by Charcot and Robin in the spleen of a patient who had died of leukemia. Probably they had been seen before; in fact, Zenker, in 1876, when interest in this subject had been greatly increased by the work of Neumann and Leyden, resurrected from the "darkness of his portfolio" a drawing and a description of crystals undoubtedly

the same as those of Charcot, and from the same source, bearing the date 1851. Following the work of Charcot and Robin, there appeared many articles describing the finding of these crystals in the most diverse situations. Besides a rapidly growing list of their occurrence in the blood, marrow, spleen and other tissues in leukemia, and their demonstration by Neumann in 1869 in the normal bone-marrow in smaller quantities, there appeared from time to time observations of their presence in the sputum in various diseases of the lungs and bronchi, culminating in the work of Leyden, and his demonstration of their almost constant occurrence in the sputum in bronchial asthma, while Leichtenstern, Bizzozero, and others have found them in many diseases of the intestines caused by different varieties of the entozoa. More recently Lewy has shown that they occur in the majority of nasal polyps and papillomata. In addition to these conditions in which they are seen very frequently, observations of their occurrence in the most unexpected situations have been made; in 1854 by Förster in a mucoid tumor of the eye, and in the thickened mucous membrane of a dilated biliary duct; in 1862 by Wagner in a thrombus in the portal vein of a woman who had died of puerperal sepsis; by Eichhorst in a purulent pleural exudate, and by Lewy in a carcinoma of the cervix; while Salkowski states that the crystals obtained by Zahn in artificial thrombi in frogs, and by Brondgeest from frozen frogs' blood, are identical with those under consideration.

Practically the same description of the crystals is given by all observers. They are long drawn-out double pyramids, with flat sides and sharp angles, colorless, exceedingly brittle, of varying size and most resistant to putrefying processes. As to the crystallographic system to which they belong, they have been variously regarded as quadratic octohedra, rhombic plates and monoclinic forms, though the work of Theodore Cohn seems to show beyond doubt that they are double hexagonal pyramids. The crystals are insoluble in cold water, alcohol, ether, xylol, chloroform and creosote; soluble in almost all acids and alkalies, and they show a marked affinity for the eosin and acid-fuchsin stains. Besides their common designation of Charcot-Leyden crystals, they have appeared under the names of Robin, Vulpian, Neumann and Zenker.

After the discovery of the crystals by Charcot and Robin in leukemia, there followed a long series of reports of their occurrence in this affection, by Vulpian, White, Mosler, Riegel, Neumann, Zenker, etc., etc. According to all these observers, the crystals are not found preformed, but they begin to appear after the blood or tissues have stood for a short time. Zenker and Neumann stated that the most striking feature in their blood-preparations was the close relationship that seemed to exist between the crystals and the white blood-cells. This was, of course, before the days of the Ehrlich stain and the differentiation thereby of the



white blood-cells into different classes, but later work has shown that the cells for which the crystals evidence such an affinity are the eosinophiles, the cells with  $\alpha$ -granulation of Ehrlich. Neumann, in his later observations on this subject, in 1889, has shown that it is only in that form of leukemia in which the bone-marrow is affected, *i. e.*, the spleno-myelogenous form, that the crystals are found, and he regards it as probable that the bone-marrow cells (many of which are eosinophiles) contain the chemic constituents necessary for the crystal-formation, although Zenker and Westphal think the spleen also plays some part in this process.

Coincidentally with the many observations of the crystals in leukemia, numerous articles appeared from time to time showing that the crystals are not peculiar to this disease, but also found under other conditions. Again, to Charcot do we owe our first knowledge on this subject, he, in 1856, noting their presence in a case of dry catarrh with emphysema. Bizzozero and Friedreich observed them in the sputum in bronchial catarrh, and Förster, Zenker and Harting in bronchitis. This was the status of affairs when, in 1872, a great impetus was given to the whole subject by Leyden's report of the finding of great numbers of the crystals in the sputum in bronchial asthma, he finding them in all parts of the sputum, but especially in the little greenish-yellow plugs, made up of mucus and round cells with large refractive granules (demonstrated later by Lewy, Seifert, and others, to be eosinophiles). From their constant presence in this disease, Leyden advanced the theory that these "spitzenförmige Bösewichter" might be the cause of the asthmatic attack through mechanical or chemic irritation of the bronchial mucous membrane, causing bronchial spasm, either directly or reflexly. The observations of Leyden stimulated much work in this direction, and in all respects his observations were substantiated. Lewy showed in 26, Ungar in 30 cases, the constant presence of the crystals, the former noting their presence just before, during, and for from two to three days after the attack; the latter calling especial attention to the close relationship existing between the eosinophiles and the crystals. Fink has recently shown that over 80% of the cells in the sputum in bronchial asthma are eosinophiles, while he, Seifert, Gollasch, Gabritschewsky, Müller, and others have shown a marked increase of these cells in the blood during the asthmatic paroxysm.

Although Curshmann regards his "spirals" as the cause of the dyspnea by blocking up the bronchioles, and Lewy and Pel regard all these substances—crystals, spirals and eosinophiles—as by-products of a primary cause, an exudative bronchopneumonia; nevertheless Leyden, in 1891, again brought forward his original theory, following the work of Lazarus, showing the reflex nature of the asthmatic attack.

Although the crystals have been described in a few cases of acute and chronic bronchitis, and by Naunyn

and Lewy in four cases of pulmonary tuberculosis, nevertheless their presence in these conditions is so very occasional, that their appearance in the sputum may be regarded as almost pathognomonic of bronchial asthma.

Voltolini showed as early as 1871, a clinical relationship between nasal polyps and bronchial asthma, being substantiated by Lewy, Vierordt, and others; while Scheinmann has shown that by the removal of nasal polyps, asthmatic attacks have been stopped. Lewy, turning his attention to this new source of the crystals, obtained them in 32 of 47 cases of nasal polyps; in 17 of 29 in those who had not bronchial asthma, and in 15 of 18 in those affected with this disease, the crystals not being preformed, but appearing on standing. Seifert in his cases reports the presence of large numbers of eosinophiles as well.

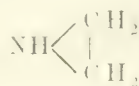
As regards the presence of the crystals in the feces, their first observation was made by Bizzozero in a severe anemia, associated with the presence of the *dochmius duodenalis* in the intestines. It is to Perroncito and to Leichtenstern, however, that we owe most of our knowledge upon this subject, the former demonstrating their presence in the feces in association with the *anchylostomum* and the *anguillula*; the latter in almost all of his 272 cases of *anchylostomiasis*, in all cases in which the *anguillula* was found, and in many instances of intestinal disease due to other entozoa—the *oxyuris vermicularis*, *tricocephalus*, *tænia saginata*, *tænia solium*, and *ascaris lumbricoides*, and he regarded the crystals as absolutely indicative of the presence of entozoa, continuing the treatment until they are no longer found in the stools. He has shown that the crystals are found both before and after death only in those portions of the intestines occupied by the worms, and he thinks more careful examination would have demonstrated the presence of entozoa in all cases in which the crystals have been found in the feces, notably in some cases of typhoid fever reported by Bäumler and Nothnagel. Many eosinophiles are often seen in the feces in all these cases, while a marked eosinophilia has been described in the blood of patients suffering with *anchylostomiasis* by Zappert and others.

Beside the foregoing findings of Leichtenstern and Perroncito, a few observations of rarer associations between crystals and parasites have been noted—by Leichtenstern in the sputum in 3 cases of *echinococcus* disease of the lungs; by Grawitz in a purulent pleural exudate in all probability entozoic in origin; by Israel in a small cyst formed by the *pentastomum denticulatum* in the liver and by Yamagiwa in the sputum in the lung-distome disease of Japan.

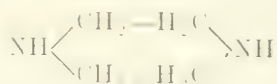
Up to 20 years ago, the chemistry of the Charcot-Leyden crystals was an unsolved problem, each observer advancing suggestions, no one offering chemic facts. Charcot thought they were proteid in nature, Robin that they were magnesium phosphate, Harting, cal-

cium phosphate from morphologic resemblances, Kühne that they were related to vitellin, Hoppe-Seyler to the aleuron crystals of plants, while Zenker and Friedreich regarded them as tyrosin, and Salkowski and Leyden as a crystallized, mucin-like body. This was the chaotic state of affairs that greeted Schreiner, when he took up the subject in 1878. As, unfortunately, crystals from the sputum or from leukemic blood were not available in sufficient quantity, he worked with the crystals obtained by Böttcher in 1866, on drying human semen, as well as upon the surface of old pathologic specimens preserved in alcohol, and from egg-albumin. These crystals showed the same micro-chemic reactions as the Charcot-Leyden crystals, were of almost, though not quite, the same form, and in all respects the resemblance was so striking that the two forms were regarded as identical. By exceedingly brilliant work, Schreiner showed that these crystals were the phosphoric-acid salt of a base,  $C_2H_5N$ , which he called spermin.

Thus, the matter of the chemistry of the Charcot-Leyden crystals was regarded as settled, until the whole subject was reopened at the tenth international medical congress. A few years before this congress, Brown-Séquard and Tarchanov had obtained a powerful principle from the testicles of animals, the famous elixir, and to this were ascribed the most wonderful tonic and strengthening properties, marvelous cures being reported as having been effected by it in tabes dorsalis, malaria, and all conditions of asthenia and anemia. It was from this substance that Pöhl isolated crystals identical with those of Böttcher, and it was his belief that these were the active principle of the elixir that stimulated further chemic research in this direction. Schering prepared synthetically a substance identical with Schreiner's base, which he called piperazin, or piperazidin; Ladenburg and Abel showed that the base  $C_2H_5N$  was in reality ethylenamin



while Hoffmann, Majert and Schmidt considered that it should have the double formula  $C_4H_{10}N_2$ , and that it was diethylendiamin



The Brown-Séquard elixir has gone the way of most of the royal roads to health, but Dr. Pöhl still clings to the spermin-crystals as powerful stimulants, regarding their tonic action as largely due to the important rôle they play in intraorganic oxidation. He has obtained the crystals in small quantities from most of the organs, although most abundantly from the prostatic secretion, and he regards the spermin and Charcot-Leyden crystals as identical, claiming to have converted one form of crystal into the other, and assigning

to each the formula  $C_5H_{14}N_2$  or some polymer. Nevertheless, the slight difference in crystallographic form, as insisted upon by Guttmann and Fürbringer, and recently demonstrated by Theodor Cohn, leaves us in some doubt regarding the question, and although the two forms of crystals are regarded by the majority of observers as identical or at least extremely closely related, further work will be necessary to settle the matter definitely.

Thus, it will be seen that the Charcot-Leyden crystals are found in the most diverse situations, in the sputum in bronchial asthma, in the feces in diseases due to intestinal parasites, in nasal polyps, in the blood and organs is leukemia and in normal bone-marrow; and the sole thread that binds together these diverse appearances is the constant association that exists between the crystals and the eosinophilic cells. The preponderance of eosinophiles in the sputum and their increase in the blood in bronchial asthma; the presence of crystals only in those forms of leukemia that show an increase of the eosinophiles in the blood; the finding of the crystals in the normal bone-marrow, which is considered to be one of the seats of origin of the eosinophiles; the increase of eosinophiles in the nasal secretion in some cases of polyp; the association of crystals and eosinophiles in the feces in intestinal diseases due to entozoa; the repeatedly made observations of the close arrangement of crystals and cells, and their identity in affinity towards the acid stains—all point to a close relationship between them. That something beside the presence of the cells, however, is necessary for the crystal-formation is shown by a series of experiments carried on by me in the summer of 1897. The source of the eosinophiles in these experiments was the blood of a patient suffering with trichinosis. In this disease, as I have reported elsewhere, there is a marked increase in the eosinophilic cells in the blood, reaching in the case studied at that time 68.2% of all the white blood-cells, with a leukocytosis of from 20,000 to 30,000, thus furnishing an abundance of these cells. On nine occasions blood was withdrawn from the patient, some placed in sterilized, some in unsterilized vessels, some kept in the thermostat at body-temperature, some kept at room-temperature, *i.e.*, it was tested under practically all conditions.

The blood under each of these conditions was examined carefully—very frequently at first, daily afterward for a period of several weeks, but under no circumstances in any of the preparations were the Charcot-Leyden crystals found; thus demonstrating that they are not *direct* crystallization-products of the eosinophiles. With these results, the experiments carried on by Müller entirely agree, he obtaining his eosinophilic cells from the contents of pemphigus-vesicles, where they are found in abundance. What, then, is this relationship, it is impossible to say; whether the crystals are formed in the lymph-spaces of



the bronchial mucous membranes, as suggested by Leyden and Weiss; whether the eosinophiles are drawn from the blood by a positive chemiotaxis, which Müller thinks the crystals possess toward them; whether cells and crystals are formed *in situ*, as Gollasch and Seifert think probable; or whether the whole process, formation of cells and crystals, is but a secretion-neurosis, as believed by Neusser—all these questions must for the present remain unanswered. But one thing can settle the matter definitely, and that is the clearing up of the chemistry of the cell-granulations, and it is from this side, and this side alone, that we can look for further progress in the matter. Unfortunately, even our modern chemic methods are not capable of the refinements necessary to such a study, and the Ehrlich stains, although helping us wonderfully in cell-differentiation, yield us practically no information regarding the chemistry of the cell-granulation.

Perhaps in the near future, the chemistry of these microscopic particles will be a possibility; but until then we shall be compelled to say of this, the most interesting question connected with the Charcot-Leyden crystals, as for the same reason we must say of many greater and weightier medical problems, "*non liquet*."

## THE EARLY USE OF THE SHARP CURET IN PUERPERAL INFECTION.

By EDMOND R. MORAS, M.D.,

of Chicago.

WHEN, following abortion or confinement, a woman develops certain signs of infection, we are told (1) to douche the vagina; (2) to irrigate the uterine cavity; (3)—if the symptoms persist—to curet, wash out and pack the womb; and yet the undesired symptoms commonly indicate the presence of the streptococcus or the staphylococcus in the endometrium, along with threatened extension to the oviducts, invasion of the pelvic connective tissues, or involvement of the peritoneum. What good, then, can the vaginal douche accomplish? Why not, at the very start, curet the endometrium so as to limit, if not prevent, these grave complications? For, in severe cases, the fatal dose of or from the poisons requires but a short time to traverse the uterine walls or to enter the circulation.

Cureting is a simple, safe and radical operation; it needs no anesthetic, and, unlike vaginal and uterine douching, it does not favor the shifting of the responsibility upon some person whose understanding of aseptic and antiseptic principles or precautions is often primitive. The operation is done quickly and successfully in any house and under the most unfavorable circumstances. Less intrusion in washing out and packing the uterus and more on the value of early vaginal examination and the timely use of the curet in puerperal infection will reduce the present mortality of

lying-in women. There should be cultivated a dread of the fountain-syringe and of other syringes in the confinement-room during and after labor. In view of the principles of modern obstetric surgery, is not the advice given in textbooks and by teachers to douche the uterus after application of forceps, version, or other operative procedure, an open acknowledgment that the obstetrician's hands or instruments were not clean? Even admitting this last to be occasionally true, is there no danger of infecting the woman with the syringe?

Then, again, writers state that "odor to the lochia is an indication for the vaginal douche." This is assuming that the odor is simply due to the decomposition of a blood-clot in the vagina; and it is inviting us to take chances when we have simple means to determine positively whether it is so or not. May not—rather does not—an abnormal odor indicate usually beginning septicemia? Therefore the recommendation should be: "Odor to the lochia is an indication for immediate examination of the genital tract." Guessing is not to be indulged in during the puerperium.

The following plan of treatment is one that I have followed since 1890: Clinically, the symptoms that indicate positive mischief within the uterus, and which always call for the prompt and thorough use of the sharp curet are (1) a temperature of 101° F. or over, with (2) some headache; (3) a peculiar flushing of the face; (4) the patient's answer that she "feels good," when the indications are that she is not doing well; (5) some tenderness over the lower part of the abdomen; (6) the cloths are stained a dirty, watery, yellow-red or brown, with perhaps a dark bloody coagulum here and there, and they emit a more or less fetid odor. During the first months or years of his practice every physician should make it his business to smell the vaginal or lochial discharge (on the pads) for the first eight or ten days after each delivery. In that way he is sure to develop more mind or intelligence in his nose than he can acquire from lectures or reading.

In every case in which the symptoms lead to a diagnosis of infection, or even only to a suspicion of infection, I invariably lose no time waiting for the doubtful effects of vaginal or intrauterine douches; and never think of postponing treatment even a few hours. Expectancy in these cases is equivalent to malpractice. When one knows what is the matter, he ought to know just what to do, and should do it at the instant. The speculum should be introduced at once, and if the discharge in the vagina and escaping from the cervix confirms the diagnosis or the suspected infection, the uterus should be cureted there and then. There is no need, or sense, of making an elaborate display of hospital-manners previously to the operation. To curet the uterus, in almost every case, the physician needs no assistance of any kind. The more ado made before an operation of that sort, the more it is likely to be delayed; and delay in puerperal infection is criminal.

With some individuals it is well to remark that "I am simply going to examine or clean out the womb." The patient is not taken from her bed; but, being in the dorsal position, her body is gently swung diagonally across the bed, so that when her buttocks are brought to the edge one leg is kept flexed by the foot resting with the heel against the angle made by the meeting of the side-board and the foot-board, and the other foot is placed on a chair shoved against the side of the bed. Some low box, or stool, is just the proper thing to sit on during the operation. To one side or the other (or anywhere within reach) are placed chairs covered with clean towels on which are set: (1) A basin or dish containing instruments (speculum, curet, dressing—uterine—forceps, and an applicator). A word about the curet. If the curet is not really sharp, the operation need not be undertaken, for a dull curet will not remove the material that needs to be got rid of. There is absolutely no danger in using the sharp curet if one only have an average degree of intelligence at the end of his fingers. Should he lack this, experience will soon provide him with it. A good way to acquire it is to use the sharp curet (simply for the education of the touch) in most cases of chronic endometritis that come to one's office. After a while the physician discovers that the sharp curet is as safe and much more useful and valuable than any other uterine instrument. (2) Absorbent cotton; (3) creolin or other antiseptic; (4) water, just boiled, to make creolin-solution as needed.

After washing the external genitals, a speculum is introduced to expose the cervix. Cureting should always be done through a speculum. Otherwise one cannot see the character and amount of the discharge and material removed from the womb, nor how much the organ retracts during the operation. The spoonlike end of the posterior blade invariably scoops from the posterior fornix a certain amount of bloody purulent fluid, which is to be removed with a wad of cotton held between the blades of the dressing-forceps. It is well to smell the cotton soaked with the discharge. The sharp curet is then passed into the uterus and gently pushed and moved in all directions, so as to get a clear idea of the size and outline of the cavity to be scraped. The cureting must be as thorough and as methodical as if the interior of the uterus were clearly exposed to view. In doing this, the operator soon becomes aware that some places feel smooth and others rough—that is, the curet slides over some spots without transmitting a grating feel or sound. These are the surfaces that need the cureting. One should search for these until the grating sensation or sound is produced. Thus the instrument is made to go over the entire uterine surface, beginning at a given point and gradually working around until every bit of the cavity-wall is gone over, and the material that the curet brings out is to all appearances clear, bright-red blood. The discharge,

as it fills the posterior culdesac, is soaked out with cotton as often as necessary. When the cureting is over (it takes from ten to fifteen minutes) a pledget of cotton is wound around the applicator and passed into and swept about the cavity of the uterus. If it comes out merely stained with blood, without any suspicious-looking shreds on it, a swab of cotton is dipped in the creolin-solution and the sulcus around the cervix is made clean. Then another solution-soaked swab, large enough to fit tightly in the vagina, is introduced with the dressing-forceps and held firmly pressed against the cervix while the speculum is being withdrawn. The solution-holding cotton is next slowly twisted out of the vagina, whose wrinkles it unfolds and forcibly cleans out. This has proved in my hands a good and satisfactory way of cleaning the vagina. Should, however, the pledget of cotton introduced in the uterus show on its withdrawal bits or shreds of tissue, a fresh pledget (moist or dry) is carried in again, and this is repeated until it comes out merely blood-stained. This done, why should the uterus be packed with iodoform or other gauze? Obliteration of the cavity by granulation is surely not wanted. If the cavity is clean the packing is needless. If septic matter still remains within, the packing, confining it there, will favor its absorption upward or into the general circulation. If the packing is left out the objection to the curet, that, by freshening the intra-uterine surface, it opens up channels for infection (which at best is a mere supposition) loses its alleged importance. That the packing acts as a drain is stating just the reverse of what it really does. Nor do we desire to prevent hemorrhage, as this is nature's own irrigating fluid. Bleeding is, therefore, to be encouraged, not only by the thorough cureting, but also by placing immediately after the operation over the patient's abdomen an extra large and thick flaxseed-poultice, and frequently renewing it. In this way healthy-looking and healthy-smelling lochia will often reappear in a few hours—surely within a day. The use of the poultice should be continued till the woman is positively well. After cureting, the poultice is much to be preferred to the uterine douche. Those who have not used the former know nothing of its good effects; while those who do not give explicit directions as to its size, thickness and where to place it, have not got half the good out of it that they should. Its effect is to start or increase the flow; and the blood coming from the interior of the uterus acts as a constant wash, and is much more efficient in getting rid of septic material that may have remained behind than is the intra-uterine douche.

As for drugs, the patient gets from one-half to one ounce of brandy every one or two hours until all danger from sepsis is past.

I beg to append notes of 7 cases treated in the manner outlined:

CASE I.—Twins were born, the second child being delivered



by internal podalic version. The placenta was extremely adherent and had to be picked away piecemeal. On the third afternoon, after confinement, the temperature was 103° F., the pulse 120. I ordered a poultice, an enema and brandy. On the next morning the temperature was 103.6° F., and other signs of sepsis were present. I had never used the curet, but thought I would make the attempt. Of course the operation was not very thoroughly performed. On the next forenoon the temperature was 101° F. I cureted again. There was no fever on the next day and the patient was all right in a few days. No douching of any kind was practised.

CASE II.—A woman, seven and a half months pregnant, had placenta prævia and was delivered of twins. Hemorrhage was profuse during manual extraction of both children. I did not visit the patient again until noon of sixth day following delivery. The temperature was then 103.5° F.; and there was headache, tenderness over lower abdomen, scanty and foul-smelling lochia, and so forth. I ordered a poultice and vaginal douches every 2 hours. On the next morning the temperature was 103° F. and cureting was practised. On the following day the temperature was 101° F. Cureting was again done. Then convalescence went along as in normal cases.

CASE III.—A multipara had been delivered five days before by another physician. The temperature was 105° F.; the pulse 130. There was very severe headache, pains and tenderness; also a distinct and painful swelling along the course of right oviduct. Cureting was done at once, poultices applied and brandy given. This was at noon. At 5 P.M. the temperature was down to 102° F., but on the next morning it was up to 104.5° F. Cureting was done again. On the same evening the temperature was 100° F. and the lochia was returning. The temperature ranged from 99° to 100° F. for four or five days, owing to the salpingitis. This patient received hot vaginal douches. She was well a week later.

CASE IV.—The patient had placenta prævia, and internal podalic version was performed. The woman had had puerperal fever four years before and "was sick nearly four months." On the fourth day of the present puerperium the temperature was 104° F. (the patient had not been seen for two days). She objected to the cureting for four days—the temperature varying in the meantime from 103° to 104.5° F. On the evening of the day on which the uterus was cureted the temperature was down to 100° F.; and the woman was up and well in a week. No douching of any kind was done.

CASE V.—The patient had suffered abortion at about the fourth month. I first saw the case four days later. The uterus was empty, but very tender, and it discharged very offensive fluid. The temperature was 104° F. Thorough cureting was done. The patient was nearly well the next day and needed no further attention.

CASE VI.—A primipara, between the second and fourth days after labor, had a temperature of 105° F., and showed other signs of acute sepsis. Thorough cureting that same evening was done and vaginal douches of creolin-solution were given every 2 hours. To all appearances the woman was all right the next day, and got along well.

CASE VII.—In a woman, following difficult labor, the genital canal was found bruised and lacerated. The patient did unexpectedly well up to the evening of the fourth day, when the temperature was 100° F.; and by morning of the fifth day it had reached 105° F. The condition seemed critical. The uterus was at once cureted, poultices applied and brandy given. At 9.30 of that evening the temperature was only 99.5° F. and the patient was well and out of bed on the tenth day after her confinement.

Although no bacteriologic examination of the material removed was made, all the cases reported were undoubtedly due to pathogenic bacteria. They comprise all the cases that have come under my care and they have satisfied me that, (1) all but the case of abortion were infected by the physician in attendance; (2) early cureting of the uterine cavity prevented extension and progress of the sepsis, which douching

would probably not have done—certainly not as surely and as quickly; (3) the dose of the septic material absorbed at the time the physician first recognizes that something is wrong is usually not sufficient to cause death or even serious consequences. Therefore one should not wait, or give the system a chance to absorb enough poison to produce dangerous or fatal results. This is certainly a danger to which those who believe in trying douching before cureting expose their patients.

Thorough and early cureting with a sharp curet ought to save every woman from the fatal results or serious complications of puerperal sepsis.

NOTE.—Since this article was written, I have treated a few more cases, all with very gratifying results. In the last one, I have cureted the uterus in practice, everything in the uterus and ovaries has been done. The temperature (eight days after abortion) was a fraction over 106° F. There seemed to be no hope for the woman. In a few minutes the uterus had been thoroughly cureted—and she got along nicely after that.

## UNILATERAL ALBUMINURIC RETINITIS: WITH REPORT OF A CASE.

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IN cases of albuminuric retinitis the lesion is usually bilateral; some authors say that it is invariably so. It must be remembered, however, that the reports of such cases are from oculists, who generally see the patients in the advanced stages of the disease, when it would be natural to find bilateral involvement. A review of the literature of this subject shows that the unilateral cases are not so rare as the textbooks imply. In fact, there is strong reason to believe that many one-sided cases have not been reported as such, the inference being that the unaffected eye would soon follow, and the case has been dismissed with no other comment than a hopeless prognosis. I have spoken to a number of my friends about this anomaly, and several have told me that they had seen the unilateral affection, but none could say whether the other eye remained healthy, although one gentleman assured me that in one instance the patient was living several years after he had seen the affected eye. None of these cases had been deemed worthy of further observation and report.

Knies<sup>1</sup>, who has made an exhaustive study of this subject, says that unilateral albuminuric retinitis is not uncommon. In his analysis of 103 cases, C. S. Bull<sup>2</sup> remarks that there were 10 cases of unilateral affection that remained so until the end of the patients' lives. Unfortunately, in none of these cases are there autopsy-records. In a private communication to de Schweinitz, Bull says:

"It is, perhaps, pertinent to state that in these 10 cases the renal disease was severe in its onset, and rather rapid in its progress, and none of them lasted longer than 5 months. I have now under observation a case of nephritic neuroretinitis, confined to one eye, which has lasted 8 months, and the other eye is, as yet, intact."

de Schweinitz<sup>3</sup> has reported two cases, in one of which the patient was lost to observation after the first examination. The other case was in a negro of 51, who, up to time of report, had been under observation 6 months, during which time repeated clinical examination indicated a typical case of interstitial nephritis. The fundus-changes were characteristic of the hemorrhagic type of albuminuric retinitis. While the man was being treated the areas of hemorrhagic extravasation decreased, with the development of larger areas of degeneration, and well-marked lines of perivasculitis. Vision in the affected eye at the time of report was  $\frac{6}{15}$ , and  $\frac{6}{4}$  in the left eye, which continued normal in appearance. In a review of the literature, de Schweinitz mentions cases of Despagnet,<sup>4</sup> Yvert,<sup>5</sup> Brunet,<sup>6</sup> Cheat-ham,<sup>7</sup> Eales,<sup>8</sup> and Bull. In all these cases it is implied that one eye was perfectly normal. In Yvert's case there was "characteristic" left-sided albuminuric retinitis in a man of 48. At the autopsy only the right kidney was found, and it was in a state of parenchymatous inflammation. In Brunet's case there was right-sided albuminuric retinitis, with right-sided anasarca. In Eales' case there was left-sided retinitis, the visual disturbance appearing one day after an injury to the left loin. Casts were not found in the urine, and the albumin disappeared.

Hasbrouck<sup>9</sup> reports a case in which the left eye was affected with retinitis for over 3 years, during which time the patient had albumin in his urine constantly. The right eye never became affected. Notwithstanding his long-continued nephritis and several minor ailments, the patient was able to do his work fairly well for one of his age—62 years.

The cases of de Schweinitz, of Hasbrouck, and my own presented similar appearances, and the initial lesion was undoubtedly in the bloodvessels. From the peculiar venous picture in his second case de Schweinitz was led to believe that the primary lesion was thrombosis of a venous branch rather than a true retinitis. He states that he suspects that in some of the other cases reported as unilateral neuroretinitis the same lesions may have been present, and he quotes in evidence Knies, who has seen hemorrhage into the optic nerve of one eye, with blindness, in a case of albuminuria, followed in one year by a pure hemorrhagic retinitis in the opposite eye. De Wecker<sup>10</sup> says that there are certain forms of retinitis attending nephritis that appear merely as simple hemorrhagic retinitis, but in the vast majority of cases true nephritic retinitis is characterized by the appearance of patches of fatty degeneration either connected with or independent of old-standing clots. He adds that, while cases of simple apoplectiform retinitis are not infrequent in which the affection is limited to one eye or does not attack the second until late, true nephritic retinitis generally commences simultaneously or within a short interval in both eyes. These statements are certainly the most

definite in the literature of the subject, and are borne out by all three of the most recently reported cases in this country. Although the terms "characteristic" and "true" are rather vague, there being such a diversity of picture in albuminuric retinitis, yet we can say that none of the three cases was the result of primary inflammation in the nervous structures, but rather the effect of a considerable hemorrhage.

The history of the case under my care is as follows:

The patient is a well built man of 49, with a good family-history. In his early manhood he was especially vigorous; and there is no specific or alcoholic history. In 1893 he was annoyed by neuralgic pains in the back and loins, and general prostration, and presented himself at the office of a well-known local physician for treatment. An analysis of his urine revealed a specific gravity of 1020, marked acidity, granular casts, and an albuminous ring "half as thick as a penny." He was ordered salol, salines, and special diet. Through some slight disagreement as to treatment the patient left his first physician and consulted a homeopath at Atlantic City, N. J., in the spring of 1893. At this time he was considerably worse, and he began to feel his neck gradually becoming stiff. In view of his advanced renal disease, and his poor physical condition, the second physician ordered him to take the mud-baths at Langenschwalbach, Germany, whither he went in September, 1893. From then on to the last of October, his German attendant made repeated analyses of the urine, invariably reporting the presence of albumin and casts. The mud-baths closing in October, the man spent the remainder of the winter in Southern Europe without medical advice.

After leaving the baths, the patient went to Frankfort, and while there experienced what was evidently the first ocular manifestation of his nephritis. While sitting on the hotel-porch one morning late in October, 1893, he noticed that a curious sign across the Schillerplatz to his left, ordinarily in his field of vision, was absent. He then discovered that the extreme left of his field was nearly or completely dark. For 10 days this state of affairs annoyed him, but as he was not embarrassed in his working-vision, and being tired of physicians, he did not consult an oculist, and the matter passed out of his mind. He did not realize that his left eye was worthless until I saw him in January, 1898, nearly 5 years later.

By December, 1893, the patient's neck was completely ankylosed, lateral movement was abolished, and only a slight up-and-down movement has since been possible. In April, 1894, he returned to this country, and early in 1895 he consulted a third physician, who reported the presence of albumin in the urine. The man remained under treatment until the end of 1895. He then stopped all medication and dietetic precautions. In January, 1898, he was attacked with an acute inflammation of the right eye, and returned to his first physician, by whom I was called in consultation. I found a typical case of iritis, with the iris immobile and bound down by posterior synechiae. After several instillations of atropin and cocain I managed to obtain full mydriasis. Small black remnants of the synechiae were plainly visible on the anterior capsule of the lens. We instituted strict dietetic treatment, and administered potassium iodid and sodium phosphate, as well as the routine treatment for the iritis, which was exceedingly painful. The aqueous of the affected eye soon became so cloudy as to obscure vision, and it was then that the patient really became conscious of the condition of his left eye. Ophthalmoscopic examination soon revealed the cause of the trouble. The course of the iritis covered about 6 weeks, and terminated in full recovery, the patient having normal vision with  $+0.25$  C. axis  $90^\circ$ .

At present, the vision of the left eye is  $\frac{4}{30}$ , exceedingly variable, and improved by looking to the left of the test-letters rather than directly at them. It is unimproved by glasses, and retinoscopy does not reveal any considerable defect—the eye is practically emmetropic. The pupil reacts normally to light, and accommodation, but under homatropin and cocain it dilates unevenly toward the nasal side. The field of vision is slightly contracted on the temporal side, but paracentrally there is an area of dull vision, in



which white is very indistinct, and colors are not at all recognized. On the nasal side the field is contracted to within the 30° circle. Vision for red is markedly contracted in the entire field.

Ophthalmoscopic examination shows the following changes: The disc is somewhat congested, but still clear in outline. The veins seem dilated out of proportion to the arteries. The upper temporal vein and artery are much diminished in size. No pathologic condition is noted on the nasal side of the fundus. Immediately over the disc, about two disc-diameters distant, is an irregular white spot of degeneration, evidently an old hemorrhage, about the size of the disc. Extending obliquely downward along the bloodvessels to the macula are several small white patches, indicative of previous hemorrhages. The macula is slightly encroached upon on the side toward the disc by a large spot of degeneration. There is a similar spot on the temporal side, which, however, does not touch the macula. Examination of the visual field shows a paracentric area of dim vision, slightly to the temporal side, which corresponds exactly to the fundus-findings.

At present the patient is in good health. For six months he has been extremely cautious about his diet, depending now chiefly on milk for sustenance. Early in the summer, urine-analyses showed an excess of urates, and invariably the presence of albumin. The amount of urine passed daily is about 50 ounces. The sole medication now is hydriodic acid.

The rapid onset of the ocular symptoms and the present fundus-condition show that the starting-point was undoubtedly in the vessels, and the case is of the type usually designated hemorrhagic albuminuric retinitis. The other eye is and always has been fully normal, which precludes the possibility of its participation in the affection by hemorrhage or degeneration in the papilla undiscoverable by the ophthalmoscope, such as has been found postmortem by Poncet<sup>11</sup> and Duke Karl Theodor.<sup>12</sup>

In regard to the etiology of unilateral albuminuric retinitis de Schweinitz recalls that various theories have been proposed. Yvert explained his case by assuming that the single diseased kidney, its fellow being entirely absent, caused an irritation of the sympathetic nerve of one side only. He based this explanation on the opinion of Potain, who believed the unilateral anasarca of nephritis following contusion of the kidney, and also attending nephritis without such history, to be due to an abnormal action of the sympathetic nerve. Eales, whose patient also suffered from an injury of the loin, with rapid albuminuria and unilateral retinitis, accepts Yvert's explanation as the most plausible under the circumstances.

If, as in the case of Yvert, one kidney alone is diseased, there is reason, but not proof, for the inference that in unilateral nephritis the retinitis will be unilateral.

Again, cases of nephritis have been reported in which life has lasted many years after the appearance of retinitis. Haab has seen such patients live as long as 13 years. According to Belt, Stevens has seen a case of 11 years' duration; Callan, one of 9 years; Noyes, one of 10 years; and Webster, one of 17 years. In such cases as well as with long-standing nephritis without retinitis, there is equal reason to suppose that only one kidney is diseased, its normal fellow supplying sufficient renal function to maintain life and even fair

health if dietetic precautions are taken. However, in the reports of such cases showing retinitis it is implied that both eyes were affected. This is opposed to the view that disease of one kidney produces unilateral retinitis. It is my belief that in some of these cases the retinitis has been really unilateral at the time of examination, and that subsequent bilateral involvement has been presupposed.

However, the existence of unilateral nephritis can only be positively proved by postmortem examination or separate catheterization of the ureters. Unfortunately, the only postmortem record of such a case is Yvert's, and this is not significant, as only one kidney existed to be diseased. Ureteral catheterization is a difficult procedure, and its performance is attended with many obstacles. It has been suggested by de Schweinitz, but it has never been performed in any of the cases in question. It may be well to state here that recently, in the *Deutsche medicinische Wochenschrift*, Neumann describes a simple and ingenious way of obtaining urine from a particular ureter for diagnostic purposes. He makes use of an instrument constructed something like certain Japanese fans, which can be withdrawn into the handle. He pushes this instrument into the bladder, maintaining it in a central position, and he then opens the fan, which is provided with a convex border and fits with approximate accuracy against the posterior vesical wall. Dr. M. L. Harris,<sup>13</sup> of Chicago, has also devised an instrument for collecting urine separately from the two kidneys.

This apparatus consists of a double catheter of special form and construction, and of a second instrument, to be introduced into the rectum in men, or the vagina in women, so formed that when in place it will make a ridge along the longitudinal diameter of the bladder. The two parts of the catheter are then rotated downward so that one section is on either side of the ridge thus formed. If the bladder has been evacuated and washed before the introduction of the catheters it is claimed that the urine will be drawn from the two sides unmixed, and the condition of the secretion of the two kidneys may then be compared. The greatest advantage claimed for this apparatus is that it may be used by any one not equipped with the great manual dexterity required for operating the cystoscope, and also this apparatus may be used in cases in which the cystoscope is not available, on account of the abnormal position of the ureters, or from profuse hemorrhage, or some similar reason. The bladder being empty, great care must be exercised in rotating the two catheters after their introduction into the bladder, for the reason that it is easy to injure the bladder-walls.

Despite the foregoing theories and means of effecting proofs, the important inference to be drawn from the history of these cases of unilateral albuminuric retinitis is, to my mind, the modification of the usual fatal prognosis. The prognostic significance of albuminuric retinitis is exceedingly bad. It is universally regarded as a death-signal, and statistics seem to support this belief. Baroness Possauer<sup>14</sup> has studied the records of 67,000 patients in the Zurich clinic and the private practice of Professor Haab, and found that the men of the poorer classes invariably died within two years, while among women of the same grade the percentage

of deaths was 68. Among private patients the mortality was 59% for men, and 53% for women. Belt<sup>15</sup> found that of 155 cases in private practice, collected from numerous sources, mostly by personal communication, 62% died within one year, 85% within two years. Of hospital-cases, 85% died within one year, and 93% within two years. Of a total of 419 mixed cases, 72% died within one year, and 90% within two years.

In the three recent unilateral cases reported in this country the patients were able to go about, and there were no serious signs indicating early death. Hasbrouck's case was in a man of 62 attending to his daily business-duties. My own patient is very comfortable and active so long as he is discreet in diet and drink. His average business day is 10 hours, and he is assiduous in his attendance.

Further investigation by postmortem examination and separate catheterization of the ureters is necessary for definite conclusions relative to these cases. The points of importance suggested by a clinical and statistical study of the cases already reported are:

(1) That the simple apoplectic form of albuminuric retinitis is the least dangerous to life; (2) that in albuminuric cases, in which the associate symptoms are not extremely severe and can be fairly controlled by medication and diet, retinitis is not a fatal sign as long as it remains unilateral.

#### REFERENCES.

- <sup>1</sup> Knies: *Die Bacillen des Sehorgans und seine Erkrankungen zu den über Knochentuberkulose, Karies, und seiner Organe*. Wiesbaden, 1895, p. 311.
- <sup>2</sup> C. S. Bull: *Trans. Amer. Oph. Soc.*, 1886, p. 185.
- <sup>3</sup> de Schweinitz: *Mon. News*, December 14, 1886.
- <sup>4</sup> Despres: *Revue d'Ophthalmologie*, 1882, p. 93.
- <sup>5</sup> Yvert: *Ibid.*, 1883, p. 145.
- <sup>6</sup> Brunet: *Journ. des Sciences mtd. de Lille*, 1884, p. 313.
- <sup>7</sup> Chatham: *Jour. Amer. Med. Assoc.*, 1885, 11, p. 150.
- <sup>8</sup> Fales: *Trans. Ophthalm. Soc. of the U. K.*, 1885, p. 126.
- <sup>9</sup> Hasbrouck: *Journ. of Ophth., Otol. and Laryngol.*, January, 1898.
- <sup>10</sup> de Wecker: *Oculist. Practitioner*, London, 1879.
- <sup>11</sup> Poncet: *Clinique Ophthalmologique*, 1880.
- <sup>12</sup> Duke-Karl Theodor: *Pathologische Anstalt der Augenheilkunde zu Nürnberg*, 1887.
- <sup>13</sup> Harris: *Jour. Amer. Med. Assoc.*, January 29, 1898—August 20, 1898. *Medicine*, April, 1898.
- <sup>14</sup> Baroness Fossamer: *Lecons et Disertations*, Zurich, 1894.
- <sup>15</sup> Belt: *Trans. of Ophthalm. and Otol.*, July, 1895.

## THE OPPLER-BOAS BACILLUS IN THE DIAGNOSIS OF GASTRIC CARCINOMA.

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In the advanced stages of the disease the diagnosis of gastric carcinoma is an easy matter, but upon an early recognition of the condition must depend the value of such surgical measures as are to be directed toward the relief of the patient. Often the diagnosis is reached too late to indicate more than operative treatment for prolonging the life of the patient, with no hope of ultimate cure. Diagnosis of the condition before the appearance of a tumor, or if that be not possible, before the growth has so involved the tissues as to be beyond removal, is demanded. That this can be done by means of the microscope would seem to have been demonstrated. Paul Cohnheim first called

attention to the importance of staining and studying particles of gastric mucosa found in the wash-water of cases of suspected carcinoma. According to his observations, when the gland-structures of such pieces of mucous membrane are found to be destroyed and replaced by round-cell infiltration, carcinomatous change is present. The finding of such particles is not always possible, and is therefore of value only in certain cases.

Normally, leukocytosis occurs after eating. In its absence a suspicion of carcinoma may be entertained, except in cases of ulcerative carcinoma in which there occurs constantly a leukocytosis of the polynuclear variety. In this latter condition the presence of pus-corpuscles in the stomach-contents should aid in diagnosis.

The presence of the Oppler-Boas bacillus has lately received much attention, and by many it is considered of great importance as a diagnostic feature. Of the various methods suggested, undoubtedly the easiest of demonstration, and consequently the most useful to the busy practitioner, is the finding of this microorganism in the gastric contents. The bacillus which was first described by Oppler in 1895, under the name of "Faden," or "threadlike," bacillus, is an unusually long and nonmotile bacterium, found in the contents of carcinomatous stomachs, lying either end to end in long threadlike chains or at right angles to each other. It stains readily with the aniline dyes, after the method usually employed in staining similar organisms. So far as is known, it never appears in the presence of any degree of hydrochloric acid, but it prefers a medium containing lactic acid. Kauffmann has attributed to it the power of forming lactic acid from various kinds of sugars. Schlesinger and Kauffmann<sup>1</sup> state that "the presence in large numbers of these bacilli is an indication of carcinoma, and their absence, accompanied by absence of lactic acid, in the presence of pyloric stenosis, is an argument against carcinoma." Riegel confirms the presence of these bacilli in enormous numbers in cases of gastric carcinoma, and adds, that, although there are many fungi that have power of forming lactic acid in the stomach-contents, this cannot alter the significance of the Kauffmann-Schlesinger observation. He does not consider the organism as pathognomonic of gastric carcinoma, but very important in the diagnosis. Hemmeter writes: "Concerning the importance of the Oppler-Boas bacillus, we can confirm the opinions of the author quoted (Riegel), that this organism is a very important diagnostic sign in the disease." Stockton<sup>2</sup> states that it "is often present in carcinoma, but has not been found in other diseases of the stomach." Oppler states that sarcinæ are found with ectasis occurring in non-malignant cases, but rarely with gastric carcinoma. The sarcinæ and the Oppler-Boas bacillus have not been found existing

<sup>1</sup> *Wiener klinische Rundschau*, 1895, No. 15.

<sup>2</sup> *American System of Practical Medicine*, Vol. iii.



together for any length of time in carcinomatous stomachs. With the diminution of the hydrochloric acid and the appearance of lactic acid, the sarcinae disappear and are replaced by the Oppler-Boas bacillus. In cases in which the obstruction was due to carcinoma, sarcinae were replaced by the Oppler-Boas bacilli, and after days of feeding of pure cultures of sarcinae in cases of carcinoma Oppler was not able to find them 24 hours afterward, either by means of the microscope or by culture, except in one case in which a micrococcus and not the Oppler-Boas bacillus was found. In both examinations in this case free hydrochloric acid and no lactic acid was found. Later, with the growth of the neoplasm the sarcinae disappeared and the Oppler-Boas bacilli occupied the entire field.

Two cases reported by Boas<sup>3</sup> are as follows:

CASE I.—A cigarmaker, 34 years old, was well until the age of 18 years. His illness dated back eight years, and had come on gradually. In the beginning he noticed, several hours after eating, a sense of pressure in stomach, accompanied by nausea, constipation, sometimes diarrhea. The disease progressed for several years, and for a year had been much worse, the pains more severe. Vomiting brought relief, the ejected material being abundant, and containing remnants of food taken days previously; often only mucus was present. Meat was not well borne, and the patient lived principally on fluids. Fruits, chocolate and cake induced pain and vomiting. The man felt well on an empty stomach, and at times for periods of a week. There was no hematemesis or blood in the stools. The patient was pale and emaciated, but not cachectic. Thorax, liver, spleen, and kidneys were normal. No tumor could be detected. The fasting stomach was found to contain much food containing yeast-cells and sarcinae, but no bacteria. Congo, tropeolin and phloroglucin reactions show the presence of HCl, while Uffelmann's reaction for lactic acid yielded negative results. The total acidity was 52. The urine was free from albumin and sugar. The hemoglobin-estimation was 50%. In the course of a month a tumor became palpable. The reaction for HCl was now negative; while there was a strong lactic-acid reaction. Examination of food-remnants showed an absence of free HCl, with the presence of much lactic acid,

been a sense of pressure in the stomach, with pain, growing worse after eating. The appetite was preserved. In February, 1894, vomiting set in, occurring often daily, while pain and nausea became worse, with increasing weakness and failure of appetite. June 24, 1894, there was complaint of pyrosis, nausea after eating, eructations, pressure and pain in the stomach, vomiting after meals several times daily. The vomited material contained food taken the day before, but no blood. It foamed, tasted and smelled sour. Relief followed emesis. The appetite was good; and constipation was present with weakness and malaise. The patient was much emaciated, and looking badly, though not cachectic. Liver, kidneys, spleen, and thorax were normal. Succussion could be elicited from two fingers above umbilicus to the symphysis. The stomach appeared distended with gas, and peristaltic movements were visible. In the region of the pylorus was a movable tumor the size of a walnut. Food-remnants from the fasting stomach were of acid reaction and responded feebly to phloroglucin-vanillin. Lactic acid was present together with HCl, yeast-cells, sarcinae, but no bacteria. On July 6th exploration by means of the electric light showed dilatation of the stomach. The patient was losing weight, and the tumor was a little enlarged. HCl disappeared, lactic acid continued present, and Oppler-Boas bacilli became abundant. On July 9, 1894, pylorotomy was performed and the pylorus found narrowed to the size of a pencil. The tissue removed proved on histologic examination to be adeno-carcinoma. By November 5th the patient had gained 50 pounds in weight, and the contents of the stomach contained free HCl, no lactic acid, and no sarcinae or bacteria.

In the case of a soldier with a history of chronic alcoholism extending over a period of years, in which Dr. Ullman was called in consultation with Major Appell, U. S. A., stationed at Fort Porter, there was pain after eating, with nausea, vomiting, especially after taking food in the morning, cachexia and emaciation. Splashing and succussion could be elicited below the umbilicus, and a tumor was palpable in the region of the pylorus. Blood-examination disclosed marked leukocytosis of polynuclear variety. The stomach-contents showed no free HCl when tested with phloroglucin-vanillin or tropeolin. Lactic acid, was, however, present, together with undigested, sour, foul food-remnants, mucus and some pus. There were no sarcinae, but many Oppler-Boas bacilli. A diagnosis of ulcerative carcinoma of the pylorus producing stenosis was made. The patient died in ten days, and postmortem examination by Dr. Williams confirmed the clinical diagnosis.

Personally I have examined four cases of suspected carcinoma of the stomach.

CASE I.—A woman, 46 years old, gave a history of having had several years previously a peptic ulcer. Her symptoms at the time of examination were those of pyloric stenosis with dilatation. No tumor was palpable; and there had been no hematemesis. Examination of the stomach-contents showed hydrochloric acid to be absent, while lactic and butyric acids were present, together with many sarcinae; but no Oppler-Boas bacilli. Exploratory celiotomy confirmed the diagnosis of pyloric obstruction from a cicatrix following a peptic ulcer.

CASE II.—A man, 45 years old, entered the hospital with symptoms of pyloric obstruction and dilatation of the stomach. He had had repeated attacks of hematemesis, and a small tumor was palpable in the region of the pylorus. Examination of the stomach-contents showed an absence of hydrochloric acid, while lactic acid was present in quantity, but no butyric or acetic acid was found.

Microscopic examination disclosed the presence of no sarcinae, but of many Oppler-Boas bacilli. The diagnosis of gastric carcinoma was confirmed by later developments.

CASE III.—A Pole, 42 years old, was able to give little history, but such as could be obtained pointed to pyloric stenosis, with occasional vomiting of foul-smelling stomach-contents. No tumor was palpable. A blood-count showed the red corpuscles to number 3,762,500, and the white, 10,900. Urinalysis yielded negative results. The stomach-contents were of acid reaction; free hydrochloric acid was absent; a small amount of lactic acid was present, together with undigested food, but no mucus. No microscopic examination was made.



Slide made from Case No. 2

but no sarcinae, and many Oppler-Boas bacilli. The tumor from now on became more palpable. Gastro-enterostomy was performed and a growth was found obstructing the lumen of the pylorus and the duodenum. The patient died of sepsis.

CASE II.—A coachman, 47 years old, had suffered since 1889 from recurring attacks of rheumatism. In 1892 there had

<sup>3</sup> Deutsche medicinische Wochenschrift, No. 5.

Several weeks later, examination of the stomach-contents showed the food to be poorly digested; free hydrochloric acid was absent; lactic acid was present; and butyric acid was absent. Microscopic examination disclosed the presence of undigested meat-fibers, but no sarcinae, and large numbers of Oppler-Boas bacilli. Palpation now revealed the presence of a small tumor. Operation was suggested and refused. Later, the man became cachectic and emaciated, and the tumor grew rapidly, to all appearances in confirmation of the diagnosis.

I believe that had a microscopic examination of the stomach-contents been made at an earlier date the presence of the Oppler-Boas bacillus would have been found before the appearance of the tumor.

CASE IV.—A man entered the Erie County Hospital on February 22, 1898, with a diagnosis of carcinoma of the stomach, although no tumor was palpable. Death took place on the next morning before any history could be obtained. Postmortem examination showed no carcinoma of the stomach, but ulcerating epithelioma of the esophagus one inch above the cardiac orifice. The tumor was small and had ulcerated through the esophagus. After death the stomach-contents—less than an ounce in quantity—showed under the microscope neither sarcinae nor Oppler-Boas bacilli.

Just what would have been found had an earlier examination been made, it would be interesting to know; but it seems reasonable to suppose that what did not exist in the stomach and esophagus after death was not there constantly during life.

That strong evidence is accumulating in favor of the Oppler-Boas bacillus as a diagnostic feature in gastric carcinoma, there can be little doubt. Kauffman reports 20 cases, in 19 of which the bacillus was present. In the one case in which it was absent lactic acid was not found. Hemmeter reports 16 cases with the bacilli present 14 times. Dr. Ullman, of Buffalo, N. Y., has had 10 cases, in all of which the bacillus was found. An examination of the records of the Erie County Hospital show that while it is not diligently searched for, the bacillus has nevertheless been observed in nearly all cases treated during the past year. In the 4 cases herein reported its presence was demonstrated in both cases of carcinoma, and its absence in another proved an aid in diagnosis. In Case III, its presence could undoubtedly have been demonstrated at a much earlier date had a proper examination of the stomach-contents been made.

In closing I beg to submit the following conclusions:

(1) That, while not pathognomonic of carcinoma, the presence of the Oppler-Boas bacilli is of the utmost diagnostic value.

(2) That their presence may be demonstrated in nearly all cases at some stage of the disease.

(3) That in a large number of cases the bacilli may be found before the tumor has involved surrounding structure to such an extent as to make extirpation impracticable.

(4) That in a limited number of cases the bacilli may be found before palpable evidences of tumor.

In compiling this article, references were made to the following:

Boas: Specielle Diagnostik und Therapie der Magenkrankheiten.  
Gardner: *A Text-Book of Tropical Diseases*.  
Hemmeter: Physical Diagnosis.  
Hemmeter: Diseases of the Stomach.  
Hemmeter: Ueber die Magen-Carcinome in *Archiv für Verdauungs-krankheiten*.  
Kraus and Schlessinger: Article in *Wiener klinische Rundschau*, 1895, No. 5.  
Osler: Article in *Deutsches Archiv für die Wochenschrift*, 1895, No. 5.  
Osler: Practice of Medicine.  
Rock: Edited by American Authors.  
Stockton: Article in "American System of Practical Medicine," Vol. iii.  
Stevens: Manual of the Practice of Medicine.  
Simon: Clinical Diagnosis.  
Ziegler: Textbook of Pathological Anatomy and Pathogenesis.

## POST-TYPHOID BED-FEVER.

By J. HOWE ADAMS, M.D.,

of Overbrook, Pa.

At the present moment typhoid fever seems to stand in the mind of the medical profession a good third to tuberculosis and syphilis in the attention it is attracting. The recent impetus given to the Brand method of bathing, after many years of controversy and criticism, together with the appearance of the disease throughout our army, has led to renewed study of this interesting process. At two of our large medical colleges in Philadelphia, at least, the course began this year with the consideration of typhoid fever.

The various symptoms, complications, sequels and treatments are now pretty well established; only here and there is anything obscure left for consideration. Among this latter class is the little-known sequel to typhoid fever, called by some authorities "post-typhoid bed-fever."

Osler, in his *Practice of Medicine*, under the head of "Post-typhoid Elevations-Fever of Convalescence," makes the following slight reference to this condition:

"During convalescence, after the temperature has been normal, perhaps for 5 or 6 days, the fever may suddenly rise to 102° or 103°, and after persisting from 1 to 3 days, or even longer, falls to normal. With this there is no constitutional disturbance, no furring of the tongue, no distention of the abdomen. These so-called recrudescences are by no means uncommon, and are of especial importance, as they cause great anxiety to the practitioner. They are attributed most frequently to errors in diet, constipation, emotions and excitement of any sort, such as seeing friends.

"There are cases in which the temperature declines almost to the normal at the end of the third week, the tongue cleans, and the patient enters apparently upon a satisfactory convalescence. The evening-temperature, however, does not reach 98.4°, but constantly keeps about 99.5° or 100°, and occasionally rises to 100.5°. This, in the late stage of convalescence, I have seen due to the post-typhoid anemia. Complications should be carefully looked for, particularly pleurisy or bone-lesions.

"In certain of these cases the persistence of the fever seems to be really a nervous phenomenon, and there is nothing in the condition of the patient to cause uneasiness excepting the evening elevation of temperature. If the tongue is clean, the appetite good, and there are no intestinal symptoms, it may be disregarded. I have frequently found this condition best met by allowing the patient to get up and by stopping the use of the thermometer. This prolonged slight elevation of the fever after the disappearance of all symptoms is most common in children and patients of marked nervous temperament."

It is the last paragraph of this quotation that fits the closest to the idea expressed in the term "post-typhoid bed-fever." This fever seems to occur in cases in which



every possible cause of the disturbance has been apparently removed. There has been no characteristic relapse with the recurrence of actual typhoid fever; nor has there been any indiscretion, constipation or emotion to account for it. The diagnosis must be reached entirely by the process of exclusion; the possibility of any other cause, definite in character, must be carefully eliminated. In my own experience, the existence of constipation may cause quite marked exacerbation of temperature. In one case, in which the nurse allowed the convalescent patient to become somewhat constipated, the temperature ran up to 102°, and the woman exhibited many signs of return of typhoid infection; the brownish, parched tongue and lips, the mental lassitude and depression, and the general typhoid facies reappeared, but were quickly dispelled by a mild dose of castor-oil cautiously administered, followed by enemata.

The books state that these fevers are slight in character; in my experience, they may become quite as marked as the original condition.

After all other factors are dismissed, there thus appears to be a class of cases in which as yet the cause of the return of the fever is unaccounted for, so that, for want of a better nomenclature, we may designate the condition "post-typhoid bed-fever." The confirmation of this diagnosis depends on the disappearance of the fever on permitting the patient to leave his bed. The usual course of events is the opposite of this; we put patients to bed to rid them of fever; in this condition we take them out of bed to rid them of fever. Possibly there is some disturbing or annoying influence about the life in bed, on being freed from which, the patient quickly responds to his generally improved state. Certainly, at the present, the condition is little understood or explained by our teachers of medicine.

The following case is a well-marked example:

A lad in whom typhoid fever had run an average course, made a good recovery from the disease; he was allowed to sit up for an hour or so a day for several days, when suddenly the temperature, which had been normal, started to bob up and down, showing an oscillation of several degrees in the course of the 24 hours; the temperature-range extending from below normal to above 102°. The boy was put back to bed, but this did not improve his condition at all; the temperature continued to rise and fall. There was nothing to account for this condition and the child remained in a fair condition physically and mentally. After a week of this experience, the boy was again allowed to get out of bed cautiously; and as his condition seemed to be no worse, he was permitted to stay up longer, and in direct ratio, as he stayed up, his temperature steadied and lowered, until it finally became normal.

There are two theories that seem at present plausible enough to explain this phenomenon; both are based on the instability of the temperature in convalescence. The first theory makes the process the manifestation of a pure neurosis, dependent on disturbance of the nerve-centers presiding over heat-production and heat-dissipation. The other theory is that the lowering of physical activity tends to allow the accumulation of waste-

products in the body, so that the patient suffers from auto-intoxication. The condition may be much the same as that causing ephemeral fever. Keeping the patient in bed at rest prevents him from breathing deeply; the lack of muscular movement interferes with the circulation of the lymph, and the heart gets no chance to tone up. Thus, there may be incomplete breaking down and elimination of effete matter, with the result, in persons with naturally unstable heat-regulating apparatus, of fever-production. In all cases in which it is possible the blood should be examined, and the relation between the white and red cells discovered. The greatest caution must be observed that an acute inflammatory process may not be masquerading under the guise of the post-typhoid disturbance under consideration.

#### A NOTE AS TO THE FUNCTION OF THE PNEUMOGASTRIC NERVE IN THE PRODUCTION OF STOMACH-DISEASES.

By JULIUS POHLMAN, M.D.,

of Buffalo, N. Y.,

Professor of Physiology in the University of Buffalo.

At the present time, when the inquiring mind is asking for causes, the question: "How long will it take before functional disturbances of the stomach produce organic lesions," deserves a fair hearing and free discussion. Diseases of the stomach are studied with the greatest care; functional disturbances are recognized everywhere; a large number of reflexes which interfere with the stomach's normal condition are well known, but their interrelation is never considered. An eminent authority in a recent course of lectures never once mentions "reflexes" as a cause in the production of stomach-diseases. True, we do not know the nature of these reflexes, whether they are inhibitory or motor, secretory, sensory, or trophic; we do not know whether the vomiting of pregnancy is a motor disturbance or whether the nausea is the result of reflected reflexes; neither do we know how eye-strain acts upon the stomach, although we are well aware of the fact that it does in many cases, and can trace its possible path anatomically down the pneumogastric nerve to the stomach; but there our knowledge stops.

Cutting of a nerve has always been the simplest method of demonstrating its action upon an organ. The muscle is paralyzed when separated from its motor nerve; a paralytic secretion is the result of injury to secretory nerves; the loss of sensation is caused by the cutting of a sensory nerve; hence, when physiology and anatomy teach us that the left pneumogastric nerve is distributed to the anterior, and the right to the posterior walls of the stomach, we expect to find corresponding changes if the right or the left nerve is cut. Experiments carried on during the past four years prove something entirely different. Section of either right or

left produces in time the same definitely localized lesions in the mucous membrane. Dogs thus operated upon have been kept alive from one to four months and all exhibited the same changes, marked more or less in proportion to the time passed since the operation. The stomach always presented the following picture: A strikingly pale and softened mucous membrane in the pyloric one-third of the stomach, and a narrow band of the same appearance around the cardiac orifice, divided by a sharp and distinct line of demarcation from the rest of the healthy and normal appearing mucous membrane.

Dr. Herbert U. Williams, Professor of Pathology in the Medical Department of the University of Buffalo, to whom I referred some of the specimens, tells me that the histologic changes were less marked than was to be expected from the macroscopic appearance, and consisted of marked edema and nothing more. How the stomach would have looked if the animals had been kept alive one or two years, can be determined only by additional experiments. If we take it for granted that conditions similar to those produced in the dog can occur in man, and that reflexes can inhibit the action of the pneumogastric nerve on the stomach, we may consider it worth while to remember without excessive theorizing that a hyperacidity of the gastric juice is accredited as a predisposing factor in the production of gastric ulcers. Physiology has taught us that the pyloric end secretes pepsin only, and if its function is interfered with and the pepsin-secretion is inhibited, the gastric juice secreted by the rest of the stomach will hold a larger proportion of hydrochloric acid. It may also be well to bear in mind that 50% of all cancer of the stomach occurs at the pyloric and from 20 to 25% at the cardiac end; in other words, from 70 to 75% of all cases of cancer are found in those parts of the stomach which are injured by prolonged inhibition of the pneumogastric nerves. The problem "how many patients suffering from stomach-diseases have or have had eye-strain" can be solved only by the heartiest cooperation of stomach-specialists and oculists.

**A New Series of 600 Thyroidectomies.**—Theodor Kocher (*Correspondenz-Blatt für Schweizer Aerzte*, Sept. 15, 1898) adds to his previous series of 1,000 thyroidectomies, which he reported in 1895, 600 new cases. The first 1,000 cases were all operated upon by Kocher himself, but 150 of this series were performed by assistants in his clinic. It is stated that 90% of the cases coming to the Poliklinik at Berne are sufficiently improved by medical treatment to make operation unnecessary. The medical treatment consists in the administration of preparations of iodine or of thyroid gland, and in case any improvement is to follow, it usually occurs in a relatively short time, *i. e.* in 3, or at the most 4, weeks after beginning the treatment. Nothing more is accomplished by the use of the thyroid extracts than by iodine-preparations. In families subject to Graves' disease, particularly at certain ages, there is often rapid loss of strength and flesh under treatment with these preparations, followed by sudden death which cannot be accounted for at the necropsy. Operation is indicated not only in cases which

show no improvement after long-continued medical treatment, but also in all cases in which there are large isolated tumors, any appearance of cyst-formation, or the slightest suspicion of malignancy. Difficulty in breathing is in any case a chief indication for interference. The danger of operation in complicated cases is much lessened since operations have been performed without general anesthesia. For more than 2 years nearly all the operations have been carried out under local anesthesia with 1% cocaine solution, without any difficulty and with but slight pain. Kocher mentions the following peculiarities in his method of operating: (1) A transverse curved skin-incision with its convexity downward ("Kragenschnitt") which makes a less noticeable scar than any form of longitudinal or T-shaped incision. (2) Separation of the muscles in the median line instead of dividing them transversely as is practised by many surgeons. (3) The so-called luxation of the tumor. The fibrous capsule is carefully divided down to the glandular tissue, with ligation of superficial veins when necessary, to free the circumference of the tumor, and then the entire mass is lifted out of the wound. Through this luxation the ligation of the main vessels is rendered much easier. The ligation of the inferior thyroid artery is undertaken after careful isolation, so as to avoid the recurrent laryngeal nerve, then follows the isolation and double ligation of the superior thyroid artery, the *venæ comites* and the large *venæ thyroideæ imæ*. Another improvement in technic is the crushing of the isthmus with strong forceps, so that in cases in which it is much thickened the colloid material is pressed out and only a thin band of tissue is left to be ligated. With the exception of infected cases, the operation is carried out aseptically instead of antiseptically, sterilized salt-solution being used for the irrigation of the wound. Cachexia thyreopriva following operation is very rare; only 4 cases are recorded following the entire series of cases thus far operated upon. This is believed to be due to the fact that most cases called total extirpations are in reality only partial, some small remnant, oftentimes the *processus pyramidalis*, being left behind. In the series of 600 cases, 18 were malignant with 6 deaths; there were 11 cases of strumitis with 2 deaths; and 15 cases of exophthalmic goiter with 2 deaths. In the remaining 556 cases of colloid struma there was only 1 death, which was due to chloroform, thus giving a mortality of 0.1%. It is believed that the single death was due entirely to the chloroform rather than the operation, so that the real mortality is 0, in spite of the fact that the tumors were in many cases of large size, causing severe circulatory, respiratory and pressure symptoms, and that many patients were weak, anemic, and some of them tuberculous.

**Bottini's Operation for Prostatic Hypertrophy.**—C. Chassaignac (*New Orleans Medical and Surgical Journal*, November, 1898) reports the case of a man, 79 years of age, suffering from complete retention of urine, who had been using a catheter for some months and whose condition was becoming almost unbearable. After thoroughly washing the bladder, about 3 ounces of a solution of antipyrin were injected so as to come in contact with the prostatic urethra. After this was withdrawn, 3 drams of a 2% solution of cocaine were similarly injected. Bottini's instrument was now inserted and a furrow was slowly burned in the anterior surface of the middle lobe of the prostate for about 3 cm. The left lobe was then treated in a similar manner. The pain was appreciable only during the last cauterization, and bleeding was slight. After the operation there was swelling and retention of urine for about 2 days, followed by an alarming chill and fever, no doubt due to slight septic absorption. This lasted but a short time, however, and from the second day after the operation the patient never needed a catheter and his general condition became excellent.

**Anophthalmos.**—T. C. Evans (*Louisville Medical Monthly*, November, 1898) records the case of a boy, 5 years old, in whom he found entire absence of both eyes. The ocular appendages were apparently normal and the conjunctiva and orbit presented the condition found after enucleation. The child was the sixth of healthy parents and was perfectly developed, with the exception of the ocular condition. The parents attributed the deformity to a maternal impression. Collins of London has collected 43 cases of this kind, in 31 of which the affection was bilateral.



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**"Someone Had Blundered."**—The War-investigation Commission, despite all its hindrances of nature and powers, is constantly stumbling upon a deal of evidence indicating the location of the real trouble. "Somebody was dreadfully at fault, can't you help us find out who it was?" was the pathetic query of Dr. Conner to one witness, and the reply was negative. And yet every witness whose testimony ends in a pointing index-finger knows perfectly well where the fault lies. If the commission were in earnest; if it had power to compel witnesses to attend and to testify, it could make short work of its investigations by commanding three witnesses: (1) The President, asking him who was responsible for nepotism, and for the appointment of Secretary Alger; (2) the Secretary of War, asking him who was responsible for nepotism, and for the appointment of General Shafter; (3) General Shafter, asking him who was responsible for blundering and inefficiency in the conduct of the Santiago campaign. We are a nation of splendid business-men and capable executive minds; and yet we advertise to the world our stupid incapacity to feed and care for a few thousand men for three months, with every agency of money and civilization at the command of the incompetents. "Utter confusion," are the words of Col. Roosevelt in describing the management of the Santiago expedition. A fine way, this, for Democracy to gain the confidence of aristocratically governed peoples!

**The Pathology of Diphtheric Paralysis.**—Long before the discovery of the diphtheria-bacillus and the knowledge of its specificity and of the toxic products of its vital activity, the paralysis that is not an uncommon sequel of diphtheria had received careful and attentive study and was believed by different observers, and demonstrated histologically, to be dependent in different cases upon degenerative changes in brain, spinal cord, peripheral nerves, and muscles. More recent investigation seems, however, to have shown that the lesion is essentially a parenchymatous degeneration of nerve-fibers of both sensory and motor systems; apart, of course, from cases in which actual hemorrhage or vascular occlusion occurs as a pure complication. Experimental inquiry has shown, further, that the lesions can be induced by means of the toxins separable from cultures, as well as by inoculation with the diphtheria-bacillus. An interesting contribution to this subject,

confirmatory of the views here expressed, was made by Batten before the Section of Diseases of Children at the recent meeting of the British Medical Association at Edinburgh. It was found, as the result of a study of the nervous system in six fatal cases of diphtheria by means of Marchi's method, that the dominant lesion is a parenchymatous degeneration of the myelin-sheath of fibers of both motor and sensory nerves, cerebral and spinal, without involvement of the cells in either the anterior horns of the spinal cord or the posterior root-ganglia.

## Gonorrhea as a Cause of Suppurative Pelvic Disease.

—In a paper recently read before the Buffalo Academy of Medicine, and published in the *Buffalo Medical Journal*, November, 1898, Joseph Price says: "As yet we have no very precise knowledge of the particular germ responsible for the destruction of the pelvic viscera of so many women. We do know that if we could get rid of gonorrhea, pelvic suppurations would be rare. To say that neglected abortions or unscientific midwifery is responsible is putting it too strong, and against facts and conditions of our everyday observation." This is in accord with the statements made of late by a number of men of large experience, and in positions to be well-informed on these matters. Lassar, of Berlin, has, for a number of years, given a series of lectures, which are open to students of all departments of the University of Berlin, on "The Significance and Prophylaxis of Venereal Diseases," in the course of which he makes the statement that probably over 90% of the suppurative pelvic diseases of women, and an equal proportion of cases of sterility, are due to gonorrheal infection, and he states further that the infection comes in most cases from the husband who has long been free from urethral discharge; after the last gleet discharge ceases there are still a few germs lurking in the urethra sufficient to cause infection and in many cases give rise to untold misery. Lassar's appeal to the students to avoid the loose habits of living so common in Germany is earnest and manly. The spread of gonorrhea is inevitable; but could not its prevalence be somewhat limited if the knowledge of the terrible results which so often follow it were more generally spread? At least no physician can afford to speak of such matters lightly with the knowledge of these facts in mind.

**The Division of Forestry, U. S. Dept. Agriculture,** has issued a circular (No. 21) of great interest and importance to the forestry movement and to owners of woodlands. In order to demonstrate that forestry, or the systematic working of woodlands, can be made to pay, the Division proposes to provide a series of practical examples of improved treatment of private forest lands, in which the present interest of the owner and the protection and improvement of the forest shall have equal weight. To this end owners of wood lots, of any size from five acres up, are invited to apply to the Department to have working plans prepared. These working plans will show the present and the possible value of the tract; will indicate the proper treatment, its cost, returns, etc. This work is to be done entirely without charge to the owners of small tracts. In the case of large tracts, which may present more difficult questions, the cost will be shared by the Department and the owners. This plan is one of the practical projects of the new chief of the Division, Gifford Pinchot, who realizes that actual demonstration of the paying possibilities of forestry management is of paramount importance at this time. If the success of some of their number shall prove to the mass of timberland owners that improved and conservative methods of lumbering will pay, the slaughter of the trees will cease, and all the attendant ills of drought, irregular water-flow, loss of valuable soil and healthful air be checked. It is significant of the interest awakened by the advocates of forest protection that already applications for working plans of over one million acres are on file.

**The Anatomy-Act of Pennsylvania.**—We call attention to the history of the first anatomy-act of Pennsylvania, by Dr. Forbes, published in the present issue of the JOURNAL. It is well to remind the younger generation that the advantages they now so easily command were not possessed by students only a few years ago, and of the severity of the struggle whereby the reform was brought about. It is also of interest generally to know how recently was gained the victory over profound superstition and ignoble prejudice. A knowledge of anatomy is, of course, the basis of all medical and surgical knowledge, and it is hard to believe that only 25 years ago the community had so little appreciation of its own duty and self-interest as to make it really a crime to secure such knowledge. The American profession owes a great debt of gratitude to Dr. Forbes for his heroic advocacy of the reform which has been of such incalculable benefit to medical science and progress. This gratitude is emphasized by two facts: (1) His part of the work, the most fundamental and important in the history of the local (if not also of the general American) profession has been so little recognized that in a so-called history of medicine in Philadelphia, recently published, the whole subject is

not even alluded to; (2) following, and partly at least as a result of the anatomy-act, Dr. Forbes was subjected to an atrocious martyrdom and unjust lawsuit which came too painfully near the most tragic ending. We are glad to be the means of placing before the profession for the first time the history of the movement, and to congratulate the soldier who so valorously won the fight. The article has been issued in pamphlet form, bearing the imprint of the PHILADELPHIA MEDICAL PUBLISHING COMPANY. It will be mailed to those who make the request.

**Hyperpyrexia.**—With reference to the report in the JOURNAL for November 12th, p. 985, of a case of puerperal infection with a temperature of 113° F., in the course of which appears the statement that this is the highest temperature followed by recovery of which the reporter had knowledge, a correspondent calls our attention to the fact that Vierordt<sup>1</sup> cites the famous case of Teale,<sup>2</sup> in which, in conjunction with a lesion of the cervical spine, the temperature rose to 50° C. (122° F.). According to the same authority, "a temperature of 45° C. (113° F.) has often been observed." High temperatures are certainly not uncommon in association especially with insolation, with tetanus and, it would seem also, with some septic processes.

Fagge<sup>3</sup> refers to a case of scarlet fever in which a temperature of 115° F. was observed. At the meeting of the Association of American Physicians, in 1895, Jacobi reported the case of a hysterical fireman in whom a temperature of 65° C. (149° F.) was observed; Shattuck cited the observation of a case with a temperature of 117° F., and Fussell one in a malingerer with a temperature of 115° F. Jones<sup>4</sup> has reported the case of a girl, 14 years old, in whom a temperature of more than 150° F. was observed; and Galbraith<sup>5</sup> one in a young woman in whom he observed a temperature of 151° F. (66.2° C.), and a nurse one of 171° F. (77.3° C.).

No doubt extraordinary hyperpyrexia has been observed in numerous other cases, recorded and unrecorded, but Osler<sup>6</sup> points out the suggestiveness of the fact that these have occurred in women, or, it might be supplemented, in hysterical or malingering men. Concerning the Galbraith case Osler adds that he has been informed on good authority that the patient proved to be a fraud. Physiologists place the lethal bodily temperature of mammals at about 115° F., and it is probable that this cannot be exceeded with the preservation of life, while it is doubtful if higher temperatures are at all possible in the human body. Temperatures above 115° must be, to say the least, looked upon with suspicion.

<sup>1</sup> *Clinical Textbook of Diagnosis*, Philadelphia, 1898, 4th ed., p. 55.

<sup>2</sup> *Clinical Transactions*, 1875.

<sup>3</sup> *Principles and Practice of Medicine*, Philadelphia, 1886, vol. i, p. 225.

<sup>4</sup> *Memphis Medical Monthly*, June and October, 1891.

<sup>5</sup> *Journal of the American Medical Association*, March 21, 1891.

<sup>6</sup> *Principles and Practice of Medicine*, New York, 1898, 3d ed., p. 1120.



### The American Humane Society and Vivisection.

—A meeting of the American Humane Society is announced to take place during the month of December at Washington, D. C., and it is thought that the subject of vivisection may come up for consideration and discussion. Inasmuch as there is now before Congress a bill intended for the restriction and regulation of vivisection by means that, if adopted, will hamper, burden, and retard scientific investigation of a vitally important character, it seems especially opportune to renew the agitation to prevent the enactment into law of the proposed measure. As we have discussed this subject on previous occasions it seems unnecessary to repeat the arguments in favor of vivisection or to recite the benefits that have been conferred upon humanity through its intermediation; those interested in a calm, judicial consideration of the topic in its various aspects may be referred to an admirable article by Professor Welch, of the Johns Hopkins University, that was published in the *Journal of the American Medical Association* for February 5th of the current year. To cite a single instance, if vivisection had resulted in no other discovery than that of the antitoxin of diphtheria the number of lives saved, the degree of suffering lessened, and the amount of disease prevented by the use of this product of the vivisectionist should alone be sufficient claim for its continued permittance in the hands of qualified investigators, most of whom are, in fact, physicians, to whose mercies the mass of the community is willing to entrust itself, with a sense that pain and suffering will ever be, so far as possible, mitigated and assuaged. We reopen this subject at this time to urge upon *all* who have not yet done so to write *at once* to Senators and Representatives in Congress to use every legitimate influence to defeat a measure that is pernicious in its tendency, and is calculated to do immeasurable injury to the interests and the welfare of all mankind. Senate Bill No. 1063, "for the further prevention of cruelty to animals in the District of Columbia," should be so overwhelmingly defeated that such restrictions as it contemplates shall never again be suggested within the memory of any now living.

**Conservatism in Gynecology.**—It has been said that "Obstetrics married surgery and that the fruit of the union was bright-eyed gynecology." This youthful specialty has passed the period of adolescence and entering into maturer years is giving indications of maturer judgment. The rashness and hotheadedness of uncertain youth are being followed by a just appreciation of a woman's reproductive organs, and experience is teaching the best methods to employ for conserving their functions. The journals of this specialty show the trend of thought now permeating the profession; the evils of the artificial menopause and the sufferers from postoperative sequels have influenced

the thinking gynecologic surgeon in selecting methods which will save rather than sacrifice important organs. In the removal of uterine fibroids, the wider use of myomectomy instead of hysterectomy is advocated, and the possibilities of this procedure manifested. The ligation of the uterine arteries through a vaginal incision, or the ligation of the ovarian arteries and their anastomosing vessels, is employed in smaller growths. Resection of the ovaries when small cysts are present, or the treatment of these smaller cysts by ignipuncture, relieves the symptoms without destroying the function of menstruation and ovulation; and by maintaining the patency of the oviduct renders impregnation possible. This conservatism has become almost radical as shown in the resection of pus-tubes and the suturing of the abdominal extremity to the healthy remnant of the ovary. Many operators are permitting fragments of ovarian tissue to remain when hysterectomy is indicated and performed. All these efforts are evidences of a general awakening to the evils of sexual mutilation, and of a broader knowledge of the possibilities of conservative work. The pendulum vibrates from one extreme to the other. A too radical conservatism may necessitate secondary celiotomy for the subsequent removal of the remaining uterus or appendages. Time alone will prove the value of these efforts, and the ultimate results of this work should be carefully studied and truthfully recorded. Meanwhile the conscientious surgeon must be guarded in his expression of opinion and not arouse hopes in his patient which may not be fulfilled.

**The Münchener medicinische Wochenschrift laughs,**—and with it must have laughed many readers upon receiving its issue of October 29th. This number contained a supplement of 20 pages "without any assistance whatsoever" of the usual and named collaborators; even the advertisements are jokes. The original articles are on the asexual propagation of *homo sapiens* by artificial means, on the colorability of the soul, the results of experimentation upon a nervous system hardened during life, etc., and there are capital reports of societies, letters, news, poetic travesties, etc. There are advertisements of doctors about to take a journey, of others who are absent, or who will soon return, and of one who intends *überhaupt nicht* to take a trip. The most profoundly scientific articles are offered for sale in manuscript, and one might think that he were reading a medical advertisement of some of our serious contemporaries when the virtues of *Iodosanin*, *Pulektanin*, *Polypraxin*, etc., are extolled. The article on "A Triumph of Modern Surgery," by Professor Swindel, of the Mississippi College," shows that the Müncheners have their eyes upon us, and among the noteworthy new books is that of John Grudger on *The Morbid Sensibility of the English—Particularly in Reference to the Naval Advancement of Other Nations*.

Ours is a serious calling; and although *Ernst ist das Leben, heiter ist die Kunst*, we believe our art is not seldom unnecessarily solemn. Moreover, there is no especial reason why medical humor should not be innocent, free from dirt, and worthy of encouragement. Because of the pathos and even the tragedy of our calling there seems all the more reason to lighten it with attention to the brightness and incongruity frequently peering with twinkling eyes of mirth from the very darkness and sufferings in and among which we labor. How common it is to find the gayest wit and liveliest satire in the sick, and even in those who know death is not far away! Was ever irony and laughter better than that which came from the *Mattress-Grave* of Heine? Such thoughts come to the grateful reader of the supplement sent by our over-sea colleagues. We wish that we might copy one of the poems called *A Dream*, in which the dreaming doctor at heaven's gate was astonished to find himself excluded. The wily Saint Peter argues the scientist to silence, knowing well all about suggestive therapeutics, nature-cure, empiricism, wound-healing, serum-therapy, and the rest. Shut out from heaven, the dreamer continues:

Da horte ich die Stimme eines alten Weibleins:  
Grüss Gott, Herr Dokter, das ist ja unser lieber Dokter!  
O mei' Herr Peter, lassen's ihn halt dengerst eine!  
Herr Dokter! Wissen's no, wie Sie als Armendokter,  
Mit mir, der armen Gichtmamsell so freundlich waren?  
Vergelt's Gott, hab' i g'sagt wohl hundert Mal zu Ehna,  
A solcher Herr, der muss a mol in Himmi kema!  
"Ja, unser lieber Dokter muss in Himmi eine!"  
So höre ich jetzt ein paar Kinderstimmen schreien.  
"Die Mutter hat uns immer g'sagt, er war ein Engel!"  
Da lacht Sanct Peter: "Ich hab' wahrlich nichts dagegen,  
Nur soll das Doktorlein bescheiden sein und merken:  
Sein Herz, nicht sein Verstand erobert ihm den Himmel!"

**The Yellow Sign.**—We have never believed that a yellow sign pasted on a door could be an effectual barrier to the transmission of disease. When the law first went into effect in this city we had an instinctive aversion to it. It seemed to us that the flaring yellow placard was a sign of pestilence about as heartless and useless as the white cross, which, Defoe tells us, was chalked on the door-posts of victims in the time of the great plague in London. It was needlessly alarming and hygienically needless. We confess that we have never overcome this prejudice, and after some familiarity with the working of the law we are not convinced that the yellow sign is a success or anything other than a nuisance. In our desire, however, to support the health-authorities in the performance of their arduous and responsible duties, we have been more than willing to sink individual prejudices in favor of sanitary law.

Complaints come now and again to our ears of hardships inflicted by the yellow poster. It is said, for instance, that business is seriously injured or even ruined by the display of this sign on a dwelling in

which the lower floor is used as a store. When a case of diphtheria is properly isolated in a remote room there is no additional safety but only injustice, say the opponents of the law, in making a quarantine of the whole house and interfering with every social and business duty of all its denizens. One indignant protest has reached us in which the writer expresses the devout hope that a certain injured tradesman will hale the Board of Health into Court on a suit for damages, and teach humility to the sanitary tyrants who perpetually read the doom of mankind in culture-tubes, and find bacilli in every specimen that is sent to them. As to this, we venture on no prediction as to what would happen to the Board of Health under such circumstances. We more than suspect, however, that the Board would have friends at Court.

The objections in our mind to the yellow-sign are about as follows: In the first place, it does not in itself prevent infection. It is no barrier to careless and reckless persons who wish to go in or out of the house. We have seen this time and again. On the contrary, it promotes, if anything, a false sense of security; it takes the place of more intelligent supervision and control. As it is an official badge, it absolves all persons concerned, save the Board of Health, from responsibility. It proclaims that the affair is no one's business but the health-inspectors. Again, it leads to deception and the concealment of contagious disease; hence, it often throws the temptation in the physician's way to favor his patrons by making a compromise-diagnosis. While most practitioners are superior to this, still it were just as well not to expose everyone to such temptation. On the other hand, the yellow poster often exaggerates danger. It proclaims to the neighborhood that the house is a pest-house; and an ignorant populace draws all sorts of wrong inferences from this. We have known one such poster to almost stampede a neighborhood. A mild case of scarlet fever, which, if properly isolated and treated, would go on to recovery and few persons the wiser, is thus made the focus of a little popular panic. The yellow sign thus leads to many false opinions and deductions about the whereabouts and spread of the disease. People say that their children took it from a neighbor who had been advertised as having it by the Board of Health with their frightful sign. This is not a small matter, as those who go among the people to practise medicine know full well. Finally, it interferes seriously and needlessly with business.

As an illustration of the use of the yellow sign we may refer to the case of a large seminary, filled with young men, in which diphtheria broke out in the janitor's family of four children. Three children successively had the disease, and one died. The yellow sign was posted, not at the front door, but at the inside door leading into the private suite of rooms occupied by the janitor's family. The students were notified and given leave of absence—but not a man of them left the



building. The epidemic never spread beyond the janitor's door on which was posted the talismanic yellow paper. Now the query naturally arises, was this fact due to the yellow sign on the door? or, if the sign had been put on the outside front door, would the disease have spread through the building? If so, there must be a potency in the yellow sign—but, if not so, why not then do likewise in every private house, and, if there must be a yellow sign, paste it on the sick-room door? There, at least, it would be unseen and harmless.

**The Relative Mortality from Disease in Our Two Last Wars.**—We are indebted to a correspondent for calling our attention to an error which accidentally slipped into an editorial article in the *JOURNAL* of October 15th. We had quoted from a trustworthy source certain figures comparing the deaths in the armies of the United States during the Civil War and the war with Spain respectively, and reduced them to percentages which we inadvertently based on "the number of soldiers participating," when we should have written the total loss from all causes. This slip of the pen passed unnoticed by us because it did not at all affect our conclusions, that a serious disparity between the ratios of death from disease in the two wars remains for somebody to explain. Our statistics of mortality in the Civil War were derived by averaging the counts made by the Provost-Marshal-General, the Adjutant-General, and the Surgeon-General in their official reports, which varied somewhat in detail; the statistics of the Spanish War were those given out by Secretary Alger himself. On these official figures our percentages were based. A comparison of percentages shows that the ratio of deaths from disease to the total of deaths from all causes was 25% higher in the Spanish War than in the Civil War. Our critics have wasted all their strength upon an inadvertence which, much as we regret it, was obvious and irrelevant. Not one of them has yet attempted to explain why there should have been such a disparity between the records of the two wars.

As we have already said, we have no desire to be unjust to the War Department, or to hold the Surgeon-General's branch of it responsible for anything more than may fairly be charged to its account. But there must be some cause for such a disproportion in the mortality from disease after the world has advanced a whole generation in knowledge. Had the perspective been reversed, and had the ratio of deaths in battle and from wounds been shown to have increased, officers of the line would promptly have sought an explanation in the increased destructive power of arms and projectiles which must have taken place in a third of a century. But as it is, the staff cannot fall back on such a defence; for the world's advance in medical and sanitary science, in the act of preparing and preserving food, in the methods and materials of clothing for cam-

paigns in various climates, in devices for shelter, in facilities for transportation, and the like, are all in the direction of saving life and not of taking it. The officers charged with feeding, clothing and sheltering our troops, with nursing and healing them when ill, with the choice of sites for camps and hospitals, etc., must divide the responsibility between them. As each branch of the staff seems desirous of shifting the load to the shoulders of some other branch, we stand by our original proposition, that it is the business of some Investigating Commission to ascertain where the blame really should rest.

Dr. Smart's communication to Surgeon-General Sternberg, which appears in the newspapers just as we are going to press, does not throw any new light on this question. The most he attempts to make out is that the percentage of deaths from disease, based on the total number of soldiers in the respective armies, was greater in the Civil War than in the war with Spain. Nobody has denied this. On the contrary, every one who has studied the figures must have been convinced that the deaths, not only from disease, but from all causes, bore a much larger proportion to the whole number of troops 35 years ago than during the last 6 months. The point which the critics of Staff-incompetency have made and which still remains unanswered, is why a so much larger proportion of deaths should have occurred from presumptively preventable causes, among our troops in the war with Spain, than from the enemy's shot and shell.

**The Surgical Treatment of Sciatica.**—Very little has been written about the advisability of radical surgical treatment for sciatica. Considering the comparative ease with which the great sciatic nerve can be reached and examined, it is remarkable that practitioners, and especially neurologists, have rested content so long with a tentative medical treatment, and have not shown more interest in the exact pathology of this severe disease. In these days of antiseptic surgery an exploratory incision even into the abdominal cavity is not a serious affair; how much less so, then, would be an exploration of the sciatic nerve? If any disease is entitled to heroic treatment it is sciatica; for this affection disables some patients for years, breaks down the general health, and ruins the capacity for both business and pleasure.

Sciatica is probably only another name for neuritis—and yet not an ordinary neuritis, for the integrity of the axis-cylinders, in at least a vast majority of cases, is not involved. This is proved by the fact that anesthesia-paralysis and trophic disorders are exceedingly rare in sciatica. Even so long ago as the time of Galen this disease was believed to be caused by a gouty humor, which attacked the nerve-sheath. In recent times a few careful autopsies have shown that the nerve is inflamed in sciatica. Thus Furnet, in 1878, re-

ported an autopsy in which the sciatic nerve was found to have been inflamed. In the few cases observed post mortem the nerve-trunk has usually been found healthy at its origin and diseased at its point of emergence from the pelvis. The history of the course of opinion on this subject is given by Luria, in a well-known thesis, from which it is evident that a few observers have reported organic changes in the nerve, but that their reports have not made a lasting impression on the minds of surgeons. Autopsies in this disease are exceedingly rare for obvious reasons, but we know of one instance in Philadelphia in which the nerve was found in such a state of engorgement and thickening of its sheath that ordinary medical treatment would have been futile.

Dr. J. Crawford Renton has now reported, in a recent number of the *British Medical Journal*, a series of cases of sciatica in which he operated successfully on the nerve-trunk. He has given an exceedingly meager account of these cases—and this feature of his report we are forced to deprecate—but his results were so satisfactory that his short sketchy paper must be regarded as an important one. In Dr. Renton's series of eight cases the condition found seems to have been one largely of adhesions of the sheath of the nerve. These had bound down the nerve-trunk and were the persistent cause of pain and disablement for months and even years after the onset of the disease. Medical treatment had not availed to cure any of the patients. In one case adhesions were found beneath the gluteus maximus muscle extending up to the sciatic notch. The dragging and pressure of these adhesions were evidently the cause of the persistent pain, and the surgical treatment consisted in releasing the nerve and removing the over-growth of connective tissue. The relief thus obtained had continued uninterruptedly for a period in some cases of several years.

From Dr. Renton's observations it would seem that sciatica is due to a perineuritis, causing thickening of the sheath and adhesions to surrounding tissue. This is in accord with clinical observations, for the conducting power of the neurons, both motor and sensory, is seldom impaired in this disease. Hence it is hardly conceivable that a destructive interstitial neuritis exists, at least in most cases, since this would probably cause damage to the axis-cylinders.

We commend Dr. Renton's results to the consideration of both neurologists and surgeons. If anything is to be gained by radical surgical treatment, it seems unfortunate that the many victims of chronic sciatica should not have the benefit of it.

**Editor and Reader, No. 4. "For Value Received I Promise to Pay."** When the subscriber sends his money for a periodical he should be given his money's worth. Does he get it in the vast majority of medical journals? Do their editors take their calling seriously, even in the com-

mmercial sense of *quid pro quo*? If an editor does his work with professional ideals and aims he will try to meet and satisfy the needs of his subscribers. If he does it for the supposed honor of the position, he should certainly be no less conscientious. If he assumes the office for the salary he secures, he should at least earn the salary by attention to the demands of those who pay the expense. Hence, all motives unite in commanding editorial obedience as an officer in the service of his subscribers. Take up many journals and judge them by these standards. The original articles cost the editor nothing except the labor required to prepare them for the typesetter. (How often is this done in a workmanlike manner?) Are the news of the profession secured by special correspondents, money being spent in the getting; or is the news not usually copyings from other journals, incomplete, and not seldom stale as the joke of a comic newspaper? We know of journals publishing no word of a report of the best medical societies meeting in their own city, or not doing so for several months after the dates of the meetings.

And then the abstracting of other journals—in what a nondescript, haphazard, scrappy way it has been done by one and all of us in the past! A subscriber could never be at all certain that a hundred desirable articles had not been missed even in the best of his journals; and he was certain that not one-tenth of the articles in the principal journals he did not take had been abstracted for him. Was this taking one's office seriously? Would it pass muster as workmanship in any lay review or newspaper? If a subscriber should rely on such reports (consisting of one, two, or three only, in each of the great departments, "under the charge of,") to keep him posted as to the work of his colleagues in all parts of the world, would he not find himself scientifically stranded at the end of the volume?

Lastly, as regards editorials, have our journals usually in the past summarized the trend of professional opinion and work, judged dispassionately, denounced inethicality with frankness, and tried to stimulate professional unity and progress?

To write thorough and systematic abstracts of the best literature requires a degree of scholarship and a conscientiousness of which few indeed have anything approaching an adequate conception. We have no desire unduly to "magnify our office," but we wish the profession to recognize the enormous labor done by the staff of our journal in a sincere attempt to present an epitome of the world's professional literature at once after its publication. So far as we know, no journal has ever undertaken such a job before. We are by no means satisfied with the present degree of perfection with which we are carrying out the scheme, although the unanimous voice of the profession in praise would justify contentment. We claim, however, that it is only by a still more generous professional support that we can bring about a complete realization of our aims, which is immediately to mirror the world's medical advances, in such a way as to be of the greatest service to our subscribers.

It is sometimes answered, "Oh, we are taking all the journals we can possibly read already." But is that an answer to our offer? We do not ask you to discontinue any that are truly professional in their management; but, candidly, do the majority of the others give you value received as do we? We frankly ask you to institute a comparison, even of a strict commercial kind, as to the relative number of pages, editorial labor, practicality, subscription-price, etc., and then answer the straightforward question, which one is giving the most for the money? For the time we may



purposely leave out of the count literary and scientific values, and put the matter down on the bargaining basis. We are at present giving you at the rate of almost 3,000 double-column pages of matter for \$3.00, or 10 pages for one cent! If cheapness is desirable where else can the bargainer find a similar offer? This may seem somewhat egotistic and as if basing the affair upon rather a low standard, but when the strictly professional journal must compete in the commercial market for place, it needs occasional mention that the commercial journals may be beaten on their own ground. If the physician uses the excuse that he already takes more journals than he can read, he may be answered by the query that even if he prefers supporting the lay-owned sort why should he prefer to pay a very much higher price for them?

**As a Medical Newspaper** we intend that THE PHILADELPHIA MEDICAL JOURNAL shall be much improved and unsurpassed. We are perfecting special arrangements whereby the principal happenings in every part of the United States shall be reported and presented to our readers at once. To this end we have determined to classify our News in two principal groups, **American** and **Foreign**, with smaller groups to aid in finding items, systematization, etc. Thus, under *American News and Notes* we shall first give the news of Philadelphia, Pennsylvania, New Jersey, and Delaware, under the heading of *Philadelphia, Pennsylvania, etc.* News of New York City and State will be given under *New York*, that of States west of New York and Pennsylvania will be grouped under *Western States*, that of the South under *South-eastern States* (including Maryland, and Washington, D. C.) that of Canada under *Canada*. General news, that pertaining to the United States as a whole, or not falling naturally in the foregoing divisions, will be placed last under *Miscellany*. There will be, for the present, three divisions of *Foreign News and Notes*, those pertaining to *Great Britain* (including her colonies), and those concerning continental Europe, under *Continental Europe*, and *Miscellany*.

In the endeavor to make our journal most useful we trust that our friends will not fail to apprise us immediately of any local news of interest to the general profession. If we do not always publish it, do not be offended, because we may have reasons for not doing so that would appear to you both good and sufficient, but which we should find tiresome to explain in all cases.

**Our Latest Literature Department**, as we have established it, has, judging from numerous letters spontaneously sent to us, proved of signal service to the busy physician, by enabling him to learn the substance of the world's best medical literature in a concise and systematic way, quickly, and at once after its appearance. During the coming year we hope to be able (with your continued help—couldn't you, perhaps, do something more for us?) to enlarge and perfect this department, so as to make it of still greater value to you and to our profession. The collaborators who do the work of reading and condensing the original articles of the best medical journals are scholarly and devoted men, whose labor is enormous, and who are doing the profession a high and unselfish service deserving of all honor. We shall hereafter append to each abstract the initials of the collaborator.

**Every subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to

aid us. In addition to this we trust you will write these friends a personal request to examine the sample copies we shall send to them, with a view of subscribing. We believe that we are giving more and better medical literature for the money than can be had elsewhere. If this is so, it is your friend's misfortune if he fails to become a reader of our JOURNAL.

## Reviews.

**Untersuchung über den Leprabacillus und über die Histologie der Lepra.** By VICTOR BABES. Berlin: S. Karger, 1898. Price, 8 marks.

This valuable monograph of over one hundred pages is the outcome of the author's careful studies of the histology of leprosy, of which he made a partial report at the Leprosy Conference, held in Berlin in October, 1897. The leprabacillus is undoubtedly the chief cause of the disease-phenomena. It resembles the tubercle-bacillus, and like the latter has no true spores. Up to the present, experiments to obtain cultures and inoculations of animals have not yielded unequivocal results. In all fatal cases of leprosy the author was able to find other organisms, such as pyogenic cocci and diphtheroid bacilli, in association with the lepra-germs. Although the bacilli have been found in the hair-follicles, on the skin-surface, and in the various secretions and purulent discharges of leprosy individuals, the possibility of infection by contact has not been proved, nor has the direct inoculability of human beings with bacillary material been demonstrated beyond question. The fact that as a rule several members of the same family are diseased, suggests the possibility of hereditary transmission of the disease. The bacilli may, and probably do, enter the body through the hair-follicles, and various dermal glands, but it is also possible that the skin-lesions are at times secondary, the bacilli having had a latent localization elsewhere, perhaps in certain lymph-glands. The bacilli in the tissues lie both within and without the cells.

The author has made some interesting studies on the action of tuberculin on leprosy patients, and has found a distinct influence upon the lesions, and suggests the cautious use of this agent in the treatment of the disease.

The prevention of leprosy has no sure foundation and will not have until the life-history of the bacillus outside of the human body is known, but the regulations proposed for prophylaxis in the case of tuberculosis are probably applicable to leprosy. Isolation of the afflicted is to be carried out and the secretions and the discharges of such persons should be destroyed. The book is provided with numerous illustrations in the text and several exquisitely beautiful colored plates at the end. There is also a valuable bibliography. The author is certainly a most careful as well as a most versatile man, and medical science is indebted to him for many contributions.

**Tenth Report of the State Board of Health of the State of Maine** for the two years ending December 31, 1897, Paper, 8vo, pp. viii. 395. Augusta: *Kennebec Journal Print.* 1898.

In addition to the usual formal and sometimes perfunctory details this report contains an account by the Secretary of the Board, Dr. A. G. Young, of the presence of diphtheria in different parts of the State, with the steps taken for its suppression; a reproduction of circulars issued with regard to disinfectants and disinfection, to diphtheria, to scarlet fever, to typhoid fever; a statement of water-analyses made; an elaborate "Bacteriological Report on Formaldehyd," by F. C. Robinson and B. L. Bryant, representing a second year's work in the study of formaldehyd as a disinfectant; and "Notes on Disinfectants and Disinfection," by the Secretary, being the outcome of study of the results obtained in the last 15 years in the investigation of disinfecting agents. The report is altogether a commendable piece of work and will repay careful reading by all interested in the study of hygiene.

**The Principles and Practice of Medicine.** Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M.D., Fellow of the Royal Society; Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore, etc. Third Edition. 8vo, pp. xviii, 1181. New York: D. Appleton & Co., 1898.

Without disparagement of other works on the practice of medicine, it may be said that Osler's is easily the most popular *Practice* in America; in England, too, it holds a high place in the professional esteem; and it were supererogatory to add that this popularity and esteem are well deserved. Dr. Osler has ever been an industrious student, methodically trained, a laboratory-worker before the laboratories were common, a wide reader, a close observer, a perspicuous writer, a progressive physician. Of this, all his work bears the stamp, and it is not surprising, therefore, that this, his opus magnus, should have been accorded the reception it has and have met with immediate and maintained success. American medicine may feel justly proud of Dr. Osler as one of her most distinguished representatives. This third edition of his *Practice* appears three years after the second, as the latter did after the same interval following the first. Although numerous changes were made in the second edition, many additional ones have been incorporated in the third, and the revision has been quite radical. The articles on the following subjects are either new or have been rewritten: Vaccination, beriberi, bubonic plague, cerebro-spinal fever, pneumonia, Malta fever, yellow fever, dengue, leprosy, glandular fever, gonorrheal infection, carcinoma of the stomach, gastric neurosis, cirrhoses of the liver, jaundice, diseases of the biliary passages, diseases of the pancreas, diseases of the thymus gland, diseases of the spleen, lymphatism, Addison's disease, encephalitis, neurasthenia, erythromelalgia, ether-pneumonia, anesthesia-paralysis, pneumaturia, albumosuria, while additions have been made to the articles on typhoid fever, tuberculosis, rheumatic fever, diabetes, gout, parasitic diseases, diseases of the blood, heart, lungs, and kidneys. The section on diseases of the nervous system has been rearranged, and an attempt has been made to group them in accordance with the modern conceptions of the anatomy and physiology of that system. From a volume of 1078 pages, the book has grown to one of 1181 somewhat enlarged pages; while the illustrative charts have increased in number from 19 to 21 and the figures from 5 to 11. The commendation that has been bestowed upon the previous editions of the book is equally deserved by this third edition, and the work will continue to be the standard text-book on the practice of medicine.

**A Synopsis of Surgery.** By R. F. TOBIN, F.R.C.S.I., Surgeon to St. Vincent's Hospital, Dublin. Pp. 277. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$2.28.

This book is a synopsis of a course of clinical lectures given at St. Vincent's Hospital, and, judging from its scope and character, the course must be complete, systematic, and up to the times. In addition to the synopsis proper, the first 20 pages are taken up with an introductory address on surgery, which does not differ materially from most efforts of the kind; then follow chapters on the principles of surgery, dealing with the usual subjects. The general arrangement of some of these chapters does not follow the plan of the rest of the book and is not a true synopsis, the effort being to give the student a more adequate idea of erysipelas, septicemia, pyemia, etc., by presenting the charts and histories of typical cases. This portion of the book is broken into by chapters on fractures and dislocations, after which follow the surgical diseases, syphilis, tuberculosis, actinomycosis, tumors, etc.; the subjects thus far mentioned taking up the first 116 pages of the book. The remaining 161 pages deal with the special surgery of the various tissues and regions of the body. As is inevitable in a book of this size, with so broad a field to cover, there are some errors, omissions, and dogmatic statements; as examples may be mentioned the assertion that the pathogenic bacteria are killed by a temperature of 32°;

the absence of any adequate discussion of diseases of the liver and bile-passages; and the recommendation of operation for appendicitis only in case of abscess. On the whole, however, the book is remarkably reliable and we know of no book of its size which offers the student as much trustworthy information. It should be mentioned that the details of operative procedure are altogether omitted, this part of the work being covered by a colleague of Tobin's at St. Vincent's Hospital. The book is clearly printed on thin paper, interleaved for note-taking, and is durably bound in flexible leather in convenient size for the pocket.

**Transactions of the Pathological Society of Philadelphia,** Vol. xviii. Containing the Report of the Proceedings of the Society from October, 1895, to June, 1897. Edited by W. S. CARTER, M.D., Recorder of the Society. 8vo, pp. xvi, 493. Philadelphia: Printed for the Society by Wm. J. Dornan, 1898.

Though a little belated, this volume is still welcome, as it stands for the work of one of the most active and most enterprising medical societies in the United States. The contents of the successive volumes of the transactions of this body represent in a way the progress of pathology in this country, and the high order of many of the contributions to the present volume indicates the position to which this department of medicine has attained. From among the mass of valuable matter offered it will be possible to name only a few of the more important papers. Drs. John Ashhurst, Jr., and Joseph P. Innis contribute a paper on Tuberculosis of the Hip-joint; Drs. Jos. Sailer and A. E. Taylor one on the Condition of the Blood in the Cachexia of Carcinoma; Dr. Ludvig Hektoen one on Segmentation and Fragmentation of the Myocardium; Dr. J. Dutton Steele one on the Distribution and Etiology of Cardiac Hydrothorax, and one entitled Some Observations upon the Lesions of the Cortical Nerve-cell in Diphtheria; Dr. J. M. Van Cott one on Malignant Chronic Endometritis; Dr. Henry J. Berkley one on Ricin-poisoning: Experimental Lesions Produced by the Action of Ricin on the Cortical Nerve-cell of the Guinea-pig's and Rabbit's Brain; Dr. C. W. Burr one on Lesions of the Brain found in a Case of Acute Yellow Atrophy of the Liver; Dr. A. O. J. Kelly one on Senile Paraplegia; Dr. Mary Alice Schively one on Cerebral Syphilis; Dr. B. Meade Bolton one on the Theories which have been adduced to Explain Immunity from Infectious Diseases. In expressing our admiration for the character and the amount of work done by this Society, we must add a word of congratulation upon its present mode of publishing its proceedings, viz., periodically in fasciculi of convenient form and size. In this way the work of the Society receives prompt and early publication, while its members are stimulated to greater zeal and greater precision in observation and in record.

**Pathological Reports.**—Montreal General Hospital, No. III. Reference-index of Postmortems. From 1883 to 1895. Compiled by WYATT JOHNSTON, D. M. MACTAGGART, and F. L. JOHNSTON.

We have here presented in chronologic order the anatomic diagnoses made in the cases that came to autopsy at the Montreal General Hospital from 1883 to 1895, to the number of 921, including 59 private cases, among a total of 2,262 deaths in the hospital; and a special index in which the morbid conditions are arranged in a nosologic manner under the particular organ or system to which they belong, with the reference-numbers appended. The work is a nice piece of statistical record, but it shows, among other things, a decided falling off in the percentage of cases of amyloid degeneration, which is attributed to improved methods of treating suppurative conditions and to better facilities for making early diagnosis and averting the graver forms of many chronic diseases. The proportion of deaths from pulmonary tuberculosis to the total deaths from all causes is practically the same as that for the city and province. Malaria is rare in the city and province of Montreal. Trichinosis was observed but twice in 20 years. Internal hemorrhagic pachymeningitis, while rare in hospital practice, was found to be common at coroner's autopsies.



## Correspondence.

## NOVEL PROCEDURE IN VESICAL IMPLANTATION OF URETER.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

SOME weeks ago, in performing hysterectomy for sarcoma of the fundus uteri, I was unfortunate enough to excise about an inch and a half of the right ureter. I endeavored to avoid the ureter, which I knew was intimately connected with the growth, by adopting Kelly's method of going down upon the left side and then upon the right, so as to enucleate the uterus from below up. The ureter, however, was involved in the growth, and in spite of every precaution I was obliged to excise a portion as mentioned. After controlling the hemorrhage my first effort was to dispose of the ureter. I found I could not make a ureteral anastomosis, as the separation was too great. I therefore decided to implant the ureter in the bladder. A forceps was passed into the bladder and the bladder was opened upon its tip at the point where the bladder-wall was most easily approximated to the ureter. The edges of the incision were held with other forceps and the end of the ureter caught with the forceps in the bladder and drawn into the incision, which was then stitched with catgut to the wall of the ureter. This being done I found the tension was too great to render the implantation safe. The bladder-wall was therefore caught, close to the point of implantation, and attached with good catgut to the stump of the broad ligament. This relieved the tension entirely, while serving as a sort of roof to protect the ureter. Lest there should be some leaking, an opening was made in Douglas' culdesac and a light gauze-drain was passed down from the point of implantation. This drain was removed at the end of about a week, but there was at no time any evidence of leaking. Recovery was prompt and uneventful.

Respectfully,

Columbus, Ohio.

J. F. BALDWIN, M.D.

## CARBOLIC ACID:

## A Note on the Cause and Prevention of Color-Changes.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

THREE years ago I bought a 56-lb. can of Merck's pure carbolic acid, and for convenience of handling, I liquefied it by adding from 8 to 10% of water, bottled it and stored it in a dark closet. The bottles were of both flint and green glass, some of them cork-stoppered and some glass-stoppered. Up to the present time I had been using what was stored in five-pint glass-stoppered green bottles and the contents remained as clear as a crystal and water-white. Without giving the matter any special thought I supposed that the product remained uncolored because of either its purity or the dark storage. On taking out a fresh bottle a few days ago I noticed that the contents were of a dark amber reddish color. I then took out all that remained, namely, three gallon bottles, one of green glass and one of flint, both cork-stoppered, and one of flint glass with a glass stopper. The contents of the glass-stoppered bottle were as clear as when introduced, but the contents of the cork-stoppered bottles were dark red.

Four years ago I bought a 5-lb. can of carbolic acid bearing an American label, and in order to preserve some of it in a crystalline state I liquefied it by heat and filled a pint

glass stoppered flint bottle. I find it now free from reddish tint, although exposed part of the time to strong light.

Seven years ago I bought two 5-lb. cans of Merck's carbolic acid and opened one of them for immediate use, and found the contents free from reddish tint. A year later the other can was opened and the contents were of deep reddish hue when liquefied. These tin cans were sealed by placing a thin plate of cork in the screw-cap. The contents of the can were of course not exposed to light until the can was opened.

These data prove to me that I have accidentally blundered into a discovery of the real cause of the color-changes that all brands of carbolic acid are said to undergo, namely *contact with cork*. Under all conditions when the container was stopped with cork the acid became red, and under all conditions when the container was stopped with glass the product remained unchanged, even when exposed to light and to temperature-changes for years. That this change, too, is a chemic one is, I think, proved by the fact that new or clear acid makes a clear 5% mixture with water, whereas the same acid after it becomes red throws down a red precipitate when so reduced, which can be removed only by careful filtration of the solution. I suggest that other physicians and chemists make tests in accordance with my experience and publish the results.

Respectfully,

A. I. HOON, M.D.

Mercer, Pa.

## EPIGASTRIC HERNIA: REPORT OF TWO CASES.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

THE following two cases are reported on account of the apparent rarity of their occurrence in medical literature:

About noon on July 16, 1898, Mrs. J. V. R., 44 years old, a very stout and fleshy woman, began to suffer from severe, agonizing pain in the upper abdomen, in the median line, radiating through the right hypochondrium. On physical examination, inspection yielded negative results, with the exception of a slight flattening of the contour of the abdomen, just above and encroaching slightly on the umbilicus. Palpation in this area disclosed a tumor the size of a small orange, 2½ in. in diameter, soft and doughy in consistence, and simulating a lipoma. The mass was somewhat tender on pressure, irreducible and without impulse on coughing. There was considerable tenderness throughout the right hypochondriac region anteriorly and posteriorly. There was no jaundice. The woman had had two stools the morning preceding the attack. During the succeeding night vomiting began, at first watery and then of brownish black liquid. The pain increased in severity. There was no fever, but the pulse gradually increased in rapidity from 70 to 120 and also became weaker. The next morning, on consultation with Dr. F. A. Cantwell, a diagnosis of strangulated epigastric hernia was made and the patient was transferred to St. Francis' Hospital for celiotomy. After a median incision, 2½ in. long, over the tumor was made, the hernial sac was found just below the skin, and filled entirely with omentum. This was adherent to the left lower quadrant of the sac, which was the seat of a diverticulum that extended to the upper margin of the umbilicus. Enough of the ileum was found drawn into the sac by the incarcerated omentum, to bend it sharply on itself and to cause the marked obstructive symptoms. The sack and diverticulum were excised, after freeing and excising the redundant omentum. The peritoneum was united by two catgut mattress-sutures and the

skin and fascia by interrupted silkworm-gut sutures. The operation was followed by marked relief of all the symptoms, the patient leaving the hospital at the end of 14 days, wearing an abdominal binder. Up to the present time she has suffered no recurrence or inconvenience.

On close questioning the patient stated that the tumor appeared about a year previously, after severe straining incident to the care of an invalid father the subject of general anasarca.

J. H., 56 years old, a civil-war veteran, and a subject of general arteriosclerosis, first noticed a painful swelling midway between the umbilicus and the ensiform cartilage 6 months ago, after severe exertion in the pursuit of his occupation as a bridge-tender. On physical examination a small tumor about 2 in. in diameter was seen in the median line, midway between the sternum and the umbilicus, slightly tender, soft and doughy in consistence, and irreducible, with slight impulse on coughing. This caused inconvenience in working, with the production of intense pains in the region of the tumor. A diagnosis of epigastric hernia was made and operation suggested for relief of the symptoms, but it was declined.

Respectfully,

GEO. N. J. SOMMER.

Trenton, N. J.

### EPILEPTIC INSANITY.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

I HAVE read with great interest the letter of Dr. J. H. McBride in your issue of November 19th upon the subject of "Insanity from Epilepsy." As most of the questions so well discussed by the doctor are answered more or less fully in a paper of mine on "Epileptic Insanity," soon to appear in your JOURNAL, I will not take up the space now with a consideration of the doctor's arguments, but refer him to that article.

Very truly yours,

FREDERICK PETERSON.

4 West 50th Street, New York.

**Ectopic Pregnancy, with Operation at Full Term.**—H. C. Dalton (*Medical Review*, November 5, 1898) reports the case of a primipara, aged 27, who had had no miscarriages, and in whom menstruation had been regular and of about 4 days' duration. After amenorrhea for 8 weeks, a bloody uterine flow took place, preceded by sudden agonizing pain, dizziness and vomiting, the discharge continuing for 3 weeks, with severe cramps throughout. Nothing unusual was noticed thereafter for 3 months, when a swelling was observed in the left iliac fossa and the movements of the child were felt. Severe abdominal pains followed some 2 months later, continuing to the time of operation. The uterus was enlarged and easily outlined. After the lapse of a further 2 months, the woman was seized with labor-pains, and hemorrhage from the vagina. On the following day an incision was made from the umbilicus to the pubes, and a fetus was removed with little difficulty. The placenta was attached to the bottom of the pelvis on the left side of the uterus. It was torn from its attachment, and the sac was packed with iodoform-gauze. Severe hemorrhages took place during the operation, and the patient was in a condition of severe shock for the next 4 days, after which she rallied and was considered out of danger. The dressing was removed on the fifth day, and the packing continued until the wound had completely healed at the end of a month. The child lived 4 hours. The woman made a good recovery.

## American News and Notes.

### PHILADELPHIA, PENNA., ETC.

**The new Atlantic City (N. J.) Hospital** will be formally opened November 30th.

**Mercer County (N. J.) Medical Society.**—At a meeting held November 15th, Dr. Charles P. Noble, of Philadelphia, delivered an address upon conservative gynecology.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending December 3d:

Monday, November 28—Philadelphia Neurological Society.

Thursday, December 1—Obstetrical Society of Philadelphia.

**Beneficiaries by the Annual Charity-Ball.**—The Executive Committee having in charge the arrangements for the annual charity-ball has announced the following institutions as having been selected as beneficiaries of the ball-fund: The Children's Ward of the University Hospital; St. Christopher's Hospital; the Sanitarium Association; and the Society for the Protection of Children from Cruelty.

**A Museum of Tuberculosis.**—Dr. Leonard Pearson, dean of the Veterinary Department of the University of Pennsylvania, has established a museum of specimens of tuberculosis, secured from the different experiments made at the State Live-stock Experimental Station at the University. These specimens will be used in the study of the subject of tuberculosis, both at the station and by the University veterinary students.

**Dr. William Pepper Memorial Meeting.**—Arrangements have been perfected for the holding of a meeting in commemoration of the late Dr. William Pepper, in the chapel of the University of Pennsylvania, on the evening of November 29th. Governor Hastings, as president ex-officio of the Board of Trustees, is expected to preside, and addresses are to be made by Drs. S. Weir Mitchell, Jas. Tyson, Mr. Daniel Baugh, and others.

**College of Physicians of Philadelphia, Section on Ophthalmology.**—At the meeting held November 15th, Dr. B. A. RANDALL reported a case of **partial paresis of the iris, with 3 linear white streaks in the choroid**, the result of a recent traumatism. The interest in the case centered in the choroidal lesions. They were not ruptures, but torsions of the membrane, and, having been noticed immediately after the injury, pigmentary degeneration had not set in. There were neither extravasations nor uncovering of the sclera in the affected patches. Inspection 26 days after the injury disclosed nearly the typical appearance, of choroidal rupture, with degeneration at the margins.

Dr. R. R. TYBOUT spoke favorably of the value of **hypodermic injections of pilocarpin hydrochlorate in the treatment of iridocyclitis**, detailing a case thus treated in which the inflammation was severe and vision was seriously compromised. Mercury and the iodids had been faithfully tried without benefit. The exudation was absorbed and vision recovered under vigorous sweating by pilocarpin.

Dr. G. E. DE SCHWEINITZ reported a case of **xanthopsia** with relative central scotoma in a man addicted to the abuse of tobacco. The treatment consisted of abstinence from tobacco and full doses of potassium iodid and strychnin. In 6 weeks the symptoms had disappeared, and it was possible to demonstrate that the blindness in the left eye, which the



patient claimed had existed for 11 years and for which no adequate explanation could be discovered, was feigned. This is the second case in which xanthopsia as a symptom of the toxic action of tobacco had been observed.

DR. W. C. POSEY read a report of a **clinical study of 287 cases of hyperopia** and concluded that this defect is present in 13% of all cases of refractive error; that its degree bears a close relationship to the degree of imbalance of the lateral muscles, with which it is associated in the great majority of cases; that it is present in all cases of marked anisometropia and strabismus; that the correction of errors of refraction is rarely sufficient to cause its disappearance; that supraorbital headache is its most frequent symptom, and that nictitation and blepharospasm are common among its manifestations.

#### Vital Statistics of Philadelphia, for the week ending November 19, 1898.

Total mortality.....		414
Children under 5 years.....		116
Diseases,	Cases,	Deaths.
Pneumonia .....	49	
Pulmonary tuberculosis.....	43	
Heart-disease 30, inflammation of the heart 6, fatty degeneration of the heart 4, neuralgia of the heart 3.....	43	
Nephritis 23, uremia 5.....	28	
Diphtheria 23, membranous croup 5	126	28
Senility .....	23	
Apoplexy 16, paralysis 5, softening of the brain 2.....	23	
Inanition 10, marasmus 9, debility 1...	20	
Carcinoma 14, sarcoma 1.....	15	
Gastroenteritis 13, gastric fever 1.....	14	
Convulsions 12, epilepsy 2.....	14	
Casualties.....	13	
Bronchitis.....	11	
Inflammation of the brain.....	10	
Typhoid fever.....	96	9
Scarlet fever.....	17	2

[In the table of vital statistics on p. 1090 of the JOURNAL for November 19th, it is through a clerical error incorrectly stated that there were 26 cases of nephritis and 4 cases of uremia and 18 cases of pneumonia and congestion of the lungs; whereas in both instances there were that number of deaths. It is further stated that there were 28 cases of apoplexy, paralysis and softening of the brain, with 16 deaths; whereas there were 28 deaths. It is stated that there were 21 cases of marasmus and inanition with 10 deaths, whereas there were 21 deaths; the number of deaths from scarlet fever is given as 5, whereas it should have been 1.]

**The Pollution of the Schuylkill River.**—At a meeting of the Board of Health, held November 15th, Dr. Benjamin Lee, Health-Officer of the city of Philadelphia and Secretary of the State Board of Health, presented a communication, in which he stated that he had instituted a special investigation of the individual sources of pollution of the Schuylkill River, the work being assigned to the medical inspectors of districts through which the stream passes, below and including the city of Reading. The object of the investigation was to obtain the exact names and postoffice addresses of all, whether corporations, or firms, or individuals, who were contributing to the contamination of the stream. The reports show the number of such parties and persons to be, in Berks County, 25; in Chester County, 10; in Montgomery, 76; a total of 111. The names of the offenders are not to be published for the present, but a friendly representation is to be made to each, in the expectation that this will be sufficient to induce him to abate the evil. In all cases in which satisfactory results do not follow this communication, orders for the abatement of the pollution will be issued, and all parties

failing to obey will be prosecuted both for maintaining a nuisance and for failure to obey an order of the Board of Health. Dr. Lee reports that "two cities in the State, namely, Altoona and Reading, have, with the most praiseworthy public spirit and consideration for the lives and health of the population living at points lower down on the streams on which they are situated, established purification-plants for their sewage. In both cases these plants, although entirely different in their construction and manner of purification, afford ample demonstration of the fact that purification of the sewage of large towns is a matter of not the slightest difficulty. The new Legislature should, therefore, insist that all cities and boroughs which introduce or at present possess public-water supplies should also introduce sewage-purification plants."

Dr. Lee also proposes that the State Board of Health shall be given authority over all important streams, with the purpose of preventing their pollution, and that river-wardens shall be appointed to patrol their banks and report violations of the law prohibiting the pollution of streams. He proposes further as a subject for legislative action the appointment of health-boards for rural communities.

**College of Physicians of Philadelphia—Section on General Medicine.**—At a meeting held November 14th DRs. HENRY MORRIS and JOSEPH SAILER showed a case of **Banti's disease** in a man, 21 years of age, who had been ill for several years. He was jaundiced and profoundly anemic, the blood-examination showing 27% of hemoglobin, 1,430,000 red corpuscles (which presented little change in shape, with freedom from nuclei), and 4,000 white corpuscles to the cu. mm. The differential count was normal. The spleen was enormously enlarged, extending almost to the iliac crest and well over to the right of the median line. The liver was under the normal size. Examination of the urine showed nothing abnormal except an excess of urates. The administration of arsenic was followed by disagreeable symptoms and had to be abandoned. Banti considered the disease primarily a splenic disorder, probably dependent upon some infection. It is characterized by disappearance from the spleen of the nucleated red cells and sclerosis of the Malpighian bodies with hyaline degeneration in their interior. The liver exhibits an interlobular cirrhosis, without any history of a previous condition likely to induce cirrhosis. There is no change in the lymphatics or other organs. DR. H. A. HARE recognized the case as one that had been for several years under his care as an instance of splenic anemia. The blood then contained a marked excess of lymphocytes and manifested a peculiar tendency to change from time to time, although it finally assumed the appearances of pernicious anemia, with the characteristic eye-lesions of this condition. Arsenic proved of great benefit in treatment at this time. DR. A. SRENGEL said he had a rather indefinite idea of what was meant by splenic anemia. Until more definite knowledge exists regarding these vague anemias, he thinks it probably better that they should be defined as secondary anemias, with enlargement of the spleen. He suggested that some of them may be leukemias that have lost the leukemic condition of the blood. Others, again, may be cases of pernicious anemia of an irregular type. DR. T. G. ASHTON, who had examined the patient's blood, said that towards the last the blood had shown the characteristic changes of pernicious anemia, with poikilocytosis, the presence of normoblasts, megaloblasts, nucleated red cells, etc. DR. SAILER agreed that the classification of the anemias is unscientific. All so-called cases of pernicious

anemia are probably not the same disease. They exhibit clinical differences, and when these can be recognized it is convenient to give the disorders distinct designations. Dr. Sailer called attention to the fact that decrease in the size of the liver present, as in the present case, is not a feature of ordinary cases of pernicious anemia. He had found no marked alterations in the relative proportion of the blood-cells.

DR. F. S. PEARCE read a paper on **local flushing (vasomotor paresis)** and reported an instance in a case in a neurasthenic. DR. W. G. SPILLER thought that in the light of the experiments of Bechterew the condition might be dependent upon vaso-dilatation. DR. J. TYSON referred to a case of "permanent" flushing that began in the face and gradually extended down the trunk and arms. This occurred in a woman who had had a breast excised and was accompanied by progressive and slowly developing paresis affecting at first and chiefly the legs and later the arms. DR. D. REISMAN cited Bechterew as having found that stimulation of a certain portion of the cortex of a dog's brain caused a rise in blood-pressure, vaso-constriction, while irritation of other parts in close proximity led to a fall in pressure from stimulation of the vaso-dilators. These facts may help explain morbid blushing or erythrobia, and perhaps the flushing in the case reported by Dr. Tyson. There might be a cortical lesion causing both stimulation of the vaso-dilators and the paresis.

DR. H. B. ALLYN read a paper on **the medical treatment of appendicitis** in which he described the line of treatment that he pursues: He directs absolute rest in bed, with abstinence from all food for from 24 to 48 hours, keeping the bowels freely open, preferably by a saturated solution of Epsom salt in peppermint-water, sometimes by means of castor-oil or calomel. In 14 cases thus treated the patients all recovered without surgical interference. The use of opium was advised against on account of its tendency to mask the symptoms, and to lock up the secretions, thus augmenting the toxemia. When the pain is violent codein may be given after freely opening the bowels. Locally turpentine-stupes, ice and leeches may be employed. Dr. Allyn does not oppose surgical interferences, which is indicated in some cases, especially those that after 24 hours' active medical treatment show no tendency to improvement. Such cases are usually early recognized and are practically surgical from the beginning. DR. J. M. ANDERS thought that the mortality of the disease would be greatly diminished if operation were resorted to in every case seen in its earliest stages. In the advanced cases when pus-formation has occurred the surgeon must hesitate. In the mild, frequently recurring cases operation should be performed between the attacks. Dr. Anders uses salines in all cases and he has resorted to them even after suppuration had occurred. The danger from rupture from this source he considers slight. He advises against the use of high enemas. DR. H. A. HARE sees no physiologic reason for giving salines except where the presence of undigested food-stuffs in the cecum is suspected. Salines abstract water from the small intestine rather than from the congested cecum, and consequently do not relieve the congestion at this point. For agonizing pain sufficient morphin may be given to take the edge off the pain, but not enough to cause constipation. The chief indication for surgical interference is rigidity of the belly-wall in the region of the appendix. DR. S. S. COHEN thought that there should be no routine treatment. In the early cases he gives a combination of a dram of magnesium sulphate with

$\frac{1}{2}$  gr. of morphin sulphate every hour for four, five or six hours. This combination moves the bowels and relieves the pain. About one case in every five requires surgical interference.

DR. S. S. COHEN made some remarks on the **use of myrtol in affections of the respiratory tract**. The chief use of the drug is in bronchial affections, excellent results being obtained in obstinate cases of bronchorrhea, dilated bronchus with fetid expectoration, and bronchitic asthma. It tends to promote healthful and to diminish unhealthy secretion. It has been useful also in some cases of obstinate asthma. The dose is the same as that of turpentine or sandal-wood oil and may be given in emulsion, capsule, or dropped on sugar.

DRS. S. WEIR MITCHELL and WILLIAM G. SPILLER reported a **case of erythromelalgia** in which the signs of the disease were almost confined to one of the great toes. Amputation of the toe had been resorted to, although considerable doubt was felt as to the benefit to be derived from the operation. The nerves of the toe were intensely degenerated, and the vessels presented a high degree of arteriosclerosis. The amputated bones were larger than the corresponding ones in a normal adult. The literature on the subject was referred to, and special importance was laid upon the case reported by Auerbach, inasmuch as this and the present one are the only ones since the disease was first described in 1872, in which important pathologic changes have been found. Auerbach's case was one of tabes. The investigations of Thoma, showing the relation of arteriosclerosis to neuritis, were described. It was pointed out that arteriosclerosis is not uncommon in the aged, and that erythromelalgia is, and the belief was expressed that the symptoms in the case reported could be attributed to the peripheral neuritis. As such neuritis was absent in Auerbach's case, it was concluded that involvement of the sensory fibers anywhere between the spinal cord—or possibly within the spinal cord—and the peripheral ramifications is capable, under certain circumstances, of causing erythromelalgia; though hysteria may present similar symptoms. It seemed not improbable that the posterior roots and the peripheral terminations are the portions of the sensory nerves most liable to undergo degenerative changes. Microscopic examination was limited to the tissue from one of the great toes, but no symptom had been noted indicating involvement of the posterior spinal roots. The sphincters were not involved; the knee-jerks were exaggerated; and sensation in all parts was preserved. The preservation of sensation in the painful foot is a striking fact, in view of the intense neuritis. The few scattered undegenerated fibers it was thought must be regarded as the agents for the transmission of sensation, and it would appear from this that a few sensory fibers may be sufficient for this transmission. This case is not the only one in which the preservation of sensation is remarkable in view of the pathologic findings.

#### NEW YORK.

**The New York State Association of Railway Surgeons** met in eighth annual session in New York City last week.

**A Facile Tongue.**—The *New York Herald* gives an account of a woman of Sag Harbor, Long Island, a paralytic from birth, with only the muscles of her head and shoulder under voluntary control, yet who manages to make her tongue perform many tasks that feminine fingers are accustomed to do. It is asserted that she can sew, embroider, sketch, write, and perform on a "metalophone."



**The new morgue in the city of New York** was recently opened. It much surpasses in commodiousness and general equipment the former morgue. Among the more important improvements is a large refrigerating plant.

**Dr. Nelson J. Henry**, surgeon of the Ninth Regiment New York Volunteers, and recently assistant surgeon-general of the New York State militia, was recently elected a member of the lower branch of the New York State Legislature.

**A Woman Medical Inspector.**—According to the *New York Medical Journal*, Dr. Mary H. Murray has been appointed by the board of health, medical-inspector of the twelve schools of the Third Ward of the Borough of Queens, New York.

**Rome (N. Y.) Medical Society.**—At the first regular meeting held October 11th, the following officers were unanimously elected: President, Dr. John F. FitzGerald; vice-president, Dr. H. D. White; secretary, Dr. Thos. P. Scully; treasurer, Dr. Jas. H. Whaley. The society meets on the second and last Tuesdays of each month.

**Detained at Quarantine on Account of Smallpox.**—The French Line steamer *La Normandie*, which arrived at the port of New York, November 20th, from Havre, was detained at quarantine because of the existence of two cases of smallpox aboard. Both were in Syrian children, who were taken ill during the voyage. The steamer was released after vaccination of the steerage-passengers and disinfection of the vessel.

**Craig Colony Prize for Original Research in Epilepsy.**—The President of the Board of Managers of Craig Colony offers a prize of \$100 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition. The prize is open to universal competition, but all manuscripts must be submitted in English. All papers will be passed upon by a committee, to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the Board of Managers of Craig Colony, October 10, 1899. Each essay must be accompanied by a sealed envelope containing the name and address of the author, and bearing on the outside the motto or device which is inscribed upon the essay. The successful essay becomes the property of the Craig Colony, for publication in its Annual Medical Report. Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th Street, New York City, on or before September 1, 1899.

**Patents on the Names of Chemic Products.**—At a meeting in New York of the committee to revise the patent and trade-mark laws of the United States, November 21st, Mr. William L. Cliffe, Chairman of the Pennsylvania State Pharmaceutical Association, presented a communication dealing with the patent-question, with especial reference to phenacetin. The Pennsylvania State Pharmaceutical Association and Patent Committee of the Manufacturers' Association of Philadelphia are both endeavoring to bring about the repeal of the patent on phenacetin in so far as it constitutes the designation of a certain drug. It seems that the National Pharmaceutical Association does not object to patents on chemic products and to patents on processes of manufacture, but that it is opposed to patents on chemic products and on names of chemicals or drugs. It is well known that phenacetin is manufactured exclusively by the Elberfelder Farbenwerke of Germany, and is sold at what many believe to be an exorbitant price. The company's

agents have been active in the prosecution of persons detected in smuggling phenacetin into the United States along the Canadian frontier. The National Pharmaceutical Association hopes to break up the monopoly.

#### **Society of Medical Jurisprudence, New York.**—

At a meeting held on November 14th, Dr. HENRY J. GARRIGUES read a paper on **apparent death**, with the special object of calling attention to the laxity of the present laws governing the issue of burial-permits. All the rules and regulations governing death in New York City and State seemed to be designed solely for the protection of the community, and regardless of the individual supposed to be dead. Although the question of whether death is real or apparent is oftentimes one of great difficulty to the educated physician, the law, as it stands at present, allows ordinary laymen to settle this nice point. For this reason Dr. Garrigues contends that the statute is little short of homicidal, for it allows the physician to certify that death has occurred, simply on the statement of the relatives, and without having personally examined the body. It thus becomes an easy matter for a person to be buried alive, or, what is more probable, frozen to death in an undertaker's ice-box. In mentioning some of the many conditions likely to lead to apparent death, Dr. Garrigues included lightning-stroke and powerful electric shocks, and implied that he is one of those who doubt if electrocution actually destroys life. Persons and animals struck by lightning have survived; why not from any other strong electric shock? Cases of suspended animation are on record in which respiration had ceased for 48 hours, and others in which the heart's action was no longer perceptible. Indeed the only sure proof of death is decomposition of the body. The physician should be required by law to certify that he has personally examined the body, and also regarding the presence or absence of all signs of death.

**New York Academy of Medicine.**—At the anniversary meeting held November 17th, Dr. WILLIAM H. WELCH, of Johns Hopkins University, delivered the anniversary discourse, taking for his theme **Landmarks in the History of Pathology**. He said that Galen was the greatest of the ancient anatomists, and the founder of experimental pathology. Until well on in the fifteenth century physicians had been bound down by the teachings of this great medical father. Early in the sixteenth century came that strange genius, Paracelsus, with his new and revolutionary ideas. It is of special interest to moderns to recall the fact that this man looked upon disease as something gaining entrance to the body in the form of a seed or germ. A still more important landmark in that century, however, was the development of the study of human anatomy by Vesalius, and with it came a diminution in the domination of Galen's doctrines. The early part of the next century was made glorious by the discovery by Harvey of the circulation of the blood. Although this was, without a doubt, a triumph for the experimental method, it is curious how, at the present day, the antivivisectionists persist in the denial of this fact. One of the early results of this discovery was the introduction into medicine of physical methods of investigation, notably the counting of the pulse, the measurement of the body-temperature and the use of the balance in physiology. Toward the end of this century, Malpighi appeared at the head of the new school of microscopic anatomy, and although these early microscopists were able, with their simple microscopes, to accomplish a vast deal, considering the crude-

ness and natural limitations of their instruments, the study of microscopic anatomy soon fell into oblivion, from which it has only been resurrected in the present century. Malpighi must be considered the founder of pathologic anatomy, for he made systematic search for the real localizations and causes of disease; since his time the development of this side of pathology has been continuous. Almost at the beginning of the eighteenth century there came that great pathologic physiologist as well as pathologic anatomist, John Hunter. He took a deep interest in what he termed "the vitality" of the blood, and performed one memorable experiment in this connection, which has not been satisfactorily explained and fully understood until very recently. This was his experiment of mixing freshly-drawn blood with putrid material, and noting the length of time the mixture resisted putrefaction. He attributed this result to the vital power of the blood, but modern investigation had shown it to be due to the presence of the so-called bactericidal substances in the blood. Bichat, who may be called the founder of general anatomy, entered upon his short but brilliant career at the end of the last century, but he succeeded in making a deep impress upon the French school of medicine, and the impetus thus given was largely responsible for making the next three decades the most brilliant in the history of the French school. The scene of activity in pathology then shifted to Vienna, and its central figure was the greatest descriptive pathologic anatomist the world has ever known—Rokitansky. Next came Virchow, the founder of cellular pathology, with his demonstration that all cells spring from preexisting cells. This doctrine, although repeatedly and violently assailed, has never been successfully overthrown; indeed, its foundations appear to have been only strengthened by modern investigation. In closing, Dr. Welch insisted that medicine is just as much in need of scientific methods as is either chemistry or physics. One of the most important of these is animal experimentation; yet the last few years have seen such ignorant and fanatical assaults against this mode of procedure that unless medical and scientific men presented a united front in opposition to this enemy, posterity might be deprived of this great lever of scientific progress. Pathology and practical medicine are drawing closer together. Each has its own problems, and it is important that each should preserve its autonomy.

**New York Academy of Medicine: Section on Medicine.**—At a meeting on November 15th, Dr. GEORGE ROE LOCKWOOD presented a paper on **The Non-Medicinal Treatment of Habitual Constipation**. Among the chief articles of diet are coarse bread, coarse vegetables and cereals; sugars, as secretion-excitors; buttermilk and fats, as peristaltic excitors. A point not always insisted on is the necessity for excluding from the dietary all constipating food. For this reason, huckleberries, cranberries and claret were to be avoided, and tea, if indulged in at all, should be well made and not strong. A teaspoonful of honey in a glass of warm milk, taken on rising in the morning, will usually assist in overcoming constipation. To get the laxative effect of buttermilk, three glasses of it should be taken daily. Among the fats that might be given are cream, butter and codliver-oil. The first rarely agrees; the second may be given in quantities of from  $\frac{1}{2}$  to  $\frac{1}{2}$  pound a day. Although there is still much difference of opinion regarding the effect of drinking water at meals, Dr. Lockwood was of the opinion that the drier the diet, the greater the stimulation of intestinal peristalsis. Abdominal gymnastics will often be found

serviceable, as will also general exercises, such as bicycling and golf-playing. The faradic current has utterly failed in Dr. Lockwood's hands. An important aid in the treatment of constipation is the use of the spinal douche, or alternate sponging of the abdomen with hot and cold water. Dr. Lockwood has obtained exceedingly gratifying results from a method of treatment that has the advantage of being applicable alike to atonic, spastic and inflammatory conditions of the bowel, *i. e.*, Kussmaul's oil-irrigations. For this purpose, he finds it less expensive, and equally efficacious, to use cotton-seed oil instead of sweet-oil. From 6 to 8 ounces of the oil are introduced into the bowel through a rectal tube, and the aid of gravity is invoked to cause the oil to penetrate the entire length of the colon. This is readily accomplished by placing the patient in the Sims position, with the hips elevated on two pillows, during the administration of the oil, and then directing the person to successively assume the dorsal decubitus, and the position on the right side, remaining in each of these three positions for 10 minutes. No immediate effect is to be expected, but the treatment usually results in securing normal stools daily for about five days, after which time the injection may be repeated. A point that should always be kept well in mind is that to be successful in the treatment of constipation one must make a careful physical examination of the rectum and colon.

Dr. JUDSON DALAND, of Philadelphia, read a paper entitled **Constipation as a Cause of Anemia and Chlorosis**. He stated that colonic washings often proved that fecal masses remain in the colon for days, or even weeks. One of the most important of the many baneful effects of constipation is the poisoning of the system by absorption from the intestine of the products of putrefaction. In one class of these cases, there will be indicanuria, moderate anemia, and severe and persistent headache. In another class, the constipation will result in such profound changes in the blood as to give rise to a clinical picture closely simulating that of pernicious anemia. In one case of this kind, the presence of such substances as indol, skatol, cadaverin and putrescin was demonstrated. Possibly in the future the physician may be able to classify cases of constipation according to the special poison found to be present, or dominant. Dr. Daland then spoke of the advantages to be derived from the use of enteroclysms, which had been demonstrated to reach as far as the ileo-cecal valve, and hence must be exceedingly useful in cleansing the bowel. In administering them, saline solution at a temperature of 100° F., is introduced through a rectal tube of rubber under a pressure obtained by elevating the fountain-syringe four feet above the patient. The patient may be allowed to assume any comfortable position, and should be urged not to retain the fluid more than a few minutes. In the discussion of the foregoing papers, Dr. BEVERLY ROBINSON said that a great deal of constipation is brought about by the ignorance or carelessness of parents, and also, in New York City at least, by the absence of proper public accommodations for those desiring to attend to the wants of nature. While the medicinal treatment might well be given a secondary position, it is often necessary to give laxatives at first to secure a sufficiently quick result. Dr. W. W. VAN VALZAH favored the administration of Carlsbad salt for a period of about three weeks in cases characterized by hyperacidity of the stomach and glandular overaction. When the muscle of the stomach and bowel is weak, he makes use of gluten-suppositories, or of injections of oil or of water. When the constipation appears to be dependent upon defective expul-



sive power, or upon intestinal spasm, cascara should be given in the form of the fluid extract, in one dose daily of such a size as will secure a *formed* stool at the accustomed time. After about two weeks, the dose should be gradually reduced and the interval lengthened. Fruits may be allowed freely, unless actual trial shows that they cause diarrhea or increase the quantity of flatus. DR. L. EMMETT HOLT confined his remarks to a consideration of **infantile constipation**, stating that when an infant is placed on modified milk, constipation is likely to be the result of using too low percentages, in which case it could be relieved by increasing the total solids. Cascara is useful when the expulsive power is defective, but suppositories are superior to drugs administered by the mouth. The successful treatment of infantile constipation demands a careful study of every detail of the little one's daily life. DR. F. W. JACKSON called attention to the constipating effect of business worry or mental strain, and DR. S. A. KNOPF advocated dress-reform as an important prophylactic measure in the management of constipation in women.

#### NEW ENGLAND.

The "**Bay State**," the hospital-ship fitted out by the Massachusetts State Government, has been purchased by the Federal Government for \$100,000.

The **Winchester Home for Aged Women** in Charlestown, the **Massachusetts General Hospital**, and the **Boston Homeopathic Hospital** are to share equally in an estate valued at about \$16,000, devised by the late Mrs. Lucretia A. Wilder.

#### WESTERN STATES.

**St. Louis Medical Society.**—At a regular meeting of the society, held November 19th, the following was the scientific program: Presentation of two cases of pseudohypertrophic paralysis, by Dr. H. W. Hermann; eye-symptoms in some constitutional affections, by Dr. Ernst Saxl.

**Idaho State Medical Society.**—At the recent annual meeting the following officers were elected for the ensuing year: President, Dr. C. W. Shaff, of Lewiston; vice-president, Dr. E. Y. Guyon; secretary and treasurer, Dr. Edward T. Maxey; censors, Drs. J. R. Numbers, A. F. Wohlenberg, J. A. McNiven, L. P. McCalla, and Frank Wenz.

**The Washington State Medical Examining Board** is constituted as follows: Drs. H. C. Willison, Port Townsend, president; F. A. Churchill, Seattle; James A. Beebe, Tacoma; Charles E. Grove, Spokane; P. B. M. Miller, Seattle; J. P. Turney, Davenport; J. H. Dumon, Centralia; E. Van Zandt, New Whatcom; J. H. Hoxsey, Spangle, secretary. The next regular session will be held in Seattle, January 3 and 4, 1899.

**Chicago Gynecological Society.**—At its 194th meeting on November 19th a symposium was held upon the subject of **Cystitis in the Female**, Dr. Nicholas Senn discussing Etiology and Classification; Dr. J. A. Wesener, Chemic and Microscopic Diagnosis; Drs. W. T. Belfield and M. D. Harris, Instrumental Examination of the Bladder; Dr. Jas. H. Etheridge, Medical Treatment, and Drs. F. Henriotin and A. H. Ferguson, Surgical Treatment.

**Chicago Medical Examiners' Association and the Chicago Medical Society.**—At a joint meeting held November 16th, the subject for discussion was **War-Risks**. A Consideration of the Diseases and Dangers to which the Soldiers were Subjected in the Late War, with a View to

Estimating the War-risk of Life-Insurance Companies. The following spoke: Lieut. S. C. Stanton, on Camp Life; Major Wm. Cuthbertson, on Enteric Diseases; Major G. Frank Lydston, on Specific Diseases; Lieut. Col. Nicholas Senn, on Surgical Diseases.

**St. Louis (Mo.) Academy of Medical and Surgical Sciences.**—At a meeting held November 22d, the following was the scientific program: The Diagnosis and Treatment of Iritis, by Dr. E. C. Renaud; Medical Climatology, by Dr. L. Ch. Boisligniere; The Relation of Experimental Physiology to Practical Medicine, by Dr. H. S. P. Lare; Diabetic Coma Without Sugar, by Dr. R. Amyx.

**The Treatment of Diphtheria with the Antitoxin.**—The following interesting tabulation is taken from the Report of the Bureau of Health of Denver, Colo., for October, 1898.

	Year	Cases	Deaths	Mortality Per Cent.
	1888	223	120	
	1889	233	109	46.5
	1890	720	277	38.6
Before Antitoxin was discovered	1891	408	175	37.4
	1892	300	89	29.7
	1893	318	106	33.3
	1894	253	71	28.7
Antitoxin introduced	1895	248	40	16.1
Treated WITH Antitoxin		123	9	7.3
Treated WITHOUT Antitoxin		125	31	25.1
	1896	246	19	7.7
Treated WITH Antitoxin		107	7	6.5
Treated WITHOUT Antitoxin		139	12	8.7
	1897	297	13	14.5
Treated WITH Antitoxin		147	6	4.1
Treated WITHOUT Antitoxin		150	37	24.6

**Chicago Society of Internal Medicine.**—At a meeting of the society, held November 22d, Dr. HENRY F. LEWIS read a paper on **musical heart-murmurs**, and reported a case of probable mitral lesion, with diastolic bruit at the apex. He said that the commonest causes of musical murmurs are aberrant tendinous cords, and aortic lesions—obstructive or regurgitant (when they are likely to be very low) perforations, and calcareous deposits. These murmurs are less common with lesions of the mitral and other valves. Dr. Lewis spoke also of intercurrent and recurrent musical murmurs, and detailed the literature of the subject. Dr. CHARLES W. PURDY read a paper on the **principles of the dietetic treatment of diabetes mellitus**. He discussed the general features of this disease; its amenability to treatment in the aged and the young; the caloric value of the most suitable foods in diabetes; the use of meat; the fallacy of an absolute meat-diet; the use of fat; its high potential value as a nutrient and force-generator; the range of use of carbohydrates; the sphere of alcohol; diet tables and methods of systematic dieting in the different grades of the disease. DR. ISAAC N. DANFORTH reported a case of **typhoid fever with unexpected termination**.

It has been arranged that at the annual meeting to be held in January, the subject for discussion shall be **acute articular rheumatism**.

#### SOUTHERN STATES.

**The National Quarantine Convention** met in Memphis, Tenn., November 16th, 17th, and 18th.

**Anti-Cigaret Law Declared Valid.**—The Supreme Court of Tennessee has made public a decision upholding the Anti-Cigaret law, passed by the last Legislature, forbidding the importation and sale of cigarettes in Tennessee. The Court says that cigarettes are not legitimate articles of commerce, and therefore are not within the provisions of the Federal Constitution regarding trade.

**The Johns Hopkins Historical Club.**—On November 14th Dr. William Osler gave an account of his visit to Sydenham's birthplace, and showed photographs of the old manor-house at Winford Eagle, in Dorset. Dr. H. A. Kelly presented a series of sixty casts of the head, which he had procured during the summer in Europe, illustrating the old theories of Gall and Spurzheim. Dr. H. M. Hurd made a short communication on madstones.

**Medical and Chirurgical Faculty of Maryland.**—A successful semi-annual meeting was held in Frederick, under the presidency of Dr. Samuel C. Chew, on November 16th and 17th. The physicians of Frederick County had organized in a local society, and there was a large attendance from the neighboring towns. There was an interesting program, in which perhaps the city men were too largely represented. An enjoyable banquet was held on the evening of the 16th.

**Trial of Dr. McShane.**—One of the most painful incidents that has occurred in the medical profession of Baltimore for many years is the trial of the former Health-Commissioner, Dr. James E. McShane, for embezzlement, which is at present going on in the Courts. It is charged that during his term of office he systematically received money from the friends of patients in the City Asylum, and instead of turning it in to the treasurer, he kept it himself.

#### CANADA.

The "**Canadian Practitioner**" and the "**Canadian Medical Review**" have joined interests under the title of the *Canadian Practitioner and Medical Review*. We extend best wishes and hopes of success to the consolidated publication.

**Montreal Medico-Chirurgical Society.**—At the meeting held November 7th, Dr. D. P. ANDERSON exhibited the **occipital bone** of a newborn child, in which there was **separation of the tables in the median line**, due to hemorrhage. The condition is analogous to the cephal-hematoma of the scalp. Conditions of this kind are not common, particularly in the occipital region.

Dr. A. LAPHORN SMITH exhibited a **uterine fibroid with diseased appendages**.

DRS. F. G. FINLEY and WYATT JOHNSTON read the report of a case of **bilateral proptosis** from thrombosis of the cavernous sinus. The condition had extended from some middle ear disease. In such cases paralysis of the ocular muscles is often spoken of, but this alteration of the visual axis is not due to paralysis, but to a fixation of the eyeballs in an unnatural position.

Dr. W. D. HAMILTON read a paper on **Pneumothorax**, basing his remarks on a study of 12 cases, 5 of which were definitely of tuberculous origin, and several had developed insidiously. Effusion into the pleural cavity was not invariably present. He recognized a pneumothorax without solution of continuity of the lung, as mentioned by some French observers. In proof he cited a case of pneumothorax and pneumopericardium due to the action of the bacillus *aerogenes capsulatus*, recorded by Dr. A. G. Nicholls in the *British Medical Journal* for December 25, 1897.

**Lister Laboratory Club (Montreal).**—At a meeting held November 11th, Dr. J. G. ADAMI gave a résumé of his work in connection with the presence of the **colon bacillus in the liver in cases of atrophic cirrhosis**. He was first led to study the human liver by the discovery in the

liver of Pictou cattle-disease, in which cirrhosis of the liver is a prominent feature, of a small diplococcus that he could cultivate and that proved pathogenic. In all the cases of atrophic cirrhosis in man he found a similar diplococcus surrounded by a halo. In cultivations from the livers and ascitic fluid he obtained the same diplococcus, which on agar grew in fine colonies. The bacillus, as it grew finally, resolved itself into the ordinary colon-form. By cultivating this at the upper limit of its growth it assumed again the diplococcus-form. Dr. Adami was able to trace all the stages from this up to the ordinary colon-form. In normal livers he had seen the same germ, but as it was brownish and did not grow, he concluded that this represented a dead form. Experimentally in rabbits he had found that in 15 minutes colon-bacilli injected intravenously reach the liver and are already ingested by the endothelial cells of the capillaries. Dr. Adami exhibited numerous slides to illustrate his paper.

Dr. A. G. NICHOLLS read a paper on the **Differential Diagnosis Between the Smegma-bacillus and the Tubercle-bacillus**. In cases of suppuration of the kidney, such differentiation is of the greatest importance. In conjunction with Dr. Keenan, of the Royal Victoria Hospital, Dr. Nicholls has examined about 15 specimens of urine taken from various patients, and in most he had found bacilli resembling those of tubercle and which stained by the carbolfuchsin and Gabbett-blue method. He referred to the work of Grünbaum in the same connection. Lately Pappenheim and Fränkel have found bacilli in the lung resembling those of tubercle, and an incorrect diagnosis was made. Subsequently at autopsy no tuberculous disease was found. The bacilli appeared to have been the smegma-bacilli. Dr. Nicholls pointed out that in gangrene of the lung the smegma-bacillus seems often to be present. It is more likely to be found in clusters and within cells. Still he has known experts to be deceived. He had also seen the tubercle-bacillus within cells in the sputum. Cultures are unsatisfactory. The only way to differentiate is by the staining reaction. The smegma-bacillus is decolorized by absolute alcohol in from 2 to 5 minutes, while the tubercle-bacillus was not. The best staining solution was Pappenheim's, viz., a saturated solution of methylene-blue in absolute alcohol, to which 1% of corallin has been added. Films are stained in the usual way with carbolfuchsin and then treated with the corallin mixture for from 3 to 5 minutes.

Dr. NICHOLLS also exhibited two sections of **acute parenchymatous nephritis** in acute lobar pneumonia, in which he demonstrated the diplococcus lanceolatus in the glomerular capillaries and in the lumen of the contorted tubules. In six cases that he had examined, the diplococcus was always present.

#### MISCELLANY.

**The American Medico-psychological Association** will convene in annual congress in New York City, from May 23 to 26, 1899.

**American Academy of Railway Surgeons.**—At a meeting recently held in Chicago, Ill., the following officers were elected for the ensuing year: President, Dr. W. W. Grant, Denver, Col.; first vice-president, Dr. J. F. Pritchard, Manitowoc, Wis.; second vice-president, Dr. J. P. Lord, Omaha, Neb.; secretary, Dr. T. B. Lacey, Council Bluffs, Ia.; treasurer, Dr. C. B. Kibler, Corry, Pa.; editor, Dr. Fred. J. Hodges, Ashland, Wis. The next meeting will be held in Omaha, Neb., in October, 1899.



**Smallpox in Cuba.**—Colonel Hood reported November 21st, that the epidemic of smallpox in Holguin and Gibara was somewhat lessened by the intelligent methods established by Dr. Wood. Two thousand cases have been isolated and nearly 800 citizens in Holguin have been vaccinated. Americans have not been attacked by the disease. Some resistance to vaccination has been encountered among people ignorant of its purpose, and in several cases force was necessary to get their compliance. Colonel Hood posted notices of its purpose and benefits about the towns, and the antagonism of the people has been gradually overcome.

**Health Reports.**—The following cases of smallpox, yellow fever and cholera have been reported to the Supervising Surgeon-General of the U. S. Marine Hospital Service, during the week ended November 19, 1898:

## SMALLPOX—UNITED STATES.

ALABAMA:		CASES.	DEATHS.
Mobile . . . . .	Oct. 27 - Nov. 5 . . .	1	1
Disease imported from Dwight, Ala., where smallpox was reported on September 12th.			

CALIFORNIA:			
San Francisco . . . . .	Nov. 7 . . . . .	1	
Employee on S. S. "Mariposa."			

MICHIGAN:			
Ecorse Township . . . . .	Nov. 9, present		

NORTH CAROLINA:			
Edgecombe . . . . .	Nov. 12 . . . . .	10	
Imported from Norfolk.			

OHIO:			
Cleveland . . . . .	Nov. 14 . . . . .	1	

VIRGINIA:			
Norfolk . . . . .	Oct. 3 . . . . .	1	
Seven cases now in city pest house.			

## SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Oct. 15-22 . . . . .	5	3

RUSSIA:			
Moscow . . . . .	Oct. 8-15 . . . . .	0	2
Odessa . . . . .	Oct. 15-22 . . . . .	2	1

TURKEY:			
Constantinople . . . . .	Oct. 26-Nov. 17		21

## YELLOW FEVER—FOREIGN.

COLOMBIA:			
Barranquilla . . . . .	Oct. 15-22 . . . . .	2	2

CUBA:			
Habana . . . . .	Oct. 28 - Nov. 3 . . .	0	

MEXICO:			
Tampico . . . . .	Oct. 16-23 . . . . .	2	
Vera Cruz . . . . .	Oct. 28-Nov. 3 . . .	11	
	Nov. 3-10 . . . . .	8	

## CHOLERA.

INDIA:			
Madras . . . . .	Oct. 1-7 . . . . .		21
On October 10th, a Calcutta gazette extraordinary was issued, giving official notice that Calcutta was free from cholera.			

**Obituary.**—DR. D. R. DEWEY, assistant surgeon U. S. Volunteers, North Adams, Mass., November 6th, aged 34 years.—DR. B. ABBOTT LINDSEY, New York, November 13th, aged 42 years.—DR. JOHN B. VANDERGRIF, New Orleans, La., November 4th, aged 71 years.—DR. LOUIS BOWER, one of the founders of the Long Island College Hospital, and one of the founders and until recently dean of the faculty of the St. Louis College of Physicians and Surgeons, in New York City, November 5th, aged 84 years.—DR. A. M. MILES, Haviland, Ky., November 2d.—DR. CARL ENGLEHARD, Chicago, Ill., November 6th, aged 64 years.—DR. G. RUTZ, Port

Townsend, Wash., November 1st, aged 68 years.—DR. F. S. C. GRAYSTON, Huntington, Ind., November 6th.—DR. J. M. MARSH, Delphos, O., November 2d, aged 35 years.—DR. FRED. MARRICK, Barclay, Md., November 4th, aged 36 years.—DR. CHRISTOPHER SHARP, New York, November 5th, aged 77 years.—DR. FRANK P. THOMPSON, St. Louis, Mo., November 5th.

**Alumni Society of the Medical Department of the University of Pennsylvania.**—Request for Information by the Catalog Committee.—The committee desires a short biography of every medical alumnus, and this appeal is made for aid of graduates of the University in such compilation. The following is the form of biography desired:

1. Name in full.
2. Father's name and mother's name.
3. Date and place of birth.
4. State matriculated from.
5. Date of matriculation.
6. Date of graduation.
7. Title of thesis.
8. Place of practice and present address.
9. College attended.
10. Titles.
11. Publications and positions held.
12. If ever in United States service, state it.
13. If married, give maiden name of wife.
14. Children's names, if any.
15. If dead, give date and place.

Several thousand biographies have already been catalogued. The Committee especially desires the histories of graduates between the years 1781 and 1790, names of whom are found in the "Proceedings of the Annual Meeting of the Alumni Society for 1898," already widely distributed. Data in reference to medical alumni serving in the French and Indian War, the Revolutionary War, the War of 1812, the Mexican War, the Civil War, and the recent Spanish-American War, it is hoped will soon be ready for collation. Assistance in this work is earnestly solicited.

R. G. CURTIN, M.D., Chairman.

F. SAVAY PEARCE, M.D., Secretary, Philadelphia.

### Surgeon-General Sternberg's Report Relative to the Operations of the Medical Corps of the U. S. Army During the Recent Spanish-American War.

—The following are some of the most important features of the report recently transmitted by the Surgeon-General of the United States Army to the Secretary of War:

The number of medical officers, 192, allowed by law to the army is inadequate in time of peace. The insufficiency in time of war was met by the assignment of over 650 contract-surgeons. The very small proportion of medical officers having experience of a military character impaired the efficiency of the department at the outset, but many of the staff-surgeons from civil life showed great aptitude for the service and speedily became of value as administrative and sanitary officers.

No provision was made for hospital-corps men for the volunteer troops except that which empowered the Secretary of War to enlist as many privates of the hospital-corps as the service may require. The number of men enlisted and transferred during the war was approximately 6,000. Over 1,700 female nurses have been employed, at first at the general hospitals and later at the field division-hospitals.

In my opinion the reduction of the age-limit from 21 to 18 years and the haste with which the volunteer regiments were organized and mustered into the service were responsi-

ble for much of the sickness that was reported in the early days of their camp-life. All military experience shows that young men under 21 years break down readily under the strain of war-service, and every regiment had many of these youths in its ranks. Medical examiners were appointed to testify to the physical qualifications of each man before acceptance, but notwithstanding this so many men were afterward found on the sick lists of the camps, unfit for service from causes existing prior to enlistment, that special arrangements had to be made for their discharge. . . .

One prominent cause of the increase of sickness in the early camps has been commented upon by only a few of our medical officers. These cite the prevalence of drunkenness and of venereal disease due to the facilities and the temptations afforded by the proximity of cities to the larger camps. They hold that if the systems of the men had not been weakened by dissipation they would not have succumbed so readily to the other influences that affected them.

It was typhoid fever that broke down the strength of the commands generally, the outbreak becoming distinctly manifest in July. Sporadic cases appeared in most of the regiments in May and June, these cases having been brought in many instances from the State camps. It appears, from a general review of the sanitary reports already filed, that the prevalence of the disease was proportioned to the insanitary camp-conditions referred to.

It is well known to the medical profession that this fever is propagated by a contaminated water-supply, and it is now recognized that the great prevalence of this disease in an aggravated form in the camps of the Civil War was due to the use of surface and shallow well-waters infected by typhoid excreta. To prevent transmission by the water-supply I recommended the use of boiled and filtered water when a pure spring-supply could not be obtained, and to enable an efficient filtration of suspected waters to be made field-filters of approved construction were issued on my recommendation by the Quartermaster's Department. . . .

It is needless to refer at this time to the complaints of starvation that appeared almost daily in the newspapers during the occupation of Camp Wikoff, for it is now generally understood that the weakness, prostration, anemia, and emaciation of so many of the troops were the results of malarial, typhoid and yellow fevers, from which the army suffered as a consequence of its exposure to the climatic influences and local infections of Santiago and its neighborhood, pending and subsequent to the surrender of the city. . . .

The precautions taken to secure a good sanitary condition of the vessels prior to embarkation and the sanitary supervision exercised over the men during their long voyage across the Pacific must be credited with the excellent condition in which the troops arrived at Manila.

The want of hospital-corps men was the main cause of the failure of chief surgeons to establish their division-hospitals promptly.

Up to September 30th eleven general hospitals were established and fully manned and equipped. These had a capacity of nearly 7,000 beds. At the same time, certain post-hospitals having good accommodations were used for the treatment of army-cases generally, without alteration of their official status as post-hospitals. My report presents tabulations compiled from monthly reports of sick and wounded received from May to September inclusive, and representing a strength present of 167,168 men. These give full particulars of 1,715 deaths, of which number 640 were occasioned by typhoid fever, 97 by malarial fevers, and 393

by diarrhea and dysentery. The death-rates for May and June, .46 and .70, were not in excess of those of the army in time of peace. In July the rate became somewhat higher than that of most well-cared-for cities, 2.15 for the month, or the equivalent of an annual rate of 25.80 per thousand living. In August it became excessive, 4.08 for the month, equal to an annual rate of 48.96 per thousand. In September the influence of the energetic measures taken in July and August to improve the health of the army becomes manifest in the falling of the death-rate to 2.45, or the equivalent of an annual rate of 29.40. The same progression to an acme in August, with a sudden fall in September, is seen in the various ratios given under the specific titles, typhoid fever, malarial fever, and diarrheal diseases. This is exceedingly gratifying and must be credited, as stated, to the sanitary measures adopted, for our experience in the Civil War demonstrates that in the absence of these measures the high ratio of August would have been continued for many months to come. From tables of absolute numbers and of ratios by which the incidence of sickness and mortality of the regular and volunteer troops may be contrasted, it will be seen that the exposures of the regular troops during the Santiago campaign gave them from June to September a higher death-rate than the volunteers, and that the rate of the latter during August, the month of maximum mortality, was 3.62, as compared with 5.83 among the regular troops.

My guiding principle throughout the war has been that relief, when needed, should be promptly accepted without reference to the source from which it came. The relief afforded by the National Red Cross Society at Siboney was promptly accepted by the surgeons on the spot, but it is evident that it was entirely inadequate to meet the emergency. This association has had full authority to send agents and supplies to all our camps since June 9, 1898, and it has contributed supplies of various kinds in a most liberal manner for the use of our field-hospitals. Other organizations that have rendered very valuable services are the National Relief Commission, having its headquarters in Philadelphia, and the Massachusetts Volunteer Aid Association, with headquarters in Boston. Both of these organizations fitted out hospital ships which were placed at my service for the transportation of our sick from Porto Rico, and I take pleasure in testifying to the valuable service rendered by the yacht *May*, of the National Relief Commission, and the hospital ship *Bay State*, of the Massachusetts Volunteer Aid Association.

Before concluding my report of the operations of the Medical Department during our short and glorious war with Spain, I feel it my duty to call special attention to the efficient services rendered by the medical officers of the army in the various responsible positions that the exigencies of the service have made it necessary for them to fill.

#### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 21 Days Ended November 17, 1898.

Surgeon W. A. WHEELER to rejoin station at Cincinnati, O. Oct. 28.  
Granted leave of absence for 15 days from Nov. 16. Nov. 15.  
Surgeon C. E. BANKS to rejoin station at Washington, D. C. Nov. 1.  
P. C. KALLOCH to rejoin station at Cairo, Ill. Oct. 28.  
Surgeon A. H. GLENNAN granted leave of absence for 15 days. Nov. 1.  
To rejoin station at St. Louis, Mo. Nov. 17.  
Surgeon EUGENE WADDIN granted leave of absence for 10 days. Oct. 27.  
Upon expiration of leave to report at Bureau for special duty. Nov. 1. To proceed to Havana, Cuba, for special temporary duty. Nov. 8.  
Passed Asst. Surgeon L. L. WILLIAMS granted leave of absence for 1 month and 15 days. Nov. 1.  
Passed Asst. Surgeon G. M. MAGRUDER to rejoin station at Memphis, Tenn. Oct. 28.



Passed Asst. Surgeon J. O. CORRIE upon completion of duties at Oxford, Miss., to proceed to Detroit, Mich. Nov. 2. To report at Bureau for special temporary duty. Nov. 10.

Passed Asst. Surgeon H. D. GERRINGS to proceed to Havana, Cuba, for special temporary duty. Nov. 8.

Passed Asst. Surgeon W. G. STIMPSON to rejoin station at St. Louis, Mo. Oct. 28. To inspect unseizable property at Memphis, Tenn. Nov. 1.

Passed Asst. Surgeon M. J. ROSENAL to inspect unseizable property at San Francisco, Cal. Nov. 7.

Passed Asst. Surgeon J. A. NYDEGGER granted leave of absence for 15 days from Nov. 15. Nov. 4.

Asst. Surgeon S. R. TARR to report at Stapleton, S. I., for temporary duty. Oct. 29. To report at Bureau for special temporary duty. Nov. 1. Relieved from duty at New York and directed to assume temporary charge at Vineyard Haven, Mass. Nov. 1.

Asst. Surgeon HILL HASTINGS to proceed to New York for duty at Immigration Depot. Nov. 4.

Asst. Surgeon C. H. LAVINDER to report at Bureau for orders. Nov. 15. To proceed to Delaware Breakwater Quarantine and report to medical officer in command for temporary duty. Nov. 17.

Asst. Surgeon R. H. VON ELDORF granted 15 days extension of leave of absence on account of sickness. Nov. 8.

Asst. Surgeon M. H. FOSTER granted 30 days extension of leave of absence on account of sickness. Nov. 8.

Asst. Surgeon L. L. LEMSDEN to proceed to Edmont Key, for temporary duty. Nov. 12.

Asst. Surgeon M. J. WHITE granted leave of absence for 30 days on account of sickness from Nov. 13. Nov. 14.

Asst. Surgeon V. G. HEISER to proceed to New York for duty at Immigration Depot. Nov. 7.

Asst. Surgeon W. R. McADAM to proceed to New York for duty at Immigration Depot. Nov. 7.

Asst. Surgeon M. K. GWTN to proceed to Boston, Mass., for duty. Nov. 7.

Board convened to meet at Washington, D. C., at 10 o'clock A. M., Nov. 9, 1898, to examine candidates for appointment as assistant surgeon. Detail for the Board: Surgeon GEORGE PURVIANCE, Chairman; Surgeon CHAS. E. BANKS, Passed Asst. Surgeon R. M. WOODWARD, Recorder. Nov. 1.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Major CHARLES F. MASON, medical inspector of the Department of Porto Rico, is placed temporarily in charge of the military general hospital at San Juan, Porto Rico.

The following-named acting assistant surgeons are relieved from duty at the general hospital at Ponce and will report for duty at the general hospital at San Juan, Porto Rico: WILLIAM G. YOUNG, ROBERT H. ANDERSON.

Major LOUIS BRECHEMIN, surgeon, Department of Porto Rico is assigned to duty at headquarters Department of Porto Rico as officer in charge of the medical-supply depot to be established at San Juan.

Acting Asst. Surgeons M. I. SCHAMBERG and G. S. DRIVER will report at Jan Juan Hospital for duty.

Hospital Steward, JOHN C. BLAKE, now in San Juan, will report to chief surgeon of the Department of Porto Rico for duty in his office.

Acting Asst. Surgeon E. V. GEDDINGS will proceed as medical officer in charge, to New York, via steamer "Port Victor."

Leave for 30 days on account of sickness, with permission to return to the United States, is granted Acting Asst. Surgeon R. M. MEYERS. Oct. 31.

Acting Hospital Steward WILLIAM H. BROWN will report for duty with the 11th Infantry.

Acting Hospital Steward SAMUEL SMILSEY is relieved from duty with the 11th Infantry, and will report at the San Juan Hospital.

Leave for 30 days, with permission to return to the United States is granted Major SEATON NORMAN, surgeon. Nov. 1.

Acting Asst. Surgeon H. M. HEWITT will proceed from San Juan to Guayama, Porto Rico, when his contract with the United States is cancelled, and he will proceed to his home on transport "Roumanian," now at Port of Arroyo.

Leave for 30 days on surgeon's certificate, with permission to return to the United States, is granted Acting Asst. Surgeon JAMES E. THOMPSON. Nov. 1.

Acting Asst. Surgeon E. R. BRAGG is assigned to duty at the medical-supply depot, Santiago, Cuba.

Acting Asst. Surgeon HERBERT GUNN, now at the Division Hospital, Presidio, is assigned to the transport "Newport," for duty with Brigadier-General, M. P. MILLER and staff.

Captain THOMAS U. RAYMOND, A. S., will in addition to his present duties perform the duties of surgeon at Fort Mason.

Captain R. S. WOODSON, A. S., medical inspector, headquarters Department of Santiago, is charged with the general supervision of all sanitary matters in and about the District of Holguin. He will proceed to Gibara.

Acting Asst. Surgeons MEYER HERMAN, now on duty with the 5th U. S. Volunteer Infantry, and WM. DOLZ, at the general hospital, Santiago, Cuba, are relieved from their present duties and will report to Captain R. S. WOODSON, A. S., for duty in the District of Holguin. Acting Asst. Surgeon W. O. STONE will also report at once to Captain WOODSON for duty in said district. The

above-named officers will proceed to Gibara, Cuba. Acting Asst. Surgeon, VINCENT GOMEZ, now in Gibara, will report to Captain WOODSON for duty.

Leave for 30 days, with permission to return to the United States, is granted Acting Asst. Surgeon JAMES M. SWEENEY. Nov. 5.

Major ROYCE D. FRY, brigade-surgeon, is honorably discharged to take effect Nov. 30.

Acting Asst. Surgeon H. P. ABBOTT will report to First Lieutenant HERBERT N. ROYDEN for duty pertaining to the care of sick and convalescent soldiers in the hospitals at Providence R. I., and vicinity.

Major JOHN J. ARCHINARD, brigade-surgeon, is relieved from duty in the Department of Santiago and will proceed to Havana, Cuba, and report to Major-General JAMES F. WADE for assignment to duty.

The order of Nov. 7 is so amended as to direct Major LEWIS BALCH, surgeon, to proceed to Camp Mead, Pa., for assignment to duty as chief surgeon, second brigade, second division of the 2d Army Corps.

Major FRANCIS T. METCALFE, brigade-surgeon, is honorably discharged to take effect Nov. 11.

Major MARLBOROUGH C. WYETH, brigade-surgeon, is relieved from duty with the 2d Army Corps and from further duty as attending surgeon and examiner of recruits at Baltimore, Md., and as soon as the medical-supply depot at Camp Meade, Pa., shall have closed, will proceed to Washington, D. C., and report to Col. DALLAS BACHE, A. S. G., president of the examining board at the Army Medical Museum, for examination for promotion, and on the completion thereof will proceed to Fort Sill for duty.

Acting Asst. Surgeon JOHN A. METZGAR will proceed to Fort Monroe for duty at the Josiah Simpson U. S. General Hospital.

Leave for 30 days is granted Acting Asst. Surgeon RUPERT NORTON. Nov. 11.

Acting Asst. Surgeon RUPERT NORTON on the expiration of his leave will proceed to Santiago, Cuba, for duty.

Leave for one month is granted Acting Asst. Surgeon, E. A. SOUTHALL. Nov. 11.

Acting Asst. Surgeon R. B. WESTNEDGE will proceed from Dubuque, Iowa, to Fort Monroe for duty at the Josiah Simpson U. S. General Hospital.

Acting Asst. Surgeon ROBERT C. YENNEY is detailed as a member of the board of medical officers at Vancouver Barracks in the place of Major RUDOLPH G. ERERT, surgeon, relieved.

Acting Asst. Surgeon EDWIN W. MEIXELL, now at Fort Columbus, will proceed to Fort Wadsworth for duty, vice Acting Asst. Surgeon WM. H. SPILLER, whose contract has been annulled at his own request.

Lieutenant COL. ROBERT M. O'REILLY, chief surgeon, chief surgeon on the staff of Major-General JAMES F. WADE, Havana, Cuba, will proceed to Washington, D. C., on business pertaining to the Medical Department, and on completion of this duty will return to his proper station in Havana, Cuba.

The following changes in the stations and duties of officers are made: The order which assigns Major AARON H. APPEL, surgeon to duty at Fort Grant, is revoked, and on the expiration of his present leave, he will proceed to Fort Hamilton for temporary duty to relieve Major FRANCIS J. IVES, brigade-surgeon. Major IVES is relieved from further duty at Fort Wingate and will proceed to Americus, Ga., and report in person to the commanding general for duty with the 2d Brigade, 2d Division, 1st Army Corps. Major FRANK BRUSOE, brigade-surgeon, is relieved from the operation of the orders assigning him to the 2d Brigade, 2d Division, 1st Army Corps.

Captain MERRITTE W. IRELAND, A. S., is relieved from duty at the Presidio and will proceed to Fort Wayne.

Acting Asst. Surgeon H. A. BARNHARDT is relieved from duty at the Sternberg U. S. General Hospital, Chickamauga Park, and will proceed to Fort Monroe for duty in the Josiah Simpson U. S. General Hospital.

Acting Asst. Surgeon FRANCIS A. HOLLIDAY, will proceed to Sullivan's Island for duty.

Acting Asst. Surgeon BENJAMIN F. WOODING is relieved from duty at the Josiah Simpson U. S. General Hospital, Fort Monroe and will proceed to Denver, Col., for annulment of his contract.

Acting Asst. Surgeon FRANK G. YOUNG will proceed from Clarksburg, W. Va., to Washington, D. C., for duty.

Lieutenant COL. LOUIS M. MAUS, chief surgeon, is relieved from further duty at Fort Hamilton.

A board of medical officers is convened to meet at the Army Building, New York City, Nov. 15, for the examination of acting assistant surgeons and candidates for appointment to that position. Detail: Majors WILLIAM H. ARTHUR, chief surgeon; NATHAN S. JARVIS, brigade-general, Captain DEAN C. HOWARD, A. S.

Captain EDWARD L. MUNSON, A. S., is relieved from further duty at Fort Adams.

Acting Asst. Surgeon JOAQUIN L. DUENAS, now on duty in Havana, Cuba, will report to Major-General JAMES F. WADE, at that place, for assignment to duty.

Acting Asst. Surgeon GEORGE H. TUTTLE is relieved from duty at Fort Thomas, and will proceed to Boston, Mass., for annulment of his contract.

Major FRANK BRUSOE, brigade-surgeon, is honorably discharged, to take effect Nov. 30.

Acting Asst. Surgeon HARRY A. BARNHARDT will proceed from Chickamauga Park to Washington, D. C., and report to the Surgeon-General of the Army.

## Foreign News and Notes.

### GREAT BRITAIN.

**Dr. J. F. Goodhart** has resigned his post as physician to Guy's Hospital, to the deep regret of all the staff and students.

**Professor William Macewen, M.D., LL.D.** Glasg., has been elected a corresponding member of the Medical Academy of Rome.

**Dr. Henry Briggs, F.R.C.S.**, has been appointed professor of midwifery and gynecology in University College, Liverpool, in succession to the late Dr. Wallace.

**Municipal Honors and the Medical Profession in England.**—No less than eighteen medical men have been elected this year mayors of their respective cities or corporations.

**Dr. W. A. Walsh** has been appointed pathologist to the Edinburgh Royal Infirmary, in succession to Professor Muir, recently elected to the chair of pathology at St. Andrew's College.

**Domiciliary Accommodations in Dublin.**—A few years ago a Dublin official had a kind of census taken of the city and found that 32,000 families were located in about 7,000 houses, affording  $1\frac{1}{2}$  rooms per family. On the other hand, the remaining 22,000 families of the city occupied 17,000 houses.

**The Parkes Memorial Prize.**—The subject for the next prize, which is open to medical men of the Royal British Navy, Army, and Indian Medical Services, is: Venereal Diseases in the British and Indian Armies: their Prevalence and Prevention. In view of the present absorbing interest manifested in this question by almost all classes of society, the subject is most opportunely chosen.

**Disinfecting-House and Mortuary for Persons Dying of Infectious Diseases.**—The Lord Mayor of Dublin has just opened a new disinfecting-house and a mortuary, in which the bodies of persons who have died of infectious disease may be kept for a night if for any cause they cannot be interred on the day of death. Superior ambulances have also been provided. The improvements cost \$10,000.

**To Prevent the Spread of Tuberculosis.**—At a recent meeting of the Health Committee of the Birmingham (England) City Council, it was resolved to have printed for circulation, handbills giving advice for the prevention of the spread of tuberculosis. The handbill details, in plain language, the reasons for considering the disease communicable, and mentions the methods advocated for preventing its spread. The co-operation is also asked of various associations and societies in disseminating a knowledge of the details noted in the handbills.

**The Antivivisectionist-Propaganda.**—We observe that our esteemed British contemporary seems "threatened with trouble," as the following announcement appears in the issue of November 12th: "We have received a letter from a firm of solicitors acting for Mr. C. Adams, of Harewood, Keyhaven, the Editor of the *Verulam Review*, stating that their client has instructed them to take proceedings against the Editor of the *British Medical Journal* for libel, and the Solicitors of the Association have replied, intimating that they will be prepared to accept service of process."

**Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.**—Nov. 15.

Acting Asst. Surgeon J. W. PINKHAM and JOHN S. FOLGER are relieved from duty at the U. S. General Hospital, Fort Monroe, and will report at the Josiah Simpson U. S. General Hospital at that post for duty.

Leave heretofore granted Acting Asst. Surgeon FRANK ROBERTS is extended eight days. Nov. 15.

Acting Asst. Surgeon ELMER S. TENNEY will proceed from Chicago, Ill., to New York City, and upon arrival will report by letter to the Surgeon-General of the Army. Nov. 15.

Acting Assistant Surgeon LEWIS M. WALKER is relieved from duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, and will proceed to Denver, Colo., and report by letter to the Surgeon-General. Nov. 15.

Acting Asst. Surgeon F. ARTHUR ZELLER will proceed from Chickamauga Park to Americus, Ga., for duty.

Acting Asst. Surgeon WM. P. HARBIN is relieved from duty at Tybee Island, Ga., and will proceed to Camp at Lands End, S. C., for duty.

Leave for 15 days on account of sickness is granted Acting Asst. Surgeon J. W. HUBBARD.

Major IRA C. BROWN, brigade-surgeon, will turn over the U. S. General Hospital at Montauk Point, to the Quartermaster's Department, and will then report in person to the Surgeon-General of the Army.

Leave for 2 months on account of sickness is granted Captain HENRY C. FISHER, A. S. Nov. 16.

Captain GEO. J. NEWGARDEN, A. S., will report to the commanding officer, 2d Artillery, for duty, and will proceed with the batteries of that regiment from Fort Adams to Savannah, Ga.

Leave for 1 month on surgeon's certificate of disability is granted Captain JEFFERSON D. POINDEXTER, A. S. Nov. 16.

Leave for 10 days is granted Captain FRANCIS A. WINTER, A. S. Nov. 16.

The following changes in the stations and duties of officers are ordered: Acting Asst. Surgeon RICARDO GASTON is relieved from duty at Fort Crook and will proceed to Savannah, Ga., and report to the commanding officer, 2d Artillery, for assignment to duty; First Lieutenant CLARENCE J. MANLY, A. S., now on detached duty at Columbus Barracks, is relieved from duty at the U. S. General Hospital, Fort Thomas, and will proceed to Savannah, Ga., and report to the commanding officer, 2d U. S. Artillery, for assignment to duty; First Lieutenant RICHARD P. STRONG, A. S., is relieved from duty with the 4th Army Corps, Huntsville, Ala., and will proceed to Savannah, Ga., and report to the commanding officer, 2d Artillery, for assignment to duty.

Acting Asst. Surgeon ROGER F. AMES, now on duty at Camp Force, Huntsville, Ala., will proceed to New Orleans, La., for annulment of his contract.

Major HENRY P. BIRMINGHAM, brigade-surgeon, is relieved from further duty as attending surgeon and examiner of recruits at Chicago, Ill., to date from June 25.

Major LOUIS W. CRAMPTON, surgeon, in addition to his present duties at Fort McHenry, will exercise supervision over sick soldiers in civil hospitals in Baltimore, Md.

First Lieutenant IRA A. SHIMER, A. S., is relieved from duty at the U. S. General Hospital, Fort Myer, and, when Captain WILLIAM F. LIPPITT, A. S., shall have reported for duty at that hospital, will proceed to Santiago, Cuba, for assignment to duty.

Acting Asst. Surgeon J. M. NEWELL will proceed from New York City to St. Louis, Mo., and will report by letter to the Surgeon-General of the Army.

Acting Asst. Surgeon JESSE RAMSBURGH will proceed from Plattsburg Barracks to Washington, D. C., for annulment of his contract.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon W. S. THOMAS, resignation accepted from November 15th.

Medical Inspector R. C. PERSONS, detached from the naval hospital, Portsmouth, N. H., and ordered to temporary duty at the Naval Laboratory and Department of Instruction.

Surgeon E. Z. DORR, ordered to additional duty in charge of the naval hospital, Portsmouth, N. H.

Surgeon J. C. BYRNES, detached from the "Cincinnati" and ordered home to wait orders.

Asst. Surgeon D. B. KERR, ordered to the "Yankton."

Asst. Surgeon W. H. BELT, detached from the Naval Hospital, Philadelphia, and ordered to the Washington Navy Yard.

Asst. Surgeon F. L. BENTON, detached from the Washington Navy Yard and ordered to the Naval Hospital, Washington, D. C.

Asst. Surgeon T. L. RHOADS, resignation accepted from Nov. 16.

Asst. Surgeon W. H. ULSH, detached from the "Yankton" and ordered to the Naval Hospital, Philadelphia, Pa.

Surgeon H. WELLS, detached from duty as member of the Naval Examining Board, Naval Laboratory and Department of Instruction, Brooklyn, N. Y., and ordered home to wait orders and to be ready for orders to the "Chicago."

Surgeon J. M. EDGAR, detached from the "Richmond" and ordered to the "Cincinnati" by steamer of Nov. 23.

Passed Asst. Surgeon R. M. KENNEDY, ordered to the "Yorktown."

Passed Asst. Surgeon W. F. ARNOLD, ordered to the "Panther" immediately.



**The Bradshaw Lecture of the Royal College of Physicians of London** was delivered on November 10th, by Dr. William Miller Ord, physician to St. Thomas' Hospital, and one of the first to recognize that the group of symptoms presented by myxedematous patients constituted a well-defined disease. Dr. Ord took as his subject myxedema and allied disorders and treated it exhaustively, giving full credit to other observers for their share in ascertaining the pathology of the condition as well as in devising the treatment. He was also ready to allow—which every medical discoverer is not—that the whole story had not yet been told. He considers that myxedema presents for our consideration many problems besides those connected with its etiology and course, and that in its pathology many points remain to be investigated and explained.

**A Novel Agent in the Treatment of Carcinoma.**—Upon the assumption "that no one who intelligently collates a number of chronic cancer-cases can well doubt that the lymph glands resist, and for a time destroy, malignant protoplasm," Dr. Herbert Snow urges, in the *Medical Press and Circular*, the employment of an extract of fresh lymph-glands in the treatment of carcinoma. One patient, with advanced carcinoma of the stomach, is believed to have had three months added to his life by the internal administration of such an extract. Several patients with carcinoma of the mammary gland have manifested considerable improvement. Dr. Snow suggests that interstitial medication would be much the preferable mode of treatment, provided physiologists demonstrate that a secretion is the essential factor in this attempt by nature at a cure of carcinoma, and that this secretion can be obtained in an active condition.

**The Dosage of Belladonna and Nux Vomica.**—At a meeting of the Manchester Medical Society, held in Manchester at the beginning of this month (November 2d), Dr. D. J. Leech, one of the most learned of British pharmacologists, related some investigations to show that accurate dosage with the official preparations of belladonna and nuxvomica—the preparations contained in the British Pharmacopeia—was impossible before the recent revision of the Pharmacopeia. This was due to the fact that, however carefully such preparations were made, their strength varied widely, owing to the difference in the amount of alkaloid contained in the drugs in a crude state. The alkaloid contained in the maximum doses of the preparations of belladonna in the 1885 edition of the British Pharmacopeia varied from  $\frac{1}{800}$ th to  $\frac{1}{75}$ th of a grain. In the standardized preparation of the new edition of the British Pharmacopeia published this year the width of limit has been greatly lessened. The largest dose of the new tincture, 15 minims, corresponds to  $\frac{1}{150}$ th of a grain of the alkaloid, the largest dose of the alcoholic extract to  $\frac{1}{100}$ th, these amounts being equivalent to about  $\frac{2}{3}$  and  $\frac{1}{3}$  of a drop respectively of liquor atropin sulphate.

**The Case of Dr. T. A. Campbell, of Carlisle,** the unsavory details of which have been printed in many English lay papers as well as medical, is indeed a sad one. Dr. Campbell was Superintendent of the Carlisle Lunatic Asylum and was a man in high repute in his branch of the medical profession as a good organizer as well as a scientific alienist. By August 31st last, he would have served a term of twenty-five years as superintendent, and the Government had arranged to permit him to retire with the handsome pension of £700 per annum. But, on August 11th, when in a condition of intoxication, he was seen to commit an act of gross inde-

cency with a female imbecile in a coal-cellar attached to one of the wards of the asylum. By a special Act of Parliament it is in England a criminal act to behave indecently to a lunatic, the lunatic being considered to deserve the same protection from the State as the little child whose sense of right and wrong in such matters is not in itself a sufficient protection, and Dr. Campbell was placed under arrest. At the trial a defence of insanity was set up and then the amazing fact was elicited that for years Dr. Campbell had been an alcoholic subject, and that for at least six months his complete mental impairment had been obvious to all who knew him. He was sentenced as a lunatic to confinement in Broadmoor, the State criminal lunatic asylum, during her Majesty's pleasure. The obvious question on reading this story is—how came it about that his relatives or those in daily association with Dr. Campbell did not reveal his condition to the commissioners in lunacy? It was indeed a cruel kindness to Dr. Campbell, as well as to subject all under his medical care to grave risks, to allow him to hold his responsible post when he was not mentally fit to discharge his duties. Friendship will not excuse this supineness.

**Reform in the Royal College of Surgeons of England.**—At the next annual meeting of this college a motion is set down in the name of Mr. Joseph Smith, to be seconded by Dr. Thomas Norton, which runs as follows:

"That in view of the expressed opinion of the council that it represents the whole and therefore all parts of the corporation, and in view of the fact that, so far as it has hitherto been possible to ascertain their sentiments, both individually and at general meetings, the opinion of a large number of the members is and has been for many years past, that they should have some share in the election of the governing body, this meeting requests the council to again consider whether some means cannot be found of fulfilling this desire."

Under this motion is concealed the ardent desire of the greater—far the greater—part of the corporation for a drastic reform in its constitution. At the present moment the affairs of the college are entirely managed by the council. The council are but 24 in number, including the president and vice-presidents, and are elected by the Fellows. The Fellows are but 1,200 in number, the members are 16,000 in number, and have no vote for the council. Their fees enable the college to exist, but they derive no benefit from the place whatever. As a rule, after they have passed their examinations they do not see the building in Lincoln's Inn Fields, with its splendid library and museum, again in their lives. It has for years been the contention of the members that they have a right to vote for the election of their body of management, *i. e.*, of the council, if not of their president, but in spite of some strongly organized associations to effect this sensible reform, the council has managed to exist on its old corrupt basis. That the claims of the members to a voice in the government of their own college have so far met with no recognition other than sentimental is largely due to the fact that the spokesmen of the members have so frequently been rude and violent, and have alienated from the cause which no doubt they had at heart, such members of the council as would otherwise have been willing to aid them. The reform will doubtless come in the end, but it would come much quicker if the members would argue more temperately and insist a little less. If a few voices within the council were raised in their behalf, a change in the methods of election in the college would come at once into the range of practical politics, but as long as the would-be reformers denounce their

opponents in unmeasured language as selfish survivors of stupid tradition and so on, they are not likely to make converts. Ten years ago or more the reform party, efficiently led and with a very definite program, looked like winning the day, but since then a wave of violent verbosity has replaced argument, and many who are supporters of reform in their hearts refuse to be associated with a movement conducted in so deplorable a spirit.

#### CONTINENTAL EUROPE.

**Dr. Lepetet** has been made professor of histology in the University of Clermont.

**Dr. Oskar Zoth** has been made professor of physiology in the University of Gratz.

**Dr. de Marignac** has been appointed professor of hygiene in the University of Geneva.

**The Twentieth Congress of Balneology** will be held in Berlin from March 3 to 7, 1899.

**Dr. B. J. Kouwer** has been appointed professor of gynecology in the University of Utrecht.

**Dr. Bonnus** has been appointed director of the pathologic and bacteriologic laboratory of the Hôpital des Enfants Malades, Paris.

**Professor Hans Virchow**, son of Professor Rudolf Virchow, was recently bitten by a rabid monkey in the Berlin Anatomical Institute.

**Dr. A. Lebedew** has been made professor of obstetrics and gynecology in the University of St. Petersburg, in succession to the late Professor K. Slawjanski.

**A Separate Ministry for Medical Affairs in Russia.**—The question of the appointment of a special Minister for Medical Affairs is being discussed in the Russian Parliament, with, as it seems, some expectation of success attending the efforts of those who advocate the movement.

**Virchow Re-elected to the Prussian Diet.**—At the general election of Deputies held throughout Prussia on November 3d Professor Virchow was returned by the third electoral district of Berlin. The great pathologist, who is a Radical in politics, received 1,358 votes against 782 polled for a Conservative opponent. Professor Virchow this time received nearly 200 more votes than at the election of 1893.

**Paris Anthropological Society.**—At a recent meeting, M. Manouvrier, professor of anthropology, presented the skeleton of the late Eugène Véron, which had been exhumed and presented to the society by his widow. Véron was a well-known scholar, and the author of *Progrès Intellectuel dans l'Humanité*, and other esteemed works. M. Manouvrier had studied his brain, and by the acquisition of the skeleton will now be enabled to continue his investigations. This is the second skeleton that has been presented to the society, the first being that of the late Dr. Adolphe Bertillon, a professor in the School of Anthropology. It seems that there is a curious law in France that forbids dissection before burial, except under special circumstances, and in the case of unclaimed hospital-patients. Bodies may, however, be exhumed and dissected. Bertillon had often expressed his intention of leaving his skeleton to the society, and, in accordance with the provisions of his will, it was exhumed eight years after his death, and is now in the library of the School of Anthropology.

**Memorial to Dr. Franz Hermann Müller.**—A committee has been formed in Vienna for the purpose of erecting a memorial to the late Dr. Franz Hermann Müller, whose death recently from the plague, at an early age, is felt to be a great loss to science, as well as to mankind. The dean of the medical faculty, Professor Puschmann, is chairman of the committee, which includes all the prominent clinicians of Vienna. Subscriptions will be received from members of the medical profession only.

**The plague in the East** shows a steady and continuous decrease in both the number of cases and the number of deaths. This is more especially true with respect to the city of Bombay and the Bombay Presidency. One may appreciate how extensive the disease was when the authorities express gratification in stating that only 3,700 deaths occurred from plague for the week ended November 7th. In the Mysore State the disease is still widespread, whereas in the Hyderabad State, sporadic cases continue to arise.

**Reform of the Assistance Publique of France.**—It is proposed, at a forthcoming meeting of the Municipal Council, to consider and formulate a scheme for the reorganization of the services and administrations grouped under the name "Assistance Publique." The principal change is that of decentralization, whereby it is proposed to establish in the *mairie* of each arrondissement an agency empowered to give succor in all cases deserving it from the Public Assistance. This assistance is to be given with the "minimum of administrative formalities." This important modification would avoid the transfer of *dossiers*, which involves a great waste of time, and, still worse, obliges the personal attendance of the poor and decrepit in order to observe some insignificant formalities.

**Medical Aid and the French Army.**—According to the *Lancet*, the French Minister of War has just taken a step that has been sharply criticised by the whole medical press. It has recently been decided that workmen employed in the military workshops at Toulouse shall be entitled to free medical aid for themselves and their families. The minister therefore applied to the medical men and midwives of the town, and in order to carry out his views as cheaply as possible he put up the office to auction it away. Notices were posted, saying that medical men desirous of being employed in this manner should send in their names and the fee they should demand, either per case or by a yearly subscription. Preference, it was intimated, would be given to the lowest tender. This is the first time that a public body has sought to impose such humiliating conditions upon medical men—not even the clubs have hitherto done such a thing.

**The Surgical Treatment of Adherent Pericardium.**—At a recent meeting of the Société de Chirurgie de Paris, Delorme presented a communication upon the surgical treatment of adherent pericardium. He said that the treatment is similar to that which he has proposed for the relief of similar conditions affecting the pleura, namely, division or a breaking up of the adhesions. He spoke of the functional troubles accompanying the condition, which of themselves often permit the diagnosis to be made, and he mentioned the excessive gravity of the complications that may attend the disorder. These include hypertrophy of the cardiac muscle, failing nutrition of the myocardium, dilatation of the heart, valvular disease, and stenosis of the large vessels. The division of the pericardial adhesions is a



difficult process and is especially hazardous in the aged. The operation is to be performed, therefore, only upon the young. An incision is made at the level of the fifth interspace, and the pericardium being opened, the parietal layer is raised and the right border of the heart is first freed. The operator then continues his manipulations toward the lower border, and then in other directions. As the auricles are approached, it becomes necessary to desist, as these are likely to rupture because of the thinness of their walls. The pericardial adhesions may be broken up with the finger, or they may be divided with a knife.

**Food-poisoning in the German Army.**—The Sanitary Department of the German Army has recently issued a report that contains an account of the various outbreaks of food-poisoning that occurred between April 1, 1894, and September 30, 1896. It appears that the first outbreak covered by this report occurred between September 6 and 8, 1894, when 75 men of an infantry regiment taking part in the annual maneuvers near Königsberg were seized with diarrhea so severe as to suggest cholera. They were isolated in the military hospital, and soon the clinical thermometer as well as the result of bacteriologic examination made it possible to exclude that disease. It was found that all the men attacked had eaten food cooked in copper utensils, and that metal was found by chemic analysis both in the fragments left and in the dejecta. The symptoms were clearly those of metallic poisoning, with the peculiarity that in some cases there was a considerable rise of temperature at first, followed after a day or two in severe cases by hypothermia. At Strassburg in the same year, between October 28th and 30th, 72 men belonging to the same mess were attacked with acute gastro-intestinal catarrh, which was traced to the eating of preserved beef. On December 15 and 16, 1894, 50 men of a Westphalian artillery regiment were attacked by an illness presenting similar features, which was traced to the eating of smoked herring. On May 25, 1896, at Fort Longerich, near Cologne, there occurred 43 cases of slight diarrhea caused by a potato-salad. At Horb, in September, 1896, 7 men were seriously ill with gastro-intestinal catarrh, after eating sausages in which bacteriologic examination revealed the presence of bacilli belonging to the group of *B. coli communis*. At the same time about 100 of the civil population of the town and neighborhood presented similar symptoms. Upon bacteriologic investigation the same bacillus was isolated from the stools in almost pure culture. All the patients recovered.

**Malarial Studies in Italy.**—The Rome correspondent of the *Lancet* writes an interesting summary of the part played by Italian observers in the development of existing knowledge of the etiology and therapeutics of malaria. After mentioning a specific instance of the utility of the intravenous injection of quinin in pernicious malaria, a form of treatment proposed and practised for years by Baccelli, he refers to the investigations of Italians in regard to the etiology of the disease, stating that they have been working steadily and silently and have obtained results only now becoming known. Profiting by the experience of Laveran, if not by that of Manson and Ross, Dr. Amico Bignami, *privat-docent* in pathologic anatomy at the University, had, in 1896, by observation and experiment, convinced himself that malaria is a "disease of inoculation." The same year, working in concert with Dr. Dionisi, also of the Roman school, he experimented on the possibility of engendering malarial fever by means of the punctures of mosquitos. Their experiments yielded no posi-

tive result, but were repeated in August and the first half of September, once more with a negative response. Dr. Bignami and Dr. Dionisi had failed to satisfy themselves, among the numerous tribes of mosquitos, as to that one which had relations, mediate or immediate, with malaria. However, Dr. G. B. Grassi, ordinary professor of comparative anatomy, succeeded last summer in completing a series of observations by which he ascertained and determined the mosquito-tribes that had power to convey the disease. Italian medicine, already distinguished in the malarial field by the studies of Tommasi-Crudeli, Baccelli, Golgi, Celli, Marchiafava, and others, chiefly of the Roman school, expects to establish a claim to having made out the special tribes of malaria-conducting mosquitos—tribes three in number and found exclusively in the fever-infected localities.

Professor Grassi, in a paper published in the *Rendiconti della R. Accademia dei Lincei*, vol. vii, 2° sem., serie 5a, fasc. 70, and in the *Policlinico*, vol. V-M. anno 1898, and quoted in the *British Medical Journal* for November 12th, states that by excluding from consideration the species of mosquito that abound in non-malarious regions and those that do not bite human beings, he has narrowed the number of insects suspected of being the purveyors of malaria to the following: *Anopheles claviger* (Fabr.), *Culex penicillaris* (Rondani), and *Culex hortensis* (Ficalbi). His chief suspicions are fixed upon the first two mentioned, but also upon a third species found in places where the pernicious form of malaria prevails especially. It has been called by Grassi, who has not as yet identified it, *Culex malarie*. In addition to these a further discovery has been made by Dr. Dionisi, who has at last found in certain mammals (bats) a malarial infection, due to parasites resembling those of human malaria. The amebæ are present in these animals in great numbers. The young annular forms are those chiefly seen, but some pigmented forms are also present.

#### MISCELLANY.

**Plague Statistics in India.**—The total plague statistics for India from September, 1896, to October 14, 1898, are 158,379 cases and 125,239 deaths.

**Obituary.**—COUNT MICHELE STEFANO DE ROSSI who made seismology a science by his work on "telluric storms" and his observations, and the instruments of his own invention for forecasting the same, in Rome, November 4th.—Dr. KONSTANTIN P. DELLIANNIS, ordinary professor of pathology in the University of Athens, October 27th.—Dr. MICHAEL KOHOS, editor of *Médecine Orientale*.

**Rabies in India.**—Almost every week some European is bitten by a rabid dog and travels to Paris for treatment at the Pasteur Institute. Now five soldiers have just been sent. Rabies is rife in nearly all parts of India and these accidents are constantly occurring, yet the establishment of an institute for India is treated with indifference and the antivivisectionists are active and take every opportunity to vilify the work of Pasteur and his successors.—[Indian Correspondent in the *Lancet*]

**Rudimentary, Accessory Lung.**—C. Springer (*Prager med. Wochschr.*, August 4, 1898) reports the discovery during a necropsy upon a woman, aged 49, of a rudimentary lung in the lower part of the left pleural cavity. It was attached by a thread-like strand about 4 cm. long. It was flat and elliptical in shape, about 3 cm. long, 2 cm. broad and 1 cm. thick, and was completely covered by the pleura. Only 5 similar cases are recorded in literature. [M.B.T.]

## The Latest Literature.

### British Medical Journal.

November 5, 1898. [No. 1975.]

1. The Operative Treatment of Cleft Palate. EDMUND OWEN.
2. The Treatment of Spina Bifida by "Open Operation," followed by Closure of the Spinal Canal. C. YELVERTON PEARSON.
3. Remarks on Coxa Vara. E. MUIKHEAD LITTLE.
4. The Pathology and Treatment of Genu Valgum. CHARLES A. MORTON.
5. Operative Reduction of Congenital Dislocation of the Hip. E. DOYEN.
6. On Excision of the Gasserian Ganglion for Trigeminal Neuralgia. J. HUTCHINSON, JR.
7. Cases of Traumatic Musculo-Spiral Paralysis, with Restoration of Function after Secondary Operation. ROBERT KENNEDY.
8. The Surgical Treatment of Sciatica. J. CRAWFORD RENTON.
9. Cases of Spasmodic Torticollis. R. H. PARRY.
10. A Series of Cases of Choledochotomy, including three of Duoneno-choledochotomy. A. W. MAYO ROBSON.
11. Rupture of Gall-Bladder: Laparotomy: Cure. W. THELWALL THOMAS.
12. Cases of Perforative Gastric Ulcer Treated by Operation. J. PAUL BUSH.
13. A New Method of the Resection of the Pylorus and of the Intestine. E. DOYEN.
14. The Radical Cure of Hernia by Displacement. W. I. DE C. WHEELER.
15. A Case of Retroperitoneal Hernia in which Recovery took place after Operation. A. H. TUBBY.
16. The Relative Value of the Cystoscope and of Ureter-Catheters as Aids in the Diagnosis of Surgical Diseases of the Kidney. DAVID NEWMAN.
17. On Catheterization of the Ureters in Both Sexes. LEOPOLD CASPER.
18. Successful Removal of Stones of Unusual Size from Both Kidneys. W. F. BROOK.
19. A Case of Traumatic Gluteal Aneurysm. WILLIAM HENRY BATTLE.
20. Castration in Enlargement of the Prostate. ROBERT JONES.
21. Excision of One of the Vesiculæ Seminales. C. MANSELL MOULLIN.
22. Chloroform in India. ARTHUR NEVE.
23. On Spreading Traumatic Gangrene, with an Account of a Case Treated Successfully. A. H. TUBBY and W. SOUTHEY WRIGHT.
24. Electrolytic Treatment of Inoperable Malignant Tumors. MAX MELCHIOR.
25. Some Rudiments of Intestinal Surgery. FREDERICK TREVES.
26. Axis-Traction with Ordinary Forceps. T. ARCHIBALD DUKES.
27. On Incurvation of the Neck of the Femur (Coxa vara), with Notes of a Case. J. LACY FIRTH.
28. Case of Excision of the Left Scapula for Squamous Epithelioma: Operation Performed with the Patient in the Prone Position. H. LITTLEWOOD.
29. A Case of Chronic Membranous Colitis of Over Ten Years' Duration Cured by Right Inguinal Colotomy and Subsequent Closure of the Artificial Anus. JAMES MACPHERSON LAWRIE.
30. Aspiration of Mammary Cancer During Removal. J. TREGELLES FOX.
31. Beri-Beri-Stricken Cases. E. C. MONTGOMERY SMITH.
32. Carbuncle Treated with Antistreptococcus Serum. E. OLIVER ASHE.
33. Vermiform Appendix Resembling Supernumerary Testicle. M. C. STAUNTON.
34. Fractured Patella. E. L. LUCKMAN.
35. Mode of Delivery in a Case of Impacted Shoulder Presentation. JAMES C. POTTER.
36. Case of Quadruplets. C. A. COLEMAN.
37. Fatal Case of Wasp-Sting. F. H. COOKE.

38. A Case of Perforating Duodenal Ulcer: Operation: Necropsy. CONNELL WHIPPLE.
39. Carbuncular Boil on Face: Pericarditis: Death. CAPTAIN W. W. O. BEVERIDGE.

1.—Duncan lays great stress upon the importance of preparatory treatment in **operating for cleft palate**. As for the technic of the operation itself, its success will depend largely upon the freedom with which the alveolar incisions are made; if the muco-periosteal flaps are sufficiently dissected up, there will be no tension when the sutures are introduced. Occasionally operations will fail because of staphylococcal infection of the tissues; in such instances the second operation should not be postponed for any length of time, as the child probably enjoys an immunity immediately after the primary infection. [C.H.F.]

2.—The **operative treatment of spina-bifida** by the open method is gradually taking the place of the treatment by injection. Pearson describes an operation with some original points that he has employed with gratifying results. The patient should lie on the side, with the head lower than the plane of the body. The primary incision should be a lateral one, in order to avoid the possibility of wounding cord or nerves; the fluid should, if possible, be retained in the sac or be replaced by irrigation during dissection of the cord. By freely dissecting up the lateral flaps one is able to completely approximate the aponeurotic coverings. The operation as described by Pearson is applicable to cases of meningo-myelocoele—by far the most common form met with in practice, and which has usually been regarded as inoperable. [C.H.F.]

4.—For all cases of **genu valgum** requiring osteotomy Morton considers it better surgery to operate upon the tibia and not the lower end of the femur. In the majority of cases of knock-knee skiagraphs will show that the essential condition is a curve outward in the bones of the leg, and not an elongation of the internal condyle or outward curve of the lower end of the femur. [C.H.F.]

5.—Doyen describes his operation for the **reduction of congenital dislocation of the hip**, which involves the reconstruction of the cotyloid cavity by an ingenious circular chisel, so constructed that it leaves no osseous debris in the wound. The actual reduction of the head of the femur is effected by means of a complicated apparatus which does not necessitate the division of any muscle or group of muscles. [C.H.F.]

6.—Hutchinson reports an instance of **excision of the gasserian ganglion** for trigeminal neuralgia from a patient whom repeated peripheral operations had failed to afford relief. After 13 months there had been no sign of recurrence of the pain. Microscopic examination of the ganglion failed to reveal any marked abnormality in the ganglionic cells or the nerve-fibers, but there appeared to be an overgrowth of fibrous tissue throughout the ganglion, the arterioles in which, though embedded in this dense tissue, presented no sign of disease of their walls. The Hartley-Krause method was employed in this case, and the operation was carried out at two sittings, owing to the extensive venous oozing at the first operation. There is no question as to the advantage of this method over those that attack the ganglion through the base of the skull by the so-called pterygoid route. The Hartley-Krause method is attended with some difficulties, which are dependent chiefly upon the depth of the ganglion from the surface, the venous oozing, and the firmness of adhesions between the ganglion and the dura mater. If division of the peripheral nerves fails to afford relief, nothing short of the radical procedure, namely, excision of the ganglion, should be considered; operations for removing extracranial segments of the fifth nerve, such as Meckel's ganglion, or ligation of the carotid, are to be rejected. [C.H.F.]

8.—The **surgical treatment of sciatica** should not be limited to nerve-stretching. In many cases large adhesions, due probably to perineuritis, will be found, and unless these are dissected from the nerve-sheath, nerve-stretching or any other form of treatment will be of little or no service. A number of cases are cited in support of this view. [C.H.F.]

10.—**Choledochotomy** is the operation par excellence for gallstones impacted in the common duct that cannot be removed by simple means. Robson has found that the oblique incision will give more room than the vertical, and



that a sand-bag placed under the loin will bring the duct several inches nearer the surface. For exploring the duct, the finger should be used, whenever the duct is large enough to admit of it, as the flexible metallic probe recommended by Fenger cannot be relied upon. The duct is closed by a row, first of catgut, then of silk sutures; and drainage is established for 24 hours. **Duodeno-Choledochotomy**, a modification of choledochotomy, first practised by McBurney for the removal of calculi impacted in the duodenal end of common duct, is less difficult than it would appear, and is much facilitated by placing a sand-bag under the lower dorsal spine. The tendency to hemorrhage in long-continued cases of jaundice may be combated by the administration of calcium-chlorid in  $\frac{1}{2}$ -dram doses t. d., as well as in dram-doses by enema thrice daily for 24 or 48 hours before the operation. Robson's mortality for choledochotomy is 11.7 %, but he believes this may be reduced by improvement in technic to 5 %. [C.H.F.]

**11.**—The interesting points about this case of **rupture of the gall-bladder** are the nature of the accident and the time of the injury. The latter was sustained by the patient falling flat on the abdomen on a flag pavement, the accident occurring 6 hours after his last meal. The intense collapse, the rapidity of the pulse, the extreme pain, the fixation of the abdominal walls, and the pinched, anxious expression bespoke a severe intraabdominal lesion. The collapsed condition in which the intestine was found demonstrated the intensity of the irritation exerted by the bile that had escaped into the abdominal cavity. When the intestine was freed from bile and washed off with salt-solution, it regained its original tone. [C.H.F.]

**14.**—The method of operation for the **radical cure of hernia** that nearest approaches the ideal, according to most recent views, is one that not only does away with the funnel-shaped depression of the peritoneum at the internal ring, but also prevents its recurrence. Kocher's method is the only one in which this idea is carried out, and it is, therefore, to be preferred to those of Halsted, Bassini, Fowler, and others. Another attractive feature of the Kocher operation, is the fact that the aponeurosis of the external oblique remains intact, thus leaving no cicatrix that can yield or stretch. Wheeler has latterly employed this operation, with results that more than favorably compare with his previous experience with other modes of operating; by the displacement method he has had no death and but one relapse, as compared with a mortality of 2.5% and a recurrence of 20% following various other methods. Of the cases recorded, 10 had been operated upon more than 2 years previously, and three over a year before, and the remainder from 5 to 9 months previously. [C.H.F.]

**15.**—Tubby reports a case of **retroperitoneal hernia** occurring in a woman, aged 60. The patient had on previous occasions passed gall-stones, and the rapid onset of the symptoms on this occasion simulated impaction of a gall-stone. At the operation there was found a hernia of the lower portion of the small intestine into the jejuno-duodenal fossa. The fact that the lower portion of the intestine was involved undoubtedly accounted for the extremely rapid abdominal distention. [C.H.F.]

**16.**—Newman endorses both the **cystoscope** and the **uretero-cystoscope** as valuable aids in the diagnosis of vesical and renal diseases. Ureteral catheters should not be used indiscriminately, however, and should never be employed until one has failed to obtain the necessary knowledge through the cystoscope. The cases in which catheterization of the ureter is justifiable are not numerous; the operation should be performed with the strictest antiseptic precautions and then only when it may be assumed from the attending circumstances that there is no danger of infecting the ureter or the kidney. [C.H.F.]

**17.**—The field of usefulness for the **catheterizing cystoscope** is ever increasing. It is now used not only as a diagnostic aid, but in conjunction with certain therapeutic measures. Objection has been raised to its employment on the ground that there is danger of traumatism and infection. In answer to these Casper states that traumatism is only due to the awkwardness of an operator, which is inexcusable, and as regards infection, while theoretically this is possible, as a matter of fact he has never in the 500 times that he has performed this operation met with a single case in which changes in the urine were found indicative of an ascending

infection. Referring to the diagnostic indications, these include cases, in which there is doubt as to the existence of an affection of the urinary apparatus, especially in the presence of large abdominal tumors. Catheterization decides whether the bladder alone or the ureter and the kidney are diseased; and, if it be the kidney, which kidney is the seat of disease, and what is the nature of the disease. While it cannot always detect stone in the renal pelvis, it can always detect not only the presence of stone in the ureter, but also its precise location. Casper has been able to demonstrate spasm of the ureter in a case of hysterical oliguria—an entirely new and remarkable observation. Such a condition is to be differentiated from strictures and bends in the ureter. The positive diagnosis of pyelitis, pyelonephritis, and pyonephrosis may be made by means of catheterization of the ureters at a time when it cannot be made by any other method. Finally, ureteral catheterization is of great diagnostic value in the determining the condition of the supposed healthy kidney when the other one is found diseased. [C.H.F.]

**20.**—Jones reports his experience with **castration for enlargement of the prostate** as being distinctly a happy one and one that should encourage more frequent recourse to this operation. It presents more gratifying results than those following prostatectomy, and while it should not be made a routine treatment, it should be employed when less drastic and heroic measures fail. As a result of the researches of White and others the relation of the testes to the prostate is now clearly defined. Experiments on both animals and human beings have proved that the prostate is a sexual organ; that castration is followed by atrophy of the gland; that unilateral castration is often followed by atrophy of one-half of the prostate. In nearly every case of ligation of the vas deferens slow atrophy of the prostate begins, but generally only after causing disorganization of the testes. [C.H.F.]

**21.**—**Excision of one or both seminal vesicles** is an operation, that, though of some gravity, presents no unusual difficulties, and may be performed with distinct advantage for tuberculous disease, cystic degeneration, or persistent pain following long-standing gonorrheal inflammation. It seems to be especially indicated in cases of tuberculous disease when the process has not extended to the prostate. Moullin records a case in which he removed the right seminal vesicle on account of extension to it of gonorrhea. Convalescence was quite uneventful and the relief afforded fully justified the operation. [C.H.F.]

**22.**—The mortality attending **chloroform anesthesia in India** differs not a little from that in other countries. It may be possible by studying the habits of the people or the climate of the country to acquire some information that may be of material assistance in lowering the death-rate in countries foreign to India. Whatever else the experiments of physiologists may have accomplished, they have not led to any conclusions of great practical value. In India the mortality from chloroform does not exceed 1 in 8,000 cases, and in some of the largest institutions it is less than 1 in 20,000 cases. Safety does not appear to be related to any special constitutional condition of Indian races and but little to their habits. It is probably due entirely to the warm atmosphere, which favors the rapid action of the drug and its rapid elimination. To obtain similar safety in England, it would be advisable to operate in well-ventilated rooms, with a temperature not below 70° F. Anesthesia should be produced gradually, with the chloroform diluted with plenty of air. [C.H.F.]

**24.**—Opinions differ widely as to the effects of electrolysis upon malignant tumors: some surgeons condemn the method altogether; a large number have obtained excellent results therefrom; while a third class occupy an intermediate position. In discussing this question Melchior mentions a case of a recurrent angiosarcoma on the nape of the neck in which a cure was finally effected by electrolysis. The method employed was first described by Kaarsberg, who does not use electrolysis until as much as possible of the tumor has been removed by the knife. By this means a strong current, 500 ma., is brought in direct contact with the tissue. Profuse suppuration and the discharge of large masses of necrotic tissue are the immediate result; when the carcinomatous tissue is all destroyed the wounds heal by granulation and by contraction, through a profuse formation of fibrous tissue. It is claimed that the current



has a strong destructive action upon the carcinomatous formation and that the carcinoma-cells are choked by the excessive fibrous formation. There does not seem to be any danger attending the use of such a strong current, except that of embolism or paralysis if the needle is applied too close to the large vessels and nerves. [C.H.F.]

**26.**—Dukes holds that the simplest, easiest, and most powerful method of applying **axis-traction with the ordinary forceps** is not generally known. His method is as follows: The patient being in the ordinary left lateral position, the blades are inserted so that the lock falls together. The handles are permitted to assume their natural position, close to the symphysis pubes and pointing forward. They are allowed to remain during the whole process of extraction in this, the position that they naturally assume, pointing more and more forward as the head descends. To extract, the forceps is grasped at or above the lock with the left hand, and the hollow of the right hand is placed on the posterior surface of the extremities of the handles, so as to be able to push with the right hand and pull with the left, by an action somewhat similar to that used in making a stroke with a paddle. Then, keeping both arms the whole time rigid and extended, the operator's chest, facing the patient, is placed in the desired line of traction, which, with the head at the brim, is a straight line passing from the patient's umbilicus through her coccyx, and reaction is made with the operator's back from the coccyx. [W.K.]

**27.**—Firth reports a case that presented the clinical signs of **bilateral coxavara**, differing from a typical case in that flexion of the hips decreased adduction. The patient, aged 19, was employed as a billiard-marker. His occupation, combined with his rachitic diathesis, played an important part in the development of the deformity. The diagnosis was confirmed by a radiograph. [C.H.F.]

**28.**—**Squamous epithelioma of the scapula** is so unusual a formation as to attract attention. In the case here reported it was supposed that the growth was a secondary deposit, but no primary epithelioma could be found. The macroscopic and microscopic characteristics of the growth, which was removed with the scapula, seemed to leave no room for doubt as to the accuracy of the diagnosis. [C.H.F.]

**29.**—It would seem that **colotomy** is a somewhat heroic measure to resort to in the **treatment of membranous colitis**, and yet, when all medicinal measures fail and the patient is rapidly losing ground the operation is justifiable. Seven months were allowed to pass in Laurie's case before the artificial anus was closed, and at the end of this time the patient's health was thoroughly restored. The longer the interval between the operation and final closure of the colotomy-wound the greater the chances of recovery. Good results have been obtained from this procedure by Golding Bird in a case of membranous colitis, and by Godlee in a case of dysentery. [C.H.F.]

**30.**—Short and unimportant.

**31.**—Smith refers to a number of cases of **beriberi** occurring on board a ship on which there had been an epidemic two years previously. One patient died suddenly while drinking a glass of milk when apparently well-advanced in convalescence. All of the others recovered. [S.M.H.]

**36.**—Coleman reports a case of **quadruplets**. The mother was a primipara, and the children were all females of about the seventh month and alive. The presentations were: First, vertex; second, breech and last two vertices. One child died 12 hours after birth; another, 48 hours after birth. The remaining two survived. There were two placenta: The first was expelled naturally; the second was completely adherent to the upper surface of the uterus. [W.K.]

**37.**—Cooke reports a fatal case of **wasp-sting** occurring in a young woman, aged 24 years, who was stung in the throat, and who was seized with pain in the stomach and violent vomiting, with numbness and blindness, from which she soon recovered. Some time afterward she was again stung in the hand. A few minutes afterward her face became very red; a sense of numbness over the entire body developed; vision and unconsciousness were lost. Following the redness the face became pallid, and the patient died about 25 minutes after the sting. Aside from being of a neurotic temperament, the young woman was strong and healthy and seemed perfectly well up to the time of the sting. [S.M.H.]

**39.**—Beveridge reports the case of a young man, aged 25 years, in Bermuda, in whom a boil developed on the face on July 31st, a time when boils are prevalent in Bermuda. The patient was a healthy, temperate man. The boil commenced as a very simple affair, but was inflamed by picking. On the day of its appearance the man was employed on coal-fatigue. In the evening he felt ill, had a slight chill, and some lumbar pain. The boil was located over the right facial artery, where this crosses the lower jaw. Another and smaller one appeared on the upper lip. The tissues surrounding both boils were purple in color, swollen, tense and glazed. The pus was evacuated by incision. After a day the lips were much swollen, and the left arm around the elbow was red and swollen. A red raised rash was present on the legs and face. The man complained of great pain in the head and precordia. By nightfall pericardial friction was heard. On the second day the pericarditis was pronounced. The local condition seemed improved, the general condition worse. On the third day the morning-temperature was 103.6° F., and the patient was very delirious. There was an effusion into the pericardium. The bowels were constipated and the urine albuminous. The eyes were protruding from their sockets and uncovered by the lids. The tissue of the orbits was tense and hard. The lids were greatly swollen and lined internally by an unhealthy blood-stained slough. The trunk and arms were covered with a scarlet rash raised above the surface, which later on developed a petechial character. The patient became violently delirious. In the afternoon the temperature began to rise, and by 4 o'clock the next morning had reached 107.6°. Shortly after this the man died. His sufferings were intense. Attention is called to the rarity and invariable fatality of carbuncular boil of the face. [S.M.H.]

# Lancet.

November 5, 1898. [No. 3923.]

1. Elements of Prognosis and Principles of Treatment in Cardiac Disease. G. A. GIBSON.
2. Some Rudiments of Intestinal Surgery. FREDERICK TREVES.
3. Summary of Gunshot-wound Cases treated in No. 2 Native General Hospital at Rawal Pindi. CAPTAIN D. M. MOIR.
4. The Rinderpest in South Africa. JOHN MABERLY.
5. Acute Necrotic Cellulitis of both Orbits. W. T. HOLMES SPICER and HAYDOCK WILBE.
6. Cantwell's Operation for Epispadias. HERBERT W. PAGE.
7. Some Malformations met with in the Postmortem Room. CHARLES POWELL WHITE.
8. The Occurrence of Rheumatism in Children subsequent to an Attack of Chorea. FREDERICK E. BATTEN.
9. A New Method of Restoring the Absent Function of Muscles in Infantile Paralysis. NOBLE SMITH.
10. A Rare, if not Unique, Fracture of the Tibia. LEONARD MOLLOY.
11. Suckling a Cause of Abortion. T. M. CALLENDER.
12. Concurrent Eruption of Measles and Chickenpox. H. W. WEBBER.
13. A Case of Extreme Deformity of the Lower Extremities; Operation. (Under the care of W. H. Battle.)
14. A Case of Fracture of the Trachea and Sternum; Necropsy. (Under the care of G. R. Turner.)

**1.**—Gibson states that when the arterial pressure is good, the heart, not unduly hypertrophied, and the system at large free from any appearance of disturbed equilibrium, **the prognosis of heart-disease** may be regarded as satisfactory. When the converse conditions exist, one must predict with greater reserve. As to the *treatment of heart-disease*, the most important object to attain is the maintenance of the blood-pressure at an adequate height. This involves the elevation of arterial and diminution of venous pressure, and is accomplished by acting upon the heart on the one hand and upon the arterioles on the other. In the practical application of therapeutic measures certain general methods must be considered, such as the influence of light and air, climatic conditions, the amount of sleep, moderate physical and intellectual exercise, the amount and character of the food and drink, and the application of baths. The exercise



should be graduated in accordance with the condition of the heart-muscle. Gibson recommends the Nauheim baths, and when these are not feasible, the artificially prepared Nauheim baths. The effect of these baths appears on percussion to reduce the size of the heart, but that this reduction is due to an actual diminution in the size of the organ has not yet been proved. The beneficial effect of the baths in suitable cases is unquestioned. Cases of cardiac weakness and dilatation, whether from depression, general disease, or overstrain are those that gain most. Cases of approaching breakdown in middle life and early loss of compensation in valvular disease are also benefited. The cases must be carefully selected; in many serious disturbances the baths will be harmful. In the application of medicinal remedies cardiac stimulants must be distinguished from circulatory stimulants. The alcohol-group is of the greatest importance in the treatment of circulatory affections. Most of this group produce in moderate doses dilatation of the arterioles and acceleration of the heart; in larger quantities they cause depression of all the great vital centers. Ethylic alcohol acts both as a stimulant and as a food. Ether is a powerful stimulant, chloroform a useful sedative, and chloral, although powerfully depressant, is of importance as a hypnotic. Paraldehyd, sulphonal and trional are most useful. The nitrites are of great value for the purpose of reducing blood-pressure by dilatation of the arterioles. The ammonia-group contains some drugs that, for reasons not fully explained, elevate the blood pressure. The camphor-group contains several powerful stimulants to the cardiac muscle. The caffein-group causes some vascular stimulation and is valuable in that its members also act as renal stimulants. The most valuable drugs are digitalis and strophanthus. They are practically identical in their effects, causing diminution of the pulse-rate, increase of cardiac energy, contraction of the arterial walls, and consequent elevation of pressure. Digitalis is more valuable when the kidneys are inactive or when edema exists. In addition to the measures recited, the eliminative measures, among which the employment of mercury is of prime importance, blood-letting, local and general, the removal of fluid, and counter-irritation by various agents are of the highest value. The use of antistreptococcic serum brought about recovery in some seemingly hopeless cases. [S.M.H.]

2.—In discussing some rudiments of intestinal surgery, Treves takes up the subject of intestinal obstruction. Too much stress has been laid upon the actual item of the obstruction, which is by no means the most serious or the most essential element in the progress of events. In fatal cases of acute intestinal obstruction, death cannot be attributed to the mere mechanical occlusion of the bowel; in the first stage the symptoms are those that attend any serious intraabdominal lesion and are simply the result of "sudden and intense impressions upon important visceral nerves." Among these symptoms are intense abdominal pain, collapse and vomiting. In the second stage the reversed peristalsis, the meteorism, the vomiting and the pain are undoubtedly the result of occlusion of the bowel; but again in the third stage the condition has little to do with the actual obstruction, but can only be accounted for by the absorption of the septic products generated in the canal—an intestinal septicemia. It is the virulence of this infection that determines the fate of the patient, not the nature of the obstruction; therefore in order to successfully combat the fatal tendencies of the condition the surgeon must not only relieve the strangulation, but also locate the bowel, and in recent years Treves has not considered his operation complete until the bowel is emptied of its septic contents. This theory of intestinal septicemia accounts for the good results that attend simple enterectomy in cases of acute intestinal surgery. No advance in the surgical treatment of intestinal diseases can be made without a careful study and a more complete knowledge of the bacterial processes within the bowel. The time may come when the introduction of some nonpathogenic bacterium into the intestine may beneficially influence by its growth the powers of the microorganisms that normally inhabit the intestines. It may be possible, by artificial means, for example, by the injection of certain materials into the serous cavity itself, to secure an immune peritoneum. Referring to certain individual operations, and speaking first of colotomy, Treves advises immediate opening of the bowel

and evacuation of the contents. If the wound receive proper attention in the after-treatment, such complications as prolapse or colitis will rarely occur. By careful feeding and the administration of *mistura alba* on alternate days, ample evacuation of the bowel will be secured and the patient rendered comparatively comfortable. In the performance of lateral anastomosis the best method theoretically is simple suture, but in many instances the surgeon is forced to use some one of the many mechanical contrivances "that alternate between oblivion and rediscovery, to the great hindrance of progress." Treves, in 1882, described a method of suturing the bowel over a collapsible India-rubber bag, whose construction was wonderfully similar to that lately introduced by Halsted. This appliance was after a time discarded as useless, and now, after a period of 16 years, Halsted rediscovers this useless bag and reproduces it with singular exactness. Of all the appliances yet devised the Murphy button gives the best satisfaction. There are only two serious objections to its use—the danger of its remaining in the canal and that of subsequent contraction of the cicatrix—but these occur so rarely that they are clearly outweighed by its many commendable features. [C.H.F.]

3.—In a comparison of gunshot-wounds, treated at the General Hospital at Rawal Pindi, it was found that the Martini-Henry bullets lodged in the tissues much more frequently than the Lee-Medford, and much more deeply than round balls. Consequently the former were much more difficult to find, and also much more difficult to extract, partly in consequence of their being more deformed, more jagged and flattened. Owing to the Martini-Henry bullets being more deeply lodged there was a greater tendency for them to shift their position, and to wander in the planes of the deep muscles and intermuscular septa. The Röntgen-ray apparatus proved of the greatest use in localizing the site and in confirming the presence or absence of bullets in the tissues. [C.H.F.]

4.—The discovery of Koch that the serum of cattle that had recovered from an attack of Rinderpest, when injected subcutaneously in healthy cattle, protected these from the poison of the disease for a short time, and his further discovery that a similar injection of bile from infected cattle led to similar results has been the means of largely wiping out this destructive plague. These facts have been elaborated upon and experimented with, and at the present time the method of protective inoculation consists in the simultaneous injection of Rinderpest blood and antitoxic serum at spots in the body sufficiently apart to prevent the two fluids from mixing together at once. This results in inducing a modified type of the disease. It has been demonstrated that the period of immunity, if not permanent, is much longer following an attack of the disease than is the immunity induced by the injection of antitoxic serum. The specific microbe of Rinderpest has not as yet been definitely determined upon, nor has it been discovered in what manner bile taken from the Rinderpest animals acts as a temporary immunizing agent. It has been shown experimentally that the action of the immunizing serum on the virus of Rinderpest outside the body is infinitely less powerful than in the body, a difference evidently brought about by the intervention of the living cells of the animal. The serum is prepared from healthy animals that have been immunized by the simultaneous method described and afterwards fortified by successive inoculations of Rinderpest blood. The animals are then bled in the usual way, and the serum is collected after the clot has formed or by means of centrifugation. The strength of the serum is then tested by a series of simultaneous inoculations. It is difficult to transport Rinderpest blood for any distance because it rapidly loses its virulent properties, and the addition of preservatives has the same effect. This difficulty has been overcome, however, to a great extent by using the blood of live sheep as a means of conveying the poison to a distance. Sheep do not take the disease, but blood drawn from them from 3 to 8 days after the injection of from 100 to 200 cu. cm. of virulent blood fatally infect oxen injected with it, and it has been proved that the strength of the virulent blood can be virtually disregarded in simultaneous inoculations. [S.M.H.]

5.—Spicer and Wilbe report a case of acute necrotic cellulitis of both orbits whose interesting features consisted in the extreme severity of the local inflammatory process, and the absence of any discoverable cause. There first



formed an abscess behind the globe, from which an ounce of pus containing fragments of necrotic tissue was evacuated. Soon the entire contents of the orbit became involved in the necrotic process. Subsequently the other orbit became involved, and eventually the patient succumbed from pyemia. Neither in the nasal cavities, nor in the antrum could any explanation for the infection be found, and a careful examination failed to reveal any wound or injury of the skin or conjunctiva. [C.H.F.]

6.—Page heartily endorses **Cantwell's operation for epispadias** by transplantation of the urethra. The operation has been cleverly devised, and is deserving of much more popularity than it has as yet attained. Page reports a case in which he performed this operation with pronounced success. As a preliminary step an opening was made in the perineum, and a Watson's silver tube inserted, in order that after the plastic operation, the parts might be kept entirely free from contact with urine. For almost 6 weeks after the operation the patient lived night and day in a warm boric bath, a procedure that contributed largely to the success of the operation. The patient was finally able to retain his urine all night, and the only defect in the result of the operation was a slight contraction of the meatus. [C.H.F.]

7.—White observed the following **malformations** during a period of 18 months, in 394 autopsies: One anencephalic and one siren-monster, the latter of the variety symphysidipus. In one case there was an absence of the pericardium. In a male subject, aged 23 years, there was deficiency of the interventricular septum. The right ventricle was enormously hypertrophied, and the left smaller than usual. The deficiency in the septum was situated high up, and gave the aorta the appearance of arising equally from both ventricles. The foramen ovale was closed, the aortic and pulmonary valves normal. The ductus arteriosus was patent. In one case there existed only two curtains of the aortic valve, and in another case there was an extra curtain of small size situated anteriorly, to the right in the pulmonary orifice. In one case there was in the middle of the posterior curtain of the tricuspid valve an aperture  $\frac{1}{2}$  inch in diameter, provided with two small curtains to which were attached chordæ tendinæ that arose from the interventricular septum; the valve was competent. In the siren-monster the left innominate vein entered the coronary sinus of the heart. In one instance there was a persistence of the left posterior cardinal vein. Two distinct duodenal pouches occurred in one adult case. Meckel's diverticulum was observed four times. Absence of the rectum and anus occurred in the siren-monster, and there were two instances of imperforate anus. There was entire absence of the genito-urinary apparatus in the siren-monster. In one case the left kidney was represented by a little mass of connective tissue containing no microscopic evidence of renal structure, and having a minute artery and vein and a fibrous cord in place of an ureter. There were three cases of horseshoe-kidney, the union in each consisting of true renal tissue. Each had two ureters. The vessels were abnormal in only one case. In a boy, aged 18 years, the left kidney was large, with its hilum placed anteriorly. Its position was normal. The right kidney was found in the right iliac fossa, was circular in shape, and viewed from the front had the appearance of two kidneys, one above the other, with their hila adjacent. The pelves of the two halves were distinct and were united by a small canal  $\frac{1}{2}$  inch in length. The ureter arose from the lower pelvis. Posteriorly the kidney showed a transverse sulcus in which ran the artery. There were two renal arteries arising from the aorta just above the bifurcation. One passed to the front and divided into two branches, one going to each half. The other passed to the sulcus back of the kidney, giving off branches in its course. The suprarenal body was in the normal situation. In another similar case the left kidney was in the left iliac fossa. It had but one valve common to the two halves. There was one case of uterus bicornis. [S.M.H.]

8.—In order to determine what percentage of **choreic children** subsequently developed **rheumatism**, Batton made an analysis of 115 cases observed in the Great Ormond Street Hospital for Sick Children. He found that within 3 years 11.3% of the children without previous rheumatism developed rheumatism. After 5 years this total was increased to 20%. [S.M.H.]

9.—It is known that in cases of muscular contraction

associated with **infantile paralysis**, division of the tendons of the contracted muscles is generally followed by improvement in the nutrition of the whole foot. Attempts have been made to explain this improvement by attributing it to the increased movements of the part that the release of the contraction has permitted. This explanation, however, cannot be sustained by facts, and it seems more likely that the improvement of nutrition is due to a direct reflex action of the spinal cord. Whatever the proper explanation may be the fact remains that division of the tendons of the contracted muscles has a beneficial effect upon the paralyzed parts. Upon the basis of this phenomenon Smith proposes this method for the restoration of muscular power in infantile paralysis, and acting upon this idea he has performed tenotomies upon two patients with infantile paralysis, and has attained results beyond all expectation. [C.H.F.]

11.—Callender reports a case of **abortion** occurring in a multipara, 30 years old, with nothing abnormal in her previous menstrual history, but who was nursing a 12-months-old baby at the time. The pains began while the child was at the breast, increased in severity and were followed by hemorrhage. It is believed that the nursing produced reflex uterine contractions and brought about the miscarriage. [W.K.]

12.—Webber reports a case of measles, on the third day of which characteristic vesicles of chickenpox appeared, the child passing through a typical course of both conditions. [S.M.H.]

13.—To overcome **deformity of both lower extremities** Bittle performed an osteotomy of the lower end of each femur, the upper end of each tibia, and the upper third of one fibula. Whereas before the operation the patient could neither stand nor walk without support, she became able to go about with perfect ease, the deformities being perfectly corrected. [C.H.F.]

#### New York Medical Journal.

November 19, 1898. [Vol. lxxviii, No. 21.]

1. The Treatment of Penetrating Wounds of the Eyeball. L. A. PRÉFONTAIN.
2. Is Appendicitis a Surgical Disease? CARL BECK. (Continued.)
3. A Case of Extensive Fracture of the Arm and Forearm, complicated by Dislocation of the Shoulder on the Same Side. E. D. SMITH.
4. Comparison of the Erectile Tissue in the Nasal Mucous Membranes of a Bull and a Bullock. JONATHAN WRIGHT.
5. A Contribution to the Treatment of Cocain Poisoning. EDWARD F. BRENNAN.
6. Practical Points in the Administration of Chloroform and Ether. J. BENNETT MORRISON.

1.—Referring to the **treatment of penetrating wounds of the eyeball** Préfontaine draws attention to the importance of not allowing a false sentiment, or ill-advised conservatism, to stand in the way of enucleation in those cases for which this procedure seems advisable. One should never count on the action of mydriatics, or meiotics to remove the iris from wounds or prevent its adhesion, although extremely rare cases will occur in which the ophthalmologist will at once see the propriety of making such use of these agents. [C.H.F.]

2.—**Appendicitis** should be regarded as an inflammation of the vermiform process due to infection. While in many cases the infection may ultimately be a mixed one, in the majority it is traced to a single form of bacteria. The streptococcus lanceolatus, the bacillus pyogenes, the bacillus subtilis, the staphylococci, the bacterium coli commune, may each be responsible for the infection, but in the large majority of instances the culture will be found to contain either the bacterium coli commune alone, or in conjunction with one of the other aforementioned organisms. It is a well-known fact that these organisms may exist in the intestinal tract without provoking infection, but that when there is any circulatory disturbance or injury to the mucous membrane their virulence increases, and infection is apt to follow. Circulatory disturbances of the vermiform appendix are not difficult to explain; the shortness of its mesentery, its low power of ex-



pulsion, the length of its channel in proportion to its small caliber, the occurrence of kinks and twists, and occasionally pressure from a right floating kidney—all these conditions may interfere with its circulation. Once the microorganism has invaded the submucosa, it is then only a question as to when the inflammatory process will be arrested. The pathology of the various types of appendicitis, based upon the virulence of the infection and extension of the inflammation, is described. The varieties include simple appendicitis, periappendicitis, periappendicular abscess, progressive phlegmonous appendicitis, pyappendix, perforating suppurative appendicitis, encysted appendiceal abscess, and gangrenous appendicitis. Actinomycotic and tuberculous appendicitis are rarely observed. As the classification is based on the anatomic lesion, so the symptomatology of the disease should alone be studied from the same aspect. The classification which divides appendicitis into light, moderate, and grave cases should be rejected. The ideal method of making a diagnosis should be based on the law that there is in general a clinical expression for every tissue-change, but, unfortunately, the results of our observations do not enable us to recognize each variety of appendicitis by its clinical manifestations. In the author's experience, in but one-half of the cases has the clinical picture been so well marked that any decisive conclusion could be drawn as to the status of the pathologic change. In each variety the symptoms of the first 24 or 36 hours show a marked similarity. In phlegmonous appendicitis the dullness is more marked, there may be more fever, and well-marked meteorism may prevent palpation of the tumor. In perforating appendicitis meteorism is more developed, chills are more frequently observed, and the general disturbances of the body are more pronounced from the beginning. Even in the gangrenous form the initial symptoms may show no marked variation from those of less serious cases. The physiologic signs of peritonitis may not have developed, and yet death is threatened from foudroyant sepsis. It is on account of this uncertainty of the diagnosis in reference to the stage and toxic potency of the inflammatory process that hinge all disagreements as to the best method of treatment. On account of this uncertainty Beck believes in the advisability of early operation. [C.H.F.]

3.—In falling from a roof the patient sustained, in addition to a **dislocation of the left shoulder, two fractures of the arm, and one of the forearm.** The humerus was fractured an inch and a half below the superior articular surface, and two inches above the inferior articular surface; while there was a fracture of the radius one and one-fourth inches from its lower end. [C.H.F.]

5.—Brennan reports a case of cocaine-poisoning from the use of a 10% solution of cocaine. Two drams of this solution were placed in the urethra and allowed to remain for three minutes and then removed. Fifteen minutes later the patient developed dysphagia, marked swelling and cyanosis of the face, neck and extremities, marked dilatation of the pupils, inability to breathe unless the tongue was held protruded with tongue-forceps, spasmodic respiration, inability to speak, and extreme nervousness, but no loss of consciousness. The patient was treated by the administration of fairly large doses of morphin and stimulants. Three and one-half grains of the sulphate of morphin were given within 24 hours. Recovery was not complete for several days. [S.M.H.]

6.—The article contains in detail a number of practical points on the administration of chloroform and ether, and is written for the benefit of hospital-internes. [C.H.F.]

### Medical Record.

November 19, 1898. [Vol. liv, No. 21.]

1. The Radical Treatment of Prostatic Hypertrophy. EUGENE FULLER.
2. The Technique of the Operative Treatment of Intestinal Obstruction. FREDERICK HOLME WIGGIN.
3. Five Weeks' Experience at Bad Nauheim. GEORGE L. PEABODY.
4. Primary Focal Hematomyelia from Traumatism. A Frequent but Often Unrecognized Form of Spinal-Cord Injury. PEARCE BAILEY.
5. Wound of the Eyelid. I. D. STARR.

6. Removal of Ovaries, Tubers and Uterus for Vicarious Menstruation. FRANK V. CANTWELL.
7. Two Cases of Chorea Due to Eye-Strain. HERBERT L. STEUBEN.
8. Was it Maternal Impression? A. S. DOLLOFF.
9. Removal of the Cecum. J. H. CARSTENS.
10. A Case of Paroxysmal Sleep, Sleep-Epilepsy, or Narcolepsy. HAROLD N. MOYER.

1.—There are but three operations for the relief of **prostatic hypertrophy** to which the term radical can properly be applied; these are Von Dittel's, Alexander's, and Fuller's. No operative measure should be termed radical which does not remove the obstruction, does not afford long-continued vesical rest, or is not permanent in its results. The patient should be expected to empty his bladder completely by the act of urination, and should have a full and forcible stream. Fuller's operation is essentially an enucleation of the prostate through a suprapubic wound, the operation being concluded by establishing perineal drainage. Von Dittel dissects the prostate out through a perineal incision, while Alexander, and with him Nicoll, removes the gland by the same route, facilitating the operation by making counter-pressure through a suprapubic wound. Of these three Alexander is the only one who employs both suprapubic and perineal vesical drainage. Fuller prefers his own method to the others on the grounds that it is more rapid of execution, is attended with less hemorrhage and therefore with less shock. He has performed 27 prostatectomies, dividing his patients into two classes; those in which the larger arteries were markedly atheromatous, and those in which such changes were absent or not prominently evident. Of the five cases in the first class three died, and of the remaining 22 cases, two died, one of suppression, the other of peritoneal symptoms. Thus for the entire series the mortality was about 19%. The first class of cases should be considered inoperable, since the chance is against their recovery. Castration and Bottini's operation should not be included in the class of radical operations. They may be objected to on the grounds that they do not provide for the necessary vesical rest, they are not applicable in emergency cases, when the catheter is no longer of service and delay in the establishment of vesical drainage means death; they are contraindicated if the case be complicated with stone. Furthermore, the mortality of castration in old men is as large as, if not larger than, that after skilfully performed prostatectomy. Many objections are advanced against the Bottini method, chief among which is the liability of stenosis at the vesical neck, resulting from contraction of the cicatrices, the presence of which would make a subsequent prostatectomy extremely difficult, should relapse require its performance. [C.H.F.]

2.—As a preparatory treatment in operations for **intestinal obstruction**, the stomach should be washed out, if there has been much vomiting or abdominal distention, and an intravenous saline injection of three pints will be useful if the patient is shocked. If the site of the obstruction is not located the incision should be made through the right rectus, between the umbilicus and pubis, since it gives ready access to the cecum. If the intestinal coils be greatly distended, the distention should be relieved by aspiration or, if need be, incision. Obstruction due to bands, diverticula, or to volvulus, is relieved without difficulty. When intussusception is the cause and the tumor prove to be irreducible, Maunsell's method should be resorted to. This consists in making a slit in the intussusciptions and exerting gentle traction until the neck appears outside the opening. The base is then transfixed with two straight needles, armed with horse-hair, and the intussusceptum is amputated one-fourth of an inch above the needles. The sutures are now passed through the invaginated bowel, caught up in the interior of the bowel, divided, and tied. The invagination can then be reduced and the longitudinal slit closed. Occasionally it may be necessary, when the obstruction is due to an inoperable tumor, to establish a fecal fistula, in which case the operation described by Nydls is recommended. Obstructing fecal masses are best removed by high saline enemas, in conjunction with repeated fractional doses of calomel. These enemas should be introduced with the patient on his left side, very slowly and with not too much force; a fountain syringe, elevated three feet, meets all the indications. If the first attempt fail the procedure should be repeated



several times. Resection of the gut may be necessary when the gut is gangrenous, and can be best executed by the method as described by Maunsell. In the after-treatment excessive thirst may be allayed by two or three large doses of bismuth subnitrate, and after the first day the patient may be made more comfortable if allowed to lie on his side. The general tendency is to give too small quantities of nourishment at too frequent intervals, a system which fatigues the stomach and is likely to cause irritability of the organ. [C.H.F.]

3.—Peabody's conclusions are that the Nauheim baths are very valuable in heart-cases in which, with valvular lesion, compensation is but slowly established, and in those cases in which compensation, after once established, has failed. He finds them also valuable in cases of angina pectoris, and in many forms of cardiac neurosis. He has been able to observe decrease in the size of the heart, particularly in the cavities of the right side. But much more important than decrease in the size of the heart, he finds that the symptoms are very markedly improved in the kinds of cases that have been mentioned. He ends his paper by the warning that, although these baths are able to accomplish much good if properly used, they may cause very ill effects. [D.E.]

4.—Bailey believes that focal hematomyelia is very frequent, and that it is extremely important to recognize it because the prognosis is usually very much better than in other forms of spinal injury, the outcome depending of course upon the extent of the hemorrhage and this is frequently slight. The cause of the condition is usually extreme flexion or extension in the neck, or the fall of heavy weights upon the head or back, resulting in a rupture of the central bloodvessels as a result of extreme bending of the cord. The symptoms that ensue upon such a lesion do not differ in most particulars from those found after other spinal injuries. There is, however, one symptom which is of great diagnostic value that does not occur, as a rule, in the other forms of spinal injury, and is almost constant in this. This is dissociation of sensation. He notes several instances in which this symptom was present. This, coming on suddenly and usually associated with paralysis of the members and probably with paralysis of the sphincters, and other distinct evidences of spinal injury, must lead to a diagnosis of hemorrhage into the interior of the cord. To illustrate the favorable prognosis, he gives the histories of two further cases that improved within a few weeks from a condition of almost complete paralysis to almost entire health. [D.E.]

6.—Cantwell reports a case of vicarious menstruation occurring in a woman 35 years of age, mother of one child. The hemorrhage occurred first from an ulcer caused by a burn, and later from an apparently normal stomach and was profuse. The uterus, ovaries and tubes were removed, hemorrhages ceased and the condition of the patient improved. [D.E.]

7.—The first case that Stebbins reports occurred in a girl of 9 years who had violent choreic movements of the face, limbs, and vocal muscles, and interference with deglutition. It was difficult to discover any refractive lesions in this case, owing to the violent movements of the head, but glasses of a strength of +1.00 D. were ordered, and such a marked improvement occurred in the movements that it was possible to fit glasses accurately, and after this she recovered completely from the chorea. The second case was less severe, but was not cured by other means, while entire recovery ensued upon the use of proper glasses. [D.E.]

8.—The instance mentioned is one of athetoid movements in a new-born child. It is suspected that these may have been the result of a maternal impression, since the mother during the fifth month of pregnancy visited an old woman who had marked athetosis, and was profoundly impressed by these curious movements.

9.—The operation was required on account of obstructive symptoms due to a sarcoma of the cecum. The cecum was removed and the free ends of the small intestine and ascending colon united with a Murphy button, which, by the way, has not been found since the operation. The patient made an excellent recovery. [C.H.F.]

10.—Moyer's case occurred in a man of 22 without neurotic family-history, but with a personal history of marked nervousness, gastritis, and subsequent intemperance, and extreme venery. Hallucinations appeared, and then he acquired the tendency to excessive sleep, falling asleep

with the greatest readiness and often from 20 to 50 times during the working day. The sleep was never deep, he was always awakened by a touch or a word, and often awakened within a few moments even without being disturbed. [D.E.]

### Medical News.

November 19, 1898. [Vol. lxxiii, No. 21.]

1. The Management of the Fever of Pneumonia. HENRY DWIGHT CHAPIN.
2. The Treatment of Pneumonia in Very Young Children. L. EMMETT HOLT.
3. The Treatment of Pneumonia in Infants and Children. HENRY KOPLIK.
4. Treatment of Broncho-pneumonia Complicating Measles. WALTER LESTER CARR.
5. Hydrotherapy in the Pneumonia of Children. SIMON BARUCH.
6. A Case of Chloroform Poisoning. DAVID TRUMBULL MARSHALL.
7. Median Cervical Fistula. F. HUBER.

1.—Chapin does not believe that the fever of pneumonia is an accurate equivalent of the degree of toxemia, and it is therefore not of such paramount importance to control it. The necessity for interference will naturally vary with the degree of susceptibility of the patient to febrile influence, but no antipyretic remedies should be used that depress the circulation, such as the coal-tar preparations. The best measure for combating fevers is probably the external application of cold. This may be done as follows: Either finely chopped ice is placed in bladders which are molded to the head, or ice poultices are prepared by mixing finely cracked ice with flax-seed meal, and enclosing the mass in oiled silk. Another method is the continuous application to the chest of compresses that have been dipped in water at a temperature between 70° and 95° F. During these various procedures, hot bottles should be placed at the feet, and stimulants given. This treatment should be employed until the temperature is reduced to 102° or 103° and then discontinued until it rises again. The tub is contraindicated on account of the terror it inspires in the patient, and the profound prostration that it causes. [D.E.]

2.—Holt summarizes the causes of death in children suffering from pneumonia as (1) exhaustion, (2) complications, and (3) acute toxemia. Exhaustion is the most common cause. It is to be treated by supplying abundance of fresh air, careful nursing, and diet. In regard to the nursing, children should not be worried by too much attention. The cough may be controlled by inhalations of such substances as creasote, eucalyptol, etc. The best stimulant is alcohol, given in the form of wine, brandy, or whiskey, one ounce of whiskey being the maximum dose for 24 hrs. All the complications that occur in infancy, excepting pleurisy, are, according to Holt, invariably fatal. Toxemia is to be treated by vigorous stimulation, the most efficient drugs being strychnin, nitroglycerin, ammonia, alcohol, and caffeine. As much as  $\frac{1}{100}$  of a grain of strychnin in an hour may be given to children one year of age. Hyperpyrexia is best combated by the employment of a cold pack. A hot water bag, however, should be kept at the feet. In certain cases, hot mustard baths at a temperature of 105° may be used. [D.E.]

3.—Koplik believes that the treatment of infantile pneumonia should be governed by the age of the patient, the severity of the infection, the extent of the pneumonic process, and the condition of the heart. Rapidity of the heart-beat is particularly suspicious, and indicates vigorous cardiac stimulation. For this purpose digitalis in half-minim doses, and strychnin in doses of  $\frac{1}{100}$  of a grain, are most useful. Such drugs, as nitroglycerin, ammonia, and caffeine are too transient in their action. In cases of acute cardiac failure hypodermics of alcohol are most valuable. Poultices are never to be employed. Opium is always contraindicated. He reports the case of a Mongolian idiot, weighing about 6 lbs., that developed pneumonia, and hyperpyrexia. The only treatment was strophanthus, for the purpose of stimulating the heart. Recovery ultimately occurred. He reports another case in an infant, 5 weeks old, with intense infection, convulsions, and persistent tetany, in which again the only drugs employed were cardiac stimulants. Baths were well borne in sthenic cases with hyper-



pyrexia. The temperature should be 85° at immersion, subsequently reduced to 75°. Baths, however, should never be repeated if they cause any weakening of the pulse. Alcohol is only used where there is cardiac weakness, and opium in those cases in which the infants manifest pain. In conclusion, Koplik calls attention to the necessity for isolation, free ventilation, and the presence of the vapor of thymol, turpentine, or creasote in the atmosphere. [D.E.]

4.—Carr discusses the treatment of **bronchial pneumonia complicating measles**. The patient should be kept in a room at a temperature of from 65° to 70° with free ventilation. The nares should be washed with a solution of boric acid, and the skin with water at from 100° to 105°. The patients should be kept quiet, counter-irritation to the chest in the form of mustard plasters applied, and the atmosphere kept moist. In regard to diet, it should be good and of about the quantity given to a healthy child. Peptonized milk, beef-juice, egg-water, jellies, custards, etc., are the best foods. In case of intestinal fermentation, irrigation with normal salt solution should be employed. Baths at 95° being reduced to 85° during immersion are the best antipyretics. Codein should be used if there is restlessness, and if there is a weak heart, nitroglycerin, and strychnin are the best stimulants. Among the expectorants, aromatic spirits of ammonia, and creasote are the most valuable. The coal-tar antipyretics and emetics should not be employed. [D.E.]

5.—Barnuch classifies the danger of **pneumonia of childhood** as: (1) involvement of the nervous system by toxemia; (2) respiratory embarrassment; (3) cardiac weakness. He explains the beneficial results of cold water by supposing that it produces contraction of the cutaneous vessels, followed by active dilatation. The latter relieves the heart, increases excretory activity, therefore promoting elimination of the toxins, and reduces the fever. Furthermore, the application of cold water to the skin produces neurovascular stimulation, which is transmitted by the nervous system to the heart, increasing ventricular force. The application of hydrotherapy is described as follows: the patient is placed in a bath 95°, while the face is bathed with water at 75°. Iced water is then added until the temperature of the bath is 85°. During all this period, about 5 minutes, friction is maintained over the entire body. This should be repeated in from 4 to 6 hours if the temperature remains above 101°. The minimum temperature of the bath should never be below 80°. If during the interval the temperature remains high, compresses at 70° may be employed. The cold pack should be employed with great care. The cloths should be wrung out of water at a temperature of 65° to 70°, and placed around the patient, who is then enveloped in blankets. If there are symptoms of chilliness, the packs should be removed at once. In the **discussion** of these papers, CRANDALL stated that drugs are still too frequently employed, and argued that the majority of vigorous children with croupous pneumonia recover without medication. NORTHRUP stated that very frequently the existence of a pneumonia was not diagnosed, and the child was treated for the cerebral-symptoms. He strongly deprecated the use of hot poultices. BERG laid stress upon the difference between lobar and bronchial pneumonia; cases of the former usually recovering spontaneously, the latter requiring the most careful treatment. In bronchial pneumonia he is in the habit of employing small doses of quinin, and suggests that the patient is aided by raising the foot of the bed.

6.—The patient was suffering from the toxic effects of chloroform, of which she had taken altogether 40 minims, in 3 doses, to relieve severe pain in the abdomen. By the free use of stimulants, especially strychnin, with the aid of artificial respiration and the faradic current, the patient's life was saved. [D.E.]

7.—Huber reports **two cases of median cervical fistulæ**; these are much rarer than the lateral cervical fistulæ, which are always congenital. This condition is always due to an abnormality in the thyrolingual duct, and we recognize three varieties; namely, the lingual dermoid, the median cervical fistulæ, and the accessor thyroid. [C.H.F.]

#### Boston Medical and Surgical Journal.

November 17, 1898. [Vol. cxxxix, No. 20.]

1. Common Errors of General Practitioners in Dealing with Cases of Pulmonary Tuberculosis. FREDERICK I. KNIGHT.

2. Suggestions: The Result of Recent Experience with Phthisical Patients. VINCENT Y. BOWDITCH.
3. Scorbutus in a Baby with Hemorrhagic Diathesis. JOSHUA C. HUBBARD.
4. I. Chylous Cyst of the Mesentery; Laparotomy; Recovery. II. Intestinal Perforation by a Fish-bone; Inflammatory Tumor; Laparotomy; Recovery. H. H. A. BEACH and F. B. MALLORY.
5. Cerebro-spinal Fluid from the Nose. A. COOLIDGE, Jr.
6. Tumors of the Naso-pharynx. A. COOLIDGE, Jr.
7. Case of Splanchnoptosis and Achylia Gastrica with Melancholia. J. J. PUTNAM.

1.—Knight mentions the following mistakes, frequently made in the **treatment** of cases of **pulmonary tuberculosis**, (1) delay in making diagnosis, caused chiefly by the unwillingness of the patient and sometimes his physician to admit the possibility of so serious a condition; (2) the failure to recognize the seriousness of the disease in its early stages; (3) improper treatment, which includes the administration of drugs that may be useful, but too frequently disturb digestion; (4) sending patients from home; and (5) not supervising the condition of the patient with sufficient care. [D.E.]

2.—Bowditch urges that in **pulmonary tuberculosis**, the condition of the heart, the temperature, and the digestive organs are of almost equal importance to the physical condition of the lungs. He criticises severely the tendency of modern physicians and laymen to regard consumption as a dangerously contagious disease, and to insist, therefore, upon the rigid isolation of the patient; and, although unwilling, apparently, to oppose the view of the contagiousness of consumption, he urges that until we are sure that it is true, such treatment of the patient is brutal. [D.E.]

3.—Hubbard reports the case of a child who after birth had bleeding from the umbilical cord followed by hematemesis, and a series of convulsive attacks; 5 months later, there was swelling in the ankles, wrist, and shoulders, and some bleeding from the bowels. There were symptoms of rachitis and the patient was given anti-scorbutic diet. This caused considerable improvement in the local conditions, but emaciation progressed and death occurred 2 months later. [D.E.]

4.—The situation and mobility of the tumor strongly suggested a movable kidney. At the operation, however, the mass was found to be a **chylous cyst of the mesentery**, containing eight ounces of milky fluid. The cyst was of retroperitoneal origin, and developed between the mesenteric fold that connected it with the upper part of the small intestine. The patient had complained for four or five weeks of pain localized in the left iliac region, and a feeling of general malaise. These symptoms were preceded by several pronounced chills. A tumor, rapidly increasing in size, was detected in the right iliac fossa, and when exposed at a subsequent operation was found to be an **inflammatory mass** containing a small abscess-cavity, the origin of which was **traced to a fish-bone that had perforated the intestinal wall**. [C.H.F.]

5.—The etiology of **nasal hydrorrhea** is not positively determined. It is sometimes attributed to mental fatigue or strain, and again regarded as a vasomotor rhinitis. Coolidge reports a case, analogous to this condition, in a boy, 13 years old, from whose nose a serous fluid, corresponding exactly to the composition of cerebrospinal fluid, had been dropping now constantly for nearly five years. There was apparently nothing abnormal in the nose itself, and the author is unable to explain its origin. [C.H.F.]

7.—Putnam reports the case of a man 70 years of age, who had been a seaman and subjected to severe exposure. His only previous symptom of importance had been chronic constipation. He had an attack of what was supposed to be influenza, and some months later suffered from lassitude, and depression, with fear of going to sleep, and complete loss of appetite. There was profound emaciation, and physical examination showed total splanchnoptosis, the lower portion of the stomach reaching the pubes, and the upper being at the umbilicus. There was no free HCl in the stomach contents, no marked alteration in the blood, but slight hyperacidity of the urine. Putnam calls attention to the relation between **gastropotosis, achylia, and mental disease**. In the present case, he prescribed nuxvomica, massage, laxatives, and food was administered in the most digestible form, that is, minced meat and peptonized milk.



1.—Lewin details the results of his studies concerning the **immunity of the hedgehog to the poison of the adder**. It is known that the former animal is not killed by the poison of the snake. Investigation was made into the question as to whether it is actually immune, by etherizing a number of hedgehogs, and then allowing the snakes to bite them repeatedly about the mouth. The animals showed distinct symptoms of poisoning afterward. Their breathing became labored; they ate little and became emaciated. These conditions continued for several days when there was gradual improvement and the animals recovered. Some of the animals presented still further symptoms, such as vomiting, spastic manifestations and sopor. Thus, although none of them died, it was evident that they were not completely immune. Subsequently attempts were made to immunize guinea-pigs with serum from the blood of the hedgehogs, but



this was found impossible, and it is concluded that the blood of either the normal hedgehog or one that has been bitten by an adder contains no substance that, injected into other animals, is capable of producing immunity to the poison of the adder. [D.R.]

2.—After a review of previous work upon the **bacteriology of pertussis**, Vincenzi describes a microorganism that he has found in considerable numbers in 18 cases. This is an immobile, small, coccus-like bacillus, resembling that of influenza. It causes bouillon to become cloudy, with subsequent deposit of a sediment, the reaction becoming acid. It does not grow upon gelatin, and temperatures below 24° C. prevented growth. Small transparent colonies appear in agar-cultures. These are round and highly refractive in the middle. Stroke-cultures show a growth along the whole line of contact. The organisms grow well in milk. The vitality of the coccus-bacillus is not great, and it dies after a few days' growth. It is not pathogenic for animals. The cultures upon agar look like small air-bubbles, and with an oblique light they present the appearance of a small mass of snow, with a somewhat umbilicated apex. Vincenzi leaves the question unsettled as to whether the organism is the actual cause of pertussis, but from its constant occurrence in the cases examined, he believes that it has a distinct relation to the disease. [D.R.]

3.—Escherich mentions the importance of the probability that the **lactic-acid fermentation in milk** and the lactic-acid contained in it have a markedly antiseptic action, and insists on the other hand, that it is not sufficiently recognized that the disinfecting power of the gastric juice is of little value in infants, particularly in those nourished artificially because of the large amount of free HCl. with which cows' milk combines. Knowledge of abnormal fermentative processes is still far from clear, but it is generally known chiefly that there is, as a rule, an acid fermentation due to carbohydrates; less commonly there is a decomposition of the food, with the production of ammonia and toxins, which cause either local irritation of variable degree or general symptoms of intoxication. Bacteriologic examination discloses various forms of bacteria as the cause for the fermentation. Sometimes one form of bacterism is found in exceedingly large numbers, and it may be the cause of the disease. As a rule, these bacteria do not find their way into the walls of the intestine. [D.R.]

4.—Gregor states that a decision as to the value of any **artificial nutriment for children** must be based not only upon the immediate results, but upon the outcome of subsequent observation as well, together with a knowledge that they do not afterward suffer from rickets and other diseases that result from imperfect nutrition. He reports the results obtained in dispensary-work from the use of malt-soup in over 100 children suffering from diseases of the gastrointestinal tract. He considers particularly 74 cases, in which the patients had been regularly weighed, and observed for some time, in order to learn whether rickets appeared subsequently. Of these, 7 died from the effect of their original disease, 6 from accidental complicating affections; 27 children were completely cured of their chronic digestive disturbance and showed absolutely no unfavorable result subsequently, continuing to increase in weight and in general development, physically and mentally, 18 children were still under observation, but in good condition; 13 children could not be observed sufficiently to permit a positive statement that there had been no subsequent illresult. The children increased in weight from 15 g. to 20 g. a day. The results were as good in summer as in winter. Gregor concludes that malt-soup is a valuable means for nourishing in all cases of chronic gastroenteric affections in children who are more than 3 months of age, if a wet-nurse cannot be obtained. With even younger infants and very weak sucklings, this form of nourishment may be used if it is properly diluted and its use is carefully controlled. Children from 9 to 18 months of age that exhibit severe rachitic symptoms and are slow in development often do remarkably well upon malt-soup. Children that have no digestive disturbance, but are below normal in their body-weight, and have been nourished artificially, also do extremely well upon this food, valuable, further, when weaning is begun, as it is not likely to cause disturbance of the gastrointestinal functions. The unique conclusion is reached that if others have not had as good results these could be due neither to bad hygienic conditions

nor to the food itself, but to improper dietetic regulations. The children treated were under the most unfavorable hygienic conditions imaginable. [D.R.]

5.—Hanz has found a mixture of **fuchsin and thionin** to be an exceptionally good differential stain for gonorrheal secretions. The gonococci, stained blue by the thionin, appear sharply defined upon the intense red background of the cell-protoplasm. The nuclei take both stains, and are consequently a bluish red, while the epithelial cells are stained bright red by the fuchsin. Should there be any other microorganisms in the field, these will be stained blue by the thionin. The stain is prepared by adding 4 parts of a saturated solution of thionin in a 2% solution of carbolic acid to 1 part of a saturated solution of fuchsin. The two solutions should be kept separate until ready for use, as the mixture soon undergoes changes. [D.R.]

### Berliner klinische Wochenschrift.

October 10, 1898. [35. Jahrg., No. 41.]

1. Recent Advances in Science and their Bearing on Medicine and Surgery. RUDOLF VIRCHOW.
2. A Case of Irreducible Subclavicular Luxation of the Humerus. NASSE.
3. A Further Communication upon Tests of the Function of the Intestine. AD. SCHMIDT.
4. Two Cases of Primary Malignant Tumor of the Epiglottis. ARNOLD SCHILLER.
5. Extirpation of the Vagina. A. MARTIN.

1.—See this JOURNAL, Vol. II, p. 725.

2.—Nasse reports a case of **subclavicular luxation of the humerus** in which he was unable to effect reduction. The patient was anesthetized on the second day after the injury, and every manipulation was tried to effect reduction, but without success. Subsequently it was decided to perform an open operation, and an opportunity was thus afforded to examine the anatomic relations. It was found that the capsule of the joint was completely severed from its attachments, as were the group of muscles that are attached to the tuberosity, and to these injuries Nasse attributes his failure to reduce the luxation. At the time of the accident there was a great deal of extravasation of blood in the region of the shoulder, and this was increased in amount by an attack of delirium tremens, during which the patient moved the injured extremity violently. When the operation was performed the extravasated blood had become organized, firmly binding the head of the bone in its abnormal site, and partially filling up the glenoid cavity. On this account, and owing to the damage to the capsule, it was deemed advisable to perform a formal excision of the joint. [C.H.F.]

3.—Schmidt first draws attention to the fact that the study of the functions of the stomach and the discovery of pathologic alterations in that viscus has advanced far beyond the knowledge of such conditions in relation to the bowel. He then reviews the methods of determining abnormal conditions of intestinal digestion by studying the feces. It is noted that nitrogen-determinations are inaccurate from the fact that a great deal of the nitrogen thus estimated, and reckoned as unabsorbed nitrogen, is really secreted by the intestinal mucous membrane, or is the result of degeneration of the cells of that membrane. The previously used methods for the determination of carbohydrates are inexact, and, most important of all, it is insisted that it is at least quite as important to determine the form in which undigested food leaves the body as it is to determine the amount; if it is entirely undigested a small quantity is of more importance than a large amount of partially digested food. Schmidt's method of testing intestinal digestion depends upon the fact that the presence of carbohydrates is a good indication of the amount of digestion and absorption going on in the bowel. He puts the patients upon a diet that has been especially prepared for such purposes, and which consists for the day of 1,560 cu. cm. of milk, 4 eggs, 3 Zwieback, 1 plate soup made from 40 g. of oats, 10 g. of sugar, 1 plate of soup made of 25 g. of wheat-meal and 10 g. of sugar, and 1 cup of bouillon, the whole amounting daily to 1,770 calories and being a combination of foods that, while sufficient to irritate the intestinal canal enough to cause secretion, is still applicable to almost all patients as



well as to supposedly healthy individuals. The test of the activity of digestion then depends upon the fact that diastase is present in the feces, and that any portions of the starches still present will be saccharified and at once further broken up by the innumerable bacteria of fermentation that are present. The diet described is administered, preceded by a capsule containing carmine. As soon as the stools have lost the red color of the stain the patient is considered as accustomed to the diet, and, therefore, prepared for testing. Then about 5 g. of feces are taken, a little less if it is hard, a little more if it is soft, and introduced, well mixed with water, into a small glass beaker, which is well stoppered with a cork through which passes a tube running into an inverted test-tube filled with water. From this test-tube runs another tube which is bent and communicates with a second test-tube containing only air, for the purpose of receiving from the first tube water, that is displaced by fermentation. If, then, after 24 hours' standing in the oven, the second test-tube has received a quarter or more of its capacity of water, or if the fermenting mass has become neutral or acid, the result of the test is positive and the bowel-function is abnormal. If the result is not positive, 60 g. of hashed and roasted beef and 250 g. of mashed potatoes are added to the diet, and a second test is made. Only a positive result can be depended upon. A negative result does not mean that the bowel-function is normal. [J.S.]

5.—Martin concludes with a review of ten illustrative cases, and gives his technic of **vaginal extirpation**. The operation is serviceable in cases of vaginal carcinomatous infiltration and when there exists total prolapse of the genital organs.

#### Wiener klinische Wochenschrift.

September 22, 1898. [11. Jahrg., No. 38.]

1. The Pathogenesis of Epilepsy. JOHANN PRUS.
2. Simple Serous Cystoma of a Third Ovary. LEOPOLD THUMIM.

1. See editorial Vol. ii, p. 808.

2. Thumim reports a case of a **simple serous cystoma** originating in a third ovary. Thumim has recently published an article on supernumerary ovaries, and he now proves that these accessory organs are subject to pathologic processes like other tissues. The patient was a young woman, 22 years of age, who had suffered four or five attacks of peritonitis during the preceding year, with pain in the back and left ovarian region, radiating down the thigh. A tumor was found that apparently sprang from the left uterine cornu and operation revealed both tubes and ovaries in a normal condition, while a cystic tumor was found springing from a true third ovary.

September 29, 1898. [11. Jahrg., No. 39.]

1. Mycotic Cystitis. A. v. FRISCH.
2. A Case of Nerve-Suture. MAX MADER.
3. A New Discovery with Relation to the Bacillus of Tuberculosis and the Prophylaxis and Cure of this Disease. J. FERRÁN.

1.—v. Frisch reports the case of a woman, 64 years old, who had been suffering for several days from symptoms of acute cystitis. The urine contained traces of albumin and 4% of sugar, and had a strong odor of cider. During its passage large quantities of gas escaped. Floating in the urine were small, white, granular flocculi that sank to the bottom in the beaker, and formed a sediment three fingers high. Under the microscope the flocculi were seen to consist of mycelial threads. In addition, large numbers of yeast-cells and bacteria were found, as well as a few pus-corpuscles and epithelial cells from the bladder. Cystoscopic examination showed near the mouth of the ureters whitish deposits similar to the granular material found in the urine. After the bladder was washed out with a solution of silver nitrate, 1 to 1000, the subjective symptoms disappeared, although the urine did not become clear. The case was recognized as one of pneumaturia, and it became necessary to determine the cause of the gas-formation. Cultivation showed that the fungus was not responsible, but the colon-bacillus. Inoculation with the yeast-plant did yield gas, but it was found that there had been admixture with colon-bacilli. In similar cases previously reported the colon-bacillus or the bacillus lactis

proved to be the etiologic agent. An interesting feature in this case was the coexistence of thrush of the bladder. [D.R.]

2.—Mader reports a case in which an incised wound of the arm completely severed the radial nerve, the divided ends of the nerve being united by catgut-sutures on the following day. One month after the operation sensation was restored completely to those structures supplied by the nerve, and the power of motion was partially so. Death occurred 5 months after the injury, and on postmortem examination the nerve on the proximal side of the wound appeared normal, while on the distal side it was reduced to one-half its normal size. At the point where the nerve was sutured was a spindle-shaped swelling, representing "nerve-callus," which, on microscopic examination, was found to contain chiefly connective tissue, although there were some few nerve-fibers. The complete restoration of sensation, and the partial restoration of motion within one month of the nerve-section, seemed to require some explanation, as it is known that ordinarily restoration of function after nerve-section does not usually occur for from 3 to 6 months. According to the theory of Lètièvant, sensibility is restored partially by anastomosis and partially through adjacent sensory corpuscles; on the other hand, the restoration of motility must be accounted for by the vicarious action of muscles that were not involved. [C.H.F.]

October 6, 1898. [11. Jahrg., No. 40.]

1. The First Year of the Surgical Clinic in Lemberg. RYDYGIER.
2. A Rare Indication for Operative Interference in the Larynx. HERMANN v. SCHRÖTTER.
3. Murphy's Button. WILHELM TIEBER.

1.—The surgical clinic at Lemberg, in the first year of its existence, received 333 patients, on whom 314 operations were performed. The mortality was 7.4%; for the men alone it was 8.3%, and for the women 4.3%, the marked difference being due to the relatively large number, among the men, of celiotomies for incarceration, the mortality of which was high. In addition, 572 operations were performed upon out-patients, with a mortality of 4.2%. [C.H.F.]

3.—Some surgeons disapprove of the **Murphy button** on the ground that it may act as a foreign body, or cause gangrene and perforation, or again because its use may be followed by a circular stricture of the intestine. The most serious objection, however, is the possibility of foreign bodies or fecal masses blocking up the lumen of the button, and thereby causing obstruction. Several cases have already been reported in which just such an accident has occurred. Tieber contributes an additional case in which a plum-stone became wedged in the button, causing fatal intestinal obstruction. This is a complication against which one cannot guard in operating upon emergency-cases, but when time allows of proper preparation of the patient, which should consist in washing out the stomach, and thoroughly evacuating the bowels, the Murphy button may be used without any such risk. [C.H.F.]

#### Suprapubic and Vaginal Extirpation of Pelvic Viscera.

—In discussing this subject, J. Price (*Virginia Medical Semi-Monthly*, October 21, 1898) states that the choice of cases for vaginal operation is simple; it is the operation of choice in cases of malignancy of the uterus, cervix or fundus. Extirpation is so simple and rapid. This method has been determined to be of value in the removal of small growths, but the discovery that the vaginal operation is easy and rapid in selected cases has influenced many to adopt it. It is not free from disadvantages: Vaginal drainage is not the most perfect and has never given the best results. The claim that there is less shock by this route is unfounded, and the uncertainty in securing the vessels is also an unfavorable feature. The claim that the risks of infection are minimized is also an error, and nearly all who work by the vaginal route admit the great danger of subsequent fistula. With regard to the results from any procedure, no reliance can be placed in the statistics of men who select only favorable cases for operation. These men have no right to compare their results with those men who do not reject desperate cases. Badly selected material has been responsible for many post-operative sequelæ and a number of deaths. [M.B.T.]



## Original Articles.

THE MECHANICS OF SUTURES, AND A DESCRIPTION  
OF ORIGINAL STITCHES, WITH A REPORT OF  
ILLUSTRATIVE CASES.By CAMPBELL FORD, M.D.,  
of San Francisco, Cal.

In an earlier paper<sup>1</sup> I gave only a technical description, general indications, and what I called universal directions for the insertion and application of stitches invented by me. I now propose to enter more minutely into the mechanics of sutures, the application of force for the closure of wounds, and also to describe some other stitches that I have devised and to report some cases illustrating their use.

Force is applied in three ways for the closure of wounds: (1) By bandages; (2) by adhesive strips; (3) by stitches. The first and second are unimportant, while the stitches are of vast importance, and their use as a fine art is an absolute necessity, since great discoveries have rendered it safe and desirable to treat wounds by closing them.

There are four classes of sutures: (1) Continuous; (2) interrupted (I suggest the word *single*); (3) pin; and (4) my own.<sup>2</sup>

The following are intestinal sutures and are merely variations of the *continuous stitch* (whip, spiral, spirordial, furrier's, glover's or uninterrupted), sometimes erroneously called the running stitch: *Gély's* is a quilted stitch through the serosa, a single thread and two needles being used; *Roger's*, *Garnier's* or *Theodore's* (fifteenth century) suture is a glover's stitch uniting the gut over an elder tube; *Watson's*<sup>3</sup> is the same over a cannula of fish-glue; *Bell's* is a glover's stitch commencing in the center of the wound and passing out alternately on one side and then on the other; *Garengot's* is the glover's widely separated; *Larry's* is a double glover's; *Petit's sutura transgressiva* is a glover's stitch quilted; *Baseball* suture is the same passing over and under the edges of the cut; *Appolito's* is a modification of *Gély's*; *Cushing's* is a modification of *Appolito's*; *Dupuytren's* is a simple continuous Lembert stitch.

These, with the following, complete the list of ordinarily known continuous sutures: *Marcey's* is the cobbler-stitch used for hernia; *Taylor's* is the cobbler-stitch used after amputation of the cervix uteri; the *mattress-stitch* is a continuous thread passing back and forth

through the lips of the wound; *Billroth's* is the button-hole stitch. *Decourcell's*, described in 1756, is a basting-stitch, variously called the zigzag or *side-stitch*, *Bertrandi's stitch* or *à points passés*; *Béclard's* is a modifica-

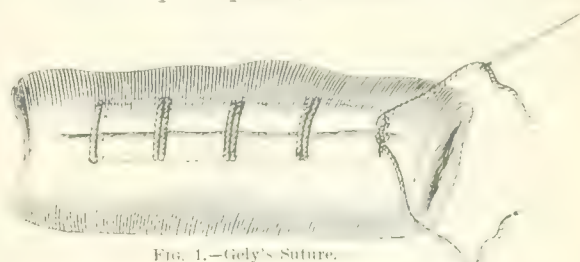


FIG. 1.—Gély's Suture.

tion of *Decourcell's*, using black and white thread. *Parallel* is a continuous subcuticular suture; *chain-stitch* is the sewing-machine stitch. *Ferguson's* is a modification of *Emmert's*, used to cover the stump after hysterectomy.

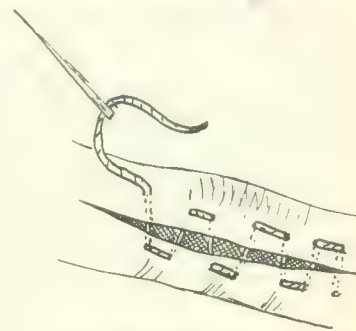


FIG. 2.—Petit's Sutura Transgressiva.

The second class, or *interrupted, single, or knotted*, sutures, like the former class, were mostly designed for use upon the intestines and, although called sutures, they would be more properly designated as operations: *Bishop's* stitches are introduced on mucous surfaces and the knots are tied alternately on each side of the wound; *Breidenbach's* is a *Lembert* stitch tied in

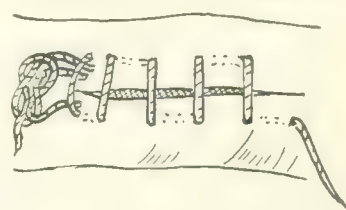


FIG. 3.—Cushing's Right-angled Suture.

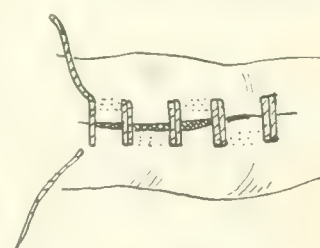


FIG. 4.—Appolito's Suture.

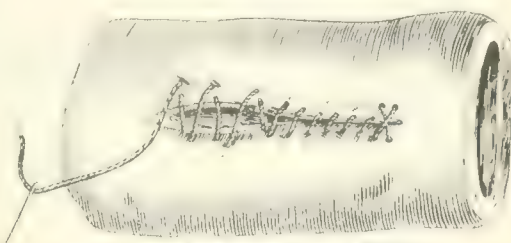


FIG. 5.—Dupuytren's Suture.

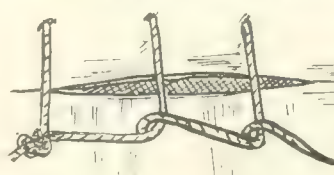


FIG. 6.—Billroth's Suture.

<sup>1</sup> Interrupted Stitch by a Continuous Method: *Trans. San Francisco County Med. Soc.*, June 9, 1896. *Pacific Med. Journal*, July, 1896; *Scientific American Supplement*, October 10, 1896. <sup>2</sup> This list includes all I have been able to collect. Most of them, with the fifteen engravings, were taken from Gould's *Illustrated Dictionary of Medicine*, with the kind permission of Messrs. P. Blakiston's Son & Co. The electrotypes, with the exceptions of those of my own stitches, were made from pen and ink copies of cuts in *Dennis' Surgery*. Martin, F. H., *Treatment of Uterine Fibroids*, p. 164. <sup>3</sup> . . . "and in large guts they may be sewed together by the glover's suture. Some persons, like *Rogier*, *Garnier*, and *Theodore*, place in the gut a *cannula of elder*" . . . *Guy de Salicet*. Quoted by *Velpeau, Operative Surgery*, vol. iii, p. 615.

the lumen of the bowel; *Conuell's* consists in stitching about one-half of the bowel through both ends, the remaining portion being closed by continuous suture; *Czerny's* passes through the serous and muscular coats and margins of the wound; *Lembert's* is the interrupted suture through the serous and muscular

fler's, and *Ritisch's* consists of one or more stitches through the gut or mesentery, with long ends designed to draw the intestine up to the abdominal wound; *Randolohr's* (eighteenth century) is the invagination of the upper coat of the intestine into the lower, followed by suturing; *Wölfler's* consists in circular sutur-

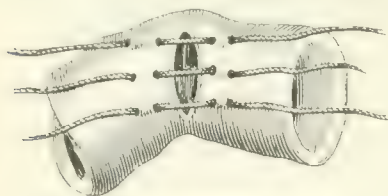


FIG. 7.—Interrupted Lembert Suture.

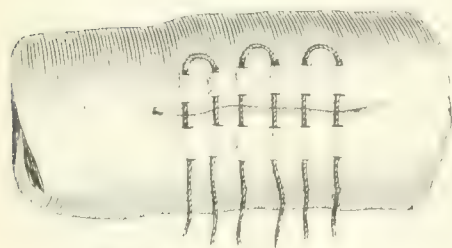


FIG. 8.—Halsted's quilt suture.

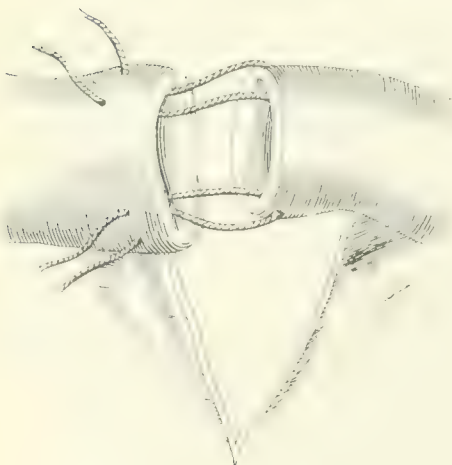


FIG. 9.—Jobert's Invagination-suture.

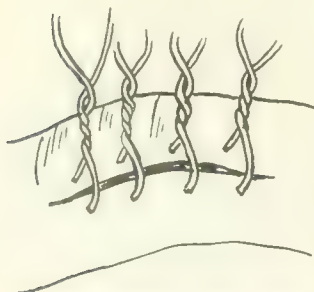


FIG. 10.—Richter's Fixation Suture.



FIG. 11.—Ladd's Suture.

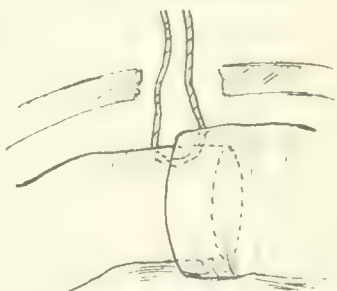


FIG. 12.—Randolohr's Invagination Suture.

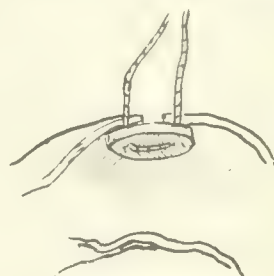


FIG. 13.—Reclard's Suture.

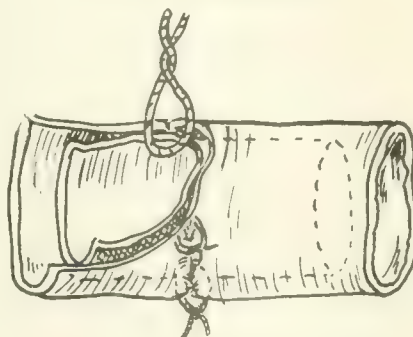


FIG. 14.—Suture of the "Four Masters."

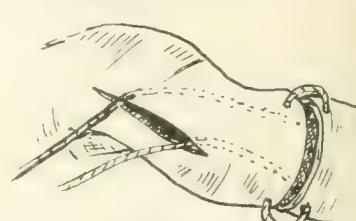


FIG. 15.—Maunsell's Suture.

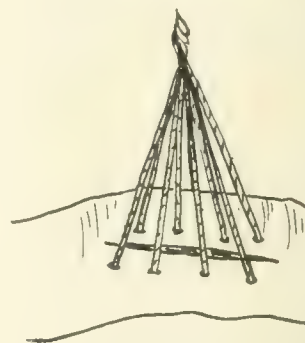


FIG. 16.—Le Dran's Suture.

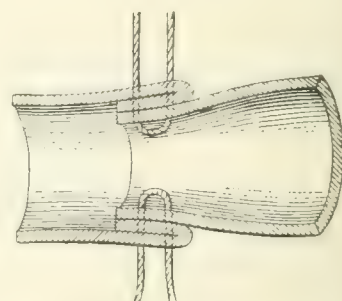


FIG. 17.—Jobert's Suture.



FIG. 18.—Button Suture.

coats, approximating the serous surfaces; *Emmert's* is a double *Lembert's*; *Halsted's* is a plain, quilted suture, a modification of *Emmert's*; *Harris'* consists in stitching the gut after the mucous membrane has been denuded; *Jobert's* is an invagination of the gut; *Palfyn's*, *Lapeyrone's*, *Le Dran's*, or *Loop*, *Richter's*, *Löf-*

ing of the intestine; three-fourths of the way, the knots are in the lumen of the bowel, the remaining distance outside; the serous surfaces are then united with a row of *Lembert* stitches; *Duverger's* consists in the use of the trachea of a calf as a means of support (eighteenth century); "*The Four Masters*," for the same



purpose (described in the thirteenth century), consists in the use of the trachea of a goose; *Mitchell-Hunter's* is the application of a quilted stitch to the mesenteric border of the gut; *Maunsell's*, the two ends of the gut are drawn through a longitudinal slit made for the purpose and then the two sections are accurately united by interrupted stitches; the invag-

at first; later, in 1838, no suture was used, the bobbins being allowed to ulcerate out.

The following are sutures other than intestinal: The *quilled* is a double thread tied over a quill, gauze, or other material; *Sims' shot* or *clamp*, *Bozeman's* or the *button* are quill-sutures modified by the materials used; the *royal suture* was one for hernia, so

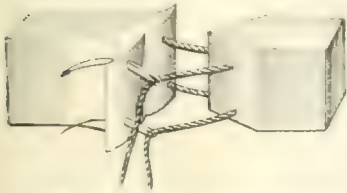


FIG. 19.—Tongue and Groove Suture.

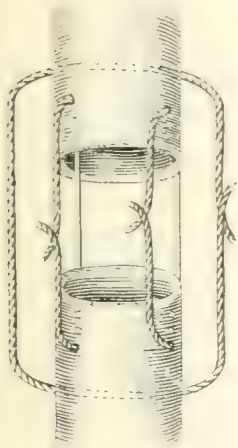


FIG. 20.—Suture of Le Dentu.

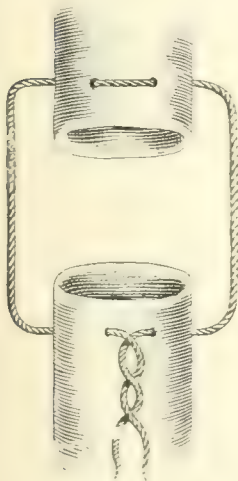


FIG. 21.—Tendon-suture of Le Fort.

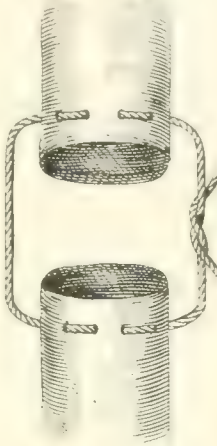


FIG. 22.—Tendon Suture (Wölfler after Lejars).

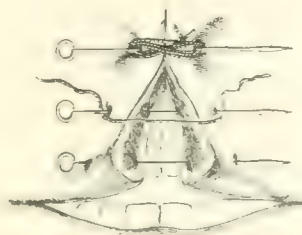


FIG. 23.—Hare-lip Suture.

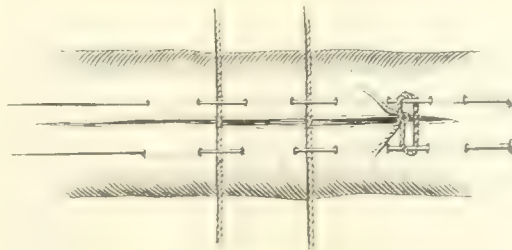


FIG. 24.—Bouisson's Suture.

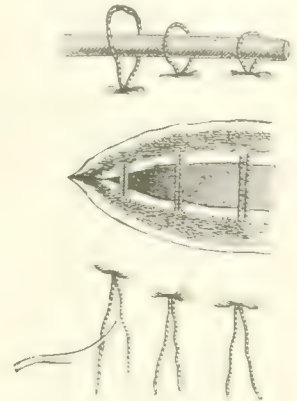


FIG. 25.—Quilled Suture.

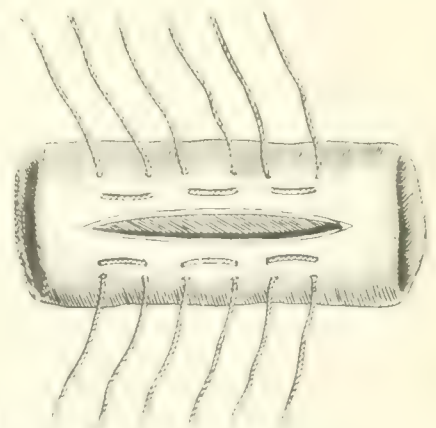


FIG. 27.—Emmert's Suture (after Seun).

nated portion is then withdrawn and the longitudinal slit is closed; *Gussenbauer's* is a combination of *Czerny's* and *Lembert's* in the form of a figure eight; *Robinson's* is a rubber tube used for the same purpose as the goose's trachea; *Reybard's*, employment of thin oval plates of oiled deal to support the gut; *Sabatier's*, a playing-card is used, saturated with turpentine; *Denan's* is a collapsible metallic tube sutured over,

called because those who were cured thereby might serve in the Royal Army; *Sanger's* are wire sutures used to close the uterus after Cesarean section; the tongue and grooved, *plastic* or *Pancoast's*, is the suturing of a tongue and grooved wound; the *subcuticular*, sunk or buried, is the application of a buried stitch to the deeper layers of the skin; the *cross suture* is the application of two single stitches to a T-wound; *Wölfler's*,

*Le Fort's*, *Anderson's*, and *Le Dentu's* are tendon-sutures; *staple-suture*, with an iron staple.

The following are the sutures of the third class or pin-sutures: *Harelip*, *figure-of-eight*, *circumvoluted*, or *twisted*, is one formed by thrusting a pin through the tissues and

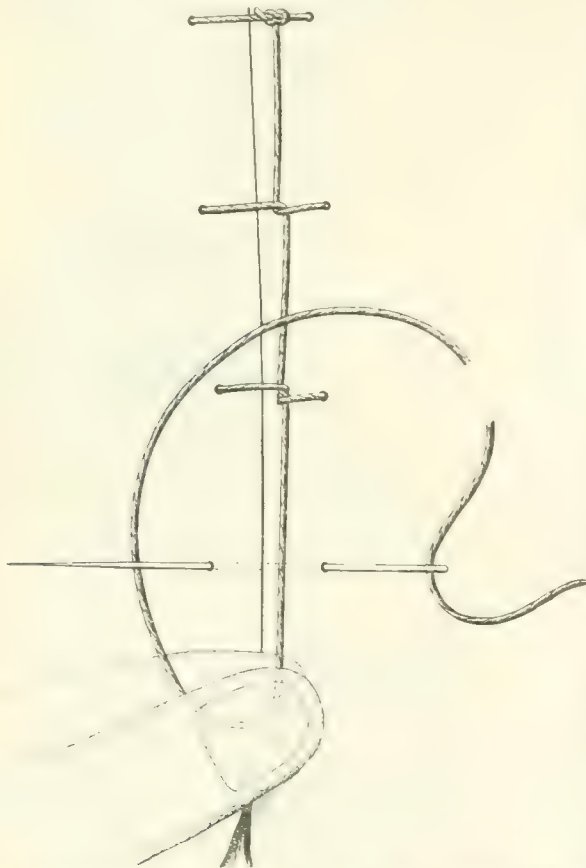


FIG. 28.—Showing a square knot, a single knot, a double or friction knot, and the first method of passing the needle to tie a single knot immediately.

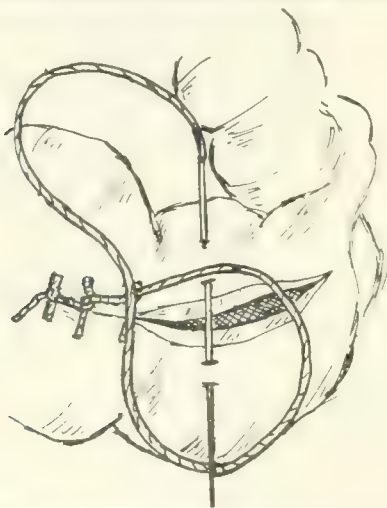


FIG. 29.—*Fort's* Stitch, showing a *Lembert* insertion and the needle passed so as to tie a single knot by drawing it on through.

applying a thread over the ends in the form of a figure eight; *Regal's* is a pin-suture with rubber rings used instead of thread; *Bouisson's* is an intestinal suture formed by inserting pins parallel to the wound, their free parts being then tied with threads.

The fourth division, or my own sutures, consists of: A *single-knot stitch*; a *double or friction-knot stitch*; a *square or reef-knot stitch*; a *granny-knot stitch*; a *mattress-stitch*.

All of these are of universal application, and may be inserted as subcuticular, *Lembert's*, *Czerny's*, *Gussen-*

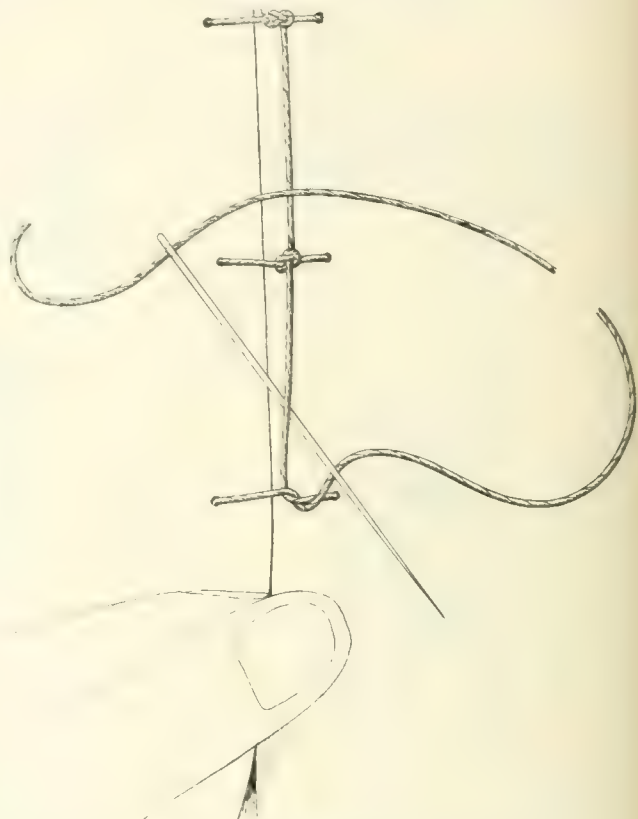


FIG. 30a.—Showing two square knots, a single knot, and the method of completing a square knot.

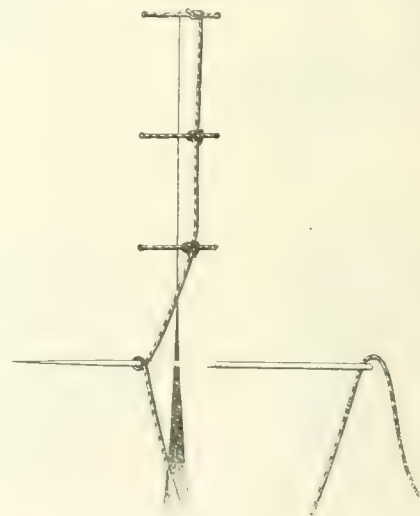


FIG. 30b.—One of the two original cuts showing the three square knots and the second method of tying a single knot.

*bauer's*, *Emmert's*, *Halsted's*, or any other suture; using threads of silk, catgut, kangaroo-tendon, or fine wire, or other material.

A stitch is, in its broader sense, a knot, and represents portions or elevations or segments of a scientific



or mathematical knot, or knots, which is an endless physical line that cannot be deformed into a circle, and cannot exist in space of four dimensions.

The plane bounded by the tied stitch I call the *plane of force*. The line intersecting the plane of force through

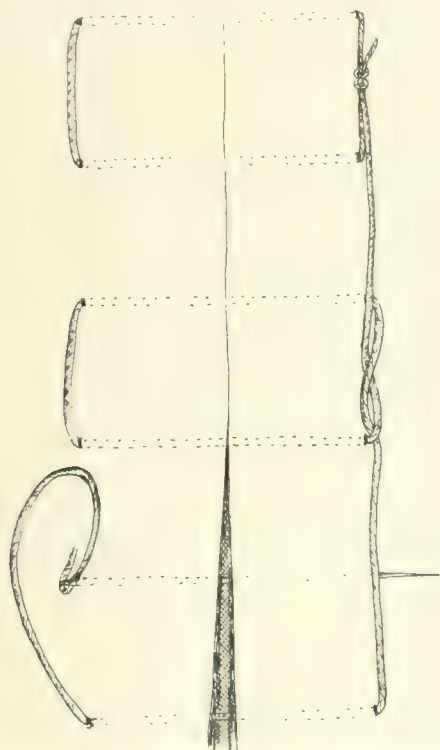


FIG. 31.—Showing the method of taking a back stitch in the Mattress Suture.

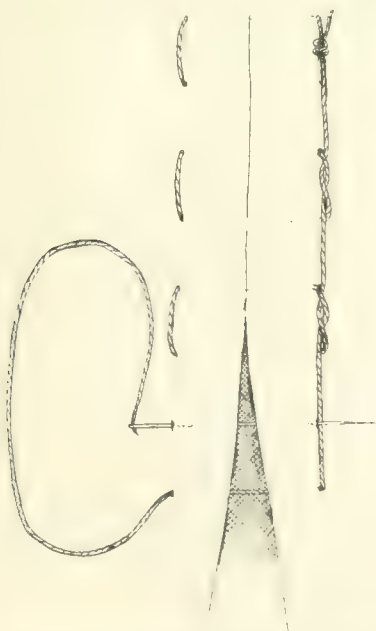


FIG. 32.—Same as 31, showing a right turn in the single knot.

the line of incision is the line of *direct coaptation*. The force transmitted to the edges of the line of incision, obliquely from the edge of the plane of force, may be called the *oblique or radiating force*. In the ordinary interrupted stitch, the plane of force is at right angles

to the long axis of the wound, and thus it acts in direct opposition to the force that tends to open the wound. The line of direct coaptation coincides with the depth of the insertion, and is perpendicular to the long axis of the wound. The entire longitudinal axis of the wound, with the exception of the planes mentioned, is closed by the oblique or radiating force. In Halsted's, which is called a *mattress suture* by himself, and *Halsted's* by others, the plane of force is turned 90° from a vertical to a horizontal position; it also assumes a bent form in passing from one side to the other, causing a tendency of the superficial edges to evert. The line of direct coaptation coinciding with the long axis of the wound, tightening the thread shortens it, and causes the stitches to pull against each other. The curvature of the plane of force causes the imperfect approximation of tissue superficial to it. With

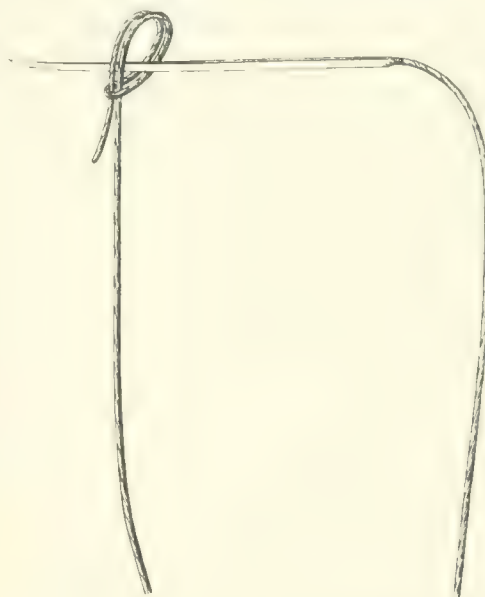


FIG. 33.—Showing the method of forming a loop to tie a square knot, immediately, for ligating, etc.

a buried suture, and when compression is applied, the tendency to eversion of the edges is overcome, and when it is used with Lembert's stitches, as the raw edges are not approximated, the eversion is of no particular objection. The chief virtue of Halsted's suture is, that it requires but one knot for two stitches. The necessity of reversing one's movements while sewing renders it slower of introduction.

Pin-sutures are nearly, if not entirely, obsolete; the mechanical action is the same as with the single or interrupted stitch; with the exception that the rigidity of the pin changes the shape of the plane of force. In Bouisson's, a longitudinal action was obtained with an interrupted stitch. This suture is theoretically perfect, but practically useless.

The continuous sutures all have the same mechanical attributes, the force acting from their origin toward their insertion. Lateral approximation is obtained by the

tendency of the thread to assume a straight line, sliding the tissues over what, if segmented, would be a wedge, at the greatest disadvantage, as up an overhanging bluff. The tissues are gathered in a roll, with the thread wrapped around them, producing undue interference with the circulation, so that repair must commence at the outer edge of this roll and not at the incision. When the suture is used on collapsible tissues, as the hollow viscera, shortening of the long axis of the wound causes the stitches to loosen, and traction causes the wound to pucker and gape sidewise. With all of the continuous sutures, a desperate effort was made to obtain the action of a right-angle suture, but a multiplicity of needles, threads, and varieties of insertions into the tissues could not change the direction of the force. Billroth's stitch formed the single exception, and its action is the same as that of mine. It possesses the defect of having no knots, a bight being used instead, so that when the long axis of the wound shortens, all the stitches loosen.

If I have made no error in my analysis, one of the corollaries—and a very important one—is, that the space between the stitches should equal the depth of their insertion, and the width of the stitch (from the point of puncture to the point of emergence) should be twice the distance apart, or, in other words, the depth we have given as a constant factor. The distance apart and on each side of the wound should be equal. When it is impractical as in sewing membranes, depth must be compensated for by quilting, as experience teaches us.

Experience shows and my analysis of the mechanics of the continuous stitch proves it to have the following objections: coaptation is poor; tension causes the wound to pucker and pull, and if one of the stitches yields the entire line loosens. "If the bowels contract it is loosened and may permit the wound to gape."<sup>4</sup>

Single or interrupted stitches have the mechanical defects that approximation is only lateral or transverse, and the fact that the longitudinal axis is without support is a serious defect in any place, and is a fatal objection to its use on the hollow viscera. With Halsted's suture the longitudinal axis *within* the stitch is supported, while *between* the stitches it is not. The greatest skill is required to retain, adjust, and unerringly tie the knots. The ends are slippery and become tangled, and mismates are picked up. Tension cannot be adjusted with the exactness required by modern surgery. It was my fortune to be a student under one of the greatest masters of surgical technic, Dr. R. A. McLean, and he was frequently compelled to have assistance when tying knots. In Heath's classic description, 169 words are used, 14 different movements of the thread, maneuvers of the thumb and palms and all the fingers except the fourth being described to tie the knot. These complicated maneu-

vers, together with measuring, cutting and the subsequent clipping of the ends, together with the changing of needles and threads, render the wound liable to infection, while the method is tedious, inaccurate and slow. The cut ends are points of irritation when the suture is buried, and the knots are liable to untie if the ends are cut short, while they increase irritation if cut long. For the purpose of overcoming these defects I have devised the following stitches and method of insertion:

(1) *Single-knot Stitch*.—Figs. 28, 29, 30. The needle is passed through the divided tissues, and, without cutting the thread, a square knot is tied. For the second stitch the thread is held or thrown so that the needle will emerge in a loop, and, when it is drawn on through, a single knot will have been formed. The tension is now adjusted, and for the last stitch a square knot is tied. This may be modified by passing the thread around the needle or the needle around the thread. The tension of the stitches and between the stitches should be equal.

(2) *The Square-knot Stitch*.—The same steps are taken as for the single knot, and when it is formed the needle is passed under the thread connecting the knots in the opposite direction from which the needle was inserted into the tissues.

(3) *The Friction-knot Stitch*.—Fig. 28. For the first stitch a square knot is tied, then the needle is passed as for a single-knot stitch, turning the thread twice around the needle instead of once. The last stitch is a square knot.

(4) *Granny-knot Stitch*.—A single-knot stitch is formed and the needle is passed in the opposite direction from which it was inserted under the thread in forming a square knot.

For some years the mattress-suture inserted by the foregoing methods seemed to be wrong; it would not "lay," and for some unaccountable reason it could not be tied with the same facility as the others. This was very puzzling to me. One day, however, as I was experimenting with a back stitch, I saw to my great delight that the problem had been solved, and I then could understand the cause of the former difficulty. The peculiarities of the insertion had turned the thread a half turn.

(5) *Mattress Stitch*.—The first knot is tied as before, and for the second the stitch is taken furthest away first, the back stitch is taken next, the needle drawn on through and any one of the knots formed according to the directions already given.

For forming the square knot the following method may be used when sewing in deep recesses, ligating bloodvessels, or when great speed is required. The needle is passed through and drawn out in a double hitch (Fig. 33), which is slid down, and when the tension is sufficiently tight a slight pull upon the other end of the thread ties a square knot. Any number may be

<sup>4</sup> J. Goss Smith, *Ann. Surg.*, 1897, p. 100.



inserted continuously in this manner. If a clove-hitch be used instead of a double-hitch a granny knot will be formed.

I have avoided the terms right and left, as their use in my first paper required different descriptions, which I gave, for different directions, and in left-handed sewing. The stitches are inserted just exactly the same in any direction, although in a given operation or position of the operator it may be much more convenient to sew in one direction or the other.

Any knot, as a weaver's, surgeon's, surgeon's inverted, etc., may be used, as fancy may dictate, inserting them continuously by appropriate maneuvers. This classification of five in number is made in the interest of exactness and is based on differences in the stitches *per se*, apart from the method of inserting them into the tissue stitched. If the distinctions given by the tissues were considered, as in the other stitches, the number would run up into hundreds. The confusion of the physiology of divided tissues with the mechanics of coaptation is unscientific and, as I have pointed out, the special sutures are varieties of operations and involve physiologic, anatomic, and all other questions save mechanical ones.

Here are combined all the advantages of all the other stitches, with none of the disadvantages of any of them. The mechanical indications are perfectly met, the action of the interrupted stitches is retained unimpaired and to it is added a longitudinal action in perfect alignment, not curved or twisted as in the continuous stitch. There are no slippery, tangled ends to vex or take up time; no changing of threads or needles; no turning about to reach for instruments; no handling the thread with the fingers; no squeezing the knot with the nails, thus increasing the liability of infection; no holding the knot by an assistant. No assistant is required or even admissible. No cut ends are left to irritate. The knots cannot untie, and tension can be adjusted with the most consummate ease and accuracy.

No skill is required, as the introduction of the suture is so exceedingly simple and easy. I have shown it once to a seven-year-old child and she could use it with rapidity and accuracy at once. In contradistinction from the single stitch, with its complicated maneuvers, only two movements describing a half-circle are necessary to tie a square knot by the first method. In the second method the manual part is practically eliminated, as it is, in fact, in all of them. Careful experiments show that the suture can be put in about six times faster than the interrupted stitches, agreeing with mathematical computations of about 2 to 14.

If the method of throwing the thread is used the single knot is faster than the continuous stitch.

These stitches were not put forward until their value was determined by elaborate experiments extending over several years, of which I do not consider it necessary now to speak except to say that I first used the

sheet-bend knot, with results that were not bad. Afterwards these were used. I then put them into actual practice and afterward I called the attention of my confrères, Drs. H. G. McGill, W. F. McNutt, and J. C. Stinson, who successfully used them in major operations before I formally introduced them to the profession at large. Among a large number of distinguished gentlemen to incorporate it in their practice recently is Dr. Jos. Silverman, Dr. Jos. Artigues, and Dr. Henry J. Barbat, of the Medical Department of the University of California, who is recognized as one of our most conservative, as well as one of our best and most successful, operating surgeons. Dr. Barbat said: "For the purpose of preventing hernia after abdominal section I use the Ford stitch to unite the fascia." In June, 1897, I assisted Dr. Avery Barnes McGill in an operation upon a suppurating appendix. A portion of contiguous omentum was found almost gangrenous. The vessels were ligated with this stitch used as a fixation-suture, and the diseased tissue was removed. I assisted him in November of this year in the same kind of a case. The appendix was removed and the stump sutured over with my square-knot stitch. The first one was then tied to the last, invaginating the stump in the caput coli, and leaving only one knot visible, being a modification of Prof. Dawbarn's method. The pus-cavity was irrigated and drained with a gauze wick. The peritoneum was then closed with the single-knot stitch, the muscles and skin being closed separately with the square-knot stitch. Recovery followed without impairment of the abdominal wall.

Dr. Andrew J. Downes, of Philadelphia, has also successfully used the single and double knot of these stitches in performing circular enterorrhaphy by end-to-end union, using an immediately collapsible rubber bulb, etc., in eight experiments on dogs.

The particular case in hand should determine the choice of the stitches. Ordinarily the square knot is the one to be preferred. In fact it is the one originally put out, all the others being deduced from it. One line of stitches may very appropriately contain all of the various knots and may be combined with various insertions, as mattress and interrupted stitches. The single knot was not originally put forward as a separate stitch, but as "the first half" of the square knot. As they all require at least two square knots, it is really the important stitch, and is the one referred to by those speaking of the "interrupted stitch by a continuous method," or the Ford stitch.<sup>5</sup>

CASE I.—Mrs. B., aged 31, married, without children, presented on April 16, 1896, a large tumor springing from the right ovary, 10 cm. With the assistance of Dr. A. B. McGill the patient was chloroformed and an incision was made, extending from the symphysis pubis almost to the ensiform appendix. Adhesions to the liver and the parietal wall were separated with the hand, and the tumor, 12 cm. in weight, delivered with a strong pair of tenaculum forceps. The pedicle was then grasped with a pair of artery forceps used as a clamp.

<sup>5</sup> Minutes of San Francisco County Medical Society, April, 1898.

and, keeping as close as possible to the tumor, it was enucleated. The wound in the broad ligament was then sewed up with my single-knot stitch. The gaping vessels were caught in the stitches used as ligatures. Some were drawn out and ligated. The pelvic cavity was then carefully sponged out, and the abdominal wound closed, the peritoneum, fascia and skin being sutured separately. The patient recovered from the anesthetic well; but complained of some pain and intense thirst. During a momentary absence of the nurse, the patient managed to get hold of a pitcher of cold water, which she drank and promptly vomited. At about the sixth hour after the operation, the patient surreptitiously drank the contents of two of the hot-water bottles, which was retained. Thirst and pain abated. The highest temperature was 102° on the second day. Recovery was uneventful.

CASE II.—Mrs. R., aged 44, married, with four children, presented herself for treatment in 1895, very much exsanguinated from profuse metrorrhagia. She was placed upon electric treatment and the symptoms ameliorated; but they recurred so severely at the end of two years that an immediate operation was undertaken September 27, 1897, with the assistance of Dr. W. F. McNutt. The patient was anesthetized, a median incision made, the tumor, a large uterine fibroid, weighing 14 lbs., delivered and a temporary stitch placed in the abdominal wound, to prevent extrusion of the intestines. The right broad ligament was clamped as closely as possible to the tumor, which was then separated, and the wound in the ligament was closed with my single-knot stitch, the operator sewing away from himself. Gaping vessels were caught in the stitches used as ligatures. The ovarian artery was ligated separately. The left broad ligament and the neck of the uterus were then clamped and the tumor removed, after the necessary peritoneal cuffs had been dissected down. The stump was then sewed over with my square-knot stitch, using heavy catgut and inserting six stitches. The left broad ligament was then stitched over with my single-knot stitch, using it toward the operator. The line of sutures was continued over the stump, burying the first line uniting the peritoneal cuffs provided, taking care to leave no raw surface. (In my next case I propose to use the Lembert insertion stitch for this purpose.) The temporary stitch in the abdominal wound was then removed and the peritoneum closed with the fine catgut with the single-knot stitch. The fascia was united with a kangaroo-tendon with the square-knot stitch; the skin was then united in the same way, and as the tendon had given out, two interrupted catgut-sutures were put in the lower angle of the wound and the external dressing was applied at 2 P.M. The following is the nurse's record:

5.30 P.M., pulse 86, respiration 28, temperature 100.2; 6.30 P.M., slept 12 min.; 7 P.M., slept 17 min., urinated 1 oz.; 8 P.M., slept 30 min.; 10.30 P.M., 1 oz. of peptonized milk and water as enema; 12.30 A.M. bowels moved; slept one hour and a half.

The highest temperature recorded was 100.4° on the second day. Liquids were given from the first at regular intervals, adding champagne, Vin Chapoteau, beef-juice, etc. The patient did not complain of pain at all, and, with the exception of a small abscess at the side of the two catgut-sutures, recovery was uninterrupted.

CASE III.—Mrs. S., aged 32, was, with the assistance of Dr. F. H. von der Leith, anesthetized March 5, 1897, and an incision was made over the site of the tumor. The gut was found to be constricted, so that its lumen could scarcely have been as large as a knitting-needle. The sac of the inflamed hernia was carefully dissected out and excised, and the serosa united with the single-knot stitch. The internal ring was then closed by bringing together the anterior and posterior layers of the femoral sheath, with my single-knot sutures, the first stitch being inserted close to the outer side of Gimbernat's ligament, and also including some of its fibers. Several stitches were taken approaching the femoral vein. The iliac and pubic portions of the fascia lata were retracted and commencing close to the pubic spine. Poupart's ligament and the deep crural arch were sutured to the contiguous portions of the fascia lata covering the pectineus and the reflection of this fascia passing behind the femoral sheath,

using the same stitch. Several were passed approaching the femoral vein. The saphenous opening was then closed, the first stitch being inserted above close to Poupart's ligament, the needle being passed first through the pubic layer of the fascia lata on the inner side of the saphenous opening, then through the iliac portion of this fascia on the outer side, suturing from above downward. The skin was then closed with my sutures with fine silk. An external dressing was applied. The highest temperature was 100.6°. There was but little pain and no vomiting. The external dressing was examined on the fifth day, and removed, and the patient allowed up on the tenth, no trusses or bandages being applied. In June, patient commenced to work in a cannery, handling 100-lb. fruit-boxes. Up to the present time she has had no recurrence.

CASE IV.—Baby E., 10 days old, presented a hare-lip fissure extending into the left nostril. With the assistance of Dr. F. H. von der Leith the site of operation was, on December 20, 1897, carefully washed and dried. The right side of the fissure was pared and the lip freely dissected up. On the opposite side the lip was freed in the manner described, and a flap turned down. Hemorrhage was controlled with the fingers. A stitch was then taken, piercing the skin just above the vermilion border, passing through and emerging at exactly the same point on the other side, and the square knot was tied; without cutting the thread, the next stitch was inserted somewhat obliquely, passing from just external to the ala nasi to the median line below the septum, closing the nostril to a small opening. The rest of the wound was then united with stitches about a sixth of an inch apart. The first stitch, tied in the usual way, took more time, on account of the difficulty of keeping the child still, than all the rest of the stitches put together, and the tension was not so satisfactorily adjusted. The wound was then painted with compound tincture of benzoin and the child was placed in the hands of a trained nurse, with instructions to give it water in the form of teas, to take the mother's milk with the breast-pump and to feed it to the child with a spoon. The nurse was also instructed to hold the child's cheeks, should he cry, so that no tension might be made upon the stitches. The child took water and food, did not cry, and slept well. The tension-stitch was taken out on the fifth day, and the remaining stitches on the seventh.

This was one of the most perfect results that it has been my fortune to have or to see, the mouth being perfect. A slight widening of the nostril, with a flattening of the nose toward that side being all that can be seen of the original deformity.

CASE V.—W. O., a man, aged 35, engaged as a cook, presented a tumor about one pound in weight, situated just over the side of the internal inguinal ring. The diagnosis of sarcoma being made, the tumor was, with the assistance of Dr. A. B. McGill, removed on June 10, 1896, leaving a round wound down to the muscles. This was closed by twenty-eight of my reef-knot stitches. The wound healed by primary union, and the stitches were removed on the sixth day. The time occupied by the operation was 15 minutes.

CASE VI.—A boy, aged 10, with an inguinal hernia and an undescended testicle, had been operated on previously, and, judging from the conditions found, by Macewen's method. With the assistance of Drs. A. B. McGill, and Geo. Gross, he was anesthetized in September, 1896, and an incision was made in the usual manner. The appendix and cecum were found in the sac, firmly adherent to it and to all the surrounding tissues. The adhesions were being separated when a violent fit of vomiting occurred. A sterilized towel was clapped over the wound and given to an assistant to hold, to prevent the extrusion of any more of the abdominal contents. While straining, a sharp explosive sound was heard, which caused me to ask whence it came. When I resumed the operation, I found a semicircular jagged tear in the gut, with escape of feces. The gut was washed with mercuric-chlorid and carbolic-acid solutions, followed by normal saline solution, and with a cambric needle, threaded with fine silk, a row of my single-knot stitches was quilted in, taking a Lembert insertion. A second row was then superimposed, going one stitch further at each end. A third row was then placed over this one, commencing the insertion in

\* The hernia operations, except the arrangement of the line of sutures in the inguinal operation, are the methods advocated by Dr. J. C. Stimson, Radical Cure of Inguinal Hernia—Some Points in Technique and Report of Cases Operated on by the Author's Method. PHILA. MED. JOUR., Oct. 22, 1898.



the middle of the wound, thereby burying them. The gut was returned to the abdominal cavity after the remaining adhesions had been separated. The testicle was then drawn down the sac, whose neck was removed as far as possible and the cut edges of the serosa were united vertically with a row of single-knot stitches, using catgut. The internal ring was closed with the same stitches in a line at right angles to the former. The abdominal muscles and their conjoined tendon were united to Poupart's ligament, with a line of my reef-knot stitches, using kangaroo-tendon. The cut edges of the external oblique aponeurosis and the pillar of the ring were united with a line of single-knot stitches. The skin was closed with fine silk, using the same stitch. No drainage was provided for. The operation occupied an hour and a half. The temperature rose to 104° ten hours after the operation. The bowels moved at the end of twelve hours. The temperature gradually subsided and recovery was uneventful and complete at the end of ten days.

## BIBLIOGRAPHY.

- Smith, J. George. *Philosophy of Surgery*. London, 1888.  
 Modlin, C. W. *Manual of Surgery*. Philadelphia, 1895.  
 Guthrie, J. G. *Practical Surgery*. London, 1896.  
 Wharton, H. R. *Manual of Surgery*. Philadelphia, 1896.  
 Homan, Robert. *Practical Surgery*. New York, 1894.  
 Corland, James. *Practical Surgery*. New York, 1878.  
 Bilroth, J. S. *Practical Surgery*. Philadelphia, 1896.  
 Nysson, P. H. *Practical Surgery*. Paris, 1895.  
 Quain, Richard. *Practical Medicine*. New York, 1884.  
 Lister, Joseph. *Practical Surgery*. London, 1847.  
 Tait, J. *Trans. Roy. Soc. Edinburgh*, 1876-7.  
 Klein, *Medical Dictionary*. London, 1878.  
 May, H. O. *N. Y. Med. J.*, 1896.  
 Harold, W. S. *PHILADELPHIA MEDICAL JOURNAL*, 1898.  
 Gould, G. M.: *Illustrated Dictionary of Med.*, Philadelphia, 1894.  
 Partridge, J. S. *Practical Surgery*. New York, 1896.  
 T. J. *Practical Surgery*. New York, 1894.  
 Richardson, M.: *System Surgery*, Dennis, vol. iv, 1896.  
 Wright, John A. *Practical Surgery*, 1887.  
 Velpeau, *Practical Surgery*, vol. ii, 1847.  
 Da Costa: *Modern Surgery*, p. 519.

## HISTORY OF THE FIRST ANATOMY-ACT OF PENNSYLVANIA.\*

By W. S. FORBES, M.D.,

Professor of General Surgery and Director of Anatomy, Jefferson Medical College, and Clinical Surgeon to the Jefferson Medical College Hospital.

At a stated meeting of the College of Physicians of Philadelphia, held February 6, 1867, Dr. W. S. Forbes offered the following resolution:

"Resolved, That a committee of three be appointed to present the views of this College to the Legislature of the State, urging the passage of a law sanctioning the dissection of dead human bodies."

He said: "In presenting this resolution and asking its adoption by the college, it may be proper to state how legislative enactment, authorizing and regulating the dissection of unclaimed dead human bodies, will enhance the cultivation of the study of anatomy."

"Two considerations present themselves at the very threshold of the matter. One is general in its nature, representing the broad catholic principle of being right in itself, and embraces the very root of everything that is accurate, and useful, and learned in medicine. The other is entirely local in its character, and interesting to us as physicians of a great medical metropolis. These considerations gravely appeal to this body for sanction in its highest corporate capacity, and impel us to ask for legislative action."

"In regard to the first consideration, that of its being

right in itself, I am free to confess, in this learned body it would be out of place to do more than announce so manifest a statement.

"I shall therefore address myself at once to the examination of the remaining consideration, namely, that of its being interesting to us as physicians of Philadelphia. And I trust it may not be thought impertinent in me to state, by way of preface, that after having been a teacher of anatomy and operative surgery in this city for ten years,<sup>1</sup> to classes numbering in the aggregate near a thousand students, some of them now within the sound of my voice, I may be supposed to know something of the difficulties in the way of obtaining sufficient material for purposes of practically teaching so large a number of young gentlemen.

"In view of the fact that our city contains now three-quarters of a million of inhabitants, I think it is idle to suppose there is not an ample number of *unclaimed dead bodies* in this city and commonwealth to satisfy the demands of all who may come for the purpose of cultivating a knowledge of anatomy, both healthy and morbid. In what then is the difficulty?

"I believe it consists entirely in the fact that as there is no law of the Commonwealth by which our physicians can claim these dead bodies, to be used for medical investigation, the authorities in whose hands they are lodged do not feel themselves at liberty to give them up for any purpose, however laudable.

"They are therefore buried, and are afterward obtained surreptitiously by a third party, the so-called 'resurrectionists,' who engage in a degrading traffic, and sell them to the highest bidder, and as it is well known that the anatomists of medical schools in distant States send here every winter to supply their dissecting-rooms, the debasing trade is stimulated, and the practical teachers here and elsewhere find themselves in unworthy competition with each other. Consequently the price demanded, and often obtained, is such as to tempt the resurrectionist to enter private cemeteries and graves, and even to commit murder, as was the case in Edinburgh, in 1829,—all tending to bring obloquy on anatomical teaching, to deter the student from pursuing his studies with that degree of diligence which is requisite for his future usefulness, and to the injury of our city as a seat of medical learning.

"During the civil war, when a surgeon of volunteers, and particularly as Medical Director of the 13th Army Corps, U. S. Volunteers, before and during the siege of Vicksburg, in 1863, I had ample opportunities of being a painful witness in observing the want of a practical knowledge of anatomy, on the part of many surgeons. And I can attribute this ignorance only to the obstacles in the way of having freely and systematically dissected the dead body during their novitiate and afterwards.

<sup>1</sup> Dr. Forbes joined "The College of Anatomy School" at the southeast corner of Tenth Street and College Avenue (now Chant Street above Chestnut) in March, 1857.

\* Prepared at the request of the W. S. Forbes Anatomical League of Jefferson Medical College.

"Believing this to be the case, and with the view of removing one very great difficulty, I drew up the following 'Act,' and submitted it last winter to the Legislature of the State :

"AN ACT

*For the Promotion of Medical Science, and to prevent the Traffic in Human Bodies.*

"SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, That the Inspectors and Superintendent of any county prison, the Board of Guardians of any City or County Almshouse, the Coroner of any County, or any other public officer having charge thereof or control over the same, shall give permission to any physician or surgeon of the same county, upon his request made therefor, to take the bodies of such persons dying in such prison, almshouse, or county, as are required to be buried at the public expense, to be by him used within the State for the advancement of medical science, preference being given to medical schools, public and private; and said bodies to be distributed to and among the same, equitably, the number assigned to each being proportioned to that of its students; provided, however, that if the deceased person, during his or her last sickness, of his or her own accord, shall request to be buried; or if any person, claiming to be, and satisfying the proper authorities that he is of kindred to the deceased, shall ask to have the body for burial, it shall be surrendered for interment; or, if such deceased person was a stranger or traveler, who died suddenly, the body shall be buried, and shall not be handed over as aforesaid.

"SECTION 2. Every physician or surgeon, before receiving any such dead body, shall give to the proper authorities surrendering the same to him, a sufficient bond that each body shall be used only for the promotion of medical science within this State, and whosoever shall use such body or bodies for any other purpose, or shall remove the same beyond the limits of this State; and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding five years, hard labor, in the county jail."

"This Act passed the House of Representatives, but in the Senate a member objected to it as being unworthy of the age in which we live, and as his influence was of weight in that assembly, it was thought proper to withdraw the 'Act,' until a more propitious time.

"In view of which I now desire to have the sanction of this body, believing that coming from such high authority, and exerted in so just a cause, there can be but one issue to the event."

The resolution was duly submitted, and the college unanimously passed it. The committee appointed were, Dr. W. S. Forbes, Dr. S. D. Gross, Dr. D. Hayes Agnew.

At a stated meeting of the College of Physicians held April 3, 1867, Dr. Forbes, chairman of the committee appointed to present the views of the college to the Legislature of the State, urging the passage of a law sanctioning the dissection of dead human bodies, read the following report :

"MR. PRESIDENT:—The committee appointed to present the views of this college to the Legislature of the State, urging the passage of a law sanctioning the dissection of dead human bodies, respectfully report, that they convened, and concluded to express the views of the college in the form of a statutory act, and ask that it

be made a law. Accordingly, the paper drawn up, and read, and shown to the college by Dr. Forbes, the mover of the resolution, appointing this committee on the 6th of February, entitled 'An Act for the Promotion of Medical Science, and to prevent the traffic in human bodies,' was approved and placed in the hands of Senator Wilmer Worthington, of Chester, a doctor of medicine, and a gentleman whose high character and influence materially advanced our cause, with the request that he would read it in place, and ask its passage by the Senate. This Act provides that the bodies of all persons to be buried at public expense shall be given to any physician or surgeon of the same city or county claiming them for the promotion of medical science; and that an equitable distribution of these bodies shall be made, preference being given to medical schools, public and private; and that they shall in no case be taken out of the State, and that no traffic in them whatsoever shall exist. The Senate referred the Act to a committee, which adopted a negative report, and presented it the following day. Senator Worthington then asked the Senate to recommit the Act, and that permission be granted the college committee to appear and explain their views. This was granted.

"Your committee determined to go to Harrisburg for this purpose, and as one of their number, Dr. Gross, was unable, from professional and other engagements, to accompany them, Dr. Henry Hartshorne was invited to unite with and assist them in their endeavors. Dr. Hartshorne consented, and your committee would acknowledge his services.

"Your committee found the legislative mind opposed to the passage of our Act, and it became necessary to explain its virtues with becoming care, for it was called a 'Ghastly Act,' with more temper than wisdom, by leading representatives.

"It was submitted that the Legislature had granted charters to a number of medical institutions which based their instruction on a knowledge of anatomy, and yet there was no law permitting the examination of the human body. That in the courts of the Commonwealth the physician was liable to be arraigned for malpractice, in cases of accident requiring surgical treatment, and yet he was debarred from obtaining the very knowledge he was required to display under heavy penalties.

"That owing to the absence of such a law as was now presented for their sanction, giving all *unclaimed dead bodies* to the medical institutions, the price demanded and obtained by the degraded and debased creatures who engage in the traffic, known as the resurrectionists, became a temptation to commit murder, as in the case of Burke, who at Edinburgh, in 1829, slew fifteen innocent human beings, for the purpose, as he confessed at his trial, of obtaining four guineas from the medical schools.

"That it was only when the cause of this dreadful



crime became known the British Parliament, in view of the necessity of anatomical investigation, passed the so-called Warburton Act, which was found in a measure to subserve the purposes for which it was intended.<sup>2</sup>

"That graves and private cemeteries were entered, and the dead bodies brought to the dissecting-table here, and frequently sent to distant cities for purposes of anatomical instruction, were often sought after by sorrowing friends much to the chagrin of the anatomist, and maledictions applied to his pursuit.

"These, with other arguments, were advanced, and finally, it was gravely observed that, as it was impossible in the nature of things to prevent the examination of the dead body of man, and as there was no law of the Commonwealth regulating the matter, it was manifest the bodies of distinguished legislators themselves, after a life full of good works, were no longer safe in their graves, but were liable to be rudely disturbed.

"After this interview the Senate committee presented an affirmative report.

"When called up on its final passage some days after in the Senate, it was objected that unless the provisions of this Act were restricted to Philadelphia, it ought not to pass, on the ground that the views of the constituents of the rural representatives were not known on the subject.

"The chairman of the college committee being present on the occasion, was asked if it would suit the views of the college to restrict the provisions of the Act to Philadelphia, with the remark that if it did not, the Act probably could not pass. The chairman, being alone at the Capitol at this time, assumed the responsibility of saying that he believed the College of Physicians had the catholic desire of having the benefit of the Act extended to every part of the State, but certainly if it could not be obtained for their neighbors, they would receive it themselves. At the same time he observed it would be well to reflect that from the very title of the Act, 'to prevent the traffic in dead bodies,' if the restriction spoken of was made, while the traffic could not exist in Philadelphia, it might be otherwise in the State at large. Yet such was the prejudice against the Act the restriction was made, and when the vote was being taken, a Senator from Allegheny asked to have his district included with Philadelphia, which was done, and the Act passed the Senate.

"It became necessary, on a subsequent visit, when the Act came before the House, to address the same arguments to the members of the House of Representatives, and they approved the action of the Senate.

"The Governor of the State was seen, and made the occasion of a third visit to the Capitol, and your committee rejoice to announce our Act became a law on the 18th of March, 1867.

"It reads as follows:

<sup>2</sup> See *Lancet*, vol. ii, 1831-32. Curiously enough, the Warburton Act, while legalizing dissecting, does not prevent the traffic in dead bodies.

# AN ACT

*For the Promotion of Medical Science, and to prevent the Traffic in Human Bodies in the City of Philadelphia and County of Allegheny.*

"SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same, That any public officer in the City of Philadelphia or County of Allegheny, having charge thereof or control over the same, shall give permission to any physician or surgeon of the same city or county upon his request made therefor, to take the bodies of deceased persons required to be buried at the public expense to be by him used within the State for the advancement of medical science, preference being given to medical schools, public and private; and said bodies to be distributed to and among the same, equitably, the number assigned to each being proportioned to that of its students; provided, however, that if the deceased person, during his or her last sickness, of his or her own accord, shall request to be buried; or if any person, claiming to be, and satisfying the proper authorities that he or she is of kindred to the deceased, shall ask to have the body for burial, it shall be surrendered for interment; or, if such deceased person was a stranger or traveler, who died suddenly, the body shall be buried, and shall not be handed over as aforesaid.

"SECTION 2. Every physician or surgeon, before receiving any such dead body, shall give to the proper authorities surrendering the same to him, a sufficient bond that each body shall be used only for the promotion of medical science within this State; and whosoever shall use such body or bodies for any other purpose, or shall remove the same beyond the limits of this State; and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding five years, at hard labor, in the county jail.

(Signed)

L. H. HALL.

"Speaker of the Senate.

JOHN P. GLASS.

"Speaker of House Rep.

Approved March 18, 1867.

JOHN W. GEARY, Governor.

"Such is the law obtained from our Legislature through the action of this college in its corporate capacity.

"A law, the humane provisions of which were first partially established in Edinburgh<sup>4</sup> in 1505, and yet more extended in France after the revolution of 1798, and under the First Empire; and the wisdom of which was observed by the British Parliament in a statute only of late, when a frightful crime revealed its necessity.

"All of which is respectfully submitted.

"Signed by the committee.

"WM. S. FORBES, M.D., Chairman.

HALL OF THE COLLEGE OF PHYSICIANS, }  
Thirteenth and Locust Streets, April, 1867. }

On motion of Dr. Rodman, the College of Physicians unanimously passed a vote of thanks for "the able and successful exertions" made to obtain this law.

After the passage of the above Act a voluntary association of the teachers of anatomy was formed in

<sup>4</sup> The States of New York and Massachusetts have passed laws on this subject somewhat similar to this one. See Revised Statutes of New York, 5th edition, vol. ii, page 67; General Statutes of Massachusetts, 1860, page 195. <sup>5</sup> See *Edinburgh Medical Journal*, October 1867. <sup>6</sup> Historical Sketch of the Edinburgh Anatomical School, by John Struthers, M.D., F.R.C.S., Edinburgh, Professor of Anatomy in the University of Aberdeen."

Philadelphia. This association was composed of the demonstrators in the chartered and private schools of anatomy. By-laws were agreed upon and an equitable distribution of the unclaimed bodies was begun accordingly—the number assigned to each school being proportioned to that of its students. For some years the number of bodies thus obtained was sufficient.

This voluntary association of anatomists in Philadelphia continued in operation until it was superseded by the Act of June, 1883, which extended the Act of 1867 to every county in the State, and provided specifically the machinery for the equitable distribution of the unclaimed bodies required to be buried at the public expense. It will be remembered that the Act of 1867 was necessarily restricted to Philadelphia and the County of Allegheny.

As the number of medical students coming to Philadelphia increased, however, and as knowledge of a higher grade in anatomy, very properly, was exacted of every student, a greater number of dead bodies was needed.

In a few years it was discovered that in the Act of 1867 the words "*shall give permission* to take the bodies of deceased persons required to be buried at the public expense," did not bind certain officials who had control of the bodies. Thus, when these bodies were asked for more than one of the officials said, "Yes, go and take them, permission is given, that is the law," it was found that these very bodies now so civilly permitted to be taken, had already vanished. They could not be found.

The *Medical News*, of Philadelphia, in its issue of 23d December, 1882, says, in relation to the Coroner and the unclaimed bodies under his control: "Indeed, he (the Coroner) states, that in accordance with his view of the law (the Act of 1867) it is his duty to have them buried, and that after he has given the certificate of death his control over them ceases."

The Coroner owned and conducted at this time the Philadelphia School of Anatomy. As the head of a private school of anatomy he was a member of the Association of Anatomists having the *equitable* distribution of the unclaimed bodies. At a meeting of this association held at the College of Physicians during the last week of 1882 for the purpose of revising and extending the Act of 1867, I moved that the words "give permission" be stricken out and the word *deliver* be inserted, so that the act would read, "That Coroners (and other mentioned officials) shall deliver such body or bodies," etc.

The Coroner then arose in his seat and objected, saying, among other things, that he warned us such wording of the act would defeat its passage in the Legislative Assembly.

I replied, that if the words "shall deliver" were not inserted, experience taught us the law would not be worth the paper upon which it was printed. I moved

that the advice of counsel be sought, which was done. The words "shall deliver" are now in the law, and form its chief binding quality.

On Wednesday, March 21, 1883, the following editorial appeared in the *Germantown Telegraph* newspaper:

#### MEDICAL SCIENCE VINDICATED.

On Saturday last, Dr. Forbes, Demonstrator of Anatomy in Jefferson Medical College, who was on trial in the Court of Quarter Sessions in this City, on a charge of conspiracy to rob the graves in Lebanon Cemetery of the bodies of the dead, was after a full and fair trial acquitted of the charge, and left the court amid the congratulations of his friends and of the public. It appeared by the testimony in the case that Jefferson Medical College educates annually six hundred students in the science of medicine, and that an indispensable part of the training is that each one of these students shall in the course of his term dissect entirely one human body. Dr. Forbes being in charge of that department, had of course received the bodies for dissection and kept a record of them, but was careful not to know from what source they were obtained. Many of course came from the almshouses, the hospitals, the prisons, the public institutions, from Potter's Field, from the Coroner's office, and from other sources peculiar to the unclaimed dead. But in the case under trial it appeared that a number of bodies of colored persons had been taken from Lebanon Cemetery—from trenches or deep pits in which dozens of dead bodies were buried in common, and which but for that regular relief would soon have been overflowing. A sensation newspaper reporter employed one of the private detectives of Pinkerton's police bureau, and between them they worked up the case so successfully as to have caught some of the parties engaged in carrying off the bodies. There is a bill now pending in the Legislature, which it is to be hoped will pass, making it lawful to supply medical institutions with bodies for dissection from the public sources named above.

#### UNREASONING CLAMOR CONDEMNED.

From the *Philadelphia Record*.

The result of the trial of Dr. Forbes is precisely that which was expected by all fair and intelligent men. The prosecution was begun under the pressure of a great and unreasoning public clamor, and it is the highest tribute to the wise integrity of our courts that, unaffected by public clamor, a case of so much importance has been determined in strict accordance with the highest principles of law and justice.

It is not my purpose at present to write an account of this trial. I will do this on some future occasion. Some strange characters appeared both in and behind the scene in court. It is sufficient now to state that this trial in the Court of Quarter Sessions in Philadelphia is a part, a very important part, of the history of medical education in the United States, in that it forced the public and the legislative mind to extend the beneficent act of 1867 to every county of the State, and forced the officials, the Coroners included, to deliver up under penalty the bodies under their control that are to be buried at the public expense. The delivery of the dead bodies under the control of the Coroner and all other officials is thus made mandatory. Many States of the Union have now adopted this law.

The trend of the medical mind of the country on this whole matter may be obtained from an examination of the medical journals of this period extending from November 1882, to May, 1883, notably the *Medical News* of Philadelphia, December 9, 1882, and December 23, 1882, and the *New York Medical Journal* of January



13, 1883, and again March 24, 1883, the *Medical Times* of Philadelphia, March 10, 1883, and the *Medical and Surgical Reporter* of March 24, 1883.

The arrest was made December, 1882. The trial began three months afterwards, on Monday, and continued until the following Saturday, the 17th of March, 1883.

From the day of arrest to the end of the trial, certain newspapers of the city during this entire period, with the most determined rancor, continued to arouse the public to a great pitch of excitement.

These newspapers can now be seen in the public libraries of the city.

The contumely thus cast at me injured me in many ways, and, sad enough, it alienated certain friends who were near to me.

These misfortunes came upon me while in the line of my duty. I was striving, and it has always been my endeavor, to place the teaching of practical anatomy, with the sanction of law, on a sure, safe, and lasting foundation, knowing that it embraces the very root of everything that is accurate and useful and learned in medicine.

I may be permitted to rejoice that this is now accomplished for the benefit of our portion of the English-speaking people.

The following has been furnished me by the secretary of the Philadelphia County Medical Society:

"From minutes of meeting, January 3, 1883: On motion the order of business was suspended to permit the introduction of the following resolution offered by Dr. W. S. Forbes:

"*Resolved*, That a committee of three be appointed to present the views of this society to the Legislature of the State urging such alteration in the Act entitled 'An Act for the promotion of Medical Science and for preventing traffic in human bodies, as may further promote the designs of the original Act.'"

The resolution was adopted and the committee appointed. The following petition with the Act appended was presented to the Legislature:

#### PETITION.

To the Senate and House of Representatives of the Commonwealth of Pennsylvania.

The petition of the undersigned respectfully shows that they present herewith the draft of "An Act for the Promotion of Medical Science by the Distribution and Use of Unclaimed Human Bodies for Scientific Purposes, through a Board Created for that Purpose, and to Prevent Unauthorized Uses and Traffic in Human Bodies," which they pray your honorable bodies to enact into a law for the following reasons:

It will increase the necessary facilities for medical education within this State, and will materially aid in preventing desecration of burial grounds. Your petitioners do not deem it necessary to argue the point that the repeated dissection of the human body is necessary before any student of medicine should be allowed to take charge of the health and lives of the community. No woman in childbirth, no person the victim of accident, no sufferer from disease is safe in the hands of men ignorant of the structure of the human body.

The only proper method to supply this knowledge is to furnish by law the bodies of those who have no friends or relatives whose feelings could be wounded by their dissection. This was done by the Anatomy Act of 1867. But this Act is defective in that its application is limited to the counties of Philadelphia and Allegheny, and an adequate supply of unclaimed dead human bodies is not furnished, and it does not provide specifically the machinery for an equitable distribution of the dead bodies so given for dissection.

In the Session of 1881-2, there were in the Dissecting and Operative Surgery Classes of the Philadelphia Medical and Dental Colleges 1,493 students. Each student pursues his studies in anatomy during two years. If he be allowed to dissect one-half of one body a year—including also the practise of operations upon the same—this would require 746 dead bodies. The professors would need for their lectures about 50 more, making in all 796 "subjects." But during that same session the number actually available for use from all sources was only 405. This is only one-half of the smallest number reasonable, to say nothing of the desirableness of a larger number to afford all the facilities a great Commonwealth should give its citizens, who can obtain their needful knowledge in no other way that is lawful.

That it is "needful" one will readily see when it is remembered that the want of such knowledge renders doctors liable to suits for malpractice, which suits are upon the calendar of well nigh every court of the State. The scanty supply is due to the fact that the unclaimed dead of one county are the only ones that are given for dissection, although the students come from all parts of this State in large numbers, as well as from other parts of this and other countries. (The present law, it is true, applies to Allegheny County, but this is practically of no use to the Philadelphia Colleges.)

During the ten years, 1873-1883, at the Jefferson Medical College and the University of Pennsylvania alone, out of a total number of over 10,000 students, there were 2,686 from Pennsylvania; of this number 1,172 were from Philadelphia and 1,514 from other parts of the State. In view of these important facts it would seem but just that the unclaimed and uncared-for dead who must be a burden upon the taxpayers of the several counties of the State for burial, should be given to the medical schools to supply this urgent need for dissecting material by students from every county in the State.

And your petitioners will ever pray, etc.

#### AN ACT

For the promotion of medical science by the distribution and use of unclaimed human bodies for scientific purposes, through a board created for that purpose, and to prevent unauthorized uses and traffic in human bodies.

SECTION 1. *Be it enacted, etc.*, That the professors of anatomy, the professors of surgery, the demonstrators of anatomy and the demonstrators of surgery of the medical and dental schools and colleges of this Commonwealth, which are now or may hereafter become incorporated, together with one representative from each of the unincorporated schools of anatomy or practical surgery, within this Commonwealth, in which there are from time to time, at the time of the appointment of such representatives, shall be not less than five scholars, shall be and hereby are constituted a board for the distribution and delivery of dead human bodies, hereinafter described, to and among such persons as, under the provisions of this act, are entitled thereto. The professor of anatomy in the University of Pennsylvania,\* at Philadelphia, shall call a meeting of said board for organization at a time and place to be fixed by him within thirty days after the passage of this act. The said board shall have full power to establish rules and regulations for its government, and to appoint and remove proper officers, and shall keep full and complete minutes of its transactions; and records shall also be kept under its direction of all bodies received and distributed by

\* Professor Joseph Leidy, A.M., M.D., LL.D., was the Professor of Anatomy in the University of Pennsylvania at this time. Professor Leidy called the first meeting of the board and organized it and presided at this meeting, and was elected its first President. Professor Leidy continued to preside at every annual meeting of the board from that date in 1891.

shall be and added to the persons to whom the same may be distributed, which minutes and records shall be open at all times to the inspection of each member of said board, and of any district attorney of any county within this Commonwealth.

SECTION 2. All public officers, agents and servants, and all officers, agents and servants of any and every county, city, township, borough, district and other municipality, and of any and every almshouse, prison, morgue, hospital, or other public institution having charge or control over dead human bodies, required to be buried at the public expense, are hereby required to notify the said board of distribution or such person or persons as may, from time to time, be designated by said board or its duly authorized officer or agent, whenever any such body or bodies come to his or their possession, charge or control, and shall, without fee or reward, deliver such body or bodies, and permit and suffer the said board and its agents, and the physicians and surgeons from time to time designated by them, who may comply with the provisions of this act, to take and remove all such bodies to be used within this State for the advancement of medical science, but no such notice need be given nor shall any such body be delivered if any person claiming to be and satisfying the authorities in charge of said body that he or she is of kindred or is related by marriage to the deceased, shall claim the said body for burial, but it shall be surrendered for interment, nor shall the notice be given or body delivered if such deceased person was a traveler who died suddenly, in which case the said body shall be buried.

SECTION 3. The said board or their duly authorized agent may take and receive such bodies so delivered as aforesaid, and shall, upon receiving them, distribute and deliver them to and among the schools, colleges, physicians and surgeons aforesaid, in manner following: Those bodies needed for lectures and demonstrations by the said schools and colleges incorporated and unincorporated shall first be supplied, the remaining bodies shall then be distributed proportionately and equitably, preference being given to said schools and colleges, the number assigned to each to be based upon the number of students in each dissecting or operative surgery class, which number shall be reported to the board at such times as it may direct. Instead of receiving and delivering said bodies themselves, or through their agents or servants, the board of distribution may, from time to time, either directly or by their authorized officer or agent, designate physicians and surgeons who shall receive them, and the number which each shall receive: *Provided always however*, That schools and colleges incorporated and unincorporated, and physicians or surgeons of the county where the death of the person or such person described takes place, shall be preferred to all others: *And provided also*, That for this purpose such dead body shall be held subject to their order in the county where the death occurs for a period not less than twenty-four hours.

SECTION 4. The said board may employ a carrier or carriers for the conveyance of said bodies, which shall be well enclosed within a suitable encasement, and carefully deposited free from public observation. Said carrier shall obtain receipts by name, or if the person be unknown by a description of each body delivered by him, and shall deposit said receipt with the secretary of the said board.

SECTION 5. No school, college, physician or surgeon shall be allowed or permitted to receive any such body or bodies until a bond shall have been given to the Commonwealth by such physician or surgeon, or by or in behalf of such school or college, to be approved by the prothonotary of the court of common pleas in and for the county in which such physician or surgeon shall reside, or in which such school or college may be situate, and to be filed in the office of said prothonotary, which bond shall be in the penal sum of one thousand dollars, conditioned that all such bodies which the said physician or surgeon, or the said school or college shall receive thereafter shall be used only for the promotion of medical science within this State, and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, or shall transmit or convey or cause to procure to be transmitted or conveyed said body or bodies, to any place outside of this State, shall be deemed guilty of a misdemeanor, and shall on conviction, be liable to a fine not exceeding two hundred dollars, or be imprisoned for a term not exceeding one year.

SECTION 6. Neither the Commonwealth nor any county or municipality, nor any officer, agent or servant thereof, shall be at any expense by reason of the delivery or distribution of any such body, but all the expenses thereof and of said board of distribution shall be paid by those receiving the bodies, in such manner as may be specified by said board of distribution, or otherwise agreed upon.

SECTION 7. That any person having duties enjoined upon him by the provisions of this act who shall neglect, refuse or omit to perform the same as hereby required, shall on conviction thereof, be liable to a fine of not less than one hundred nor more than five hundred dollars for each offense.

SECTION 8. That all acts or parts of acts inconsistent with this act be and the same are hereby repealed.

APPROVED—The 13th day of June, A. D. 1883.

ROBT. E. PATTISON,  
Governor.

Such is now the law of this Commonwealth.

## PHOTOMICROGRAPHY.<sup>1</sup>

By IRVING E. HARRIS, Ph.B., M.D.,  
of Rochester, N. Y.

THE first discoveries and published reports of work in the science of photomicrography belong to no less a person than the eminent natural philosopher, Sir Humphrey Davy. Davy was little appreciated as a youth, either by his relatives or the community. It was a common remark, "This boy Humphrey is incorrigible. He will blow us all into the air." His sisters complained of the ravages made upon their dresses by corrosive substances, while his parents were no more indignant at his idle habits than fearful of the outcome of his attic diversions.

On the death of his father in 1794, Davy, then 16 years of age, was apprenticed to a surgeon of large practice, Mr. Borlace of Penzance, with whom he lived for 5 years. Indeed, it was not until his connection with the "Pneumatic Institute" at Bristol, in 1798, that he abandoned the profession of medicine, having long determined to study and graduate at Edinburgh. At this "Pneumatic Institute," a place "established for the purpose of investigating the medicinal powers of factitious airs and gases," Davy met the Earl of Durham, Coleridge, and Southey, men whose acquaintance probably had much to do with his connection, in 1801, with the Royal Institution. There, associated with such men as Gregory Watt and Dr. Beddoes, men of education and scientific attainments, and provided with excellent apparatus, Davy speedily entered upon a career of discovery that rendered his name illustrious. Among the records of many experiments we note that at the age of 22 he had discovered the intoxicating effects of nitrous oxid when respired. Three years later (1803) he published a series of experiments in which he had obtained photomicrographs upon paper and leather. These he was unable to render permanent, but they are believed to have been the first experiments in both photography and photomicrography. For twenty years we find little or nothing recorded on this subject, until

<sup>1</sup> Read before the Rochester Pathologic Society, May 26, 1898.



a Mr. Dancer and Mr. Richard Hodgson, of London, came forward. The former had produced photomicrographic objects upon silver plates, while the latter had obtained excellent daguerreotypes of microscopic objects. In the same year M. Donni, of Paris, presented to the Academy of Science copies of various microscopic objects on daguerreotypes.

In 1845 Mr. Joseph Delves presented a paper to the Microscopic Society of London, and the following number of the *Quarterly Journal of Microscopical Sciences* published specimens of prints from his collodion plates, this being the earliest publication in England using photographic illustrations of microscopic objects. In this country Lieutenant-Colonel J. J. Woodward, M.D., produced at the Army and Medical Museum, Washington, about the year 1866, the first photomicrograph that attracted the attention of the entire scientific world, and a full description of which was published in the *British Journal of Photography* for that year. "His work," says Sternberg, "being confined exclusively to difficult test-objects, as diatoms and fine rulings on glass, did more towards the improvement and perfection of the modern objective than to the advancement of our knowledge of this subject, as related to medicine."

Among other names associated with the development of photomicrography we find Drs. Abercrombie and Wilson of Cheltenham, the Rev. Mr. Reade and C. Kingsley, the Abbé Count Castracane, Drs. M. Carey Lea and Henry Morton of Philadelphia, Surgeon-General Geo. M. Sternberg, U. S. A., and Dr. A. Clifford Mercer of Syracuse; not to forget the work done in our own city by Mr. Whittier, whose presence and examples of work we have with us to-night—work that stands as proof that no more excellent results have been attained anywhere or at any time than are now produced at our very doors.

Having thus briefly referred to some of the men who have been connected with the growth of photomicrography, before entering into detail as to the apparatus used and methods employed, I shall endeavor to define the subject and outline its utility. A photomicrograph is an enlarged photographic image of a microscopic object. Such pictures are often incorrectly spoken of as microphotographs, a term used by scientific writers to designate a reduced photographic image of an object made on so small a scale that a microscope is required to see it in a satisfactory way. Thus the Declaration of Independence has been photographed in a space no larger than a pinhead.

"The microphotograph, according to Sternberg, is interesting as an exhibition of the possibilities of the art of photography, but otherwise has no special value. The photomicrograph, on the other hand, is a record of what has been seen under the microscope and is therefore free from the principal objection urged against drawings of microscopic objects, namely: that they do not always represent exactly what has been seen, but rather that to which the observer wishes to give special prominence, or what he thinks ought to be present and possibly imagines that he has seen."

Then, too, the expert microscopists state that the picture seen under the microscope tells a different story to different observers. The photomicrograph rules out this personal equation. "It also enables us," says Sternberg, "to form some estimate of the technical skill of the observer."

Particles of foreign material may be described as something new in histology, or if the photomicrograph shows that the object taken is poorly prepared, the lack of skill on the part of the one who made it will be evident.

However wholly so only to an expert, as in the best prepared specimens, not all details of structure are in focus at the same time. This fact the experienced worker has in mind, being content with the way in which the characteristic features are brought out, while the inexperienced, having in mind perhaps the sharply drawn lines of cuts in the books, and unable to overlook the haziness of that part of the field that is not in perfect focus, will be strongly inclined to criticise the photograph.

These defects in the best-prepared specimens have led several experimenters to attempt to develop a photographic image on the principle of the composite photograph. Dr. W. C. Borden, writing in the *American Monthly Microscopical Journal* (Vol. xiv, p. 329), says:

"It has been suggested, that by a succession of exposures upon the same plate, with the object focused differently for each exposure, a composite photograph could be built up, which would represent the object with the truthfulness of the photograph and the pliability of a drawing." Concluding, he says: "This method, though widely exploited, fails utterly in practice, giving only that appearance so familiarly known through examples of composite photography."

Complete failure here turned the minds of such experimenters as Wenham, Maddox and others towards the stereoscope, an instrument thus defined by Webster:

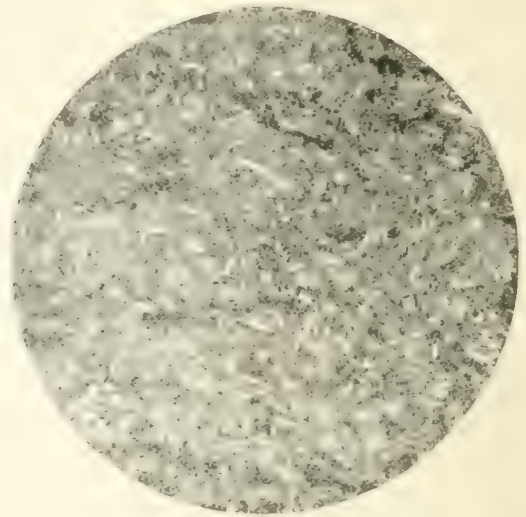
"It combines in one, through a blending of the rays of light, two photographic pictures, taken for the purpose, at points of view a little way apart, furnished with two eyeglasses, and by refraction or reflection, the pictures are superimposed so as to appear as one to the observer."

By this method the two most important planes of an object are taken on separate negatives, a different focus being used for each, and both photographed with reference to the production of stereoscopic effects. These two negatives are then superimposed or combined—in other words, viewed stereoscopically—when a true image of the object was obtained, each part clear and sharp.

Though the results of stereoscopic photomicrography were apparently successful, the process has not come into general use, or in any sense displaced the direct method. Whatever influence it had seems to have been manifested only as a stimulant to other experimenters in their endeavors to improve and perfect the earlier form of apparatus, before taking up a description of which we might say that the methods employed



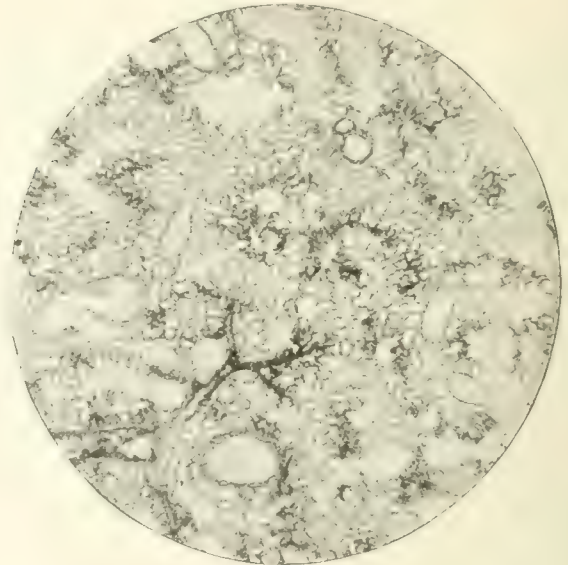
Emphysema of the Lung - 200



Bone, Transverse Section - 6940.



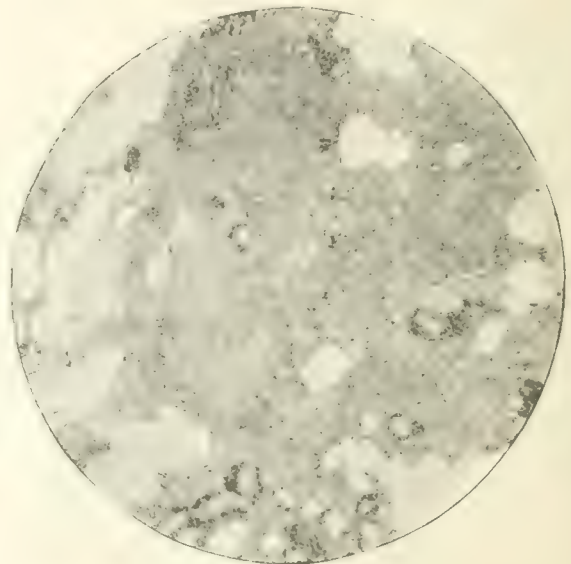
Endothelial R. of Lung of a Child - 157



Injected Lung - 1600.



Large Intestine - 180



Miliary Tuberculosis - 840.



and the apparatus used are varied and complex. There are, however, several essential characteristics of a similar nature that must be kept well in mind, viz.: a concentrated light, a means of magnifying the object, and a camera to take an impression of the magnified image.

The chief differences have been in the position of the instrument, the form of illumination, and the construction of the camera. Whether, however, the whole apparatus is in a vertical or a horizontal position; whether the method of illumination be paraffin, oxyhydrogen, acetylene, or magnesium-flame, or gas, sunlight, or electric light, or whether the operator use the simple camera-box in an ordinary room, or makes a dark-room of his laboratory, thus dispensing with the camera, while all items of importance to the photographer are of interest to us only as different methods of working.

The following description of Dr. Woodward's instrument is taken from an extended description published by himself, and though by no means detailed and complete, I have tried as much as possible to preserve his language, that I might not err on so technical a subject:

"His laboratory was fitted up as a dark-room, the only source of light being a small aperture  $1\frac{1}{2}$  inches in diameter, upon which the rays of sunlight were concentrated by a mirror receiving the sun's rays from a Silbermann's heliostat, standing on a shelf outside of the window.

"Within the room a frame of walnut, 10 feet long, is placed on a firm table perpendicular to the window. The microscope stands on the end of the frame next the window in a horizontal position and the tube carrying the diaphragm or achromatic condenser fits into the tube projecting inward from the shutter by which the sun's rays reflected from the window outside are admitted.

"A black velvet hood covers the parts about the stage and objective of the microscope, and thus prevents the leakage of light into the room. The plate-holder is movable backward and forward on the walnut frame on which the microscope stands, its greatest distance from the stage of the microscope being nearly 9 feet.

"To permit of ready focusing at any distance along the frame a rod  $\frac{3}{4}$  of an inch in diameter and capable of easy rotation runs the whole length of the right side. The milled head of the fine adjustment of the microscope is grooved, and a grooved wheel on the end of the rod permits the two to be connected by a band. The operator standing at any point of the frame can therefore manipulate the fine adjustment by simply turning the rod.

"The arrangements of light, position of object, coarse adjustment, etc., are made by the operator, who stands by the microscope, afterwards going to the plate-holder. The final focus is made by means of the rod, the image being viewed on a piece of plate glass held in the frame which is to receive the sensitized plate.

"Outside the shutter, over the hole by which the light is admitted, hangs a cell containing a solution of ammoniasulphate of copper of sufficient density to absorb nearly all the rays except those at the violet end of the spectrum. The light used, therefore, is essentially monochromatic and contains, with enough illumination for agreeable vision, the greater part of the actinic force of the sun's rays. The heat-rays, being chiefly at the other end of the spectrum, are of course excluded."

Later Woodward, as did Abercrombie, Mercer, Morton, and others, substituted for the solar ray various forms of artificial light, claiming quite as good results and with the big advantage of being able to work in all kinds of weather and at night as well as by day, the

only change in the apparatus being that the light, instead of coming through a perforated shutter, is generated in a tight box within the room.

The object-glasses employed range from a 1-inch to  $\frac{1}{25}$ -inch immersion, and as the microscope stands in position the objective points toward the specimen held in place over the aperture of the tube connected with the source of light, while the eyepiece-extremity of the microscope points toward the distant plate-holder or is thrust into the end of a large camera-box accordingly as the laboratory is fitted up as a dark-room or a camera is used in an ordinary room.

Aside from a properly cut and well-mounted specimen probably the most difficult thing to obtain is a properly ground objective for the work, in other words, one ground so that the visual and chemical foci coincide. If they do not do this the picture resulting from a sharp image upon the ground glass—visual focus—is blurred, or if the operator is skilful enough to empirically estimate the chemical focus he will get a sharp picture from an image on the ground glass which is there indistinct—not in visual focus. This result is obtained by overgrinding the lenses of an ordinary objective, giving us a common point or focus for both, such objectives being spoken of as "corrected so as to bring the actinic, chemical and visual rays to a focus," which rays, as already stated, we find only at the violet end of the spectrum.

Another important feature in this work is the power of the objective used. At first thought, one would say that the ability to take a picture of an image magnified by a  $\frac{1}{25}$ -inch homogeneous immersion, must give vastly more satisfactory results than if a  $\frac{3}{4}$ -inch objective were used. In making photomicrographs of such objects as bacteria this is true in a sense, but not altogether. It is only necessary to call to mind the difference in aperture between the two objectives mentioned to get a perfect illustration of the fact that the higher the power the greater will be the diminution of light and the area of the field magnified. As a result, even in photographing such objects as blood-corpuscles, though the size of the individual cells increases with the higher powers, the picture lacks detail and is often hazy and indistinct. This is due to an inability to get sufficient light through the lenses, as well as the tendency of the higher powers to bring out the inequality and defects of the preparation. As a matter of fact very often we can get quite as good, if not better, results with a much lower power by intensifying the light and removing the plate-holder farther from the microscope.

Another important factor in the work of photomicrography is the actual taking of the picture and the plate or paper used in its production. To become an expert one must not only be an experienced photographer, but also have a thorough knowledge of the subject upon which he is working, be it entomology, geology, histology, or what not.

Here, in passing, I might say that Mr. Whittier and myself have been of mutual advantage to each other—he with a most modern and complete apparatus and every facility for general photography, and I with several hundred slides and a recently acquired medical diploma. And we never fought. How could we? He claims to know nothing about histology; I absolutely nothing about photography. Each has been the authority for the other in his individual subject; though I find my pupil has been much more apt in learning histology than his in acquiring a knowledge of photography.

As I have said, a combined knowledge is necessary in this work; for, however expert as a photographer one might be, he must also be able to find the most characteristic field under the microscope and so bring it out in focusing the image that it will appear in the picture. On the other hand, the most profound knowledge of histology would count for *naught* without a like knowledge of the principles and a good experience in the methods of photography. Indeed, it takes weeks of the most careful training before one masters that most difficult part, the relation of time to the exposure, and is able to read in his failures the rules for his success.

The subject of plates, though largely of photographic interest only, is worth mentioning at least. Of the two processes, dry and wet, the former is the one most generally used in all forms of photographic work. The plates, whether glass or paper, are coated with certain preparations called emulsions, which readily decompose in the presence of light, permitting, as a rule, a brief exposure, from 10 to 30 seconds, though not instantaneous results. The accompanying photographs are, however, instantaneous. They are taken by the wet process and the means of illumination was an electric light of Mr. Whittier's own construction. The time of exposure is less than a second, depending simply upon the rapidity with which a mechanical shutter can be opened and closed. This wet process, now little used, has decided advantages in photomicrography. A plain piece of glass is taken, freshly coated with a preparation of collodion, then sensitized by being placed for a few moments in a silver-solution, transferred at once to the plate-holder and used.

The great object to be attained in this work is definition and contrast, that is, strong high lights and deep shadows. This is especially true in lantern-slide work, where the contrast must be so brought out as to show under great magnifications upon the screen. It is here especially that the wet process is of advantage, for while the dry plate gives fair results, the lights and shadows are so blended in it that the picture loses much of its detail. The collodion or wet process gives the high lights and deep shadows, and thus the essential characteristics of the image are preserved in the projection upon the screen.

As we have seen, the photograph is taken from a projected image, its size being limited only by that of the plate or film that we can procure. This feature, as well as the ability to readily enlarge the work, has been utilized in the production of a series of photographs of sufficient size to show details of structure at a considerable distance. The value of these for school-room demonstrations and in illustrating lectures is readily seen. For instance, we all remember the attempts of our professors in histology, pathology, embryology, etc., to show us, by charts and chalk-drawings upon a black-board, the essentials of their subject. We were never quite sure of what we saw, for we beheld in them the characteristics of a man, rather than the reproduction of a microscopic image.

In photomicrography there is perhaps nothing of more value or of more general interest than the lantern-slide.

We are all familiar enough with the principles of amateur photography to know that the ordinary photograph is a print or transfer upon a sensitized plate of the image upon the negative; but to many at least the method of making lantern-slides is supposed to be far different. This, however, is not the case. In the production of this work a simple printing frame is used. In it, film-side up, is placed the negative and upon it, film-side down, a sensitized plate. This is exposed a second or two in diffuse light, the print removed and developed according to the ordinary rules of photography.

These medium-sized photographs (about 7 inches in diameter), showing both normal and pathologic conditions, are probably of the most utility to the general practitioner. They save his time and eyesight, and he is always sure that he has before him an exact reproduction of a microscopic field.

Photomicrography has reached that point where one has only to designate the nature of the work required to be able to obtain it. Thus, for example, we can show photomicrographs of normal kidney, acute, parenchymatous, and interstitial nephritis; normal lung, emphysema, hemorrhagic infarct, broncho-pneumonia and croupous pneumonia, the last showing early and late stages or red and gray hepatization.

To the surgeon, as a record of his work and in illustrating articles for publication, the photomicrograph demands an important place. In fact, in this age of exact science and skepticism of the theories and hypotheses of men, the time will soon come when this work alone will be accepted (when it can be employed) by the profession at large as proof of reported discoveries in medical science.

In conclusion I would say that I have tried, not only to briefly sketch the development of this line of work, but also to call attention to its range and utility, leaving it for your more experienced and fertile minds to judge of its value and predict its future.



## RADIOSCOPY OF THE LUNGS.

## The Danger of Misinterpretation by those who Employ this Method of Diagnosis.

BY ALBERT ABRAMS, A.M., M.D. (Heidelberg),

of San Francisco, Cal

Professor of Pathology in Cooper Medical College.

No ONE who has had much experience with the Röntgen rays in examination of the chest can deny its indubitable advantage as an auxiliary and, in not a few instances, as a corroborative method of diagnosis in affections of the lung. In health the lungs appear in the fluoroscopic picture as light areas. In disease, on the contrary, the lungs are not easily traversed by the rays, and in consequence we find opaque areas, which may indicate a tuberculous patch, a neoplasm, a hemorrhagic infarction, or consolidation from whatever cause. If, for instance, in cases of emphysema, in which the lungs are less dense than normal, or in pneumothorax, the normal brightness of the lungs is accentuated.

It is, however, in connection with pulmonary tuberculosis that the Röntgen rays have achieved their greatest diagnostic triumph. With their aid it is possible to detect pulmonary tuberculosis when no other physical sign of the disease is present. Only an intimate acquaintance with the normal appearance of the lungs will justify the observer in formulating conclusions from his fluoroscopic examination. When we remember that the diagnosis of a tuberculous area by radioscopy alone is based on the appearance of a dark area that is normally bright, we are confronted by certain conditions that appeal to the careful observer. He knows that in health the brightness of the lungs will vary not only in different individuals, but also in the same individual. Obese and muscular individuals show a pulmonary area less bright than those of reverse development. The lungs are brighter during inspiration than expiration. The thickness of the bones constituting the thorax must not be forgotten, nor the dark reflexes cast by the spines of the scapulæ.

There is one condition that demands citation and which is the special object of this communication, and that is *pulmonary atelectasis*. A failure to recognize this fact may be a source of grievous error. I have made reference to this condition in previous papers.<sup>1</sup> The essential facts of these contributions are as follows: (1) There are present over the thorax of apparently normal individuals constant areas of diminished percussion-resonance varying from dulness to flatness; (2) The areas vary in number and situation, as far as the individual is concerned, but in the aggregate they admit of definite localization; (3) I have denominated these

areas of dulness as *atelectatic zones*; (4) repeated forced inspirations will dispel them in children, as well as in adults, although they will reappear (usually after two or three minutes) when tranquil breathing is resumed, and will continue as such until an increased demand is again made on the vital capacity of the lungs; (5) in children, less often in adults, an *anemia* that I have designated as *pulmonary*, is associated with the atelectatic zones, and the specific treatment for *pulmonary anemia* is thorough lung-inflation secured by pulmonary gymnastics; (6) the atelectatic zones bear an almost definite relation to the points of election and paths of distribution of the lesions in chronic pulmonary tuberculosis.

Since my last contribution, I have made blood-counts in a number of individuals with pronounced atelectatic zones, and have found that the loss in red corpuscles is, on an average, about 20%; that coincident with the dissipation of the zones by the pneumatic-cabinet treatment, the hemoglobin and the number of blood-corpuscles rapidly attains the normal percentage. These results tally with the observations of Paul Bert, Waldenburg and others, who demonstrated that whenever the organism is forced to dispose of more oxygen, it produces more oxygen-carriers. Since the advent of the Röntgen rays and their use in the diagnosis of pulmonary affections, I have extended and confirmed my original observations on the subject of pulmonary atelectasis. If individuals in whom atelectatic zones are demonstrable by percussion are subjected to an X-ray examination, it will be found that the zones obstruct the rays, and, in consequence, the fluoroscopic picture will be marked by areas of opacity corresponding to the atelectatic zones. It will be noted furthermore, if the patient is instructed to practise forced breathing, that, in a variable length of time, the opaque areas become bright, only to become opaque again when forced breathing is suspended. It must be remarked, however, that the zones are not always opaque, the shadow thrown on the fluoroscope varying from slight haziness to decided opacity. This is fully in accord with the results yielded by percussion.

In my investigations with the X-rays, I have sought to eliminate the personal equation in every possible way. One method adopted was to examine the patient without any previous physical exploration of the chest; to locate the opaque circumscribed areas and to confirm, later on, the radioscopy results by percussion. Almost invariably the results by both methods of examination were found to coincide. In a recent contribution by Stubbert,<sup>2</sup> the statement is made with reference to examination of the lungs with the Röntgen rays, that "slight haziness indicates the beginning of tuberculous infiltration, and may or may not be accompanied by dulness." This conclusion, which tallies with the views

<sup>1</sup> Report of one hundred cases treated by the Pneumatic Cabinet, *Pacific Medical Journal*, September, 1891. Pulmonary Atelectasis as a Cause of Anemia, *Transactions of the Medical Society of the State of California*, April, 1892. Observations on Pulmonary Atelectasis, *ibid.*, Session of 1894. *Medicine*, December, 1895. *New York Medical Journal*, June 13, 1896.

<sup>2</sup> PHILADELPHIA MEDICAL JOURNAL, March 12, 1898, p. 469.

of other writers, demands revision in accordance with the subject-matter of this contribution.

The following conclusions may be formulated:

1. Atelectatic zones may be demonstrated in a large number of individuals.
2. These zones throw circumscribed shadows on the fluoroscope, which will vary according to the degree and area of the pulmonary atelectasis.
3. The shadows cast by the atelectatic zones can be made to disappear by continuous forced breathing, and they will reappear after a variable period when quiet breathing is resumed.
4. Before deciding whether the shadow cast on the fluoroscope is really due to pulmonary consolidation, the subject should be instructed to make forced inspirations; if the shadow disappears and is supplanted by a bright reflex, it is due to atelectasis; if the shadow persists, pulmonary consolidation may safely be concluded to exist, excluding, of course, other anatomic conditions that would interfere with the transmission of the Röntgen rays to the fluoroscope.
5. Radioscopy of the lungs demonstrates that the opacities on the fluoroscope corresponding to the atelectatic zones greatly exceed the percussional areas of the latter; and, furthermore, that in individuals in whom no zones can be demonstrated, opacities are sometimes present which disappear after forced inspiration.
6. Before and during a radioscopic examination of the lungs, it is always imperative to instruct the patient to practise forced breathing.

## TWO CASES OF BILATERAL PYOSALPINX WITH OVARIAN CYSTS; EXTENSIVE ADHESIONS; CELIOTOMY; RECOVERY.

By J. MURRAY JOHNSON, M.D.,

of Bridgeport, Conn.

Late House Surgeon in St. Mark's Hospital, New York City; Late Resident Gynecologist in the New Yorker Frauenklinik, Former Attending Physician to St. Mark's Day Nursery, New York City, etc.

ONE will often find patients suffering from some pelvic condition, when the only measure of relief that can be offered them is of an operative nature. A number of these will only submit to an operation when it can be done in their own homes. Again, many of these patients live in tenement-houses, which are, as a rule, in a most unsanitary condition. Still, with our present knowledge of aseptic technic, we can operate almost as successfully under such circumstances as in our modernly equipped hospitals. I shall give a brief synopsis of two celiotomies that I performed under these conditions:

**CASE I.**—Miss D., 19 years old, born in the United States. Menstruation first appeared at the age of 14, and was perfectly normal in every respect, until two years ago, when she contracted a violent gonorrhea, which apparently extended rapidly up the uterine canal and into the tubes, resulting in large bilateral pyosalpinx. From this time the patient suffered greatly from pelvic pain, which was much increased during her menstrual periods. She also had sev-

eral attacks of pelvic peritonitis, and her general health was bad.

Examination revealed bilateral pyosalpinx, with an ovarian cyst on the right side and an enlarged left ovary. The patient was carefully prepared for both vaginal and abdominal operation, and anesthetized; and the uterus was thoroughly curetted. She was then put in position for an abdominal section. The abdomen was again carefully prepared and surrounded with sterilized towels. An incision was made in the median line, and the peritoneal cavity was opened, when I at once realized that the condition was more serious than was anticipated. Both tubes were involved, the right tube was densely adherent to the cyst, the broad ligament, the posterior abdominal wall, and the cecum; and the appendix to the cyst. On the left side the tube was adherent to the bladder, the rectum, the broad ligament, the posterior abdominal wall, and the descending colon. I separated the appendix from the cyst, and also the adhesions that involved the cyst and the intestines. The tube being so densely adherent to the broad ligament, it was necessary to remove a portion of it with the tube. On the left side I freed the ovary, and then carefully separated the tube from the intestine and removed it intact. The ovary was so hopelessly diseased that it was necessary to remove it.

There was considerable oozing resulting from the separation of the adhesions, which was controlled with gauze-compresses wrung out in hot saline solution. The peritoneum, muscle, fascia, and skin were closed separately, no drainage being used. The highest temperature was 100° F. Primary union took place and recovery ensued. The patient is entirely free from pain.

**CASE II.**—Miss B., aged 27, was born in the United States. Menstruation had first appeared at the age of 14, and was of four days' duration, painless, and normal in quantity. At the age of 20, the girl had gonorrhea, and was treated by a physician. A year later she had a fresh attack, which extended up the uterine canal into the tubes. At that time she developed pelvic peritonitis, and had repeated exacerbations afterward, and up to the time of the operation was in poor health. Having been carefully prepared the patient was anesthetized and curetted. She was then placed in position for abdominal section. An incision was made in the median line and the peritoneal cavity was first opened at the upper angle of the incision, as in some cases of pus-tubes, when there have been repeated attacks of peritonitis, one is liable to find the intestines adherent to the anterior abdominal wall. By first opening the peritoneal cavity at the upper end of the incision cutting into the bowels will be avoided. It was wise to have done so in this instance, for the intestine was strongly adherent to the abdominal wall. I first separated the gut from the parietal peritoneum.

In this case there was a cyst in each ovary, a large pus-tube on both sides, and the appendix was adherent to the tube on the right side. Everything was densely bound down by adhesions, which were separated with great difficulty. The diseased organs were then removed. There was considerable oozing, which was controlled by hot gauze-compresses. The abdomen was closed in layers and no drainage was used. Recovery followed.

Both patients were referred to me for operation by Dr. F. B. Downs, of this city, who rendered valuable assistance during the operation.

It is wise in most cases of celiotomy to move the bowels early. I generally begin at the end of 24 hours with small doses of calomel, say  $\frac{1}{10}$  gr. every 15 minutes for 12 doses; to be followed, if necessary, by a half-bottle of effervescing magnesium citrate; if this fails, a high ox-gall enema is given.

I do not apply much dressing to the wound and invariably use an ice-bag or a coil. If there be any shock it is advisable to wait until the patient recovers from it before applying the ice-bag; the constant application of the ice-bag seems to destroy or, at any rate, to retard the growth of the pus-producing organisms.



In both cases I thought it good surgery to leave the uterus, as it was quite movable, after being freed from its adhesions to the diseased appendages and the pelvic floor. In my opinion it is not a good plan to use drainage in celiotomy-cases unless there be some special reason for so doing.

### HOLOCAIN. A NEW LOCAL ANESTHETIC, WITH A REPORT ON ITS USE IN EYE-SURGERY.

By E. C. ELLETT, M.D.,

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HOLOCAIN was discovered by Tauber, instructor in chemistry in the Polytechnic Institute in Berlin. It is not an alkaloid, like cocain, but a synthetic preparation, with a complex formula and a compound name. For our purposes I need only say that it is a derivative of parphenetidin, and akin, therefore, to phenacetin and lactophenin. It has been quite largely used in Germany as an anesthetic on mucous membranes that can be reached by topical application, and in this country it has been especially studied by Hasket Derby of Boston, Würdemann and Black of Milwaukee, and Randolph of Johns Hopkins Hospital. The last has studied it carefully from a bacteriologic point of view.

The following facts have been demonstrated and are of interest: Holocain is sparingly soluble in cold water, but freely so in hot. I prepare it by agitation with hot water in a porcelain vessel, and pour it when cold into a bottle thoroughly cleansed with liquor potassæ, and then with distilled water. It should not be prepared in glass vessels or stirred with a glass rod, for the alkali of the glass is dissolved out and precipitates the drug. The standard solution is 1% strength, and this solution is clear, stable and antiseptic. Randolph has demonstrated its inhibitive influence on bacterial growth, and pus-organisms are killed when exposed to the solution for a certain length of time (less than 24 hours). It is a protoplasmic poison, arresting ameboid movement, putrefaction and fermentation. If the solution becomes cloudy, filtering renders it clear, and boiling does not interfere with its activity. As it is itself antiseptic, it is not necessary to add an antiseptic or to sterilize it before using. When dropped into the eye it causes smarting, about like that caused by a 5% solution of cocain. In about one minute sufficient anesthesia of the surface is produced to permit the removal of a foreign body from the cornea. For operations, repeated instillations are necessary.

The effect of holocain is simply that of producing anesthesia. It does not affect the pupil or the accommodation. It does not contract the bloodvessels, hence, it penetrates better, and is more readily absorbed than cocain. The anesthesia of deep structures makes it the

best anesthetic for iridectomy, as it permits the iris to be cut with absolutely no pain. It permits freer bleeding than cocain does. No toxic effects have been observed from dropping it into the eye, but hypodermic injections of the solution are said to cause clonic convulsions. It has no effect on intraocular tension, and there is no tendency to cause desiccation and exfoliation of the corneal epithelium. The anesthesia lasts about 20 minutes, but may, by repeated instillations, be prolonged indefinitely with perfect safety. Holocain has more effect on inflamed surfaces than cocain. It may safely be put in the patient's hands for use in painful affections of the cornea.

I have used the drug somewhat extensively in my ophthalmic work during the past winter, and have performed the following operations under its influence: 11 cataract-extractions, 11 iridectomies, 2 paracentesides of the cornea, 5 capsulotomies, 1 excision of prolapsed iris, 3 advancements of ocular muscles; several tenotomies and pterygium-operations, Knapp's rolling operation for trachoma, cureting corneal ulcers, opening chalazia, and a good many foreign bodies in the cornea and conjunctiva. I have also once broken up recent adhesions between the lid of the ball (symblepharon) and once attempted to extract a foreign body from the ball.

With two exceptions, the anesthesia was perfect. In one of the cataract-operations I used an old solution, and was unable to secure profound anesthesia. I subsequently operated on this patient's other eye under holocain with complete success. The other case was one of iridectomy for chronic iritis. In this case I do not think any local anesthetic would have produced satisfactory anesthesia.

From the experience that these cases afford, I am well pleased with the action of holocain as a local anesthetic in eye-surgery, and I beg to repeat that the profound insensibility of the iris is especially gratifying. In all my operations the wounds have healed well. My instruments are sterilized by heat and then by alcohol and latterly formol, and the field of operation is, as far as is practicable with mucous surfaces, rendered sterile.

I have not used holocain in the surgery of the nose and throat.

### A CASE OF CHOREA OF THE LARYNX.<sup>1</sup>

By P. S. DONNELLAN, M.D.,

of Philadelphia.

Laryngologist to St. Mary's and St. Agnes' Hospitals.

A CASE of chorea of the larynx, without associated symptoms of the affection in any other part of the body, came under my care recently, and seemed to me to possess sufficient interest to warrant my presenting a brief report of it.

<sup>1</sup> Read before the Section on Otology and Laryngology of the College of Physicians, October 4, 1898.

The patient—a boy, 10 years of age, first seen June 20th, —was the third of six children of healthy parents and grandparents, in whom no trace of functional or organic nervous disease could be found. He had always been in good health except for the minor ailments of infancy and childhood, which were slight in character and from which he recovered perfectly. Three weeks prior to the time when I first saw him, he began, without apparent cause, to have a cough, which, his mother stated, was constant during the time he was awake, but did not occur during sleep. She also stated that so far as she knew, the boy had not had a fright, nor was the cough the result of imitating another similarly affected. On examination, I found the patient to be a healthy, well-nourished boy, with good digestion and normal appetite. He could not be described as neurotic or anemic in appearance. His chest was found to be of normal shape; there was no dullness on percussion; the vesicular murmur was clear; and no rales or friction sounds were heard. The area of cardiac dullness was normal; and there were no valvular or hemic murmurs present. The urine was clear, acid, with a specific gravity of 1016, and did not contain any albumin or sugar. In order to satisfy myself as to the absence of any source of reflex irritation I examined his prepuce and found it short, non-adherent, and easily retracted. His teeth were sound, and not crowded, his tongue clean, with a frenum of normal length; and his intestinal canal was free from worms.

Before proceeding to the examination of his naso-pharynx and larynx, I studied the character of the cough, which consisted of a series of expiratory "barks" like those of a small dog. The cough was rhythmic in character, averaging about 30 to the minute; it was entirely involuntary, and was not accompanied by dyspnea or expectoration. It persisted during attempts at speech, but, as before mentioned, ceased during sleep. Examination of the naso-pharynx showed the septum to be straight, and the turbinates normal in size and appearance; the absence of adenoids was noted. The uvula presented no abnormality; the tonsils were not enlarged, and there were no hypertrophies at the base of the tongue.

The epiglottis and arytenoids were slightly hyperemic. The vocal bands were normal in every way. During inspiration, they had the characteristic appearance seen in a healthy individual. In expiration, when the boy barked, their free edges were closely approximated, as if in position to produce a high note; but when the bark ceased, they immediately relaxed and inspiration succeeded uninterruptedly. The application of a 4% solution of cocaine to the pharynx and larynx had no apparent influence on the paroxysmal cough.

The patient was given ascending doses of Fowler's solution of arsenic, beginning with three drops three times a day, and increasing a drop at each dose. No other treatment was prescribed. The boy's mother reported a week later that for two days previously the barking cough had become much less frequent, and occurred only about four times in a minute. He was ordered to continue the Fowler's solution in ten-drop doses three times a day. On July 5th I saw him again and found that the paroxysms of cough had entirely ceased for three days. He was instructed to reduce the Fowler's solution to three-drop doses and to report if the cough returned. On my return to the city in September, I found that the patient had not had the slightest symptom of cough since I last saw him two months previously, and that his general health had greatly improved. No further treatment was necessary.

Laryngologists have given the name laryngeal chorea to cases similar to the one I have described. Thus, Porcher, in Burnett's *System*, says that the difference between the spasm in chorea of the larynx and ordinary spasm is that in ordinary spasm the closure of the glottis occurs in the inspiratory effort, preventing the entrance of air into the larynx, whereas in choreic spasm the closure takes place in expiratory effort and is therefore phonal in character. He states also that the cough of chorea of the larynx resembles the bark of a dog so closely that the children suffering from it are known as "barking" children. Bosworth draws atten-

tion to the fact that the cough of chorea of the larynx occurs only during the waking hours, being absent during sleep. He notes also that the tone of the voice is not affected and that conversation between seizures is easily carried on. Lennox Browne thinks that chorea of the larynx bears some analogy to the condition known as writer's cramp, and that it represents fatigue and spasm of one set of muscles, and overuse of another. The neurologists are unwilling to admit the existence of a separate disease labeled chorea of the larynx and consider the term misapplied. Gowers prefers to call such cases as I have described "habit-spasm," while C. L. Dana designates them "spasmodic tic." In my case, the previous history, the absence of hysterical symptoms, the character of the cough and of the laryngoscopic appearances, the absence of abnormal physical sounds in the chest and the prompt response to treatment with Fowler's solution, influenced me in calling it one of chorea of the larynx.

**The Surgery of Severed Tendons in Infected Regions.**—In discussing this subject, F. B. Fite (*Railway Surgeon*, November 1, 1898,) lays particular emphasis on the necessity for free drainage, on suturing the severed tendons and the use of oily dressings. In dealing with infected tendons we are at a disadvantage because no tissues can be spared and infected parts can not be cut away. Drainage is quite as important as antiseptics, for if the least infection lurks behind, pus may form and is prone to travel along the sheaths of the tendons and do great damage if not evacuated.

**Delivery of a Patient with Pendulous Abdomen.**—J. W. Hyde (*Brooklyn Med. Jour.*, November, 1898) reports the case of a much weakened, emaciated, anemic woman in her third pregnancy, in which, after the patient had been in labor for 2½ hours, the abdominal contents seemed to be contained in a long abdominal pouch resting on the thighs, with its most dependent portion on a level with the junction of their middle and lower thirds. The walls of the pouch were so attenuated that a hand or foot could be easily differentiated. Examination through the vagina showed a practically empty pelvis. After the administration of stimulants, the patient was chloroformed, and the whole pouch and its contents were turned back on the abdomen, where they were held; the child's head was then easily forced into the superior strait. The os was found two-thirds dilated, and the membranes unruptured. The liquor amnii was discharged, forceps applied and rapid extraction of the child accomplished. The uterus contracted well, and with careful abdominal bandaging and tonic treatment no untoward result followed.

**Diverticulum and Calculus of the Urethra.**—V. Lieblein (*Prager med. Wochenschrift*, October 6, 1898) reports the case of a man, 43 years old, who presented two fistulous openings near the middle of the anterior surface of the scrotum. The patient had been struck accidentally in this region a year before by a piece of iron, and an inflammatory swelling the size of a hazelnut had resulted, from which fourteen days later there was a discharge of pus. After this the wound healed, but again broke open on several occasions. On incision a cavity filled with pus was opened, in which was found a stone of light-brown color, about the size of a walnut. A catheter was fastened into the bladder and the diverticulum was packed with iodoform-gauze. The progress of the case after operation was uneventful, and at the end of a month the cavity was clean and covered with healthy granulations. A second operation was then undertaken, the wall of the diverticulum being dissected away, the urethra closed with fine silk Lembert sutures, and the wound united by a continuous suture. A catheter, changed daily, was kept in the bladder for three weeks. The patient left the hospital, completely cured, about six weeks after the second operation.



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**Notice to All Medical Journals.**—For reasons set forth in another column, the PHILADELPHIA MEDICAL JOURNAL will, on and after December 31st, discontinue all exchanges with other journals. Publishers and mailing clerks will kindly bear this in mind, and from the date mentioned cease to mail us their journals on account of exchange. The business manager of the JOURNAL will soon remit the regular subscription-price for the journals desired by us for 1899.

**Suggestions to Writers: No. 15. Carcinoma or Sarcoma—not Cancer.**—The dictionaries define “cancer” as (1) a crustacean, (2) a constellation and a sign of the zodiac, (3) a malignant tumor, (4) a plant. At a time when the several forms of malignant neoplasm were undifferentiable there was perhaps some justification for the use of a single word to comprehend them all; but, as, with the development of histologic methods and knowledge, it became possible to discriminate a number of distinct varieties and give them appropriate names, the usefulness of such a term was largely lost. On this account we think it better, on grounds of precision and clearness, to discard the word “cancer” and use in its stead the name of the specific form of malignant disease under consideration, *e.g.*, carcinoma or sarcoma.

**Hospitals for the Insane.**—Although the word asylum means really a haven of safety, or place of refuge, its relation with insanity in the past has given it an opprobrium that even time, with its beneficent influences, has failed to remove; and as we have learned that lunatics are not culprits that must be imprisoned, but sufferers from disease and amenable to treatment and cure, it would be a good thing if the old designation were dropped and institutions for the care of the insane were universally and invariably called hospitals instead of asylums. The plea may appear a trivial and a sentimental one, but it may make a difference in the result whether the patient be moved by the hope of recovery in a healing institution or the despair of incarceration in a detaining one; and the friends of the unfortunates may be taught that insanity is not a stain to be concealed, but a disease concerning which much has been learned and much is yet to learn; and that the earlier treatment is instituted the more favorable is the prognosis. It were often better if hospitals for the

insane, as is growing the custom increasingly with hospitals for the treatment of other diseases, were utilized as a primary rather than as a final resource.

**So-called Idiopathic Diseases.**—Occasionally we see references to idiopathic disorders of one sort or another, as idiopathic epilepsy, idiopathic anemia, idiopathic erysipelas, idiopathic tetanus, idiopathic intermittent fever. Sometimes it is obviously meant that the disorder is primary or protopathic, as opposed to secondary or deuteropathic; at other times it would appear merely that the mode of origin, the etiology of the affection, has escaped detection. It is, however, not always an easy matter to decide that a disease is primary, and it may even be fairly questioned whether there is such a thing as primary disease. Disease must, in the light of modern knowledge, be looked upon as the reaction between the body and certain irritants, and its existence implies necessarily disordered function and altered structure, though either or both escape clinical detection. Different irritants give rise to different reactions, and the same irritant may not always be capable of inducing any reaction. Certain conditions of the body will at times predispose to disease, and certain other conditions will correspondingly confer immunity or resistance. It must therefore be obvious that in speaking of primary disease we assume knowledge of which we are not possessed, and in speaking of idiopathic disease we conceal ourselves behind an ignorance that we are unwilling to confess.

**Relative Deaths from Disease in the Two American Wars.**—While the statisticians are trying to settle the question, how far our nation has advanced in the art of war in the last 35 years, they may find some suggestive figures in a comparison of the total deaths in battle and in camp respectively during certain parallel periods in the Civil War and the war with Spain. In the latter war we had only one trial at arms which was worthy the name. That was the fighting on the way to Santiago, at El Caney and San Juan, July 1-3, 1898, when, of about 16,000 men engaged at various points, 239 were killed, or nearly 1½%. At the much more sanguinary battle of Gettysburg, fought July 1-3, 1863, of some 80,000 men engaged, 2,834 were killed, or more than 3½%. Measured by this standard alone, our progress would appear to have been rapid.

On the other hand, the medical records for the five months of the Spanish war, May to September, 1898, have their nearest parallel in the corresponding months of 1861, as the staff in both instances found itself plunged into war with almost no preparation, and compelled to recruit its personnel and provide and distribute its supplies in extraordinary haste. The following table tells its own story:

Months.	Strength of Army, 1861.	Percentage of Deaths from Disease, 1861.	Strength of Army, 1898.	Percentage of Deaths from Disease, 1898.
May .....	16,161	.00118	151,685	.00046
June .....	65,950	.00148	159,793	.00070
July .....	69,118	.00281	203,250	.00215
August .....	109,054	.00303	190,347	.00408
September .....	162,217	.00270	130,763	.00245
Average .....	84,700	.00224	167,168	.00197

This shows a reduction in deaths from disease from a trifle above one-fifth of one per cent. to a trifle below one-fifth of one per cent., not a very noteworthy difference. Plainly, in those branches of the art of war which deal with the care of troops in the field we have much more to learn than in the strategical branches. It is a matter of pride with an officer of the line to accomplish his ends without letting his men fall into a hostile ambush. It should be equally the pride of the staff to shield the helpless soldiery in the camps and on the transports from the foes which lurk there unseen and too often unsuspected.

**The "Contagiousness" of Leprosy.**—According to the newspapers a case of supposed leprosy has been captured in Philadelphia. The victim, or the culprit, is described as a Russian sailor, 25 years old, born at Arensburg, on the Island of Oesel, in the Baltic Sea, where leprosy is said to prevail. If bacteriologic examination, by disclosing the presence of the lepra-bacillus, shall demonstrate the disease to be really leprosy, it is proposed to condemn the unfortunate man to confinement for the remainder of his life in a building at the Municipal Hospital, together with another leper already there. It seems scarcely possible that such a condition of affairs could exist, and such a course of action be tolerated, and both be apparently sanctioned at the close of this enlightened nineteenth century. There is no more reason in thus restraining and depriving of his liberty the subject of leprosy than there would be for similarly treating cases of syphilis or gonorrhea or tuberculosis or any other of the transmissible diseases. In fact, there would be more logic and more safety in thus rigidly segregating cases of tuberculosis, especially of the pulmonary form, than cases of leprosy. The leper spreads his disease only by more or less intimate contact with others; while the tuberculous subject can, through indiscriminate ex-

pectoration, cause infection of numberless innocent victims; and careless disposition of the discharges from a case of typhoid fever, to take another example, is the most common cause for the spread of this disease.

Leprosy is generally admitted to be an infectious disease, that is dependent upon a cause capable of indefinite multiplication and propagation, viz., upon the activity of the microorganism discovered by Hansen. It is not contagious in the current sense of the word, as tuberculosis and as syphilis is not contagious, although all are etymologically so—that is, transmissible through contact; and the victims of all should receive the same sort of disposition. We have not, however, yet reached a state in which infectious disease, and especially chronic disease, can be viewed as a crime, and until we have, we have no right to virtually imprison those who suffer from such disease. We may provide places for them where it shall be advisable for them to go, but we cannot, without abuse of authority, make them go. We believe heartily in the intelligent segregation of individuals suffering from infectious disease, but we wish to enter protest against the singling out of one set and treating them differently with regard to their liberties than others. For the leper it may be said at least that he is without danger to those who do not come in intimate contact with him; but he is not more dangerous in this respect than the syphilitic, and he is less so than the tuberculous subject. The problem of the proper disposition of those suffering from transmissible diseases, acute and chronic, is one that will ever demand the most earnest and careful consideration, in order on the one hand to protect the well from infection and on the other hand to conserve the welfare and the interests of the sick.

**Once More the Inflatable Rubber-bulb in Intestinal Surgery.**—In last week's issue we abstracted an article by Frederick Treves, of London, in which he says:

"To cope with these difficulties there has arisen the remarkable host of plates, discs, tubes, cylinders, buttons, and bobbins which has so disturbed the peace of the surgeon who hungers after the 'last new thing.' Not a few of these appliances alternate between oblivion and rediscovery, to the great hindrance of progress. For example, in 1882 I described a method of suturing bowel over a collapsible india-rubber bag which was sausage-shaped and was introduced into the ends of the gut to be united. It could be blown out in the form of a firm cushion and before the last stitches were introduced could be emptied and withdrawn. A little experience showed me that my bag was useless and I promptly discarded it. Now, after a period of 16 years, an American surgeon, Dr. W. S. Halsted, rediscovers my useless bag and reproduces it with singular exactness. He believes this old-new procedure to be 'better than any method hitherto devised,' and so we step back 16 years."

The following is an abstract from Treves' article on Resection of Portions of Intestine (*Medico-Chirurgical Transactions*, Vol. lxxvi), which he read December 12, 1892 [not 1882], and in which he describes his inflatable rubber cylinder:



"I had a thin rubber bag made about 3 in. in length of sausage shape, and that could be distended by air to a large size through a tube inserted about the middle of the long axis. Having blown out this bag till it was about the size of the divided bowel, I inserted one end into the lower piece of the intestine and the other end into the upper piece. The tube that supplied it with air would thus occupy the suture line. After being inserted the bag can be distended to any size and can thus quite overcome any inequalities in caliber that may exist between the two pieces of bowel. It moreover forms a firm support in the interior of the gut over which the sutures can be most readily applied. The sutures having been applied, the bag is exhausted of air and is withdrawn from the bowel, and so thin is its structure that the collapsed bag can be drawn through a hole with the circumference of a No. 13 catheter."

The following are the references in the PHILADELPHIA MEDICAL JOURNAL bearing on this subject:

Vol. 1, No. 2. Original article by W. S. Halsted, "Inflated Rubber Cylinders for Circular Suture of the Intestine."

Vol. 1, No. 6. Communication from Dr. A. J. Downes claiming priority over Halsted.

Vol. 1, No. 9. Editorial. Independent Discoverers of Inflated Rubber Cylinders for Intestinal Sutures.

Vol. 1, No. 14. Original article by A. J. Downes, "Intestinal Anastomosis by Means of Removable Rubber-bulbs."

Besides those mentioned we have also learned of others who have made use of the device in complete ignorance of what others had suggested. Doubtless some scornful man will yet rise up and prove that he preceded Treves and all the rest.

We again bring the matter up, not so much for its direct interest—the device of Dr. Laplace having, we believe, largely made the rubber-bag unnecessary—but simply to illustrate "the way not to do it." The hauteur and sneers in Mr. Treves' words are as absurd as they are unnecessary. In this respect Dr. Halsted could, if he found a willing pupil, teach our honored English confrère the dignity and duty of graciousness, magnanimity, and courtesy—things worth more than all the instruments ever invented in surgery.

**Uniform Mortality Statistics for the World.**—The American Public Health Association, at its meeting in Ottawa, Canada, in September last, recommended the adoption of the Bertillon system of classification of causes of death. The object of the Association was to secure a uniform system of classification for the three countries—the United States, Canada, and Mexico—which are represented in its membership. This body comprises representatives from the boards of health and registration offices of these three countries; hence its recommendations are likely to be effective. A commission of three members for each country was also appointed, with the object of securing a decennial revision of the Bertillon system in order to keep it abreast of the advances of medical science. We learn from the Michigan *Monthly Bulletin of Vital Statistics* that the American commission has appointed Dr. Cressy L. Wilbur, of Detroit, its secretary.

The object aimed at seems to us to be altogether desirable, and we trust that the influence and authority of the American Public Health Association will be sufficient to secure the adoption of some such plan. Although, as the *Bulletin* says, this is a consummation devoutly wished by statisticians and sanitarians, it has not been an easy one to secure, because of both national pride and the difficulties in the way of making changes in systems long in use in various countries. In America, with our numerous State and municipal organizations, each probably following its own plan, the difficulty, we imagine, will not be slight; but when we consider what confusion and lack of scientific method must prevail, we feel all the more keenly the importance of a uniform and scientific method. The same need, of course, must exist among the various nations of the world. Vital statistics can only be thoroughly available for practical purposes when they are compiled not only intelligently, but in accordance with some settled and uniform plan. This is especially true of mortality statistics, for these require some scientific knowledge of disease, and may be totally misleading if gathered by the haphazard methods, and with the arbitrary nomenclature, which we know so well.

The Bertillon system embodies an attempt to conform mortality statistics to the requirements and methods of scientific medicine. Its fault—if it be a fault—seems to be that it presupposes a knowledge of pathology and an agreement about nosology which we fear will not always be found in all the persons who have to make the first return of a death. Still, without some such uniform and scientific method, reliable statistics for the whole world can never be obtained. This system has the great advantage of being educational; it will oblige careless and ignorant observers to attempt, at least, to think and form a rational diagnosis when they make a return of a death. Here, at the very beginning, is where mortality statistics are weak; they depend upon the diagnostic acumen of all sorts and conditions of practitioners. The Bertillon or some similar and equally good system would act as a sort of guide-book for the halting diagnostician through the mazes of pathology.

As for this particular system itself, we have not had an opportunity to examine it with sufficient care to pass judgment. We accept the endorsement, however, of such a capable body as the American Public Health Association. The first revision of the Bertillon system is to be completed and announced at the International Congress of Hygiene and Demography, at Paris in 1900—at which time and place, we trust, a uniform plan of mortality statistics can be inaugurated for the world.

**The Pathology of the Gasserian Ganglion.**—A paper of much interest and value has been contributed on this subject by Dr. William G. Spiller, of Philadel-

phia. It is written in association with Professor Keen, who reports a series of cases of removal of the ganglion for tic douloureux. The excised tissue was examined microscopically by Dr. Spiller. The joint paper of these two authors forms part of the splendid commemorative volumes recently published in honor of Professor Durante, of Rome.

Dr. Spiller examined the specimens from seven of Dr. Keen's cases. These specimens had all been removed by surgical operation, and had all, therefore, been subjected to the rather rough usage which is inseparable from this particular operation. In all but one of these cases, one or more branches of the fifth nerve had been excised in prior operations. These points are of first importance in a critical examination of the report.

Dr. Spiller's findings, in brief, were evidences of neuritis and degeneration in the branches of the fifth nerve, and, in most cases, alterations in the bodies of the neurons in the Gasserian ganglion itself, with increase of connective tissue and thickening of the walls of the vessels even to the extent, in some cases, of obliteration of the lumen. The significance of these changes, as found by such a competent observer, may now fairly be discussed by all neuropathologists, among whom opinions will possibly vary. Dr. Spiller himself is cautious and conservative, and does not commit himself unreservedly to the view either that the Gasserian ganglion is the primary, or that it is the secondary, seat of the disease. In the only one case in which the sensory root was examined, no alterations were found in it.

Our opinion, from reading Dr. Spiller's able report, is that a case is not satisfactorily made out for the peripheral origin of tic douloureux, although, it must be acknowledged, there are some difficulties in the way of accepting the theory of its central origin. The clinical evidence is strongly in favor of the central, or ganglionic origin of the disease, and this evidence is not materially traversed by the microscopic research. The gross lesions of neuritis and degeneration of the nerve-trunks may readily be accounted for by the preceding surgical operations—a fact which is strikingly emphasized by the absence of such changes in the only one case in which no such precedent operation had been done.

The nerve-fibers in the peripheral branches of the fifth (as in every sensory) nerve are not true axis-cylinders but dendrites. These are essentially the receptive organs of the neurons, and when they are cut off it is quite conceivable that the neuron itself would experience an anesthetic influence that would tend to deaden its morbid irritability. It is well known that the stumps of such excised dendrites will undergo degeneration, even though still in connection with the cell-bodies. Hence their total disintegration years after such an operation should not be accepted as evidence of an ascending neuritis that was the original cause of

the tic douloureux. Such an inference is certainly not warrantable.

Again, the clinical evidence is strongly against a destructive peripheral neuritis in tic douloureux. The fact alone that tactile anesthesia is rarely, if ever, seen in these cases is sufficient proof of this. An additional proof is furnished by Dr. Spiller in the exemption of the sensory root of the nerve. Surely, if the neurons were the seat of destructive inflammation, it is not probable that the true axis-cylinders contained in this sensory root would escape. They would inevitably degenerate with the rest of the neuron. An additional proof that the disease-process is not an active destructive one is found in the fact that trophic changes do not occur. Ophthalmia and herpes are practically unknown in tic douloureux.

These facts suggest that the process in tic douloureux is an irritative or nutritive one not advancing to destructive inflammation. Otherwise there would be tactile anesthesia and degeneration of the sensory root with trophic changes. It is well known that a sensory neuron can be so modified as to transmit the most painful sensations, and yet not be impaired in its ability to transmit simple tactile impressions. When its nerve-fibers are broken, as described by Dr. Spiller, it will transmit neither.

Clinically, the fact that the excision of a painful branch of the fifth nerve, rarely if ever radically cures tic douloureux, but that the disease soon steps across, as it were, to another branch, is strongly in favor of its primary seat in the ganglion. This transmission from one branch to the other could occur by no other route—unless by the bloodvessels. A perfect analogy for a slowly progressive nutritive disease going from one cell-body to another is found in the motor ganglia of the anterior horns in progressive muscular atrophy. Such a process is conceivable in the Gasserian ganglion.

We regard the changes in the bloodvessels in the ganglion, as reported by Dr. Spiller, as of great interest. They may be significant of the essential nature of the disease—which may arise, as we have already intimated, in a vicious nutritive process, and this may start in the vessels.

As for the gross lesions, found and so ably described and depicted by Dr. Spiller, rare and interesting as they are, we cannot be sure that they are not to some extent the result of the surgical procedures to which the nerve-trunks and the ganglia had been subjected. Both Dr. Keen and himself, however, are entitled to great credit for having advanced this obscure subject to a point where further observation and criticism may avail to bring about a satisfactory solution.

**The Teaching of Neurology in the Medical Schools.**—The science of neurology has generally come to be regarded as a specialty, although in rather a different and broader sense than many of the other special-



ties. Some one has aptly said of obstetrics that it is the specialty of the general practitioner; so of neurology (or, more properly, neuropathology), it is a specialty that no practitioner can afford to be without. Of recent years no branch of general medicine has undergone so many changes, and made so many demands for special study and skill in those who aspire to lead in it, and especially to teach it, as neurology. New ideas in anatomy and physiology, new methods of histologic research, new modes of clinical investigation, new plans of treatment, and new perceptions of the significance of nervous diseases in both medical and legal practice, have all marked the development of neurology along lines that indicate it to be one of the broadest and farthest reaching of the truly philosophic fields of medicine.

It would seem to follow from all this that the methods of teaching neurology in our medical schools need the infusion of much new energy, and the stimulation of much original knowledge, to enable them to keep up with the advances of this specialty. In some of the schools this need has evidently been recognized, and efforts have been made to place the neurologic department on a level where it belongs; but in many schools no adequate attempt has ever been made to give to neurologic science the systematic and detailed cultivation that the subject imperatively demands. To do this, we understand full well, requires competent teachers, as well as adequate hospital-wards, and clinical and pathologic laboratories; and these are not, and never have been, a part of the equipment.

As the case stands at present in some (but not all) of the schools, neurology is taught by the professor of practice as a part of his didactic course. That is, the professor reads off every winter a few conventional chapters on nervous diseases. These lectures are not founded on original knowledge or research, because, as a rule, the occupant of the chair of practice is not a specialist in nervous diseases, and outside of his chair has but a limited claim to be recognized as a neurologist. We suppose it will not be gainsaid that the contributions to neurology made to-day in America by the occupants of the chairs of practice in our numerous medical colleges are, as a rule, of small extent and of even smaller value. The very few notable exceptions only test the rule. This is the more remarkable inasmuch as nothing in law or custom forbids the professor of practice to be a neurologist if he would; hence the only inference is, that he either does not care for neurology or does not feel himself to be thoroughly qualified for neurologic work except in a didactic chair. The value of such perfunctory work as a factor in education can be readily appreciated.

As a step in advance some of the colleges have established a clinical professorship of nervous diseases. In cases in which this chair is properly filled, equipped, and supported, it is doubtless a most efficient means for

teaching neurology; but the fact cannot be denied that in some colleges (but not in all) this chair is given such a secondary rank, and its occupant devotes so little time and original research to its duties, that it falls far short of being an important or successful factor in education. A chair which allows its occupant only one lecture a week, on any clinical subject that a day-dispensary supplies him with at haphazard, and is not supported by systematic bedside instruction and laboratory work, is not a successful factor in education. Such a course is lacking in both thoroughness and system, and fails absolutely to train students in the intricacies of neurologic science.

We think it does not need to be demonstrated that any plan that separates the didactic from the clinical teaching in neurology is a vicious one; and when this plan, moreover, is not supplemented with bedside and laboratory instruction, that it is not worthy of the name and fame of any great medical school. Finally, when this plan takes no account of the minute anatomy and physiology of the nervous system, but leaves these to be picked up as best a student may, it may be literally said to have no legs to stand on. For how, let us ask, can a student learn cerebral localization, or the course of tracts in the spinal cord, or the intricate anatomy of the neurons, and all the modifications of these by disease and injury, if he has no opportunity save that given him from a seat in an amphitheater? It is a well-known fact to most clinical neurologists in our large hospitals, that many of the internes, when they first come from the medical school, are lamentably deficient in the very elements of neurology, and cannot differentiate a case of tabes from one of multiple neuritis, or tell the difference between a neuron and a scavenger cell of Deiters. These men are often well-grounded in diseases of the lungs, heart, liver, kidneys, and in general internal pathology, but the nervous system is a *terra incognita* to them.

A comprehensive plan for a neurologic department in a medical school could easily be formulated on paper. The practical difficulties, we realize, are not to be ignored—especially the need of a plant and of money to support it. But all departments have these same needs, and if the difficulties can be met for the others, they can be met also for neurology. The first and imperative need, we say, is to elevate the chair of neurology to the level of other professorial chairs, and not to separate the didactic and the clinical teaching. Again, the chair, or chairs, should be filled by competent neurologists, and not by general clinicians or others. Finally, hospital and laboratory facilities should be liberally supplied. In a great city, like Philadelphia, the richest clinical fields are to-day not fully utilized, because students are forced to sit on benches and listen to inadequate lectures when they might be enjoying the untold advantages of great hospitals and well-equipped laboratories. If America is to keep pace with

the advances made in foreign countries in neurology, her medical schools must abolish or modify their antiquated systems. If they do not, neurology must advance in the future, as it often has in the past, without the patronage of the schools.

#### Editor and Reader, No. 5. Business Principles.

There are two ways of conducting a business enterprise. The first is the way of cunning unscrupulousness, consisting essentially in reliance upon sharpness of the seller and dullness of the buyer. Those who carry on their business by this method have, as sellers, different prices according to the ignorance and deceivability of the people to whom they offer goods, the chief aim being to cheapen the quality of the product while preserving the appearance of not doing so. Whence arises shoddy, marble dust, and a hundred devices to deceive the unwary and ignorant. The second way of doing business is briefly that of honesty—dealing with all alike in honor and integrity. Now medical journals viewed simply as business enterprises may also be described as either shoddy or honest. The manner in which the distinction appears commercially is, first as to the treatment of the subscribers, and second as to the treatment of the advertisers. The open secret of all journalism, whether lay or professional, is that no journal can live by its subscription-receipts alone, and that according to the numbers of its subscribers will be the amount of its advertising receipts. Hence to show a big subscription-list, it is well known that medical journals will keep the list swollen by carrying large numbers of non-paying subscribers. This is plainly unjust to those who do actually pay their subscriptions, because evidently if the publication that carries a lot of non-paying subscribers is to pay at all it must do so either by cheapening its product (*i. e.*, by means of shoddy reading notices, etc.), or by accepting advertisements which a truly professional journal should not accept. Shoddy medical literature is really cheating the paying subscriber, and publishing nostrum advertisements is also cheating the honorable advertiser of legitimate articles. When a nostrum advertisement appears in a journal the value of the advertisement of a good nonsecret article in the same pages is thereby tremendously lessened. Honorable advertisers will some time realize this and refuse to allow it to go on. We hope a compulsory reform from the outside may thus eventually be brought about in some of our lenient and lethargic contemporaries. If you believe this journal is of value to you and to the profession, you should pay your subscription promptly. If you do not do so our business manager will drop your name from the list. It is a matter of ethics and good journalism as well as of honest business methods. We shall refuse to "carry dead wood and make it up on the ads."—to use the jargon of the newspaper.

To our advertisers we would say that we shall be glad to know if any advertisement in our pages is in your judgment not legitimate, or why it should be excluded. We wish you to be in good company, and you have the right to choose that company. We have by our rules and declinations excluded many thousands of dollars' worth of advertisements which we find in the pages of what are called "the best" medical journals. If our profession will not support us in so doing we shall not for that reason "rob Peter to pay Paul." It is also decidedly to your interest to help us carry out this plan.

And to advertisers it may also be said that, despite false, boorish, and contemptible charges, we have but one rate for all advertisers. Our advertising space has not been nor

will it be offered for a cent less to one than to another,—and this, as you well know, is not the case with many other journals.

**The Abolition of the Exchange-System.**—In the interests of courtesy and justice we have for our part determined to discontinue the exchange-system, beginning with January 1, 1899. We fear that at first our motives may be misjudged, but we are perfectly serious in saying that we believe the exchange-system results inevitably in discourtesy and injustice. We doubt if there is an editor or publisher of one of the larger and more professional journals who is not heartily tired of this older method. What was inaugurated in a spirit of kindness has become in reality a cause of burdensome irritation and unfairness. Medical journals are published for a hundred different purposes, from as many motives, and at almost as many different subscription-prices. If the exchange-courtesy is extended to a score it is asked by hundreds of others, until each finds he is spending a large amount of money, perhaps a thousand dollars annually, in sending out his own copies and for which he receives several hundred journals the greater number of which in his special field of work are worthless. Why, *e. g.*, should a journal publishing only original articles in experimental medicine exchange with an ophthalmologic journal? A hundred similar examples might be added. It is also unjust for a journal published at \$10 a year to be asked for in exchange by one published at \$3 a year. In fact, in the great majority of instances the exchange is of far less benefit to one than to the other. To pay for that which he wishes seems the cleaner-cut and more business-like method. The half-way reformation, exchanging with everybody, the journal of lesser subscription-price remitting the difference, does not strike at the root, and is a poor sort of compromise; it reminds one of the story of the man who wanted dinner at 1 while the wife wished it at 7 P.M. After long controversy they compromised on 4 o'clock—an hour detested by both. The plan we have adopted lets all concerned know just what to expect, extinguishes dissatisfaction, and does away with a great source of worry and work. Not only from the standpoints of correct business and good journalism do we think it advisable, but quite as much for professional and scientific reasons.

**Our Latest Literature Department,** as we have established it, has, judging from numerous letters spontaneously sent to us, proved of signal service to the busy physician, by enabling him to learn the substance of the world's best medical literature in a concise and systematic way, quickly, and at once after its appearance. During the coming year we hope to be able (with your continued help—couldn't you, perhaps, do something more for us?) to enlarge and perfect this department, so as to make it of still greater value to you and to our profession. The collaborators who do the work of reading and condensing the original articles of the best medical journals are scholarly and devoted men, whose labor is enormous, and who are doing the profession a high and unselfish service deserving of all honor. We shall hereafter append to each abstract the initials of the collaborator.

**Every subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to aid us. In addition we trust you will write these friends a personal request to examine the sample copies we shall send.



## Correspondence.

### SPONTANEOUS REPAIR OF VESICO-VAGINAL FISTULA.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

A PRIMIPARA, 24 years old, was delivered June 26, 1898, after a protracted labor, in consequence of dystocia due to a brow-presentation.

Delivery was accomplished by instruments, with the patient under the influence of an anesthetic, and was followed by grave post-partum hemorrhage, which was finally controlled by tamponade of the uterus, and hypodermic injections of ergotin. At the end of four hours the uterine tampon was withdrawn, though the vaginal one was retained. The patient was catheterized ten hours later. The vaginal tampons of borated gauze were kept in situ, though changed twice daily. The patient's temperature for the first 48 hours was 102°, the pulse 118 and feeble. On the third day the temperature was 99.2°, the pulse 104. The external genitalia and the vaginal walls were very edematous; so that partly on this account, but mainly as a precaution against secondary hemorrhage, the vaginal tampons were continued and catheterization was resorted to. By the end of the third day the swelling had almost completely subsided, and the tampons were discontinued. On the morning of the fourth day the patient complained of having wet the bed, though she had had no desire to urinate, and that she still felt as if she was passing water. Examination proved that this was really the case and disclosed the presence of a vesico-vaginal fistula situated high up. The patient's condition contraindicating any operative procedure, palliative measures were, for the time being, resorted to. These consisted in a thorough washing out of the vagina and the bladder with an aqueous boric-acid solution (gr. v to f ʒ 1), then tamponing the vagina with borated gauze and in such a way as to make pressure against the site of the fistula. A sterilized catheter was then left in situ and the patient put on a strict milk-diet, with occasional drinks of some alkaline beverage—lemonade, with a little sodium bicarbonate, about 5 grains to a small glassful. This line of treatment was pursued for several days, the tampons being changed 3 times a day, and the bladder irrigated once daily. The first half-dozen tampons, in addition to being saturated with the lochial discharge, contained also a perceptible amount of urine. This by the third day, viz. the seventh day after delivery, had, however, decreased to such an extent as to be barely discernible, while the tonicity of the bladder, as shown by its power of retaining the boric solution, rapidly improved. On the morning of the fifth day there was not a trace of urine on the tampon. Moreover, the irrigating solution, about 14 oz., was retained by the patient, and upon catheterization was expelled with considerable force. I now discontinued the use of the catheter, though I still kept up the tamponade, introducing a tampon at 10 P.M., and removing it at about 8 the next morning, absolutely free from the faintest trace of urine, nor had there been any incontinence on the part of the patient during the night. She then voided her urine voluntarily, and has since continued to do so, without the slightest inconvenience or any abnormal symptom. Examination now shows the presence of some hyperplasia at the site of the fistula, but there is not any change discernible in the caliber of the urethra. At no time

other than upon the occasion referred to did the temperature rise above 99°.

Respectfully,

J. FRANCIS HAMILTON.

1937 Vine St., Philadelphia.

## Selection.

### PUNISH THE IMPOSTORS.

Do the Medical Examining Boards of the State of Massachusetts recognize a diploma of the "Massachusetts Metaphysical College" as evidence of qualification to practise medicine? We presume not, yet the Legislature of that State refused last winter to pass a law to prevent the "graduates" of this institution from practising their profession and incidentally murdering their patients. The concern in question is a Christian science "college" and those who hold its degree are qualified "healers."

We learn something about this college and its system of instruction from a statement given to the press by the Christian Scientists in session at Concord, N. H., which we reproduce:

"The Rev. Mary Baker C. Eddy, the discoverer and founder of Christian Science, has just completed an examination of a class of about seventy of the active workers in Christian Science mind-healing to confer on them the degrees of the Massachusetts Metaphysical College as healers and teachers of this system of medicine, whose only crowned head is Divine sovereignty, whose only priest is the spiritualized man. Most of those present were the students of her students. Nearly all of them had had several years' experience and marked success as healers."

Mrs. Eddy's exposition of her system of medicine is characteristic. Its only "crowned head" is "Divine sovereignty," its only "priest" is "spiritualized man." The Mills woman, now under indictment in England for killing Harold Frederic by Christian Science, talked this sort of cant to the Coroner's jury and got herself held for trial.

Why is it not possible to suppress these murderous fanatics in this country? Mrs. Eddy's statement shows that she professes to have established a "system of medicine." She describes it in those words. She speaks of a college, of students, classes, examinations, and degrees. The graduates of the Massachusetts Metaphysical College must be able to tell what they have been taught. Before they are allowed to practise as "healers" they ought in every case to be examined by the boards constituted by law to inquire into the character and qualifications of physicians. Their pretensions and the fact that they call their art a system of medicine plainly bring them within the scope of the medical examination laws of every State. They can be arrested for practising without a license. Why are they not arrested?

The examinations which a regular practitioner must pass are in all Eastern States exceedingly severe, and the Western States are all the time raising their standard of qualification. In this State, since January 1, 1898, four years' study of medicine is required. The preliminary studies—that is, the studies that belong to general education—must have been such as to make the candidate a well-educated man. The Mills woman never could have passed that part of the Regents' examination. The special training of the candidate is tested by a pretty rigid examination in anatomy, physiology, therapeutics, materia medica, diagnosis, and other branches of medicine that must be mastered before the student is fit to practise.

These examinations are prescribed by a law of the State, and anybody who attempts to practise medicine in New York without having in his possession evidence that he has passed them exposes himself to the pains and penalties of the law. Why not enforce the law against these homicidal charlatans who practise their hocus pocus on patients sick with typhoid fever, heart disease, and consumption? They kill, and so far, kill unpunished. Not one of them could pass the Regents' examination. It would catch them all, and they would be delivered over to the law, if they practised and took fees without a license. The experience of Massachusetts shows that it may be difficult to draft a statute that will net these pests. Common sense shows that new legislation is not needed. Existing law will protect the ignorant from their deadly impostures if it be enforced.—[*New York Times*, Nov. 25.]

## American News and Notes.

### PHILADELPHIA, PENNSYLVANIA, ETC.

**Dr. William G. Miller** has been appointed coroner's physician of Norristown, Pa., by coroner-elect Grant R. McGlathery.

**Rush Hospital for Consumptives.**—Plans have been prepared whereby the accommodations of this hospital will be increased to the extent of 28 additional beds.

**Montgomery County (Pa.) Hospital.**—The Directors of the Poor of Montgomery County, Pa., have determined upon the erection, shortly, upon the almshouse property of a new, large, commodious hospital, provided with all modern appliances.

**Free Bed for Glass-Workers in the Methodist Hospital.**—The Methodist Hospital, of Philadelphia, has received a gift of \$5,000 from Mrs. Rebecca E. Shoemaker, of Bridgeton, N. J., to endow a bed in honor of her mother, Mrs. Mary B. Clark, for the benefit of the employes of the Cumberland Glass Manufacturing Company, of Bridgeton.

**The Atlantic School of Osteopathy, Wilkesbarre, Pa.**—An application for a charter for the Atlantic School of Osteopathy, to be located in Wilksbarre, was recently filed. A correspondent informs us that he is not aware that the local county medical society is taking any action in the matter. If this is the case, we earnestly commend to the society some action that will tend to prevent the establishment of the contemplated "school."

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending December 10th:

Monday, December 5—Academy of Surgery.

Tuesday, December 6—College of Physicians—Section on Otolaryngology.

Wednesday, December 7—College of Physicians.

Thursday, December 8—Pathological Society.

Friday, December 9—College of Physicians—Section on General Surgery.

**The Cumberland County (N. J.) Medical Society** will celebrate its 80th anniversary, at Bridgeton, N. J., December 8th. The following is the program, to be followed by a dinner: Prayer, by Rev. S. W. Beach; Address of welcome, by Dr. W. L. Newell; Response, by Dr. W. E. Ashton; Historical address, by Dr. F. M. Bateman; A Study of Cardiac Pain, by Dr. H. A. Hare; Surgery of the Hepatic Ducts, by Dr. John B. Deaver. The following is the committee of arrangements: Dr. Ellsmore Stites, chairman, Drs. D. H. Oliver, H. W. Elmer, Joseph Tomlinson, and J. C. Applegate. A train will leave Bridgeton for Philadelphia at 12 o'clock midnight, for the accommodation of out-of-town guests.

**The Newark (N. J.) Hospital Saturday and Sunday Association** was organized recently at a meeting attended by representatives of eight of the leading hospitals, as follows: German, St. Barnabas, Baby, Eye and Ear, Home for Incurables, Home for Crippled Children, Women's and Children's, and the City Hospital. It is proposed that the proceeds from collections to be taken up in all the churches on the last Saturday and Sunday of the year be distributed among the members of the association. A committee, composed of Mayor Seymour, Dr. Rand, D. Smith Wood, Edward Harris, and Fillmore Condict, was appointed to draw up the necessary by-laws, and to report at a meeting to be called by the mayor.

### Vital Statistics of Philadelphia, for the week ending November 26, 1898:

Total mortality.....		449
Children under 5 years.....		121
Diseases.....	Cases.....	Deaths.....
Pneumonia.....		62
Pulmonary tuberculosis.....		54
Heart-disease 30, inflammation of the heart 5, fatty degeneration of the heart 3.....		38
Diphtheria 33, membranous croup 3.....	137	36
Nephritis 24, uremia 6.....		30
Marasmus 11, inanition 9, debility 5.....		25
Gastroenteritis 16, cholera infantum 3, cholera morbus 1, diarrhea 2, gastric fever 1.....		23
Apoplexy 15, paralysis 8.....		23
Senility.....		17
Convulsions 13, epilepsy 1.....		14
Carcinoma.....		12
Typhoid fever.....	90	10
Scarlet fever.....	28	1
Smallpox.....	3	0

**Compensation for the Treatment of Sick Soldiers.**—At a meeting, on November 22d, of a committee of the National Relief Association and representatives of the various hospitals with Major D. C. Peyton, it was determined that the compensation to be given by the United States Government to the various hospitals wherein sick soldiers have been treated shall be upon a basis of \$1.00 a day for each soldier. The proposition for compensation was entirely unsolicited on the part of the hospital-authorities, who throughout have been willing to give their services gratuitously, but it is the policy of the Government to pay for the care and treatment of its sick soldiers. The following table indicates the number of sick soldiers treated in the various hospitals, and approximately also the number of days for which each hospital will receive compensation from the Government:

HOSPITALS.	NO. OF SOLDIERS.	NO. OF DAYS.
St. Agnes.....	490	14,700
Medical-Chirurgical.....	459	13,500
Pennsylvania.....	318	7,500
German.....	274	5,700
University.....	217	5,425
St. Joseph's.....	200	5,000
Presbyterian.....	161	4,025
Episcopal.....	160	4,000
Jefferson.....	195	3,900
Methodist.....	51	2,142
Red Cross.....	66	1,320
Woman's Homeopathic.....	50	1,250
Hahnemann.....	60	1,200
St. Mary's.....	55	770
Germantown.....	21	666
Polyclinic.....	43	636
Jewish.....	25	500
Woman's Philadelphia.....	20	500
Orthopedic.....	12	242
Howard.....	10	200
Samaritan.....	5	184
St. Timothy's.....	6	120

**Philadelphia County Medical Society.**—At a meeting held November 23d, Dr. ERNEST LAPLACE demonstrated **intestinal anastomosis by means of a new forceps**, which is described at length in the JOURNAL, Vol. I, page 1102. Drs. J. CHALMERS DaCOSTA, ORVILLE HORWITZ, EDWARD MARTIN, W. JOSEPH HEARN, ANDREW J. DOWNES, THOMAS S. K. MORTON, WILLIAM L. RODMAN, and MORDECAI PRICE agreed as to the practical utility of the instrument and believed it a marked improvement over other mechanical devices employed in the operation of intestinal anastomosis. Dr. ANDREW J. DOWNES exhibited a modification of the forceps.

Dr. B. ALEXANDER RANDALL read a paper entitled: **The Value and Technic of Catheter-inflation of the**



**Tympanum.** He urged that Eustachian catheterization has not been superseded by the many substitutes that have been offered, but it lacked its proper application because it is regarded as "an operation," or because it is not skilfully employed. While yielding few brilliant results, it can greatly aid a large class of patients who are vainly seeking relief by operation, "patent ear-drums," or anything claiming to be new. It must be practised with a well-made catheter, and is generally very simple if the back edge of the palate-bone is used as a landmark. It is only a means for the introduction of air, vapor, or fluid into the tympanum, and the auscultation-tube must be used to make sure of success in this. Fluid petrolatum sprayed and blown up by the ordinary atomizer is efficient in most cases; and benefit much more marked and lasting than by Politzerization is usual. The procedure should be repeated before all good of the previous treatment is lost, and should be continued so long as the benefit is on the increase. Due naso-pharyngeal treatment must precede its use, and gargling and pneumatic massage must supplement it and be continued when it is intermitted.

**In Memory of Dr. William Pepper.**—A largely attended meeting was held on the evening of November 29th, in the Chapel of the University of Pennsylvania, in memory of Dr. William Pepper, formerly provost, and, at the time of his death, professor of the theory and practice of medicine and of clinical medicine in the medical department. The speakers were Governor Hastings, who presided, representing the University, as president ex-officio of the Board of Trustees, and also the Commonwealth; Dr. S. Weir Mitchell, representing the trustees as a body; Dr. James Tyson, representing the medical faculty; Gen. Isaac J. Wistar, representing the Wistar Institute; Mr. Daniel Baugh, representing the Archeological and Paleontological Museums; Mr. Hampton L. Carson, representing the General Alumni Association; Mr. Samuel Dickson, who read a letter from Mr. Frederick Fraley, representing the American Philosophical Society; Dr. William P. Wilson, representing the Commercial Museum; Mr. John Thomson, representing the Free Library of Philadelphia; and Hon. Charles F. Warwick, mayor, representing the Municipality. Governor Hastings, on taking the chair, alluded to his association with Dr. Pepper in the Board of Trustees, and spoke of the marked advancement of the material interests of the city that Dr. Pepper had accomplished. Dr. S. Weir Mitchell recounted the many new departments created in the University during the provostship of Dr. Pepper, and said that the many gifts to the institution during that period were stimulated by the personal liberality of the provost. The lavish generosity of Dr. Pepper inspired legislators and City Councils to give also to the University. Dr. James Tyson spoke of Dr. Pepper as a physician, of his preeminent powers as a diagnostician, and of the courtesy that characterized all his dealings with his patients and the community at large. General Wistar spoke of the active interest that Dr. Pepper took in the establishment of the Wistar Museum, and Mr. Baugh of the events that led to the establishment of the Archeological and Paleontological Museums. He characterized Dr. Pepper as the greatest citizen since the time of Franklin, and said that he took with him to his grave the magnetism of his own personality, which triumphed over every obstacle. Mr. Carson spoke of the lack of appreciation of the worth of great men, and thought that the next generation, which could possibly more properly appraise the character of Dr. Pepper, would perceive how far above others he stood as a physician, teacher, and citizen. Dr. Wilson spoke of the great diversity

of character and rare attainments of Dr. Pepper and of his idea of the establishment of a group of museums, so broad and far-reaching in their scope, as to go beyond the past and present history of man and his conditions and to embrace all animal and plant life and all the activities in which man is engaged, such as commerce, economics, etc. He dwelt upon the energies that Dr. Pepper had put into the establishment of the Commercial and Economic Museums. Mr. Thomson spoke of Dr. Pepper's interest in the establishment of a free library, quoting Dr. Pepper as saying: "What is wanted is a people's library; a library in which every man, woman, and child of proper age can have as ready access to its books as they can have to the few volumes stored upon the shelves at their own homes." Mayor Warwick, speaking for the city, characterized Dr. Pepper's loss as irreparable. He spoke of his genius for administration and his capacity for work. He said that no work was too vast for him to engage in, provided he could see in the result advancement of the city's interest or the interests of those institutions in whose welfare he was so deeply concerned. He truly said he gave his time, his talents, his wealth, and sacrificed his life, to the cause of the public good.

**College of Physicians of Philadelphia—Section on Otology and Laryngology.**—At a meeting held November 1st, Dr. E. B. GLEASON exhibited a patient on whom he had operated three weeks previously for **bony occlusion of both posterior nares**. The patient was etherized and the obstruction removed with a small trephine, two fingers of the operator being placed in the posterior nares to prevent the blood running into the pharynx or larynx. The operation was entirely successful. Dr. A. W. WATSON mentioned a case in which he had operated for double occlusion of the posterior nares, using a Seiler's chisel and completing the operation with the galvanocautery. Several years later he examined the patient and found that the posterior openings of both nares were normal. Dr. E. L. VANSANT called attention to the danger of post-operative adhesions in such cases, and advised touching the edges of the incision with trichloroacetic acid in order to prevent this complication.

Dr. C. W. BURR read a paper on **Brain-tumor mistaken for Cerebral Abscess**. Dr. B. A. RANDALL noted the rise in pulse when the temperature was elevated as indicative of the absence of cerebral abscess. He has frequently diagnosed cerebral abscess in the presence of meningitis by the slow pulse. In Dr. Burr's case, the presence of pus in the temporal bone probably masked the symptoms and caused some elevation of temperature.

Dr. A. W. WATSON read a paper on the **Arrest of Nasal Hemorrhage**. After briefly considering the usual methods employed, he described the nasal circulation and showed the distribution of the vessels on the lateral walls, with their course from behind forward. He then described a simple method for making pressure on the vessels posterior to the seat of hemorrhage by drawing a pad of gauze into the nasal cavity from behind. Two cases in which severe nasal hemorrhage was controlled by this method were reported. Dr. JOS. S. GIBB related a case in which every known method was employed unsuccessfully until one devised by the late Dr. D. Hayes Agnew was tried and was successful. This consists in the introduction of pieces of fat pork into the nares. Dr. G. MORLEY MARSHALL inquired if Dr. Watson's patients had been examined for mitral regurgitation. Dr. E. B. GLEASON said that each one had his own method for arresting nasal hemorrhage, and he advocated

the use of absorbent cotton loosely wrapped on an applicator, then dipped into hydrogen dioxide and passed into the naris from which the hemorrhage issued. The evolution of gas exercised pressure on the capillaries and stopped the bleeding. In Dr. Gleason's hands this measure has proved uniformly successful. DR. VANSANT said that he had seen only two cases in which it was necessary to plug the posterior nares for the arrest of nasal hemorrhage; one with the late Dr. Harrison Allen, which occurred during an operation for a spur on the nasal septum; the other, a case of recurrent hemorrhage following an operation for nasal sarcoma. Personally, Dr. Vansant advised a combination of styptics and pressure, using 10% of alumol packed lightly into the nose. DR. WATSON said that no heart-lesion was present in either of his cases, and he emphasized the importance of making pressure on the lateral wall of the nares.

DR. JOS. S. GIBB exhibited a **large rhinolith** removed from an anemic girl aged 14 years, who always had had a discharge from her right nostril, which ceased when the rhinolith was removed. He exhibited also a piece of the **blade of a pocket-knife** that he had removed from the external auditory meatus of a man.

DR. P. S. DONNELLAN read a paper on the use of **orthoform** in the treatment of the **dysphagia of tuberculous laryngitis**. He called attention to the value of this drug as a local anesthetic, its effects being continuous for several hours, thus enabling the patient to eat solid food with comfort not attainable with cocaine. It is best applied to the larynx by means of an insufflator, 5 grains being used at each insufflation. It has no anesthetic effect when applied to an unbroken mucous surface, and its greatest effect is seen in cases of ulceration of the larynx when the nerve-endings are exposed. DR. WATSON said that he had experienced difficulty in using orthoform on account of the smarting it produced, while DR. GIBB stated he had found it useful in mucous patches and painful ulcerations about the mouth. DR. GLEASON exhibited 10-grain suppositories of orthoform, which he found useful in hay-fever and after the Staake operation on the ear.

DR. A. B. HIRSH described a useful **respirator** that he had found valuable in cases in which the inhalation of a volatile oil is indicated. It consists of an ordinary clay-pipe, the bowl of which is packed with absorbent cotton, on which is dropped the selected oil. The patient puts the stem of the pipe in his mouth and inhales the vapor, as if smoking tobacco.

#### NEW YORK.

**Dr. Marcus S. Farr** has been appointed curator of the zoological collection of the New York State Museum, University of the State of New York.

**New York Polyclinic.**—Dr. Charles H. Chetwood has been appointed professor of genito-urinary surgery, and Dr. Frederick Whiting, professor of otology.

**Hospital for Contagious Diseases, Brooklyn, N. Y.**—Dr. George H. R. Gosman, a recent graduate of the University of Pennsylvania, has been appointed a member of the staff.

**New York Medico-legal Society.**—At the annual meeting held November 16th, the following officers were elected for the ensuing year: President, Albert Bach; first vice-president, F. B. Downs; second vice-president, George W. Glover; recording secretary, Clark Bell; corresponding secretary, Moritz Ellinger; treasurer, Thomas Darlington; chemist, C. A. Doremus.

**The Esculapian Club of Buffalo, N. Y.,** is the name of a recently organized medical association. The membership is limited to 25, and it is proposed to hold meetings monthly from October to May.

**Buffalo Hospital of the Sisters of Charity.**—The following appointments have recently been made: Dr. John H. Pryor, consulting physician; Dr. Stephen Y. Howell, gynecologist; Dr. Eugene A. Smith, surgeon; and Dr. H. Y. Grant, ophthalmologist and otologist.

**The Samaritan Hospital,** of Troy, N. Y., a new institution provided with all modern appliances, was recently opened. It contains 80 ward-beds, 30 private rooms, and an infectious-diseases building. The last is divided into four departments, and is provided with 35 beds.

**Dr. P. J. McGowan, the Surgeon of the "Yankee," Honored.**—On Thanksgiving Eve a number of physicians of New York gathered in the banquet-hall of the Hotel Logerot to honor their comrade, recently returned from his cruise with the Naval Reserves in Cuban waters. He was presented with an exquisite piece of silversmith's art, a cup designed and made by the Gorham Silver Company. Many speeches were made during the evening, but especially noteworthy was the scholarly address of Dr. John Aspell.

**New York Academy of Medicine; Section on Laryngology and Rhinology.**—At the meeting held November 23d, DR. C. G. COAKLEY reported a case of **recurrent laryngeal paralysis**, occurring in a man 82 years old. The paralysis affected the left recurrent laryngeal nerve, but careful examination of the chest failed to reveal the cause. At the autopsy, a tumor was found pressing on the trachea. The pathologist considered it to be a carcinoma of the lower portion of the thyroid.

DR. H. HOLBROOK CURTIS read a brief paper on the **Abuse of the Electric Cautery in the Nose**, in which he expressed the opinion, that the use of the galvano-cautery in the nose was both unsurgical and unscientific, and liable to give rise to unpleasant and even dangerous sequels. The effect of this cautery was to change the nature of the cartilaginous cell-elements, when used on the septum, and so interfere with repair. As a result of such applications it was not uncommon to find artificial fenestration of the septum, and it almost invariably gave rise to a very troublesome dry, scabby condition of the nose. He thought the inferior turbinate, especially posteriorly, could be more scientifically treated by injecting monochloroacetic acid. He had almost entirely abandoned the use of the electric cautery on the turbinates, and believed that it should never be used on the cartilaginous septum. In the discussion, DR. R. C. MYLES said that he had never been convinced of the necessity for using the thermo-cautery on the cartilaginous septum, but he had employed it quite frequently on the tubercle of the nasal septum, and had never observed any serious results from it in his own practice. The electric cautery seemed to act more efficiently on hypertrophic tissue than acid, but it should only be used along the inferior turbinate with the greatest caution because of the liability of exciting meningitis. If the electrode consisted of a sharp and delicate knife, and was used properly, there should rarely be any unpleasant sequels. DR. J. W. GLEITSMANN endorsed what had been said by the last speaker regarding the manner of using the galvano-cautery on the septum. In treating hypertrophies of the inferior turbinate, he first made a groove with the cautery, and then filled this with trichloroacetic acid. DR. W. K. SIMPSON



said that while this form of cautery should not be used for the reduction of extensive deformities, it had many important uses, particularly if the finer points were selected and applied with care and judgment. DR. CLARENCE C. RICE said that he used the galvano-cautery constantly, but only at a low red-heat, for the reduction of small spurs on the septum, and, in the form of small punctures, for the treatment of hypertrophy of the inferior turbinate. DR. EMIL MAYER and DR. O. B. DOUGLAS said that they had discarded the electro-cautery because of the belief that there were other and better methods. DR. J. E. NEWCOMB spoke of the use of suprarenal extract as one of these better methods.

DR. CLARENCE C. RICE read a paper on **Nasal Catarrh in Children; its Cause and Treatment**. He said that many acute coryzas in children are symptomatic of pathological states in the nose and pharynx. In his opinion, fully 80% of the cases of chronic nasal discharge had their origin in enlargement of the pharyngeal tonsil. Only a small degree of adenoid hypertrophy was competent to give rise to chronic catarrh in children because of the narrowness of the space in these young subjects. Although Bosworth spoke of purulent rhinitis, characterized by the presence of a bright yellow pus, as a common cause of atrophic rhinitis in children, it had been rare, in his experience, to meet with such a discharge. Chronic hypertrophic rhinitis must be comparatively rare in children because it is rare to find organized connective-tissue hypertrophy in children under 12 years. Spurs on the nasal septum are rarely sufficiently large to cause catarrh in young children. Atrophic rhinitis is present in about 10% of children over 5 or 6 years of age, and is characterized by dryness and the formation of crusts. This variety is especially common among the poorer classes. The speaker believed that enlargement of the pharyngeal tonsil is the most common cause of nasal catarrh in children. In most instances, the early removal of the adenoids would restore the nasal passages to their normal state, and hence it was the imperative duty of the physician to give this matter prompt and careful attention. After the nasal passages had been cleared, the treatment should consist in the use of bland disinfectant washes, powders and oils. In the discussion, DR. A. JACOBI said that adenoids are rarely found in very young children, although nasal catarrh was very common. The smaller dimensions of the nasal cavity in early life accounts, in part, for this frequency of occurrence; and it is partly explained by the irritation arising from a failure to expel or wash out the accumulated secretions. In the infant there is rapid change of epithelium into mucus, the lymphatics are larger and more numerous than in adults, and the irritating material is consequently absorbed with great readiness. Such absorption is marked, therefore, by the enlargement of the adjacent lymph-bodies. On the removal of the irritation which caused the enlargement of the lymph-nodes, the original size of the latter would again be restored, provided the condition was not so old that the nodes had become hyperplastic. In the same way the enlargement of the adenoid tissue might be removed, if it had not existed too long. The fact should not be lost sight of, that the adenoids are not the cause, in most instances, but the result of the nasal catarrh. The rhinitis was the primary affection. Adenoids are rare in children of 3 or 4 years, but common in those of 8 or 10 years. He made it a rule to insist that the noses of babies should be irrigated once a day with warm salt water, even though there was no nasal catarrh present. Meningitis was most common

between the ages of 2 and 5 years, and it was, he believed, largely due to the fact that just at this time of life children are crawling around on the floor and are prone to introduce all sorts of dirt and infective material into the nose. This afforded an additional and cogent reason for a daily toilet of the nasal passages. DR. H. D. CHAPIN said that he had found marked hypertrophy of the adenoid tissue almost invariably in children of 4 or 5 years suffering from nasal catarrh. If irrigations of alboline did not suffice to give relief, he scraped away the adenoids. A troublesome cough at night was often an indication of adenoid growth in the vault of the pharynx. DR. J. HENRY FRUITNIGHT also favored the daily irrigation of the nose in little children. Constitutional conditions, such, for example, as rachitis, undoubtedly predispose to catarrh, but the treatment of nasal catarrh should be begun long before the development of adenoids. DR. WALTER LESTER CARR also emphasized the importance of giving due consideration to the constitutional condition, and to the care of the nose during the exanthemata. DR. W. K. SIMPSON said he believed that dentition was one of the critical periods of life, and that it was very liable to be followed by the development of nasal catarrh. Bad hygiene and constipation were potent etiologic factors. DR. W. C. PHILLIPS remarked that the parents of children having adenoids had almost invariably suffered from the same condition. Adenoids in the pharynx are much more common than enlargement of the faucial tonsil. That adenoids may be found even in young infants he had proved by removing a goodly portion of such a growth from a baby of 4 months. DR. JONATHAN WRIGHT said that he had seen in the post-mortem room marked examples of congenital adenoids. DR. RICE, in closing the discussion, expressed the belief that regular spraying or irrigation of the nose and throat in cases of adenoids was dangerous because of the liability of exciting an otitis, and moreover it was rarely efficacious in cleansing the obstructed passages.

**New York County Medical Association.**—At the meeting held on November 21st, DR. FREDERIC S. DENNIS exhibited a patient on whom he had performed **gastrotomy for the relief of a stenosis of the esophagus following typhoid ulceration**. When the man had first come under his observation, he was in a starving condition. The operation was performed last March, and, although since that time he had been fed entirely by food introduced through the gastric fistula, he had gained 78 pounds.

DR. DENNIS also presented two patients with **tuberculous joint disease**. The first one was a young man on whom he had operated eleven years before by resecting 6 in. of the humerus. The case was instructive because of the amount of motion that had been preserved. In the second case, one of tuberculous disease of the elbow-joint, only the soft tissues of this articulation appeared to be involved, the bones being simply denuded of periosteum. Only the soft parts were removed, and then the local treatment consisted in packing with iodoform gauze and injecting an emulsion of iodoform in glycerin. He already had good motion, and this was steadily increasing.

DR. ROBERT ABRAHAMS presented a case of **lupus erythematosus of long duration**. The patient was a woman of 81 years, and the disease had existed on her face for 41 years, and had proved most rebellious to treatment, although conducted by a number of prominent physicians. For some months past one of the atrophic areas had been ulcerating and bleeding, and, Dr. Abrahams

thought, presented the appearance of a flat epithelioma. It was because of the very typical appearance of the lupus and the possibility of it being complicated with malignant degeneration that the case was presented.

DR. THOMAS H. MANLEY exhibited a young man whom he had successfully treated for an **osteomyelitis of the tibia** that had been overlooked by other surgeons. The man had been under treatment for a considerable time for synovitis and joint disease, but without benefit. When first seen by Dr. Manley he had detected the presence of pus in the upper part of the tibia. On making an opening with a drill and evacuating the pus, the case rapidly improved, and ultimately recovered perfectly.

DR. MANLEY also spoke of the treatment of **severe crushing injuries by embalming dressings**. He said that many of these cases which had heretofore been subjected to primary amputation were better treated by "embalming" the limb in appropriate dressings until a line of demarcation had formed. In support of his views he presented a little girl and a young man who had been successfully treated in this way. The case of the latter was also interesting because it was one on which Dr. Manley had practised what he calls **homologous ligation of arteries**, *i. e.*, producing hemostasis by turning the arteries upon themselves instead of introducing foreign ligature-material. In connection with the case, he made the statement, that, according to his experience, the utility of a stump could not be measured by the amount of skin over it, as some very troublesome stumps are well covered with skin, while, on the other hand, some exceedingly useful ones have simply a cicatricial investment.

DR. MANLEY then exhibited a **multilocular dermoid cyst of the scrotum**, weighing nearly fifteen pounds, which he had removed from a man of 60 years, who also had a hernia complicating the case. The cyst was opened, its contents removed, and drainage established with good results.

DR. J. F. ERDMAN reported a case of **resection of the head of the humerus**. The patient, a sailor, 52 years of age, had been severely injured on ship-board six weeks before coming under treatment. At the operation it was discovered that three inches of the humerus had been absolutely denuded of periosteum, together with the capsular and muscular attachments. The head of the bone was removed. At the end of the third week there was motion to the extent of 40° from the body.

DR. EDWARD A. TRACY, of Boston, read a paper on **the use of wood-fiber splints for joint and bone fixation**. The wood-fiber, which is manufactured in sheets by the American Wood-pulp Company, of Boston, is more easily manipulated than leather, is porous, and, when properly applied, usually produces immediate fixation. As it is applied directly to the limb without any padding, it secures better fixation than plaster-of-Paris. In the discussion, DR. MANLEY endorsed the use of this material, insisting that the surgeon should not use plaster-of-Paris for splinting when he had a choice of materials. He also expressed the opinion that, in fractures of the extremities, better results would be obtained if splints were discarded, and advantage taken of position and relaxation of the muscles.

DR. WICKES WASHBURN read a paper on **Montauk Point and the Government Hospital**. Speaking of this locality as a camp-site, he said that Montauk Point itself is ten miles long and varies in width from half a mile to three miles. The surface of the land here was made up of the old glacial

deposits or moraines (hillocks) with the intervening "kettle-holes." The soil for about forty-five feet deep is in alternate layers of sand and impervious clay, and, therefore, the water in the kettle-holes is taken up only so fast as it can be absorbed by the few inches of sand and gravel at the top. From a geological map sent him by Professor Arthur Hollick, of Columbia University, and exhibited in connection with the paper, it was shown that, in all probability, the water-supply of Long Island comes in reality from Connecticut. The speaker said that this site had been selected by Surgeon-General Sternberg as a camp, and Colonel W. H. Forwood was sent there as medical purveyor. His duties were to carry out Dr. Sternberg's suggestions and plans regarding the establishment of this camp, but he was not, as had been so often erroneously stated, placed in charge of the hospitals at Montauk Point. Dr. Washburn said that the soldiers began to arrive at this camp about August 10th, and he himself reached there six days later. The general hospital was located on one of the highest and largest of the elevations. Each ward was composed of six tents, 14 x 15 feet, and two flies, stretched over a framework in such a way that the flooring, 113 x 15 feet, was covered. The flies were placed after each second tent, thus securing proper ventilation. There were nine wards situated on either side of a plank walk, which were 15 feet wide and covered by the usual flies only. On his arrival at Camp Wikoff, Dr. Washburn said that, although there were comparatively few of the 18 wards occupied, he was impressed with the fact that there did not seem to be any order in the camp or any executive head. The supplies came with fair promptness and regularity, but the distribution of these supplies was left entirely to chance. Patients were suffering from lack of bed-clothes while there was an abundance of such clothes in the supply-tent. Surgeons and physicians were transferred from one place to another at short intervals, and without any regard to their experience or special fitness. Confusion reigned everywhere, so that there was little wonder that the typhoid-fever patients were allowed to dip their hands into the common milk-supply, and that the linen of these same patients was permitted to accumulate between the tents until there was enough to fill 25 wagons, each drawn by 4 mules. There was no opportunity for disciplining the workers in the hospital-camp who were guilty of these gross violations of well-known sanitary rules, for these men were changed almost daily. The wards had been originally designed for the accommodation of 30 persons, but afterwards by placing mattresses on the floor they were made to hold 50 patients. Although he was admitted to have under his care at one time the sickest of the men, there were, on of these nights, in his two wards 103 patients, yet the same night the two adjoining tents contained only 18 men each. As the supply of trained nurses increased the camp took on a more cheerful aspect. But for these women, and their tireless energy, Camp Wikoff would have indeed been in a serious and desperate condition. As a matter of fact, only about one per cent. of the sick soldiers died at Montauk Point. He had had under his care 573 patients there, of whom only five died, if two were excepted who entered the camp *in extremis*, and died within a very few hours. The Red Cross and the National Relief Association did good work in supplying the soldiers who were going home with food and shelter at the depot, for, owing to inexperience and red tape, there was often a delay there of twenty-four hours before the soldiers could embark. The speaker said, in closing, that the independence of rank made it very much more likely that the contract surgeon could accomplish more than



the regular army surgeons. The latter would not ask to have certain changes made, even though they knew them to be for the welfare of their charges, if such a request could be regarded in any way as a criticism of a superior officer.

### NEW ENGLAND.

**The Painless Extraction of Teeth.**—According to the *Journal of Medicine and Science*, a Rhode Island jury recently decided that a dentist must not advertise to extract teeth by a painless process and then rack patients with excruciating tortures. In a suit for damages in a case of this kind, brought by a woman in Providence, the jury awarded the plaintiff \$500.

**State Hospital for the Insane in Connecticut.**—According to the *Boston Medical and Surgical Journal*, the legislative committee of Connecticut has reported the necessity of erecting another hospital for the insane, and that, in consideration of one-half the patients being admitted to the State Hospital from Fairfield and New Haven Counties, the hospital should be located in Bridgeport. A commission has been again appointed by the last Legislature, of which Dr. Amos J. Givens, of Stamford, and Dr. C. B. Adams, of New Haven, are members. This commission is in search of good locations.

**The Biological Laboratory of the United States Fish Commission at Woods Holl, Mass.,** will be open throughout the winter to those who may desire to avail themselves of the opportunities afforded for investigation in maritime zoology and embryology. Several of the winter-fishes have already begun to breed, and the surface-fauna is materially different from that of the summer-months. The Laboratory is provided with steam-heat, and a limited number of rooms in the residence are available. Applications should be addressed to the Director, Dr. H. C. Bumpus, Woods Holl, Mass.

**By the will of the late Edward Austin,** \$500,000 are bequeathed to Harvard University, the interest to be applied to needy meritorious students and teachers, and an additional \$10,000 are bequeathed to the bacteriologic laboratory of Harvard Medical School. The Massachusetts Institute of Technology receives \$400,000; Radcliff College, \$30,000; Roanoke College, \$30,000; Tuskegee Normal and Industrial School, \$30,000; and the New England Trust Company, \$100,000 in trust, the income to be paid to needy men and women who have been in better circumstances in early life, but have become reduced to want in old age.

**Boston Society for Medical Improvement.**—At the meeting of November 21st, papers were read on **The Work of the Volunteer Aid Association.** Dr. H. L. BRERELL presented a record of the *Bay State*, the first hospital-ship to be fitted out under Article XIII of the Geneva Conference, and the only hospital-ship fitted out by any State. She was only about one-fourth the size of the hospital-ships *Relief* and *Solace*, her capacity being 100 patients. On her three trips she brought home 336 sick soldiers, only 5 of whom died, a percentage of .014; she supplied medical and surgical supplies at various points, and equipped two hospitals.

Dr. BOTTOMLEY gave a *résumé* of the cases treated on board; 101 of the 336 came from Santiago; of these, 81 had malaria. The rest came from Porto Rico; only 21 malaria cases. Typhoid was more prevalent and severe in the Porto Rico cases; malaria plasmodium was found in only 2 out of

200 blood-examinations. Dysentery and malaria were more common in Santiago.

### WESTERN STATES.

**Cooper Medical College (San Francisco).**—At the last faculty meeting Drs. Stanley Stillman and Emmet Rixford were made professors of surgery, and Dr. William Fitch Cheney, professor of principles and practice of medicine.

**The St. Joseph (Mo.) Medical Society** was recently organized, with the following officers for the ensuing year: President, Dr. P. I. Leonard; vice-president, Dr. E. A. Donelan; secretary, Dr. J. M. Bell, and treasurer, Dr. J. H. Flynn.

**Lectures on the History of Medicine.**—Dr. Horace Whitacre, of the Medical College of Ohio, began, on November 30th, a series of lectures on the history of medicine, to be given in the college-building and to be free to the profession at large.

**St. Louis Medical Society of Missouri.**—At a meeting held November 26th, the following was the scientific program: The general health and the upper air-passages, by Dr. J. C. Mulhall; Specimen of gastroenterostomy, with remarks, by Dr. John C. Morfit.

**Cleveland Medical Society.**—At a meeting held November 25th, the following was the scientific program: The clinical and microscopic differentiation of sclerocystic and cirrhotic degeneration of the ovaries and chronic ovaritis, by Dr. W. H. Humiston; Morphine and its treatment, by Dr. A. J. Pressey; A case of long-standing neurotic vomiting, by Dr. H. L. Spence.

**The Indiana Medical College,** a department of the University of Indianapolis, was destroyed by fire November 25th. The total loss is estimated at about \$40,000, with an insurance of \$25,000. Dr. Norman Shope, of Ligonier, and Dr. R. G. Morgan, of Plainfield, were in the building at the time of the fire. The latter managed to escape by the fire-escape, but the former, in endeavoring to leave the building by the stairs, was perhaps fatally burned.

**St. Louis Academy of Medical and Surgical Sciences.**—At the annual meeting held November 8th, the following officers were elected for the ensuing year: President, Dr. G. C. Eggers; senior vice-president, Dr. John C. Murphy; junior vice-president, Dr. J. C. Spohn; secretary, Dr. James Moores Ball; treasurer, Dr. Emory Lanphear; orator, Dr. A. H. Ohmann-Dumesnil; curator and librarian, Dr. G. F. Hulbert.

**The Disinfection of Street-cars.**—According to the *Medical Review*, a resolution, offered by Dr. C. H. Hughes, at a meeting of the St. Louis Board of Health, on November 11th, with regard to the sanitary inspection of street-cars and sleeping-cars, was adopted. It is similar to the resolution offered before the Board more than a year ago, but more sweeping in its provisions. The resolution requests the city-authorities to enact such legislation as will compel the companies to keep their cars in proper sanitary condition. It specifies that the cars should be inspected by the city-authorities; that an appropriation be made for the work; that the cars should be disinfected with fresh air, antiseptics and ozonization after each trip in which they are crowded with passengers. The resolution also suggests that the cars be placarded when the seats are filled, in order to prevent the crowding of passengers.

**The Indiana State Medical Society** will hold its semicentennial meeting in Indianapolis, June 6 and 7, 1899. The following are the officers: President, Dr. J. C. Sexton, of Rushville; vice-president, Dr. George F. Keiper, of Lafayette; secretary, Dr. Frederick C. Heath, of Indianapolis; assistant secretary, Dr. George H. Grant, of Richmond, and treasurer, Dr. A. E. Bulson, Jr., of Fort Wayne. The committee of arrangements consists of Drs. John H. Oliver, Albert E. Sterne, J. Rilus Eastman, H. M. Lash and Charles E. Ferguson, of Indianapolis.

**University of California.**—Regular work in the new building of the Medical Department of the University of the State of California has now been going on for some weeks, and though a few hitches have occurred, things are settling down to smooth running remarkably quickly. The present freshmen class is a large one, and contains a number of students from the other departments at Berkeley. The large laboratories and the improvements and conveniences are highly appreciated by the faculty and teaching staff, and unusual interest seems to have been developed by the move into the new quarters. The Department of Pharmacy of the State University intends moving into its building, next the Medical building in the group of the affiliated colleges, during the Christmas vacation.

**"Christian Science" and the Iowa Judiciary.**—The Iowa judiciary is evidently free from all taint of "Christian Science," if one may form an opinion from a recent decision. A litigant was so illogical as to seek pecuniary redress for injuries said to have been sustained by falling into an unprotected areaway, and to have been "cured" by a practitioner of this latter-day "science." The verdict was that injuries which "Christian Science" could heal must have been wholly imaginary, or so nearly so that their estimation in dollars and cents, or even in cents alone, is impossible. The derisive laughter of interested spectators is said to have accompanied the "unfortunate" litigant as he betook himself from the court-room. Evidently the Court thought, with the miracle-monger whom the plaintiff consulted, that his wounds and bruises were merely "mortal thoughts" and nonexistent as soon as he chose to make them so.

**Southeast Kansas Medical Society.**—The following is the scientific program of the quarterly meeting to be held at Parsons, Kan., December 6th: Diseases of the Rectum, by Dr. J. B. Anderson, of Chetopa; Granular Conjunctivitis, by Dr. J. W. Tinder, of Parsons; Typhoid Fever, by Dr. E. C. Liggett, of Oswego; Phthisis Pulmonalis, by Dr. R. L. Von Treba, of Chetopa; Dislocations, by Dr. G. A. Blair, of Girard; Diarrhea in Children, by Dr. J. T. Davis, of Independence; Needed Medical Legislation, by Dr. J. J. Kackley, of Chetopa; Cervical Endometritis, by Dr. A. J. Roberts, of Fort Scott; Epilepsy, by Dr. John A. Punton, of Kansas City; Sarcoma, by Dr. A. J. Fulton, of Kansas City; Malarial Toxemia, by Dr. James, of Columbus. The officers of the Society are: President, Dr. P. W. Barbe; secretary, Dr. George S. Liggett, both of Oswego.

**Chicago Medical Society.**—At a clinical meeting, held November 23d, Dr. TRUMAN W. BROPHY reported cases of **early operations in cleft palate**, in which he operated upon the palate before operating upon the concomitant hare lips. Dr. MANNING presented a case of **osteomyelitis**, with demonstration of the entire tibia removed by amputation. Dr. ISABELLE HERB reported **one thousand consecutive cases of anesthesia**, the third thousand

reported in the service of Dr. A. J. Ochsner. The essential points in the report were the absence of any lethal issue, and the avoidance in almost every case of any disagreeable symptoms, except in a few cases of alcoholic and morphin habits. Dr. A. R. EDWARDS reported a case of diffuse cystic degeneration in both kidneys (to be published in a future number of the JOURNAL). Dr. C. G. BUXFORD demonstrated specimens of cystic kidneys and tuberculous kidneys. Dr. H. T. BYFORD presented specimens of **uterine fibroids**.

**Medical Affairs in Cleveland, Ohio.**—We quote the following from the *Cleveland Journal of Medicine*:

"A movement has been on foot to consolidate Starling Medical College and the Ohio Medical University in a medical department of the Ohio State University, but it has failed by reason of opposition in the faculty and trustees of the Medical University. Conditions became so bad that a member of the Columbus profession wrote a letter to the Cincinnati *Lancet-Clinic* of August 6th, in which some very serious charges were anonymously made. In spite of the fact that this letter refers in uncomplimentary terms to the chancellor of the Medical University, Dr. J. F. Baldwin, he was accused of writing it, and was recently removed from the chancellorship by the trustees. The letter asserted that the success of the Medical University was due to 'low fees; no entrance-examinations, no final examinations, and a diploma to all comers.' It was charged that any physician willing to contribute \$250 to the institution at its start in 1892 received a professorship. It was asserted that the school has eight or ten 'professors of surgery.' Following this, Dr. J. Dudley Dunham, recently professor of bacteriology in the school, made certain open and written charges against the school, and submitted them to the Ohio State Board of Medical Registration and Examination. In a nutshell, these charges were that the faculty passed numerous men whom Dr. Dunham refused to pass in his branch, as not knowing sufficient about it, with specific allegations that he was told that the school was for the purpose of attracting and passing as many students as possible, so that the faculty might receive a return in consultations from these men after their graduation. If the charges were true, they indicate that the Medical University is a disgrace to the State (the charges state that the Illinois Board of Health refuses to recognize their diplomas), and it was clearly the duty of the State Board to sift them to the bottom. At the Board's October meeting the charges were dismissed without hearing. This was a wrong to the profession and to the school in question. All will sympathize with the reluctance of the Board to dip into what was more or less a personal squabble, but the profession put the Board where it is to see that all the colleges of the State maintain a certain minimum standard. If the Board is more solicitous of its finer feelings than of the welfare of the profession, it should promptly step down and out. The Board is showing a lamentable lack of backbone in this and other matters, and it is high time it indulged in some 'stiffening.' As the matter now rests, a medical college in the State stands charged before the profession with the most serious offences by a man in a position to know of what he wrote, who was prepared to prove his case before the Board by witnesses, but the charges were dismissed by the Board on a technicality. If innocent, the Medical University should insist loudly upon a hearing, and if guilty, the Board has manifestly and shamefully neglected its plain duty to the profession."

**Diet in Diabetes.**—The following are the articles of food prohibited and those advised by Dr. Charles W. Purdy, in his paper on the dietetic treatment of diabetes, read before the meeting of Chicago Society of Internal Medicine, November 22d:

*Articles Strictly Prohibited.*—Bread of all kinds, including gluten-bread, crackers, griddle-cakes, toast and waffles, unless especially ordered in stated quantity in the special case; all farinaceous vegetables, including potatoes, rice, tapioca, sago, macaroni, vermicelli, arrow-root, flour of all kinds, oatmeal, cornmeal, barley-meal, cracked wheat, buckwheat-meal, and all cereal breakfast-foods; the liver of animals; oysters, unless by special permission; such vegetables as peas, ripe beans and corn, melons, pumpkins, squash, also turnips, carrots, parsnips, beets, celery, radishes and all roots; rhubarb, tomatoes and Bermuda onions, unless especially permitted; fruits of all kinds, including preserves, unless especially ordered in



this particular case: sugar, syrup, honey and all sweets, including sweet puddings and desserts, candy and ice-cream.

**Beverages Prohibited.**—Milk, whey, buttermilk, skimmed milk, matzoon, koumiss, chocolate, cider, champagne, port, sherry, Madeira, beer, and all sweet wines and liqueurs.

**Foods Especially Advised.**—Butter, fats and oils, cream, marrow-bones, bacon, fat part of ham, beef, mutton, pork; beef-tongue, fat goose, mackerel, salmon, whitefish, eels, sturgeon, sardines in oil, yolk of eggs, German sausage (Cervelatwurst), caviar, Cheddar cheese; also cream-cheeses, as Stilton, Neufchatel, Stracchino, Gorgonzola, Brie; green salads, as lettuce and cucumber, with French dressing.

**May Eat.**—All meats, including beef, mutton, ham, bacon, poultry and game of all kinds; roasted, broiled, smoked, potted or preserved in any way except with sugar or prohibited vegetables; sweetbreads, kidneys, heart, gizzards, tongue, brain and marrow-bones; fresh fish of all kinds, except oysters; dried, cured or smoked fish, including codfish, haddock, herring, mackerel, salmon, crabs, lobsters, sardines, anchovies, shrimps, eels, caviar, frogs and turtles; fats, oils (vegetable or animal), butter; fresh vegetables, including spinach, lettuce, cucumbers, green string-beans, asparagus, cauliflower, red and white cabbage, Brussels sprouts, mushrooms, onions, cress, leeks; preserved vegetables, including tinned asparagus, French beans, cucumbers pickled in brine or vinegar, mixed pickles, sauer-kraut, chow-chow and olives; spices, including pepper, salt, curry, cloves, nutmeg, English mustard, parsley, dill, capers, caraway-seed, laurel; soups and broths if clear and unmixed with bread-crumbs, flour, barley, rice or cereals; cheese, such as Neufchatel, Gorgonzola, Stilton, Brie, and so-called cream cheeses; eggs, raw or cooked in any way without admixture of flour; nuts, such as almonds, walnuts, Brazil nuts and filberts.

**Beverages.**—Pure drinking water, all table mineral waters, plain or carbonated, clear or mixed with lemon or lime-juice, coffee and tea with or without cream, Rhine wine, claret, Burgundy.

## SOUTHERN STATES.

**The South Texas Medical Association** will meet in Houston, Tex., December 8th.

**The North Texas Medical Association** will meet in Paris, Tex., from December 13th to 15th, under the presidency of Dr. R. D. Potts, of Bonham. Dr. R. F. Miller is secretary.

**University of Maryland Medical Society.**—At a recent meeting the following officers were elected for the ensuing year: President, Dr. John S. Fulton; vice-president, Dr. St. Clair Spruill; secretary, Dr. José L. Hirsh; executive committee, Drs. William Stokes, Charles W. Mitchell, and Thaddeus W. Clark.

**Dr. McShane's Acquittal.**—Dr. McShane, formerly Medical Health-Officer of the city of Baltimore, has recently been on trial, charged with appropriating to his own personal use funds paid into the department by the friends of insane patients for the maintenance of the latter. The jury acquitted Dr. McShane, notwithstanding the fact that in his own evidence he admitted misappropriating the money.

**Premature Coroner's Verdict.**—Rev. J. H. St. Clair, of Decatur, Ala., was reported dead on November 24th, and the coroner having been informed that he had taken 15 grains of morphin, rendered a verdict of suicide by morphin-poisoning. On the following day, the Rev. St. Clair, having recovered from his overdose of morphin, to which drug he is said to have been addicted, came to life, and is now reported to be in the enjoyment of good health, despite the fact of having been officially declared dead.

**Practitioners of Medicine in the District of Columbia.**—According to the *Maryland Medical Journal*, 1,074 physicians were granted licenses to practise medicine in the District of Columbia, by reason of having registered at the

health-office prior to June 3, 1896. Thirty-four applicants were refused licenses, and two are awaiting action. Of the 86 applicants since the enactment of the law, 18 failed to pass the examination, and 68 were licensed, making in all 1,142 licensed physicians in the District, or one physician to about every 250 persons.

**Bullet in His Heart 37 Years.**—In the Cincinnati *Lancet-Clinic*, Dr. O. B. Beer, reports briefly the case of a man in Jackson County, W. Va., who during the civil war was shot by "bushwackers." The bullet entered the chest posteriorly on the left side, between the second and third ribs, and coursed downward and inward, passing through the left lung and pericardium, and imbedding itself in the wall of the heart, near the lower part of the left ventricle. After being wounded, the man was left on the field for dead, but he eventually recovered and thereafter persisted in the assertion that the bullet was still in his heart. Before his death, which occurred a short time ago, he requested that a necropsy be performed to ascertain the facts. This was done by Dr. Beer and Dr. G. O. Brown, with the results noted.

**Eosinophilia in Trichinosis.**—Two years ago a case of trichinosis was admitted to one of the medical wards of the Johns Hopkins Hospital, and the interesting observation was made that there was marked eosinophilia in association with fairly well-marked leukocytosis. The highest point the eosinophiles reached in this case was 68%. Since then 4 other cases of trichinosis have been admitted, and in each instance a suspicion of the existence of the disease was aroused by the presence of marked eosinophilia. The suspicions in each case were confirmed by the finding of trichinae in the pieces of excised muscle. The fifth case is now in the hospital. The highest point the eosinophiles have so far reached has been 51%. This one observation is a sufficient recompense for the laboriousness of systematic blood-examination and differential counts of the leukocytes.

**Memphis (Tenn.) Medical Society.**—At a meeting held November 1st, Dr. E. C. ELLET presented: (1) a case of **secondary glaucoma** of one year's duration, depending upon detachment of the retina; (2) a case of **primary glaucoma**, in a man, aged 28 years, completely cured by eserine and massage locally, and lithium citrate internally; (3) a **myxomatous nasal growth** removed from a boy, aged 10 years; (4) several specimens of **adenoid growths** removed from the nasopharynx.

Dr. G. G. BUFORD read a paper on **Vomiting of Pregnancy not of Reflex Origin**. He held that the variety of vomiting is not reflex, but is autogenous, as the result of the action of a leukomain-product of the urea-group, produced by the increased cell-metabolism that takes place during gestation. This chemic substance was thought to be irritating to the vomiting center in the medulla. Lavage of the stomach and proper hygiene were advocated in the treatment.

Dr. M. GOLTMAN reported three cases of **acute congestion of the kidneys**, and a case of **cerebral syphilis**.

Dr. WILLIAM KRAUSS reported a case of **malarial hematuria**.

**Johns Hopkins Hospital Medical Society.**—At a meeting held November 21st, the President, Dr. J. M. T. Finney in the chair, Dr. BLOODGOOD presented a number of interesting surgical cases. The first case was that of a child, 2 years old, successfully operated on for vesical calculus by suprapubic cystotomy. The calculus measured about 2 x 3 cm. Two cases operated on for the radical cure

of hernia, in which cocain was the only anesthetic used, were exhibited. The patients suffered but little during the operation, and the results were perfectly satisfactory. The use of cocain in major operations had been introduced into the hospital by Dr. Cushing. It proves perfectly satisfactory in many severe operations in which the administration of chloroform or ether is feared, owing to the condition of the heart or lungs. Dr. Bloodgood referred to a case of strangulated hernia in which he operated and found the strangulated portion of the gut gangrenous. The gangrenous portion was excised and an end-to-end intestinal anastomosis established. The patient recovered and is now practically well.

DR. CUSHING read a paper on **Operation for Intestinal Perforation in Typhoid Fever**. He reported cases of typhoid fever from the medical wards in which he had operated for suspected intestinal perforation. Three of these proved at operation to be cases of actual perforation, while in the fourth no intestinal perforation was found. This last case developed symptoms of perforation during a typhoid relapse and illustrated the great difficulty presented in many cases of making a diagnosis of intestinal perforation. Of the three patients of actual perforation operated on, two died subsequent to the operation. In these two fatal cases the clinical symptoms of perforation had not been typical, and more delay was caused in watching the cases than would have occurred had the symptoms been frank and outspoken. The successful case operated on was in a boy, aged 8 years. The perforation was readily found and sutured. On the following day symptoms of obstruction developed and celiotomy was performed, but nothing found. At a subsequent date symptoms of obstruction again developed and at operation a fibrous band was found obstructing the small intestine. This patient made a good recovery after the third celiotomy and was presented before the society practically well. Dr. Cushing has thus had one successful result among three cases operated on. He urged early operation in cases with suggestive symptoms of typhoid fever and expressed the hope that it may yet be possible to make a diagnosis of the preperforative stage of intestinal perforation. Dr. OSLER said that the surgeon saw too little of the typhoid cases in the medical wards; the surgeon should make medical visits with the physician, and vice versa. He expressed the belief that the time would probably come when the hospital-rules would require the physician to make visits in the surgical wards once a week and the surgeon to make visits in the medical wards probably twice weekly. Dr. FINNEY said that he had operated on 4 cases of typhoid perforation with one recovery.

DR. YOUNG read a paper on **Prostatectomy for Enlarged Prostate**. He has performed the operation in 4 cases with excellent results. The prostate is enucleated through a perineal incision, suprapubic cystotomy being performed, so that the fingers can be introduced from above, in order to aid in the removal of the gland through the perineal wound. In all 4 cases the difficulty and frequency in micturition were relieved and the patients were able to go 4 or 5 hours without voiding urine. Dr. Young considered prostatectomy preferable to excision of the testicle for enlarged prostate. Although the ejaculatory ducts must be torn during the enucleation of the gland, yet he has found actively motile spermatozoa in the seminal fluid of one of the patients after operation. The fact that spermatozoa persists after prostatectomy is a strong point to recommend this operation in preference to removal of the testicles. The treatment of enlarged prostate by sending the patient home with a catheter in most cases, to set up a bladder-infection, was strongly con-

demned, especially as the enucleation operation is so easy of performance. DR. OSLER did not take so gloomy a view of the regular use of the catheter in old people with hypertrophied prostates. He cited the instance of a friend, aged 86, who for many years had used a catheter and who is still quite active and enjoyed life. DR. BLOODGOOD complimented Dr. Young on the success he had had with his cases, but showed that the mortality from enucleation of the gland and excision of the testicle for hypertrophied prostate is about equal.

**Medical and Chirurgical Faculty of Maryland.**—The semiannual meeting was held at Frederick, Md., November 16th and 17th, the president of the Faculty, Dr. S. C. CHEW, of Baltimore, in the chair. An address of welcome was made by DR. W. H. BALTZELL, of Frederick, who in a few appropriate remarks offered the keys of the town to the members of the Faculty. The president made the response on the part of the Faculty, and the regular program was then taken up.

DR. WM. OSLER read a paper on the **Diagnosis of Gallstones**. He called attention to the fact that the long-continued repetition of gall-stone attacks without jaundice and acute cholecystitis occasionally occurs without there being any gall-stone, and that such attacks usually follow some acute disease like typhoid fever. He also reported some cases of acute inflammation of the gall-bladder simulating appendicitis. One of these cases had been operated upon on the diagnosis of appendicitis, but the appendix being found healthy, further search was made and revealed an acutely inflamed gall-bladder, with a perforation of about pin-point size, and one small gall-stone was removed. Reference was also made to the occasional difficulty in distinguishing between cases of renal colic and gall-bladder inflammation.

DR. T. CASPER GILCHRIST read a paper on the **Treatment of Acne Rosacea**. He said that the constitutional part of the treatment consists of the correction of any irregularity of the bowels and careful attention to the diet, especially avoiding pastry, pickles, pork and highly seasoned dishes. Cascara sagrada was recommended as the most useful laxative. In local treatment the use of the electric needle or scarification was recommended.

DR. JNO. H. JAMAR reported **ten cases of fistula in ano** treated by conservative measures. The treatment consisted in simply passing a probe through the fistulous tract, curetting the edges and walls of the tract thoroughly, flushing out with a solution of mercuric chlorid, 1 to 5,000, and locking up the bowels for seven days by the administration of opium and belladonna. On the seventh day an enema was given to thoroughly cleanse the bowels, and again they were checked for seven days as before. Liquid diet was used during the whole of the two weeks that each case was under observation. The result was a cure in all cases.

DR. T. A. ASHEY read a paper on **Intestinal Complications in connection with Abdominal Operations**, with a report of cases. He advocated end-to-end anastomosis in case primary resection is done, but when cysts or tumors connected by adhesion with the bowel have to be removed it is better to make use of the Murphy button. He reported 5 cases of abdominal operations, giving especial attention to the complications attending each. Four of the 5 patients had recovered, although some of the operations were performed in country dwelling-houses, without trained assistants and where absolute asepsis was almost impossible.

In the discussion DR. STONE stated that many such cases



are allowed to die under the general belief that they are hopeless. Dr. Ashby's results under adverse circumstances tend to show what can be done even when hospital-advantages are not obtainable. Drs. WINSLOW, PLATT, CULLEN, and STEVENS commented upon the excellent results obtained and upon the surgical features of such cases.

DR. H. O. REIK read a paper on the **Ocular Manifestations of Diabetes**. He called attention to the fact that occasionally an examination of the eyes gives the first hint of the existence of this grave systemic disease. He recommended that all physicians should be able to use the ophthalmoscope, at least sufficiently well to recognize the existence of abnormal intraocular conditions. He laid especial emphasis upon the belief that it is a common habit in testing the urine to use Fehling's solution, and if sugar be not indicated in a hasty and incomplete examination to dismiss the possibility of the existence of diabetes. The well-known fact that in this disease there may be periods of temporary absence of sugar from the urine was referred to and more careful and complete examinations of the urine, as well as the use of the blood-tests, especially Bremer's, was recommended.

In the discussion, DR. HIRAM WOODS referred to the existence of diabetic cataracts, and inflammations of the retina and cornea, during the course of this disease, and of the importance in such cases of examining for diabetes. DR. BRUSH emphasized the importance of the last point concerning the examination of suspected diabetic urine. DR. FLEMMING referred to the importance of early diagnosis in these cases, because of the local disease depending for cure upon the care of the general condition.

DR. HUGH H. YOUNG read a paper on **The Treatment of Hypertrophied Prostate**, with a report of four cases of total excision. He reviewed the older methods of treatment, with their attendant discomforts to the patient and unsatisfactory results to the physician. He objected to the custom of giving a catheter to a patient in any case, as it must soon become the source of infection. He reported 4 cases in which he had removed the entire prostate with good results, and he advocated this operation on the theory that in prostatic enlargement we have to deal with a tumor that is sure to increase in size if let alone and which can be treated by the same surgical means applied to tumors elsewhere. Although the whole prostate was removed in his cases it was proved that the ejaculatory ducts were not closed and that the seminal fluid contained a large number of actively motile spermatozoa. The advantages of the prostatectomy over castration are that the patient is cured by a simpler method, that the sexual powers are not interfered with, and that the patient does not object to it as he does to castration.

In the discussion DR. WINSLOW said that he considered this a remarkable advance in the treatment of prostatic enlargements. He thought that the dangers of castration and the humiliation that the individual felt when deprived of these organs rendered the operation a repugnant one. DR. PLATT stated that he knew but one man who had managed to keep a catheter clean for any length of time, and even he had infection after a year or so. He considered that the lives of men compelled to use a catheter constantly are rather miserable, and he felt that while we might have to use caution in selecting cases for this operation, Dr. Young's results had been so good that other surgeons must accept them and use this method of operating.

DR. FRANK MARTIN reported cases of **fracture of the skull**, accompanied with serious intracranial hemorrhage.

He gave a detailed report of cases of head-injury, and considered at some length the difficult points that arise in deciding what cases shall be operated upon.

DR. GEO. A. FLEMMING reported a case of **glioma of the retina** occurring in a very young child upon whom he had performed enucleation. A recurrence of the growth in the orbit followed and the child died within the year. Macroscopic and microscopic specimens of the growth, which had invaded nearly all the tissues of the eye, were exhibited.

#### CANADA.

The **Montreal Medico-Chirurgical Society** met on November 21st, in the Drummond Hall, DR. J. S. ADAMI in the chair.

DRS. D. J. EVANS and H. S. SHAW showed a specimen of **anencephaly**. This was due to imperfect development of the dorsal somatic canal resulting in fusion of the occipital region with the sacrum. There was also a small meningocele. The child was perfectly formed in other ways and had lived a short time.

DR. F. A. L. LOCKHART read a case-report upon an **ovarian tube** which he had removed. The specimen, which was shown by DR. D. P. ANDERSON, consisted of a large **dermoid cyst** containing hair and teeth. It was beginning to show carcinomatous degeneration.

DR. F. J. SHEPHERD recorded a case in which he had successfully operated for **intestinal obstruction** from bands. He had divided two adhesions without relief of the symptoms, and found that the small intestines made a half turn upon the mesentery. When restored to position the difficulty was overcome. Dr. Shepherd had not seen a similar case recorded.

A paper on **Functional Heart-murmurs**, written by DR. MAUDE ABBOTT, was presented by PROFESSOR JAMES STEWART. The paper consisted of a statistical study of so-called functional heart-murmurs, as they occurred in the medical records of the Royal Victoria Hospital. A functional murmur was considered to be one which was *temporary* in character, not associated with permanent organic lesion of the valves or heart-muscle, and the occurrence of which was therefore consistent with a good prognosis. Under this definition, both accidental or hemic murmurs, and those due to a temporary relative mitral insufficiency, were considered. All cases in which there was anything, either in the previous history or in the present condition, to suggest organic cardiac disease were excluded from consideration. Of 2,780 case-reports examined, a functional murmur was noted in 466 (17%); it was often present in conditions where there was neither anemia nor fever. The murmur was generally "low" and "soft." "Loud," "harsh" functional murmurs were more common at the pulmonary area (27 out of 42 cases). The murmur of temporary relative insufficiency was often widely transmitted; in 7 cases it was heard in the back below the scapula. In all but 10 cases the murmur was systolic in rhythm. In these 10 cases a diastolic murmur was noted which could not be rejected as organic by any of the criteria that had been used. The cases were in chlorosis, splenic leukemia, functional cardiac disturbance, chronic bronchitis, catarrhal jaundice, cerebral thrombosis, dementia, and exophthalmic goiter. The particular character of the murmur and the associated cardiac condition were particularly studied in the following diseases: *True anemias* (pernicious anemia, chlorosis, leukemia, Hodgkin's disease, and anemia secondary to hemorrhage); *pulmonary phthisis*, *typhoid fever*, *hysteria* and *allied functional nervous disorders*,

and *exophthalmic goiter*. In the 16 cases of *pernicious anemia* in which it occurred the murmur was always apical. In the lesser degrees of blood-alteration it was present at apex and base with about equal frequency. In *typhoid fever* a large percentage of cases developed murmurs at some part of their course. These were interesting by their changefulness, alternating in site, character and persistency during their course.

The following conclusion were drawn: (1) Functional murmurs often occur associated with neither anemia nor fever, but with some form of intoxication. (2) Diastolic murmurs have been noted which do not appear to have an organic origin. (3) In cases of anemia pulmonary accentuation is often associated with a pure accidental murmur. (4) Although accidental murmurs are generally heard at the base and those of relative mitral insufficiency at the apex, accidental murmurs are sometimes, though not always, heard best at the apex. On the other hand, murmurs produced at the mitral valve are occasionally, though rarely, heard best at the pulmonary area. The writer ended by stating that the statistical study of this symptom, from the large amount of material examined, must be considered only a preliminary to a more thorough investigation of the subject by the personal examination of the individual patients.

### MISCELLANY.

**The American Chemical Society** will hold its winter meeting in New York City, beginning December 27th.

**Inspection of Animals at Abattoirs.**—The report of Dr. Salmon, chief of the Bureau of Animal Industry, shows that during last year, at 135 abattoirs in 35 cities, 51,335,398 animals were inspected before being slaughtered.

**Professorships of Military Medicine.**—In connection with recent criticisms of the administration of the medical department of the United States army, a correspondent suggests, in the *Boston Medical and Surgical Journal*, "That the best way to approach perfection in military medicine and surgery would be to establish a chair on these branches in every reputable medical college in this country."

**Senator Edmunds on Territorial "Expansion."**—"When people say that the British have done much in India, it is true; they have done it; but it has taken 200 years to accomplish it, and they govern there now by force and force alone. Their civilians and soldiers have to be sent into the mountains, which are, some of them, near at hand, in order to keep them alive at all. And that is precisely the trouble in these tropical islands, that every year, or two, or three, our soldiers and our civilians must leave these islands and go to some cool, temperate zone to recuperate. The idea of shipping off, say to a Chinese or Japanese port, or into any foreign country, a few soldiers to spend three months to get well, and then sending them back, and the next summer shipping others that had not gone before, thousands of miles and back again in order to make our case similar to the British case in India, would, to anybody who has not a political typhoid fever, be considered preposterous."

**Obituary.**—DR. MARK H. LINCOLN, a graduate of the University of Pennsylvania, November 26th, aged 37 years.—DR. CHARLES M. HAMMETT, formerly health-officer and coroner of the District of Columbia, November 22d, aged 63 years.—DR. F. H. VANVALZAN, Bellefonte, Pa., November 27th, aged 60 years.—DR. P. V. BENSON, Baltimore, Md., November 10th, aged 60 years.—DR. JAMES D. MONCURE, Williamsburg, W. Va., November 9th, aged 56 years.—DR.

JAMES M. SMITH, Cheswold, Del., November 12th, aged 62 years.—DR. HERMAN A. BORGER, Chicago, Ill., November 18th, aged 38 years.—DR. CHARLES C. EDWARDS, Bingham, N. Y., November 16th, aged 73 years.—DR. EMIL SHOFEN, Yonkers, N. Y., November 17th.—DR. C. J. HECKERT, Harrisburg, Pa., November 13th, aged 40 years.—DR. PHILIP STANHOPE BARBOUR, superintendent of the Louisville City Hospital, November 14th, aged 51 years.

**The National Quarantine-Convention at Memphis, Tenn.**—The meeting was called to order, November 17th, by chairman J. S. MENKEN, of the committee on organization. After addresses of welcome by MAYOR J. J. WILLIAMS, and MR. J. S. MENKEN, GEN. LUKE E. WRIGHT was chosen permanent chairman, MR. PHILIP A. RUCK, of Senatobia, Miss., secretary, and Mr. FRED. ORGILL, of Memphis, assistant secretary. The remainder of the morning-session was devoted to a discussion upon equitable representation of the States, the afternoon session to the appointment of various committees, and the reading of various resolutions; the evening-session, to the reading of a paper by DR. JOHN B. HAMILTON, of Chicago, in which he advocated that the convention endorse the bill now before Congress known as the Spooner Bill, which had already received the sanction of the American Medical Association and the American Public-Health Association. DR. S. D. ROBBINS advocated the annexation of Cuba as a practical way of dealing with certain questions of quarantine. DR. F. M. ROGERS, in a paper dealing with epidemics of fever from the earliest to the present time, advocated national control of quarantine. On the second day of the convention, DR. H. B. HORLBECK advocated the establishment of a Bureau of Health at Washington, DR. SAUNDERS spoke against the advisability of centralizing authority in matters of quarantine, as being contrary to the spirit of the institutions of this country. The chairman of the committee on resolutions then presented the following report, which had been unanimously adopted by the committee:

The committee on resolutions, after careful consideration of the many valuable resolutions offered by the various members of the convention, have decided upon the following as embodying the ideas expressed in the majority of the said resolutions:

**THEREFORE,** That for the purpose of protecting and improving the general health of the people of the United States, coordinating and harmonizing the action of the State and National sanitary authorities; framing regulations for the treatment of infected vessels and material at all infected or suspected foreign ports of shipment; preventing unnecessary interference with commerce, the United States mail, or through traffic by land or water, and for adopting a uniform system of quarantine for all ports in this country; be it

*Resolved,* That there be established on a broad and comprehensive basis a national bureau of public health in the Department of the Treasury of the United States, that the administration of all the public-health functions now exercised by authority of the United States be placed in the hands of this bureau.

*Resolved,* That the sanitary authorities and commercial interests of the several States of the Union be brought into immediate relations with the bureau, and be given a due share in the power and responsibilities of the central board through the agency of an advisory council, consisting of one member from each State, to be appointed by the authorities of the several States.

DR. R. B. MAURY, the delegate from Tennessee, objected strenuously to the adoption of the report, which, he said, was absolutely vague and uncertain; that there was nothing in it to indicate what practical means were recommended by the committee to meet the issue. Dr. Maury then referred to the speech of Dr. Saunders as a possible elaboration of the meaning of the committee's report, and said that he regarded his proposed system as impractical and impracticable.



ble; that it afforded no security whatever from the evils for which relief is sought. He said that the "advisory council" plan had been tried 20 years ago, and was found wholly wanting, resulting in confusion, and that the people of this country would have no more of it. Dr. Maury went on to say that unless the convention should take stronger and more definite measures, the deliberations will have been utterly futile; the convention should adopt as its recommendation to Congress a clear, definite and practicable bill providing for effective national quarantine. He said that, as a compromise, a bill recommending nothing but a national coast-quarantine would be better than the unsatisfactory and vague and futile resolutions presented. Numerous amendments were offered, but the original resolutions were finally adopted, with a few dissenting votes from Tennessee and Mississippi. The following committee was appointed to draft a bill in accordance with the views of the convention to be presented to Congress: DR. LUKE E. WRIGHT, of Tennessee; DR. RUHRÄH, of Maryland; MR. FRED ORGILL, of Tennessee; DR. U. O. B. WINGATE, of Wisconsin; DR. W. B. HORLBECK, of South Carolina; MR. W. H. DWYER, of Louisiana; J. T. HARAHAN, of Illinois; and DR. SAMUEL DURGIN, of Massachusetts.

**Health Reports.**—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Supervising Surgeon-General of the U. S. Marine-Hospital Service, during the week ending November 26, 1898:

## SMALLPOX—UNITED STATES.

ALABAMA:		CASES.	DEATHS.
Hale County . . . . .	Nov. 14.	Reported present.	
Mobile . . . . .	Nov. 12.		1
COLORADO:			
Tinnath . . . . .	Nov. 16.		5
VIRGINIA:			
Newport News . . . . .	Nov. 14.		1

## SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Oct. 22-29 . . . . .	1	2
BRAZIL:			
Rio de Janeiro . . . . .	Sept. 23-30 . . . . .	17	3
" . . . . .	Oct. 1-7 . . . . .	12	7
" . . . . .	Oct. 7-14 . . . . .	16	6
INDIA:			
Bombay . . . . .	Oct. 11-18 . . . . .		1
JAPAN:			
Tokyo Fu . . . . .	Sept. 30-Oct. 20 . . . . .	1	
Aomori Ken . . . . .	Sept. 30-Oct. 20 . . . . .	24	5
Iwate Ken . . . . .	Sept. 30-Oct. 20 . . . . .	1	
RUSSIA:			
Moscow . . . . .	Oct. 15-22 . . . . .	7	2
" . . . . .	Oct. 22-29 . . . . .	11	5
Odessa . . . . .	Oct. 22-29 . . . . .	13	1
St. Petersburg . . . . .	Oct. 22-29 . . . . .	2	
Warsaw . . . . .	Oct. 22-29 . . . . .		4

## YELLOW FEVER—UNITED STATES.

DISTRICT OF COLUMBIA  
Washington . . . . . Nov. 18 . . . . . 1 1

YELLOW FEVER—FOREIGN.

BRAZIL:			
Rio de Janeiro . . . . .	Sept. 30-Oct. 14 . . . . .	13	
COLOMBIA:			
Barranquilla . . . . .	Oct. 15-22 . . . . .	2	
CUBA:			
Havana . . . . .	Nov. 10-17 . . . . .		

## CHOLERA.

Bombay . . . . .	Oct. 11-18 . . . . .	2
Calcutta . . . . .	Oct. 1-8 . . . . .	2

## PLAGUE.

Hong Kong . . . . .	Sept. 24-Oct. 1 . . .	1	1
INDIA:			
Bombay . . . . .	Oct. 11-18 . . . . .		150
Madras . . . . .	Oct. 8-14 . . . . .	2	

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Surgeon H. WELLS, ordered to the "Chicago."  
Asst. Surgeon W. J. BROWN, ordered to the "Buffalo" and detached to Mare  
Island, Cal.  
Medical Director G. H. COOKE, retired, December 12.  
Asst. Surgeon T. RONGER, detached from the "Buffalo" and ordered  
to the New York Navy Yard.

**Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.**

Captain FREDERICK P. REYNOLDS, A. S., is assigned to duty as attending surgeon at the headquarters Department of Porto Rico and sanitary inspector of San Juan.

Major RUDOLPH G. EBERT, surgeon, is assigned to duty at the division field-hospital, the Presidio.

Major VALERY HAVARD, surgeon, will return to his proper station, Santiago, Cuba.

Major HENRY S. KILBOURNE, surgeon, will proceed from Madison Barracks to Washington, D. C., on business pertaining to the Medical Department.

The order of Nov. 7, relating to First Lieutenant BASIL H. DUTCHER and IRVING W. RAND, A. S.'s, is revoked.

Leave for 15 days is granted First Lieutenant BAEN STREET, A. A. S.  
Nov. 17.

Major LEWIS BALCH, brigade-surgeon, is relieved from further duty with the Second Army Corps, and will report to the commanding general of the First Division, First Army Corps, for assignment to duty as sanitary inspector, and in that capacity will accompany the first troops sent to Cienfuegos, Cuba.

The following changes in the stations and duties of officers are ordered: First Lieutenant POWELL C. FAUNTLEROY, A. S., is relieved from further duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, and will proceed to New York City and report to the commanding officer, U. S. hospital ship "Missouri," for duty to relieve Captain ALEXANDER N. STARK, A. S. Captain STARK is assigned to duty in command of the U. S. hospital ship "Bay State."

Major IRA C. BROWN, brigadier-surgeon, will proceed to Plum Island, Mass., on business pertaining to the selection of a site for a hospital on that island.

Major R. EMMETT GIFFIN, chief surgeon, will return to his station at Chickamauga Park.

The orders of Nov. 5, relating to Major OSCAR LESEURE, brigade-surgeon, is revoked, and he will return from the Sternberg U. S. General Hospital, Chickamauga Park, to his home, Detroit, Mich.

Major OSCAR LE SEURE, brigade-surgeon, is honorably discharged, to take effect Dec. 20.

Captain GEORGE J. NEWGARDEN, A. S., when the Second Artillery embarks for Cuba will proceed from Savannah, Ga., to his proper station, Fort Adams.

**Septicemia Treated by Venesection and Infusion of Salt-solution.**—Young (*Maryland Medical Journal*, No-

ber 19, 1898) reports the case of a boy, aged 15, who had had recurrent attacks of appendicitis since early childhood, but who had previously recovered under use of cathartics or other simple measures. Dr. Halsted was called to see the patient after an attack of 5 days' duration. The abdomen was distended; there was tenderness over the sigmoid flexure and hypogastrium; no tenderness of the iliac fossa, but a boggy mass was felt in the pelvis. A diagnosis of probable appendiceal abscess was made and celiotomy performed. Turbid fluid was found in the abdominal cavity, the intestines were adherent, and after breaking them up a large abscess was found, in which lay a necrotic perforated appendix. The pus was evacuated, the appendix removed, and gauze-packing inserted. After the operation the temperature gradually rose, and the pulse became more rapid. The next morning the temperature had reached 105.8° F., the pulse was 156, and it was evident that the condition was one of septicemia. Under cocain-anesthesia the right basilic vein was opened, about 2½ ounces of blood removed, and 1½ quarts of normal salt-solution transfused. The temperature immediately fell, and the general condition became much better. The improvement did not remain permanent, however, and 24 hours later another transfusion of 2½ quarts was made. The temperature and pulse both dropped almost to normal, and after that there was never any great concern about the boy's condition. The subsequent convalescence was tedious but uneventful. [M.B.T.]

## Foreign News and Notes.

### GREAT BRITAIN.

**Royal College of Surgeons, Ireland.**—Dr. Frederick Kidd, master of the Coombe Hospital, Dublin, has been elected professor of midwifery and gynecology.

**Westminster Hospital Medical School, London.**—Dr. William Murrell has been appointed joint lecturer on medicine, and has in consequence resigned the chair of *materia medica*, pharmacology, and therapeutics, which he has occupied for many years.

**The Communicability of Leprosy.**—The British Colonial Office has requested the Royal College of Physicians to report to it on the communicability of leprosy, and the question has been referred to a committee consisting of Sir D. Duckworth, Drs. R. Liveing, Paine, Hebb, Heron, and J. Anderson, with power to confer with others not belonging to the College.

**Aberdeen Royal Infirmary.**—Dr. Robert J. Gardner has been appointed senior surgeon to succeed Prof. Ayrton, resigned; Dr. J. Mackenzie Booth is now second surgeon, and Dr. J. Scott Riddell (formerly assistant in Dr. Ayrton's wards) third surgeon. Dr. H. M. W. Gray, formerly assistant anesthetist, becomes one of the assistant surgeons. Dr. Williamson has resigned as dental surgeon. Professor Stephenson was recently appointed gynecologist.

**The British Institute of Preventive Medicine** was founded with the view of establishing a national home for bacteriologic work in all its branches, and has made considerable progress toward the achievement of this aim during the past few years. The bacteriologic laboratories are now fully organized, the laboratory of serum-therapeutics is on a firm footing, whilst the application of bacteriology to hygiene is finding full recognition. A further addition has just been made to the departments of the Institute in response to the growing demands of the times. A large laboratory at Chelsea has been assigned to investigation and instruction in technical bacteriology, wherein the agriculturist, the chemist, the brewer, and others will be afforded opportunity for the instruction that they individually require for successfully employing the living agents of fermentation. Investigations will also be undertaken, and it is hoped that the laboratory will become a center of useful work, and promote the advancement of a line of research of the greatest importance to the industries of the country. The laboratory has been named the Hansen laboratory, in recognition of the pioneer work of the distinguished investigator, and will be under the superintendence of Dr. G. Harris Morris. The formal opening of the Institute will take place early in the new year, when the public will have an opportunity of inspecting the provisions made for furthering its objects. The occasion will also be marked by the issue of a fresh volume of *Transactions* of the Institute.

**For the Protection of the Public Health.**—The Salford corporation (Manchester, Eng.) intends to introduce a bill into Parliament during the next session, which, if passed, will, amongst other things, greatly extend their means of controlling certain dangers to the public health. They will seek powers to compel the removal to and the retention in a reception-house, for a period not exceeding 14 days, of persons living in any house in which a case of infectious disease has occurred, if the medical officer of health

considers this necessary for the protection of the public health; to prevent the holding of "wakes" on the bodies of those who have died from infectious disease; to prevent the removal of such bodies by rail without the certificate of the medical officer of health that satisfactory precautions have been taken; to impose penalties on parents or guardians for knowingly allowing children to attend school when infectious disease exists in the home, and on teachers for knowingly admitting such children to school; to require milk-dealers to let the medical officer of health know the sources of their milk-supply, and to furnish a list of their customers when required; to prohibit the sale of milk from farms where infectious disease exists; to obtain power to enter cowsheds, etc., and to examine the cows; to compel the owners of such cows to assist in making such examination under penalty; to insure the notification to the Health Department of disease in cows, and to make the selling of milk from diseased cows a punishable offense; to obtain powers to proceed against the original seller of diseased animals; and to regulate the manufacture and sale of ice-cream.—[*Lancet*.]

### CONTINENTAL EUROPE.

**The French Society of Electrotherapeutics** met in Paris, November 17th, under the presidency of M. Apostoli.

**A Course in Hygiene for Italian Students of Engineering.**—The Italian Minister of the Interior has recently issued a decree establishing a course of lectures in hygiene for students of engineering. The lectures are to be given by the professors of hygiene in the Italian universities.

**The Study of Leprosy in Breslau.**—Arrangements are being made for the careful study and treatment of leprosy in the Breslau University Clinic for Skin-Diseases, the patients being brought from Eastern Prussia with great precautions as to isolation and disinfection of the railroad-cars.

**Plague (?) in Russia.**—Consul-General Holloway, of St. Petersburg, reports to the State Department that an epidemic disease, similar in clinical manifestations to the plague, and having a high death-rate, has developed in the village of Anzov, in the district of Samarkand, east of the Caspian Sea.

**Dr. Giuseppe Sanarelli**, of the Uruguayan Medical School and Director of the Hygienic Institute at Montevideo, and the discoverer of the microbe of yellow fever, has been offered by Dr. Baccelli (Minister of Public Instruction) the chair of hygiene in the University of Bologna, left vacant by Professor Roncati.

**Hospital Saint Antoine, Paris.**—Dr. Hayem's new clinic was opened with appropriate ceremonies on November 14th. The building, which adjoins the wards, and the plans for which were furnished by Dr. Hayem himself, contains a large lecture-room, examination-rooms, a chemist laboratory, and a pathologic and bacteriologic laboratory.

**"Archiv für Kriminalanthropologie und Kriminalistik,"** is the title of a new journal published by F. C. W. Vogel, of Leipzig, under the editorial direction of Dr. Hans Gross, of Gratz, Austria. The first number appeared in October, and contained original articles by Dr. Freiherr v. Schrenck-Notzing, of Munich; Dr. M. Dennstedt, of Hamburg; Dr. Oskar Klaussmann, of Berlin; Dr. A. Weingart, of Dresden; Dr. Karl Kautzner, of Gratz; Dr. Josef Kautzner, of Kierling, and Dr. Hans Gross, of Gratz.



**Formalin-disinfection in the Austrian Empire.**—The Imperial Austrian Minister of the Interior has promulgated a decree instructing all sanitary officers and inspectors throughout the empire to employ generously either liquid formalin or formaldehyd-gas in the disinfection of premises and wearing apparel. This method is regarded as the most efficient and harmless, and was employed in the disinfection of the apartments occupied by the plague-victims in Vienna.

**Parisian Periodicals.**—According to the *British Medical Journal*, the number of periodicals now published in Paris is estimated at 2,587; of these, 187 made their first appearance last year. In this host of publications medicine bulks largest numerically, having no fewer than 206 representatives of one kind or another in the periodical press. Finance comes next with 195 journals, politics being a bad third with 144. How is it that medical journalism flourishes with such tropical luxuriance in the French capital? The answer is not difficult. Every Parisian physician who can afford such a luxury thinks it due to himself to have an "organ" of his own. How many of these journals serve a useful purpose as far as medical science and the medical profession are concerned? Probably not more than half a dozen; and even as regards this minute proportion a cynic might be disposed to say in the words of St. Augustine (speaking of the small number of people likely to be saved), *Quin et de his dubito!*

**Medical Officers for Schools in Berlin.**—Reference has been made in these columns on several occasions to the contemplated appointment by the Berlin authorities of medical inspectors of schools. Definite action has now been taken and a series of instructions for the inspectors has been drawn up. Their duties are defined as follows: (1) They will examine children as to their state of health before they enter a school; (2) In cases of bodily or mental abnormalities they may recommend the adoption of special instruction; (3) They will look after children who are absent from school without sufficient reason; (4) They will advise the headmaster in cases of infectious diseases; (5) They must give notice to the school-board when they have found the health of the children unfavorably affected by the unhygienic conditions of a school; (6) They will be present at a certain hour at the school once every two weeks, so that the masters may obtain their advice in individual cases; (7) They will control the class-rooms without reference to the hours of instruction; and (8) All the medical officers to schools will meet regularly under the presidency of a member of the school-board, to discuss matters relative to the hygienic conditions of the schools, etc.

#### MISCELLANY.

**Obituary.**—WILLIAM CAMPBELL MACLEAN, C.B., LL.D., M.D.Edin., surgeon-general, I. M. S., late professor of medicine in the Army Medical School, and honorary surgeon to Queen Victoria, at Sidmouth, Devonshire, November 10th, aged 87 years.—ALEXANDER SIMPSON, M.A.St.And., M.D., B.Sc.Edin., medical officer of Perth, October 23d.—EDWARD DEAN MACDERMOTT, M.A., M.D.T.C.D., one of the oldest practitioners of Bath, England, November 9th.

**Zulu Prescriptions.**—The following are cited as prescriptions of the Zulu medicine-men: If you have the mumps, go to an ant-bear's hole, look into it, and call out "zagiga! zagiga!" (let me alone!), and if you return home without looking back, the mumps will leave you. If you are deaf, get a monkey's ear, burn it to ashes, mix the ashes with hippopotamus-fat and beeswax, drop some of the mix-

ture into your ears, and your hearing will soon be as good as the monkey's.

**The Importation of Microbes.**—According to the *Lancet*, quoting the *London Times*, the Government of Victoria has taken a very decided stand with regard to the importation of microbes. A medical man who recently returned to Melbourne from India, where he had been studying the plague, brought with him a stock of plague-bacilli. The authorities of Melbourne strongly objected to the bacilli being imported and asked for their surrender. The medical man is said to have declined to give up the microbes unless compensated to the amount of £300, on which the authorities seized the culture-tubes and destroyed them.

**Health in the Philippines.**—In a recent publication Prof. Dean C. Worcester describes as follows the climatic conditions of the Philippine Islands: It is unfortunately true that the climate of the Philippines is especially severe in its effect on white women and children. It is very doubtful, in my judgment, if many successive generations of European or American children could be reared there. We must then, I think, necessarily admit that we have here a serious, though not necessarily insurmountable, obstacle to the development of the great resources of this remarkable country.

Malaria and digestive troubles aside, the health of the colony is fairly good, and the danger from epidemic disease is comparatively slight. Smallpox is always present, but it seldom spreads rapidly, as a large percentage of the natives have it during childhood, so that there is hardly material for an epidemic. Cholera is infrequent, but when it once starts cannot be controlled. The natives believe that a black dog runs down the street, and the disease breaks out behind him. They declare that it is the will of God, and refuse to take the simplest precautions.

Leprosy occurs, but it is not common. There is a great deal of beriberi in Balabac, and I have seen it in Mindoro. The bubonic plague has, fortunately, never gained a hold in the Philippines.

**Gunshot-wound of the Uterus.**—J. T. Benbrook (*Medical Times*, September, 1898) reports a case of a woman who received 2 shots from a 44-caliber pistol, the first shot passing just below the crest of the left ilium downward and backward. A sacral abscess formed, from which a large amount of necrotic pus was removed. The second bullet passed between the eighth and ninth ribs of the right side, on a line from the axilla to the crest of the ilium. Examination of the wound showed that the ball had penetrated the abdomen, but as no symptoms arose operative treatment was not undertaken. On the third day after the injury the woman was taken with hemorrhage from the uterus and labor-pains. A large quantity of blood-clot was expelled, together with the bullet, which had passed through the fundus of the uterus into the cavity of that organ. [M.B.T.]

**Sponge Grafting to Fill Bone Cavities.**—P. H. Salter (*Western Medical Review*, October 15, 1898) says that he has frequently seen sponges used to aid in filling up cavities in soft tissue, but has never heard of their use in bone-cavities. A sponge placed in a cavity acts as a mechanical support to new capillary loops, and its meshes are gradually filled by granulation-tissue, while the sponge is slowly absorbed. All necrotic tissue must be removed and the wound rendered perfectly aseptic. Small surgical sponges are carefully prepared to remove all calcareous particles and are rendered thoroughly aseptic. Two cases are reported in which sponges were used in this manner with very satisfactory results: One, a case of osteomyelitis of the shaft and end of the tibia, which destroyed all but a mere shell of bone; another, a case of tuberculous caries of the astragalus and os calcis. Healing seemed to be hastened by the use of the sponge.



## The Latest Literature.

### British Medical Journal.

November 12, 1898. [No. 1976.]

1. Myxedema and Allied Disorders. WILLIAM M. ORD.
2. Radical Cure of Hernia by an Improved Method of Torsion of the Sac. CHARLES B. BALL.
3. Wound Treatment. RUTHERFORD MORISON.
4. The Treatment of Typhoid Fever. SIDNEY PHILLIPS.
5. Note upon the Treatment of Pneumonia by Iron Perchlorid. HENRY W. KING.
6. On the Passage of the Uterine Sound into a Fallopian Tube. WHEELTON HIND.
7. Puerperal Pyrexia Treated by Antistreptococcic Serum. ARTHUR A. FIM.
8. A Case of Intestinal Obstruction from the Impaction of a Gall-Stone Resulting in Death. WINSTAN ST. A. ST. JOHN.
9. A Fatal Case of Hydatid of the Lung. H. CRITCHLEY HENDER.

1.—According to Ord the first symptom to be taken into consideration in arriving at a diagnosis of **myxedema** is the external appearance of the patient, the increase in the size and bulk of the body, due evidently in part to changes in the skin, and in part to changes in the subcutaneous tissue. The changes in the skin affect more or less the whole surface and determine the changes in the appendages of the skin, in the hair, the glands and the organs of touch. The mucous membranes also are subject to altered states resembling those in the skin and leading to the destruction of its appendages, as the teeth and the glandular structures. It is a point of much importance that the swelling of the skin and mucous membranes is not an ordinary dropsical swelling. It does not in any way gravitate from the upper parts of the body to the lower and does not pit on pressure, but is firm and resilient. There is a group of symptoms indicating in various ways the impairment of the functions of the nervous system, such as slowness in muscular movement, tardiness in response to impressions made upon the surface of the body, slowness in thought and action, weakening of memory, disturbance of the balance of muscular actions of the limbs. The quality of the speech and the sound of the voice are perfectly typical of the disease and depend on the combined effects of the swelling of the lips and the fauces, and failure of the movement of the muscles within the swelling and by default of nervous power in controlling the action of the muscles. There may exist also various degrees and kinds of mental aberration. The symptoms of the second degree are the lowering of the body-temperature as a tendency to hemorrhage following comparatively slight injury. This hemorrhage is most common in the skin or mucous membranes, although it sometimes occurs in the internal organs, and occasionally in the brain. The affection is largely confined to the female sex. There is no disorder of the viscera that can be called characteristic of myxedema, although visceral troubles may arise in the course of the disease, chiefly from external or new causes. Relations to the thyroid body assume great importance, as certain changes in it and its functions are in effect causative of myxedema. Ordinarily the thyroid is found in a state of atrophy. In some cases enlargement of the gland has preceded contraction and atrophy and this will probably be more observed as the patients come under notice earlier. Myxedema has a number of times followed upon exophthalmic goiter. The administration of thyroid gland itself when it can be carefully and regularly maintained is the most appropriate form of treatment. When this cannot be accomplished a glycerin-extract in doses varying from 10 to 30 drops a day or every second or third day, according to the effects produced and the patient's power of bearing the influence of the new drug, may be substituted. Still more convenient are the tabloids in common use, especially those made from extracts of the whole gland. Thyroid extract acts as a distinct diuretic. It aids in the elimination of nitrogen. This latter occurs almost entirely in the form of urea. The urine in myxedema rarely contains albumin. When it does, together with casts, the phenomenon is probably dependent upon an internal

change in the kidney comparable to those in the eyelids. After death the kidneys are large, exceedingly tough, with excessive thickening of the connective tissue around the Malpighian bodies and between the tubes. The quantity of urine voided is below the average quantity and the amount of urea present is subnormal. [S.M.H.]

2.—The **radical cure of hernia**, by the method of **torsion of the sac**, as developed by Ball, has all the advantages of the Kocher operation, without necessitating any incision of the tendon. The Ball method consists essentially in passing a suture in such a way that, when tightened, it will draw up a loop of the twisted sac in the subperitoneal tissue behind the entire thickness of the abdominal muscles, and fix it there. The object of the operation is to do away with the depression in the peritoneum opposite the internal ring, a condition responsible for so many recurrences. Among 74 operations performed since 1893, there has been 1 death and, so far as is known, but two recurrences. The Bassini and Halsted methods unfortunately require free division of the abdominal wall, which of itself is an objectionable feature. [C.H.F.]

3.—After a visit to the large hospitals of the Continent and the United States Morison found that wound-infection is no less frequent there than in cases treated in Lister's wards. He is an advocate of the antiseptic system on the grounds that it is safer, simpler and leads to the most satisfactory results. The preparation of the skin of patient and operator depends chiefly upon a 1:1000 mercuric-chlorid solution; the instruments may be sterilized by soaking for an hour in a 1:20 carbolic acid, and during the operation nothing stronger than 1:10,000 is brought in contact with the wound. [C.H.F.]

4.—In discussing the **treatment of typhoid fever**, Phillips calls attention to the following dangers to life: (1) Death from general causes, toxemia, hyperpyrexia, pyrexia, heart-failure and asthenia; (2) death from local lesions special to typhoid fever, perforation, hemorrhage, etc.; (3) death from intercurrent affections. Toxemia is probably the most common cause of death, and in order to lessen its dangers the antiseptic method of treatment, having as its object the destruction of the toxins before their absorption, has been adopted. The most useful antiseptic is mercuric chlorid. Salol is also useful and benefit is derived from a daily enema of some disinfectant solution, especially when constipation exists. Hyperpyrexia is nearly always due to some local affection and treatment must be directed to the local condition, the temperature in the meanwhile being lowered by sponging, quinin, etc. Pyrexia is best treated by the cold bath. When the bath cannot be used, sponging with tepid or cold water, effusions, or wet packs, are better than drugs. Quinin is the only drug that should be given. Cardiac failure, which is usually due to changes in the myocardium resulting from pyrexia and toxins, is indicated during life by feebleness of the heart-impulse and cardiac sounds and the condition of the pulse. In another class of cases in which death is due to failure of the circulation there is a natural want of blood in the body, arising from failure in the blood-making function. In these cases death occurs from mere bloodlessness. The proof that the symptoms of typhoid are sometimes due to want of blood are: (1) If the artery of a patient dead of typhoid fever, after these symptoms, be opened, it will be found singularly empty of blood; (2) there is an enormous decrease in the number of red corpuscles and in hemoglobin throughout the course of the disease. There is also a great decrease in leukocytes and in the fibrin of the blood. The sudden rises in the number of corpuscles sometimes observed in typhoid fever are attributed to losses of fluid by sweats and diarrhea; (3) the symptoms of rapid pulse, increasing listlessness and debility, with fever and a perfectly clear mental condition, are those that follow want of blood. The pyrexia and toxins in the blood, the cloudy swelling of the internal organs, the special affection of the blood-making organ, the spleen, and the frequent drain of material from diarrhea, hemorrhage or profuse sweats are all causes that can act in the production of blood-deterioration. There occurs also in typhoid fever a tendency for the venous side of the circulation to be full of blood, while the arteries are unduly empty. In the matter of treatment of the circulation, the one essential is to prevent waste of material through diarrhea, hemorrhage, or profuse sweats, and to supply as much nourishment as can be digested and absorbed. Milk should be the staple diet. In cases in



which vomiting or diarrhea exists, beef-tea or meat extracts may be substituted. Stimulants are not necessary as a routine treatment. Opium is admissible, to secure sleep. In cardiac weakness digitalis, strychnin, and caffein can be used carefully. Ether, ammonia, sumbul and diffusible stimulants are often useful. In order to keep up the volume and composition of the blood, sweats should be checked by belladonna and diarrhea by enemias. Cold water may be given freely. Oxygen-inhalations are sometimes useful and solid food should be given after 3 days without fever at any time within the 24 hours. Saline injections are useful when there are elements of profound bloodlessness and weakness, preferably injected into the basilic vein by means of a simple cannular drainage-tube and funnel. Two pints at a temperature of from 100° to 115° may be introduced. Operation is indicated in all cases in which perforation can be diagnosed. Hemorrhage is a bad omen and in its treatment opium may be given freely. Turpentine is useful, but 5 minim doses of the tincture of hamamelis are most to be relied upon. An ice-bag to the abdomen is useful. In the treatment of diarrhea enemias of starch, with or without opium, are more useful than drugs given by the mouth. Bismuth salicilate in 30-grain doses 3 or 4 times a day should be given, however. Constipation should be treated by enemias. When tympanites is present and the abdomen is soft and doughy, as well as swelled, diffusible stimulants are useful; when the abdomen is tense, hot fomentations and the passage of a long tube into the rectum, with the administration of food in small quantities, usually bring relief. The question of moving the patient when the sanitary conditions are bad should be governed by the stage of the disease. In very early cases removal is preferable. The intercurrent affections of typhoid should be treated according to general principles. [S.M.H.]

5.—King reports a case of **apical pneumonia** in a man, aged 34 years, successfully treated with 20 minims of the tincture of ferric chlorid given every 3 hours. He recommends its general use. [S.M.H.]

6.—Hind reports a case that shows the possibility of passing a **uterine sound into the oviduct**. The instrument, when introduced, passed for nearly 8 inches, and on palpation of the abdomen it could be felt on the left side, apparently immediately underneath the abdominal wall. The abdomen being opened for the removal of a dermoid tumor of the left ovary, the instrument was found to have passed through the whole extent of the left oviduct and to be presenting at the orifice. [W.K.]

7.—Pim reports two cases of **puerperal pyrexia** treated by the injection of antistreptococcic serum. The first case occurred in a primipara, aged 23 years, who, when pregnant seven months, was taken in labor, with a breech-presentation, which was heralded by slight hemorrhage ten days before. The placenta and membranes were adherent and were removed under ether. The temperature fluctuated for two days, and then, after a rigor, rose suddenly to 105.5°, falling after an antiseptic douche. As it rose again the next day to 105°, the uterus was explored, a small portion of the placenta removed, and the uterine cavity cureted. Notwithstanding this treatment, the temperature continued high until the injection of the antistreptococcic serum, which was continued until the temperature became normal. Both patients made a good recovery. [W.K.]

### Lancet.

November 12, 1898. [No. 3924.]

1. Myxedema and Allied Disorders. WILLIAM M. ORD.
2. Some Details in Posterior Gastro-enterostomy with Two Successful Cases. ARTHUR E. BARKER.
3. A Further Contribution to the Surgery of Stone in the Bladder, Based on a Recent Series of Cases in Hospital and Private Practice. REGINALD HARRISON.
4. General Paralysis of the Insane: an Attempt to Ascertain its Average Duration at the Present Day. JAMES ADAM.
5. Axis-traction Forceps. WALTER COLQUHOUN.
6. Paralysis Agitans: with an Account of a New Symptom. PURVES STEWART.

7. Two Cases of Puerperium Complicated With Scarlet Fever; Recovery. J. GAWLER MURRAY.
8. A Note on Amputation for Charcot's Joint-Disease. F. A. SOUTHAM.
9. Notes on a Case of Persistence of Hymen; Non-Rupture. N. CULLINAN.
10. Note on Staining the Capsules of Pneumococcus and of the Bacillus of Friedländer. ALFRED MACCONKEY.
11. A Case of Intussusception Treated by Laparotomy; Rapid Recovery. (Under the care of RICKMAN J. GODLEE.)
12. A Case of Acute Ileo-cecal Intussusception; Laparotomy and Reduction; Necropsy. (Under the care of J. H. RAY.)

2.—The results that have been obtained from **posterior gastro-enterostomy** as compared with the anterior operation would seem to indicate that the former procedure will eventually take the place of the latter. Certain it is that the anterior method has well-known drawbacks, chief among which is the probability that the button will fall back into the stomach, rather than pass into the bowel, and the probability of a kink forming in the jejunum. While these two factors have been brought forth as arguments against the use of the Murphy button, by the anterior method, the same arguments do not hold good if the anastomosis be made in the posterior wall of the stomach. Barker recommends two modifications of the operation that is generally performed; one modification, suggested by Carle, is that instead of using the usual purse-string-suture around the edges of the opening, to close it on the central tube; a stitch at each end of the slit will suffice to reduce the size of the opening. The second modification is the abandonment of the stitching of the stomach to the slit in the transverse mesocolon. Both these modifications, if adopted, not only save time, but are also equally effective. Barker was struck with the small amount of general disturbance produced by the posterior operation as contrasted with the anterior method. [C.H.F.]

3.—In discussing the **surgery of stone in the bladder**, Harrison expresses views upon certain important phases of this subject, founded upon personal experience with 110 cases during the interval from 1890 to 1897. Of the 101 litholapaxies, 6 terminated fatally, death being due in most instances to suppurative nephritis; among the entire number there were 23 recurrences. In glancing over the table of cases, it will not be difficult to recognize that prostatic hypertrophy and conditions associated therewith complicated most of the cases of stone-recurrence. It is not too difficult to understand how favorable are the conditions offered for recurrence in a bladder that cannot freely evacuate its contents, how under such conditions a small fragment remaining after a litholapaxy, a small renal calculus entering the bladder after a litholapaxy, or the detritus of a chronic cystitis may form the nucleus of another vesical calculus. The question of the prevention of recurrence has been carefully studied; it involves a thorough clearance of the bladder in the first instance, attention to the subsequent management of the case after it has left the hands of the operator, and such measures as have for their object the bringing about of atrophy of the prostate gland. In cases complicated with prostatic hypertrophy, the post-operative treatment should extend over a period of three or four months, during which time the bladder should be washed out at least once a week with the evacuator as used at the operation, in addition to such irrigation and catheterization as the patient can himself employ. In cases of chronic cystitis, injections of argentic-nitrate solutions are known to prevent the formation of phosphatic concretions, a point well worth bearing in mind. Vasectomy was employed to advantage in 6 cases and seems to have done good by rendering easier access to and from the bladder, as to both micturition and catheterization, and by getting rid of the slimy mucus that clings so tenaciously to the bladder walls. In no instance in which vasectomy was performed was there recurrence, and in each there was decided improvement in the symptoms provoked by the enlarged prostate. In 9 cases of the series it was thought necessary to employ some form of incision to facilitate the removal of the calculus either entire or after crushing, and of the three methods employed preference is given to perineal lithotripsy. The advantages of perineal lithotripsy are that it enables the sur-



geon to crush and evacuate large stones in a short space of time; it is attended with less risk than lateral or suprapubic lithotomy; it enables the surgeon to thoroughly explore the bladder and to deal with certain forms of prostatic growth and obstruction, complicated with atony of the bladder; and finally, by the subsequent introduction of drainage-tubes, cystitis, due to retention of urine in pouches and depressions in the bladder, is entirely cured or permanently improved. On the other hand, the objections to suprapubic lithotomy are its high mortality in elderly individuals, the interference with micturition caused by a cicatrix, which in turn may form a holding ground for phosphatic concretion. [C.H.F.]

4.—In an attempt to ascertain the average duration of **general paralysis of the insane** at the present day, Adam addressed questions on the subject to the superintendents of all institutions for the care of the insane in England. On the basis of these replies, he found that the correctness of the previously accepted average of 2 years was practically verified. It would appear from the facts obtained that among the educated and well-to-do classes the condition is more prolonged, probably because of an earlier recognition of the disease. Brief notes are given of three cases. Two of the patients recovered within 6 months, and the other continued ill, after a period of 6 years. [S.M.H.]

5.—Colquhoun considers the various forms of **axis-traction forceps** now in use. A pair of forceps is said to act in three ways: (1) as a tractor; (2) as a lever; and (3) as a compressor. An axis-traction forceps should combine these three properties with that of confining traction at each point to the direction of the pelvic axis. In addition to these properties, attempts are now made to provide for free movement of the fetal head in flexion, extension, and rotation; and it is also demanded that the forceps should act as a guide to the fetus and as an indicator of the direction of traction. Forceps that are best suited for axis-traction, having a full pelvic curve, are unsuited for rotation, and if they rotate, they are no longer axis-traction forceps. Colquhoun is convinced that while it is a benefit to use the axis-traction rods, the rigidity of the instrument and its simplicity should be as little interfered with as possible. [W.K.]

6.—Stewart reviews 28 cases of **paralysis agitans**, of which 17 occurred in men and 11 in women. Over 82% commenced after the age of 42 years. The youngest patient was 23, the oldest 73 years, at the beginning of the condition. A family-history of nervous disease was obtained in only a few instances, and 6 patients gave a history of fright or emotional disturbance. These so-called exciting causes, if they really are causes at all, merely precipitate the disease in a decaying nervous system. The earliest symptom in a large proportion of cases was not tremor, but stiffness. This occurred in half of the cases. The symptoms were in most instances hemiplegic in distribution, the left side being affected in the majority of cases before the right. The side first attacked remains more severely affected than the other side. The upper extremity was affected before the lower in 18 of the 28 cases. Sensory symptoms exist more commonly than is thought. Dull aching pains in the affected limbs, along with stiffness and weakness, often antedated the rigidity and tremor by months. The variety known as "paralysis agitans sine agitatione" is probably more common than is generally considered, but it often passes unrecognized. All voluntary movements may become slow and stiff in paralysis agitans excepting the ocular, palatal and respiratory muscles. Rhythmic tremor of the jaw occurred in 4 of the cases, the movement being up and down and synchronous with the rhythmic movement of the limbs. In the "starched" expression of the face there is scarcely any play of the facial muscles when the patient talks. This condition may be unilateral. In 6 of the cases rhythmic tremor of the face developed, especially about the lips, and in 3 of these synchronous antero-posterior tremor of the tongue was associated. The voice was usually high-pitched and monotonous, and articulation was frequently disturbed. The characteristic stooping attitude of the patient, and the frequent rhythmic movements, the interosseal position of the hand, the semiflexed forearm and the frequent unilateral facial weakness, the stiff, shuffling gait, often more marked on one side than the other, suggest the attitude assumed in ordinary hemiplegia of cerebral origin. Another rather characteristic symptom in the advanced cases accompanied

by rigidity was the method adopted by the patient of assuming the recumbent position. He climbs up on the bed, stands on it, and bending down very slowly, takes hold of the rail at the foot of the bed with both hands and gradually sits down on the bed, holding on to the rail. He then allows his trunk to fall backward on the bed. Difficulty in changing position in bed, and difficulty in finding a comfortable posture were quite common symptoms. Stewart describes a new symptom that he has not seen described, and that occurred in 5 cases in his series. In the majority of cases it is an early symptom. The patient complains when walking that the toes of one foot occasionally become spontaneously strongly flexed and curled up under the sole in a cramp-like fashion, causing difficulty in walking. This is often so uncomfortable that the patient has to stand still for a minute or two until he can get his toes to relax and spread out again. All the toes, with the exception of the great toe, are thus affected. The hallux, on the other hand, usually becomes hyperextended at the same time. Sometimes, however, it flexes like the other toes. In some cases the contraction may spread to the anterior tibial muscles, causing inversion of the ankle as well. [S.M.H.]

8.—Surgical textbooks recommend, as a rule, that operative interference is not usually justifiable for **Charcot's joint-disease**. Southam has performed four amputations for this condition and found, contrary to expectations, that the stumps healed quickly without suppurating, and without any tendency to sloughing of the soft tissues, or necrosis of the end of the bone, as might have been expected from the nervous origin of the disease. The experience of Mr. Jonathan Hutchinson coincides with this report. [C.H.F.]

9.—Cullinan reports a case of **persistence of the hymen** in a married primipara, aged 25 years. The points of interest were as follows: (1) The non-rupture of the membrane, although the patient had been married 11 months; (2) the membrane itself was of fibro-elastic consistence and extremely dense; (3) the small opening, allowing impregnation to take place; (4) the abnormal sensitiveness of the parts; (5) an unusually large clitoris; and (6) the obstruction caused during the second stage of labor, with the amount of force necessary to cause rupture. From a medico-legal point of view cases of this kind are of much importance. [W.K.]

10.—MacConkey finds the following combination useful for **staining the capsules of the pneumococcus**: Dahlia 0.5 gram, methyl green (0.0 crystal) 1.5 gram, saturated alcoholic solution of fuchsin 10 cu. cm., distilled water to 200 cu. cm. In staining the film is prepared in the usual manner, the coverslip is flooded with the stain and held over the flame until steam begins to rise, then placed aside for about five minutes, washed in water and dried out in balsam. This is a good general stain, especially for the bacillus typhi abdominalis, bacillus coli communis, and more especially for the Klebs-Löffler bacillus. [S.M.H.]

11.—Godlee reports a case of **intussusception** that is noteworthy on account of the age of the patient (6 months) and the rapidity with which recovery followed operation, the patient being discharged perfectly well on the seventh day. The intussusception was situated in the cecum and ascending colon, and little difficulty attended its reduction at the operation, which was performed very shortly after the onset of symptoms. The result speaks in favor both of early operation, and of operative treatment in these cases, as reduction by any other method would in this case have clearly been impossible. [C.H.F.]

12.—Ray reports a case of **intussusception** in an infant, 9 months old, in which symptoms developed in the early morning, and celiotomy was performed in the evening of the same day. The intussusception was found in the ileocecal region, and was reduced with much difficulty. The child never rallied from the original condition of shock, and died about 9 hours after the operation. Postmortem examination showed that there had been no return of the intussusception, and that there was no polypoid or foreign body to account for the immediate onset of the condition. The lesson to be learned from this case is that early operation offers the only chance of saving the patient's life. The fatal result is no argument against operative treatment, as it was clearly demonstrated that no procedure other than operation could have reduced the intussusception. [C.H.F.]



## New York Medical Journal.

November 26, 1898. [Vol. lxviii, No. 22.]

1. Is Appendicitis a Surgical Disease? CARL BECK. (*Continued*.)
2. The Diagnosis of Injuries of the Hip. MAX HÜHNER.
3. A Case of Bronchitis and Pneumonia caused by the Inhalation of the Filling from a Tooth Broken in Extraction. CHARLES O'DONOVAN.
4. The Importance of Early Diagnosis in Injuries to the Abdomen. H. N. CHAPMAN.
5. The Treatment of Coughs with Heroin. MORRIS MANGES.
6. An Unusual Case of Spasms affecting the Voluntary Muscles. JOSEPH G. WILSON.
7. Cerebral Eidola. WALLACE WOOD.
8. Henoch's Disease, or Nervous Purpura. FRANCIS A. THOMPSON.
9. Aseptic Surgery in General Practice. GUSTAVUS M. BLECH.

**2.—A correct diagnosis in injuries of the hip** and one established within a short time of the accident is imperative, as a mistake in diagnosis, and therefore a mistake in treatment, will lead to disastrous results. For all practical purposes the differential diagnosis rests between fracture of the femur, contusion of the hip, and dislocation of the femur. The relative frequency with which these injuries occur may be of some assistance; a fair estimate gives to dislocations between 1% and 2%, and divides the rest equally between fractures and contusions. If the injured limb is extended as the patient lies upon the bed, dislocation can at once be excluded; and if the patient be able to raise his heel from the bed it cannot be a fracture. The diagnosis of contusion of the hip can, therefore, be made by exclusion, without even so much as touching the patient. Supposing dislocation to be excluded, the diagnosis between fracture and contusion may be established without difficulty. If the foot be everted and cannot be inverted, fracture may almost be excluded; on the other hand, if the foot be everted or straight, the diagnosis still must be made between contusion and fracture. A marked diminution in the length of the base of Bryant's triangle points to fracture, although the latter may be present without any appreciable shortening at the time, or immediately after the injury. A convenient method of determining the length of Bryant's line is by applying circularly around the body a broad bandage, the lower border of which will touch the anterior superior spines of the ilia. The distance between the lower border of the bandage and the top of the trochanter represents the length of the base of Bryant's triangle. Rotation of the trochanter, relaxation of the fascia lata, and depressibility of Scarpa's triangle, though not of much significance, may be called into play for diagnostic purposes. If the diagnosis rests between contusion and dislocation, it should be noted whether there is inversion or eversion of the limb. If the latter the diagnosis of contusion of the hip is unquestioned. Information as to the position occupied by the head of the femur, and the relationship of the trochanter to Bryant's line will be of further assistance in distinguishing between contusion and dislocation. [C.H.F.]

**3.—O'Donovan** reports the case of a woman, aged 46 years, who had a tooth broken in the process of extraction, the operation being performed under the influence of nitrous-oxid gas. After regaining consciousness she found her breathing difficult. On the following day she developed cough, paroxysmal in character and unaccompanied by expectoration. A few days later signs of localized bronchitis manifested themselves near the base of the right lung. The local and general condition grew persistently worse. On the twentieth day of the illness a dull spot, about the size of a pigeon's egg, was made out at the point where the bronchial rales were first heard. There developed also slight general bronchitis. The temperature ranged from between 102° and 104° in the evening to between 99° and 100° in the morning. Considerable bloody expectoration developed, but examination of the sputa failed to disclose the presence of tubercle bacilli. In one month from the beginning of the illness a cavity commenced to form in the region of the original diseased spot in the lung. This attained the size of a walnut. The general and local conditions remained about the same until about 15 weeks after the development of the bronchitis, when, during a severe paroxysm of coughing, the patient spat

up a piece of amalgam-filling, which had evidently come from the broken tooth. This was smooth on one surface, but very rough and ragged on the other. It was  $\frac{1}{4}$  inch long,  $\frac{3}{8}$  inch wide and  $\frac{1}{4}$  inch thick, and weighed 28.11 grains. Immediately following this, improvement began; at first slowly, later more rapidly. Recovery was eventually complete, the cavity in the lung contracting. [S.M.H.]

**4.—The importance of early diagnosis in injuries of the abdomen** is well illustrated in the case of a child that, falling from a wagon and striking her abdomen on a brick, died 18 hours afterward. The symptoms of internal injury developed with astounding rapidity, and, though there were no signs of injury to the superficial structures, there was found at the operation, performed 15 hours after the accident, a perforation of the intestines and strangulation of 3 feet of bowel, which had passed through a loop of the mesentery. [C.H.F.]

**5.—Manges** calls attention to the fact that Dreser has shown that heroin is ten times more powerful than codein in its effect upon the respiration, and that its fatal dose is ten times that of codein. It reduces the frequency of respiration and at the same time increases the length of inspiration by its action upon the respiratory muscles. The result is an increase in the volume of the individual respiration. It induces general muscular repose of the entire body and has much less convulsive tendency than codein. It reduces the production of carbonic-acid gas by one-fifth its original volume, and it does not lessen the sensibility of the respiratory centers to the important chemic regulators of respiration. The sensibility of the lungs to mechanical distention is lessened by it, but not abolished. In Manges' experience with heroin he found disagreeable after-effects in only a few cases, the symptoms induced referring chiefly to mild disturbances of the sensorium. These were less than those induced by morphin and codein. The dose must be small when administered to aged people. It was found prompt and effective in allaying cough. In some cases it was necessary to give large doses. The results were not so good in neurotic coughs. In pulmonary tuberculosis the effects were better in the earlier than in the later stages. It relieved the irritant cough, had a marked reducing effect upon the temperature and in some instances it lessened or controlled night-sweats. It can be administered in watery solution, if dissolved by the addition of a few drops of acetic acid; it can be rubbed up with sugar and dispensed in powders; or it can be given in tablet-triturates in doses ranging from  $\frac{1}{2}$  to  $\frac{1}{4}$  grain. [S.M.H.]

**6.—Wilson** reports a case of spasms affecting the voluntary muscles. The patient was an adult male with a history of having had similar attacks 3 or 4 times a year for 15 years. The premonitory symptoms were extreme nervousness and slight muscular twitchings of the arms and legs. As soon as these had developed the man had taken  $\frac{1}{2}$  grain of morphin by the mouth. This not having any effect an additional  $\frac{1}{2}$  grain was given hypodermically. Within 15 minutes a violent cramp-like spasm attacked the muscles of the right leg. The various muscle-groups of the body were involved in rapid succession. The biceps, adductor magnus and ham-string muscles were most frequently attacked. The spasm of each group lasted from 30 to 60 seconds and could be relieved by a violent blow just above the point of insertion of the muscle affected. As the spasms were becoming more violent another hypodermic injection of morphin,  $\frac{1}{4}$  grain, was given and chloroform was administered by inhalation. At the end of an hour the patient assumed the position of opisthotonos at frequent intervals. The paroxysms were accompanied by intense pain. The intervals between the seizures lasted from between 5 and 10 seconds to between 2 and 3 minutes. At the end of  $1\frac{1}{2}$  hours the condition had not abated. Another  $\frac{1}{4}$  grain of morphin was given and the chloroform administration was pushed. An hour later the spasms began to abate. The patient fell asleep and slept for a number of hours. On waking, there were slight cramps in the limbs, which were quickly controlled by a hypodermic injection of morphin. In a short time the man's condition was normal. The pulse during the paroxysms was of good volume, but of high tension and rapid. The patient was a robust, plethoric man, was not addicted to the morphin-habit, had none of the stigma of hysteria, denied syphilis and had no gastro-intestinal disturbance. He was always perfectly well to within



half an hour of the attacks. There was no unpleasant after-effect. The cause of the condition could not be determined. [S.M.H.]

8.—Thompson reports the following case of **Henoch's disease**: A girl, aged 11 years, was taken ill in the late afternoon with cramps and vomiting. Some of the stools were composed almost entirely of liquid blood. There was blood in the vomited matter. The vomiting and purging were paroxysmal in character. There was no pain except during the paroxysms. The child was much exhausted, the skin cool and moist, the temperature normal. The right wrist and elbow, the left elbow, the knees and thighs were swollen and covered with petechiae. The spots on the wrist and elbows were small and indistinct, those on the buttocks large and well marked. They did not disappear on pressure. The patient was only seen three times. She was said to have had two attacks of less severity shortly following this and eventually had spots all over the body and face. The prognosis in these cases is rather grave, death usually resulting from the development of nephritis or from internal hemorrhage. [S.M.H.]

9.—**Aseptic surgery** can be practised by the **general physician** in any well-prepared room. The hands of the operator and the field of operation can be prepared with a brush, soap, boiling water, and chemicals; instruments can be rendered practically aseptic by boiling in an alkaline solution; and perfectly sterile suture and ligature materials, as well as dressings, can be procured from reliable manufacturers of surgical supplies. [C.H.F.]

#### Medical Record.

November 26, 1898. [Vol. liv, No. 22.]

1. Manslaughter, Christian Science, and the Law. WILLIAM A. PURINGTON.
2. Common-Sense Infant-Feeding. LOUIS FISCHER.
3. Modern Aspects of Puerperal Fever. F. D. GRAY.
4. Closure of Wounds of the Abdominal Wall. ROBERT J. REED.

1.—Purington relates the Thomson case that occurred in Massachusetts, in which the defendant was, after having caused the death of a man, acquitted, in the first place, because there was no statute in the State that prohibited medical practice without a license, and without special knowledge; secondly because proof was wanting that Thomson knew that his treatment was dangerous, or that he had intent other than to cure the patient. In the subsequent case of Pierce, the law was laid down that the use of anything dangerous, according to common as well as individual experience, constituted foolhardy presumption or gross negligence sufficient for conviction. The Christian Scientist admits the healing power of mental impulses, particularly in nervous disease, but he insists that every one should not be allowed to attempt to cure even functional diseases. He decides that while policy would make prosecution of Christian Scientists possibly unwise, owing to the prospect that they might appear as martyrs, still, with regard to the law, there is no reason why they should not be punished, and it is wise to prohibit them from treating individuals who are sick, unless they have prepared themselves for such professional acts by sufficient medical study. If death ensues from their treatment, there is no reason why they should not be convicted of manslaughter, according to law. [D.L.E.]

3.—Gray discusses the **modern aspects of puerperal fever**, a condition that does not originate de novo, is not dependent upon any indiscretion in diet, and is not caused by too brief a period of rest in bed after labor. Puerperal fever is always due to one of two causes: First and most frequent is the introduction of septic germs into the genital tract during, just before, or within a few days after delivery; second, the decomposition of retained secundines, clots, or secretions. The result of the former of these causes is a true septicemia, while the latter constitutes a sapremia. Consequently a woman who suffers from what is commonly termed puerperal fever, must do so as a result of the introduction of germs from without and resulting septicemia; or the production of putrid poisons by the decomposition of organic matter within, and a consequent sapremia. Two facts are evident: (1) that septic germs are of various sorts;

(2) that not all bacteria are septic, but many are innocent. The streptococcus is the cause of the most virulent and uncontrollable of all puerperal diseases. Besides the streptococci there are the staphylococci, the bacillus coli communis, the gonococci, the Klebs-Löffler bacilli, and the germs of one or more of the exanthemata. Schaick asserts, after a series of investigations, that the gonococcus may be found in the vaginae of 26% of married women. Prophylaxis is the first point in treatment. Gray condemns the routine use of vaginal douches, but believes in most careful preparation of hands and instruments. On general principles, a case of puerperal fever occurring early and presenting an intense type should have the benefit of the antistreptococcic serum before waiting for the result of a culture, which latter should be made at the earliest possible moment. When retained secundines, etc., are present the use of the curet is recommended, followed by intra-uterine irrigation and the subsequent application of Churchill's tincture of iodine, or of caustic solutions of silver nitrate or zinc chlorid, in order to render the uterine canal non-absorptive. Gray then introduces a self-retaining uterine drainage-tube, to permit easy and frequent intra-uterine irrigation. The use of submammary injections of saline solution is commended. They stimulate the patient, dilute the infected blood-current, and sometimes tide her over the critical period of the disease. [W.K.]

4.—As the strength of the abdominal wall depends upon the integrity of its fascia, the greatest pains should be taken in closing abdominal wounds, whether operative or traumatic, to secure perfect approximation of the fascial edges. In so doing one reduces to a minimum the dangers of subsequent hernia. The difficulty of ensuring thorough sterilization of absorbable sutures and the danger of non-absorbable sutures acting as foreign bodies have led Reed to employ a **method of closing the abdominal wall** that allows of the suture being removed, at the same time securing perfect union of the fascial layer. A continuous suture of silkworm-gut is used to close the peritoneum, the free ends of the suture having been carried through the belly-wall  $\frac{1}{2}$  inch above and below the limits of the cutaneous incision. Interrupted through-and-through sutures of the same material are then introduced, without including the peritoneum, and before these are tied, a continuous suture is introduced into the fascia in the same manner as recommended for the peritoneum. The interrupted sutures are now tied and the free ends of the peritoneal and fascial sutures are grasped with hemostatic forceps. By this method all the sutures may be removed, one is assured of perfect union of the fascia, and the material, silkworm-gut, is one that can be easily and perfectly sterilized. [C.H.F.]

#### Medical News.

November 26, 1898. [Vol. lxxiii, No. 22.]

1. Inhalation of Oxygen in Acute Affections of the Lungs. ANDREW H. SMITH.
2. Gastric Ulcer. A. L. BENEDICT.
3. The Cause and Treatment of Bubo. GEORGE T. HOWLAND.
4. Cholelithiasis; with a Report of Some Operative Cases of Dr. Charles M'Burney. HOWARD D. COLLINS.
5. Facial Neuralgia. WM. L. RODMAN.
6. Traumatic Cataract in an Infant's Eye from Pressure of Forceps. EDWARD S. PECK.

1.—Smith analyzes the conditions and reasons for the employment of **oxygen** in pulmonary disease. In cases of partial obstruction, without disease of the alveoli, normal respiratory relation can be reestablished by its use. Thus, if the lumen of the trachea should be diminished one-half, it would be necessary to double the quantity of oxygen in the air, and no dyspnea would ensue. Membranous croup is typically adapted to this treatment and can often be relieved. Bronchitis, excepting the capillary form, is also thus susceptible to improvement. Even in lobar pneumonia, oxygen may be of benefit, because there is always bronchitis or edema present. Oxygen, also, stimulates the blood and causes it to circulate more freely in the congested areas. In croupous pneumonia it is of but slight value, and this only when used quite early. It should be given, therefore, from the moment moderately severe symptoms become apparent. It is probably useful in cases of spasmodic asthma associated with spasm of the bloodvessels. [J.S.]



2.—Benedict recognizes three forms of **gastric ulcer**: an erosion, a latent ulcer, and the so-called peptic ulcer. He is unable to explain satisfactorily why it is that women are more liable to gastric ulcer than men, as the commonly accepted explanation of the difference in clothing does not apply to the class of society from which the statistics were drawn. He suggests, however, the hypothesis that the reason may reside in the gastropnoxis and moderate dilatation so common among women. Gastric ulcer appears to be often associated with hyperacidity, but the diagnosis is difficult because when ulcer is suspected the stomach-tube should not be employed. The most important symptom is hemorrhage. It is not, however, always easy to be sure that the blood comes from the stomach and not from elsewhere. Benedict reports the case of a young man, with gastropnoxis and apparently some pulmonary disorder, who suddenly died of violent hemorrhage, the source of which could not be established. Occasionally, hemorrhage may come from the stomach, and not be due to gastric ulcer, as in a case of ruptured esophageal varices, and another in which the intestinal tract was filled with blood from the rupture of a large ovarian cyst. Benedict reports also the case of a girl who had gastric ulcer and subacidity, and that of a young man with the opposite condition. He finally mentions the case of a young woman, 21 years of age, with a typical history, to whom morphin, atropin, and ergot were given to control the bleeding, and all food administered by the rectum. A fermentation-test of the vomited material showed the presence of considerable acid. The nausea occurring in the next few days was controlled by morphin, while bismuth was administered by the mouth, the patient ultimately recovering. Among the important symptoms, Benedict mentions an excess of indican in the urine, which is a sign of the presence of putrescent material in the gastro-intestinal tract. In conclusion, he states that a reliable test for the recognition of blood is highly important, but has not yet been brought forward. The most satisfactory test, but which is of only negative value, consists in acidifying the suspected liquid with acetic acid, and extracting with ether, as a result of which a brownish color should develop. [J.S.]

3.—Of all the varieties of **buboes** the chancroidal is perhaps the most frequent, and yet in the better class of practice, where the lesion is seen in the earlier stages and the patient submits to proper treatment, bubo complicates but a small percentage of cases. The etiology of the chancroidal bubo is still a mooted question, some attributing it to infection by the specific microorganism, others to the chemic products elaborated by this microorganism. Clinically, however, three varieties are encountered, one in which the pus is sterile, when healing takes place in from 7 to 10 days; another, in which the pus contains one or another microorganism of suppuration, from 14 to 20 days being required for the ulcer to heal; and lastly, a variety in which the pus contains the Duerey-Krefting bacillus either with or without the admixture of other organisms. Among 66 cases of suppurating buboes, recorded by Deutsch, 37 of which occurred as a complication of chancre, examination of the pus revealed the presence of the Duerey-Krefting bacillus in but 3 cases. Most gonorrheal buboes probably represent a condition of mixed infection. If the chancre is seen within the first week, Howland, after thorough disinfection of the surrounding parts, cauterizes the lesion under ether and applies a dressing of glutol (Schleich) and moist mercuric-chlorid gauze. By this routine treatment healing is complete in from 7 to 12 days. If the case comes under observation after infiltration of the deeper lesions has taken place, the use of a sharp curet is substituted for the cautery. Of all the methods for handling chancroidal buboes there is none that surpasses in efficiency that of Hayden, or the following modification as practised by Howland: After disinfection of the field of operation, the bubo is incised with a bistoury, the pus expressed, and the cavity irrigated successively with pure hydrogen dioxid and a 1 to 3,000 mercuric-chlorid solution. The cavity is filled with glutol (Schleich) forced into it by a powder-blower, and glutol is sprinkled over the external wound. The dressing, which consists of gauze wrung out of 1 to 3,000 mercuric-chlorid solution, need not be removed under ordinary circumstances till the sixth day. In 40 cases submitted to this method the course of treatment lasted on an average only 11 days. [C.H.F.]

4.—The mode of attack, in the **operative treatment of cholelithiasis**, depends naturally upon whether the calculus be situated in the gall-bladder itself, or in the cystic or common duct. One of two incisions should be employed in exploring the region of the gall-bladder or bile-ducts; the best one extends from about  $\frac{1}{2}$  inch below the free border of the costal cartilages to a point 2 or 3 inches above the umbilicus, passing just within the outer border of the rectus muscle. The second is a curved incision parallel with the free border of the costal cartilages and about 1 inch below them. These incisions have been selected after a study of the distribution of the dorsal nerves over the abdominal wall, and it will be found that none but the ninth dorsal nerve will have been divided by either of the two incisions as described. The longitudinal one is to be preferred, as it divides the muscle in its longitudinal and not in its transverse axis. If the gall-stone be lodged in the gall-bladder the calculi are removed from an incision in the fundus of the gall-bladder after the latter has been stitched to the abdominal wall. In order to avoid the annoyance of a fistula persisting for weeks or months after the operation, McBurney recommends the following modification of the ordinary procedure: The circumference of the gall-bladder about  $\frac{1}{2}$  inch below the fundus is sutured to the edges of the abdominal wound; a pursestring suture is passed around the gall-bladder between the opening in the fundus and the line of suture to the abdominal wall; the free edge of the incised fundus is now inverted, a small rubber drainage-tube is inserted, and the pursestring is tightened, so as to prevent reversion of the inverted edges. The inverted flaps act as valves to partially prevent the leakage of bile, and as the serous surfaces are approximated, more rapid closure will follow than if one depended upon granulations. After this method, the drainage-tube may be removed in the course of several days, and in a short while the fistula will be permanently closed. Comparing a series of cases operated upon by the old method with a similar series operated on by the method recommended by McBurney, it is found that whereas in the former series from one to two or more months elapsed, in the latter the fistula was closed in from 5 to 10 days. If the calculus lodge near the outlet of the common duct, McBurney removes it through an incision into the duodenum. If situated in any other portion of the ducts, the calculus must be removed by an incision in the duct, directly over where it is lodged. [C.H.F.]

6.—As the result of the pressure from a forceps-blade during delivery, a **traumatic cataract of the eye** developed almost immediately. There was in addition a large subconjunctival hemorrhage, while the eyeball was softened and flattened, the cornea steamy and the pupil dilated. From the time of the injury to the present, the child being now 7 years old, there has been a gradual evolution of the cataract, so that the patient's vision is  $\frac{3}{8}$  with a 1 D. lens. This case is the only one of its kind on record, and it seems marvelous that, after an injury of such severity as to not only produce a cataract but probably detach the retina, recovery, with partial restoration of vision, should have occurred. [C.H.F.]

#### Boston Medical and Surgical Journal.

November 24, 1898. [Vol. cxxxix, No. 21.]

1. The Operative Treatment of Intestinal Fistula and Artificial Anus. C. B. PORTER.
2. Six Cases of Fecal Fistula Closed by Operation. J. W. ELLIOT.
3. Menière's Disease. GEO. CARROLL SMITH.
4. Carbuncle of Neck. C. B. PORTER.
5. Adenocarcinoma of Rectum. A. T. CABOT.
6. Cerebrospinal Meningitis. E. G. CUTLER.

1.—There are some cases in which **intestinal fecal fistula** may be closed by the application of caustics, or by curetage, but in the great majority of cases a more radical mode of treatment is required to effect a cure. Porter has attained some success with an operation carried out on these lines. The fistulous opening is closed temporarily by flaps dissected up from the skin, and tightly sutured so as to prevent any escape of feces. The object in this preliminary step of the operation is to allow of the peritoneal cavity being opened and the intestines so freed of adhesion that they can



be delivered out of the peritoneal cavity. The second step of the operation consists, therefore, in extending the incision around the fistula, carefully dissecting down to the peritoneum, and freeing the intestines and fistula from its adhesions. At this stage of the operation it must be decided from the existing circumstances what further intervention will be required. In most cases it will be necessary to resect that portion of the intestine in which the fistula lies. At the conclusion of this step the muscular edges of the abdominal wound are freshened, and after careful cleansing of the sutured bowel it is returned to the abdominal cavity, and the parietal wound is closed throughout. Occasions may arise in which it may be impossible, either on account of inflammatory adhesions or from the shortness of the mesentery, to deliver the intestines without the abdominal cavity. These cases can be treated by intestinal anastomosis and exclusion of the diseased portion of the intestine from the fecal current. Porter records a series of cases, all of which, with one exception, were permanently relieved of this condition by one or another operation. [C.H.F.]

2.—Elliot records brief histories of six cases in which fecal fistulae were closed by operation. In some, intestinal resection was performed, while in others, after dissecting away the sinuses, the opening into the intestine was closed by appropriate sutures. [C.H.F.]

3.—Smith reports the case of a man, 62 years of age, who had suffered for some time from some disorder of vision, for which the ocular muscles had been repeatedly cut, and from nervous dyspepsia and constipation. A few months previously the man was suddenly thrown violently on the floor, striking on the left side, and becoming momentarily unconscious. Intense vertigo, with persistent vomiting, followed. At the same time a hissing or puffing noise was heard in the left ear, and on the following day it was noticed that this ear was quite deaf. Similar attacks, somewhat milder in character, occurred at intervals of several weeks. Examination of the ear yielded entirely negative information. The arteries were slightly sclerotic, but otherwise the patient appeared normal. A diagnosis was made of **Menière's disease**. Smith states that the intra-labyrinthine causes of this condition are labyrinthitis, syphilis, leukemia, anemia, hyperemia, trauma, and toxemia. It is possible also that the symptoms may be caused by disease of the roots of the acusticus. The vertigo may be continuous or paroxysmal. If the patient falls, it is usually toward the affected side, and there is often propulsion or retropulsion. Among the usual symptoms are nystagmus and diplopia. The tinnitus may be curious, and in cases in which tunes, words, etc., are heard, possibly of cortical origin. The differentiation is to be made from disease of the external and middle ear, and from lesions of the brain or the meninges. The apoplectic form is distinguished from true apoplexy by the rapidity of recovery and the more moderate disease of the vessels. The prognosis is good for life, bad for recovery. The treatment consists in the use of quinin, salicylic acid, and electricity. [J.S.]

5.—Cabot reports a case of **adenocarcinoma of the rectum**, in which the growth was exposed and removed by **Kraske's method**. The tumor was drawn out from the posterior opening, and its pedicle, with the neighboring portion of the rectal wall, was sewed through and through with a cobbler's stitch, and the growth was cut off. This method of stitching brought the peritoneal surfaces on the wall of the bowel snugly together, and ensured a satisfactory closure of the peritoneum by adhesion. [C.H.F.]

6.—Cutler reports 2 cases apparently of **cerebrospinal meningitis**; 1 in a boy with high fever, frontal and occipital headache, and retraction of the head; and the other in a man who became comatose in the first 24 hours of observation. Both were given large doses of ergot, and recovered. A third patient with herpes and beginning strabismus died under the same treatment. A patient is mentioned with epigastric hernia, without digestive disturbance. A culture of the bacillus mallei was obtained from a patient suffering from glanders that had apparently invaded the lung. The unusual feature of the case was the appearance on the face of a number of tubercle-like swellings of the size of the end of the finger. These were surrounded by a zone of hyperemia, and capped by a suppurating sac, so that they resembled a typical chickenpox or smallpox pustules. The pus obtained from these caused glanders in a guinea-pig. Upon the mu-

cous membrane of the throat there was an exudate that resembled paraffin in appearance. The patient suffered from a pyemic condition. In the discussion of this paper, Putman expressed skepticism in regard to the beneficial effects of ergot in cerebrospinal meningitis. Rotch reported a case of this disease without cephalitic symptoms, in which a diagnosis was made by finding the organisms in fluid obtained by lumbar puncture. Walton suggested that the cases in which recovery took place were instances of serous meningitis. [J.S.]

### Journal of the American Medical Association.

November 26, 1898. [Vol. xxxi, No. 22]

1. Introductory to the Annual Course of Instruction. I. N. DANFORTH.
2. Children's Diseases. CHAS. H. SHEPARD.
3. Control of Diphtheria. W. K. JAKES.
4. Alcohol on Tissue and Cell Growth. T. D. CROTHERS.
5. Heredity as a Causative Factor of Inebriety. F. C. MYERS.
6. Isolation in a Great City. How Best Accomplished. SAMUEL P. DUFFIELD.
7. The Rights of the Public in Dealing with the Defective Classes. ALFRED WILMARTH.
8. The Water-Supply of Cities. C. F. ULRICH.
9. The Importance of Bacteriology in the Progress of Preventive Medicine. FRANKLIN STAPLES.
10. Thalassic Submersion as a Means for Disposal of Our Dead. D. LIGHTY.
11. Some Experiments on the Value of Carbide of Calcium in the Treatment of Cancer. EMIL RIES.
12. Some Causes of Wry-neck. C. H. HOBBY.
13. Do We Drain too Frequently in Pelvic Surgery? W. H. HUMISTON.
14. The Importance of the Sterilization of Foods and Drinks Before Their Ingestion. AUGUSTUS P. CLARKE.
15. The Surgery of Camp Wikoff. N. SENN.

2.—Shepard advocates the use of **heat in treatment of diseases of children**, particularly in the form of the Turkish bath, which is considered the most perfect form of using heat in all cases of disease. Shepard believes that the number in the criminal and pauper classes might be lessened and the health, longevity and refinement of the people greatly increased by such use of hot baths. [M.B.T.]

4.—Crothers sums up his conclusions as to the influence of alcohol upon tissue-growth and cell-growth as follows: (1) Alcohol acts primarily on the nerve-cells, changing their granular matter, breaking up their nutrition and changing their dynamic force. (2) This action is followed by contraction and atrophy of the dendrites, shrinking of cell-walls, as in fatigue, and coalescence and disappearance of the granular protoplasm. (3) The special injury from alcohol seems to be on protoplasm and terminal fibers of nerve-trunks; the irritation and inflammation of the nerve-walls and fibers ending in sclerosis are common. (4) Alcohol acts on the leukocytes, checking their activity, and destroying their function. These are driven in masses by the increasing rapidity of the heart, and become blocked in the capillaries, forming centers of obstruction and injury. (5) The use of alcohol is followed by diminution of the carbon-dioxide and all waste-elimination, with a marked sensorial palsy and a slowing of all mental operations. [M.B.T.]

6.—Duffield believes that the **death-rate from contagious diseases** might be materially reduced by careful supervision of schools for smaller children. Tenement-houses are the great hotbeds for contagious diseases, and perfect isolation is impossible in them. Boards of Health, untrammelled by political relations, and the cottage refuge-system would improve matters materially. [M.B.T.]

7.—Wilmarth discusses the evils arising from the increase of the criminal, pauper, and feeble-minded classes and cites statistics and illustrative examples from several noted criminal and imbecile families. He holds that inasmuch as the taxpayers are obliged to support these classes there should be legislation to prevent their further increase. Three radical measures are at our disposal for the accomplishment of this end: (1) The sequestration of women of the defective class; (2) the passage and enforcement of more stringent marriage-laws; (3) the adoption of surgical meas-



ures for the prevention of the further increase of such defectives as threaten to be a life-burden. [M.B.T.]

8.—Ulrich advocates, as the essentials of a city water-supply, an uncontaminated source of supply, filtration of such water as is used for domestic purposes, and municipal control. [M.B.T.]

11.—Ries has shown by experiment that calcium carbide in a dry state has no effect on the tissues; hence the results produced when it is used in the **treatment of carcinoma of the uterus** as suggested by Etheridge must follow after its disassociation as the result of the absorption of moisture from the serum oozing from the cureted surfaces. When decomposed, only acetylene-gas and quicklime are produced. The gas was found to have absolutely no effect on the tissues of the body, the escharotic action being entirely due to the action of the quicklime. It is not believed that it has been proved that death has been postponed or the patient rendered more comfortable by the use of calcium carbide than by that of many other forms of local treatment. The cases that have been reported have not been treated with the carbide exclusively, but in addition with curetment and cauterization, methods that, in the hands of other surgeons, have yielded fully as good results. It seems necessary that these facts be generally understood, for there is an impression among many practitioners that the use of the carbide is a curative measure that may take the place of excision of the growth. [M.B.T.]

12.—Hobby reports two cases of wry-neck resulting from ocular influences, as shown by recovery following proper treatment of the eyes. [M.B.T.]

13.—Humiston expresses the opinion that no drainage is required in almost all cases of **pelvic surgery**. During the past four years he has drained in fewer and fewer cases, and there has been a steady decrease in his mortality-rate in this time. Cases of gonorrheal pyosalpinx and tubo-ovarian abscess, suppurating ovarian cystoma, ruptured tubal pregnancy, and pelvic peritonitis are reported, which were successfully treated *without the use of drainage*. [M.B.T.]

15.—Senn presents a large ground-plan showing the arrangement of the general field-hospital at Camp Wikoff and he describes the facilities and methods in use there. In discussing the various surgical diseases that came under observation he states that the number of cases of hernia was surprising. It might be surmised that in some cases this physical defect was overlooked during examination. This might have been so in isolated instances, in the case of volunteers, but such a view would not hold good for men belonging to the regular army. More cases of hernia were seen in men belonging to the latter than to the former branch of the military service. The **hernia-formation was attributed principally to relaxation of tissue**, caused by disease and its effects, aided by the prevalence of intestinal affections which must have often resulted in increased abnormal intra-abdominal tension. Four operations for varicocele, 1 for hydrocele and 5 for injuries of the bones and joints are reported. [M.B.T.]

### American Journal of the Medical Sciences.

October, 1898. [Vol. cxvi, No. 4.]

1. Antitoxin-treatment of Pneumonia. ANDREW H. SMITH.
2. Primary Malignant Disease of the Suprarenal Bodies. H. D. ROLLESTON and H. W. J. MARKS.
3. Anomalous Positions of the Colon. JOHN B. SHOBER.
4. Two Attacks of Temporary Hemiplegia Occurring in the Same Individual as the Result of the Use of Peroxid of Hydrogen in a Sacculated Empyema (Pleural). E. G. JANEWAY.
5. Gastric Syphilis, with the Report of a Case of Perforating Syphilitic Ulcer of the Stomach. SIMON FLEXNER.
6. The Diagnosis of Nephritis without Albuminuria. ARTHUR R. EDWARDS.
7. The So-called Hyaline Bodies and Other Cellular Degenerations in Nasal Polypi. JONATHAN WRIGHT.

2.—Rolleston and Marks report six cases of **primary malignant disease of the suprarenal bodies**, together with a collection of twenty from the literature. In the first case reported, the growth affected the left suprarenal capsule, had ruptured into the stomach, and had invaded the pancreas. The symptoms and signs had pointed to diffuse

aneurysm at the commencement of the abdominal aorta. The malignant tumors of the suprarenal bodies are carcinoma (including malignant adenoma), and sarcoma. Nothing is gained by making a class of endotheliomata. The following general conclusions are formulated: (1) Primary malignant growths of the suprarenal glands are rare, but their anatomic characters are fairly constant: Hemorrhagic, with a tendency to break down in the center and form a pseudocyst. There is no marked difference in the incidents of the disease on the two sides of the body. (2) Sarcoma is the more frequent form, occurring in 15 of 24 cases; carcinoma also occurs, being met with in the remaining 9 cases. Both sarcomas and carcinomas present considerable variations in nature and structure. (3) The sexes are affected equally, but the average age of the females (31.5 years) is much lower than that of the males (43.5 years). (4) The average age is 37.5 years, and is lower for sarcoma than carcinoma. (5) There is no special tendency to the incidence of the tumors in early life. The 4 cases that occurred under 4 years of age were all in females. (6) Secondary growths occur most frequently in the liver. (7) The typical clinical picture of Addison's disease is not presented, but in some rare instances it is partially, though imperfectly, suggested. (8) There is much variety in the clinical aspect of the cases, but the condition most often simulated is renal tumor. There is no certain way of constantly distinguishing suprarenal from renal tumors, though there are several points that may help in differential diagnosis. [D.R.]

3.—Shober reports a case presenting an **anomalous position of the sigmoid flexure of the colon**, which lay in the usual position of the appendix. The ileocolic juncture could not be found. The case is regarded as one of over-development of the colon, but the question as to whether such a condition is congenital or acquired during infancy or early childhood is one that cannot be readily decided. Eighteen cases are cited in which the sigmoid flexure and the rectum were found on the right side of the pelvis, and other reported abnormalities and malformations of the intestines are mentioned. [D.R.]

4.—Janeway reports the case of a man, 41 years of age, a right-handed writer, who had a **sacculated empyema** at the base of the left lung. An incision was made, and afterward the patient used hydrogen dioxide to irrigate the sac. Three and one-half months after the operation, and two minutes after an injection of a wineglassful of the dioxide, as he noticed it to bubble inside, the man became unconscious for a second, and of a pale-greenish color, and immediately afterward found the right arm and leg powerless. The power of speech was not lost. The loss of power in the right arm, which was complete, and of the right leg, which was almost so, lasted for 25 minutes and then passed away. Three days later the man had an exactly similar seizure, except that he lost power in his neck also; his head rocked, and he had difficulty in breathing. The paralysis of the right arm and leg was again complete, and lasted, as before, 25 minutes. At that time the sinus had so far closed that neither air nor fluid escaped after the introduction of the dioxide. In connection with this case Janeway cites two similar ones from the French literature. He would explain the hemiplegia as due to embolism, the latter being of such a nature as soon to disappear. The only substance capable of thus acting would be air or gas. Oxygen was probably the agent in his own case, from the dioxide used. The collapse alone could be the result of a reflex influence, while in certain convulsive cases, especially those followed by or rather associated with hemiplegia or paralysis, something is probably sent by the circulation to the brain, possibly some of the injection-fluid or pleural contents by the aspiration-influence causing capillary embolism. [D.R.]

5.—To the few cases of undoubted **gastric syphilis** on record Flexner adds the following instance: A man, 52 years old, had been ill for 3 years. Following a debauch he had been seized with vomiting and irregular chills. His temperature during the attack, which continued for a long time, ranged around 101° F., and a tumor was discovered in the splenic region extending 9 cm. below the costal margin and afterward nearly to the umbilicus. After several months the splenic tumor diminished remarkably and ascites appeared. There was also dropsy involving the legs and the scrotum. The abdomen was tapped several times, always with relief. At the end of two years the peritoneal fluid diminished con-



siderably. The patient died rather suddenly, with symptoms of intense abdominal pain, tympanites, and collapse. The autopsy disclosed peritonitis due to a mixture of the bacillus aerogenes capsulatus and bacillus coli communis. The spleen was enlarged but contained no gumma. It was adherent to the stomach and covered by closely adherent omentum, which was gathered up at the left border of the stomach. When gently separated, the contents of the stomach issued from a small opening, 15x3 mm., in this organ, whose much-contracted mucous membrane presented a mammillated appearance, and in the fundus, 4 cm. from the esophageal opening and occupying the greater curvature, a large ulcer, 5x5 cm., was found. The left lobe of the liver was reduced to a mere appendage, and on section was found occupied by a mass formed by the confluence of several gummatous nodules, which extended well into the right lobe along its lower border. The tumor thus formed lay over the portal vein, and measured 11x4x5 cm. The microscopic features of the ulcer demonstrated its syphilitic nature, but gave no support to the view that it had been produced by the softening of a gumma. The appearance was more that of an indirect necrosis of the mucous membrane brought about by combined softening of the submucous gummatous infiltration, and obstruction and obliteration of the bloodvessels. The mucous membrane, thus deprived of its nutrition, became necrotic, was removed, and an ulcer resulted. The clinical course of the disease was made clear by the autopsy-findings. The splenic tumor and ascites were the results of the portal obstruction, the obstructing agent being the syphilitic tumor, and the immediate cause of death the perforation into the peritoneal cavity of the gastric ulcer. [D.R.]

6.—Edwards dwells on the existence of **nephritis without albuminuria**, and its diagnosis. Three interesting cases are cited, and extensive reference is made to the literature. The following conclusions are reached: (1) Careful repeated routine chemic and microscopic examination of the urine every 24 hours usually, but not invariably, will detect acute and chronic nephritis. (2) The diagnosis of albuminuric and nonalbuminuric types of nephritis is aided by searching examination of other viscera and parts, *e. g.*, by disclosure of cardiovascular disease, retinal involvement, etc. (3) These visceral or somatic changes may be lacking in concrete instances and may be capable of other or diverse interpretation, as polyuria, atheroma, etc. (4) The urinary findings most essential to the diagnosis of nephritis may be lacking, as may be other signs and symptoms of minor dignity; hence, the existence of nephritis may be feared instinctively in a certain case before examination of the urine, as it may be feared also after analysis with negative results. (5) Nephritis may be unattended with albuminuria, and is then usually interstitial in type. (6) While certain instances of nonalbuminuric nephritis correspond to the type described by D. D. Stewart, nonalbuminuric nephritis may not exactly correspond to this type, as acute nephritis, chronic parenchymatous nephritis, and chronic interstitial nephritis may exceptionally occur without albuminuria. (7) Casts should always be searched for. They are more constantly found than is albumin; yet they seem in certain instances to betoken renal degeneration rather than inflammation. They are not invariably in nephritis, nor are they invariably nephritic. (8) Nonalbuminuric nephritis is especially important in life-insurance and kindred examinations and in practice, as prophylactic measures may be instituted and the prognosis be obviously influenced. [D.R.]

7.—In some sections from a **recurrent nasal polyp** Wright found peculiar nuclear hyaline bodies taking the eosin-stain strongly, and varying in size from that of a white blood-cell to three or four times that. They did not react with iodine, but stained brilliantly red with pale, red fuchsin, to which a little picric acid had been added. In addition to these bodies, irregular masses reacting similarly to stain, were found. The former, more regular bodies, Wright calls "berries," the latter "plaques." They were also observed in numerous other polyps, in inflammatory conditions of the nose, in tumors of the stomach, etc. In some polyps there were found also small globular bodies, which, judging from their staining reactions, were similar to the "berries." Both the berries and the globules are produced from the cell-granules that have grown in size and have burst the cell-wall. Material outside of the cells taking a similar stain may be found in low-grade fibrous tissue, and

especially in the peculiar homogeneous bodies of epitheliomas. Under the influence of disturbed nutrition in the wandering cells there may occur an overgrowth of the granular material, which, in the normal cells, takes the hematoxylin-stain, the granules increasing in number, but not markedly in size. These cells may or may not possess nuclei. [D.R.]

### Münchener medicinische Wochenschrift.

September 27, 1898. [45 Jahrg., No. 39.]

1. The Behavior of Eosinophiles in Blisters. BETTMANN.
2. Pulmonary Anthrax. SCHOTTMÜLLER.
3. The Treatment of Diphtheria with the Serum of Convalescents. WEISBECKER.
4. Progressive Multiple Ossifying Myositis. A. ROTH.
5. Local Anesthesia by Oberst's Method. GEHRARDI.
6. A Portable Apparatus for Testing Vision, and the Use of the Ophthalmoscope, together with Remarks on the Testing of Visual Acuity. EHNER.
7. The Etiology and Surgical Treatment of Varicose Veins of the Lower Extremity.

1.—Heusser and others have shown that pemphigus-blisters contain large numbers of eosinophile cells, more even than are contained in the blood. In other vesicular eruptions, and in artificial blisters, most observers have not found any large number of such cells, but Bettmann has succeeded in discovering a considerable number of them in cantharidal blisters. In cases of eosinophilia of the blood the cells in the cantharidal blister are much more numerous than ordinarily. As to the source of eosinophile cells in blisters, it is believed that their appearance is due to a chemotactic stimulus, as Ehrlich has already assumed for the pemphigus-blisters. The view of Heusser as to the local formation of eosinophile cells in the skin is not accepted. [D.R.]

2.—Schottmüller reports two cases of **pulmonary anthrax**, in one of which there was nothing in the history to explain the disease. A second patient was a basket-maker, who used strips of hide to fasten the bottoms of the baskets, and it was through these hides, which were infected, that the disease was conveyed, the anthrax spores having no doubt been inhaled. Reference is made to wool-sorters' disease and to Haderkrankheit, in both of which infection occurs through the lungs. The disease generally sets in suddenly, without prodromal symptoms, with a chill, headache, vertigo, vomiting, coryza, and lacrimation, and it lasts for from 3 to 6 days, the chief subjective symptoms being oppression, shortness of breath, pain in the epigastrium, and in the head and neck. Marked weakness with a tendency to collapse is present, and this is almost a characteristic symptom of the disease. In the first days the lungs present nothing abnormal; then an exudate accumulates in the pleura and a small area of consolidation develops in the lung. The temperature is at first elevated, but later it sinks even to below normal. The sputum may be colorless and mucoid; often, however, it is sanguinolent or "prune-juice" in character. These symptoms are modified if in the course of pulmonary anthrax the disease also localizes itself in the brain or intestinal tract. The prognosis is extremely grave. Treatment consists in cardiac stimulation. [D.R.]

3.—Weisbecker has employed the same method in the treatment of diphtheria that he claims has been so successful for measles, scarlet fever, typhoid fever, and pneumonia, that is the injection of the serum of convalescents. He admits that this is hardly necessary if Behring's antitoxic serum can be employed. Nevertheless, he has treated 30 cases, with only 3 deaths. The characteristic effects of the injection are improvement in the subjective symptoms, no further advance, and often retrogression of the local changes, and diminution of the fever. In croup, particularly, were the local lesions favorably influenced. Symptoms of sepsis were present in the 3 cases in which death occurred. In 3 cases injected early in the course of the disease, septic symptoms developed, but recovery ensued. In one case, in which the injection was made a few hours after the first symptoms, recovery occurred in less than a day. In 2 other cases recovery took place in less than 48 hours; and 4 others in addition are reported characterized by mild symptoms but longer duration. In cases of croup, the duration was usually from 1 to 3 days after the injection, and recovery was ushered



in by profuse sweating. Weisbecker makes the following statements in regard to this method of treatment, without giving any adequate reasons for them: (1) Never more than one injection should be given, as this accomplishes all that can be expected from this method: (2) serum should be obtained only from those patients that recover spontaneously, without injection of convalescents' serum or antitoxin. [J.S.]

5.—According to Gehardi the **Oberst method of inducing local anesthesia** is to be preferred in most cases to the so-called Schleich or other methods. It is especially adapted to operation upon the fingers and toes, although it may be employed with satisfaction in major operations upon the extremities. No matter how extensive the field of operation, the amount injected does not vary and this amount is not sufficient to cause any toxic symptoms. The anesthesia is produced by injecting a 1% solution of cocaine over the course of the nerve-trunk supplying the area to be attacked. With a solution of this strength not more than from 0.01 to 0.02 gram of cocaine would be required. In order to prevent too rapid absorption, and thus shortening the period of anesthesia, it is well to throw a ligature around the limb above the point of injection. [C.H.F.]

7.—It has been proved by clinical and experimental investigation that the mechanical theory will not explain the great majority of cases of **varicose veins**. Statistics would seem to show that occupation and sex play an unimportant part and should no longer be considered among the etiologic factors. The varicosities of veins is now known to be due to certain anomalous conditions in the structure of the vein, and as many of these are congenital, heredity may be put down as one of the predisposing causes. Anatomic study of the normal vein shows there is a definite arrangement of the valves, the distance between each two of which varying with the length of the limb. Therefore, in individuals with long lower extremities, the distance between the valves would exceed that in the individual of average height. From this it may be reasoned that stature is another predisposing cause. The anomalous condition referred to consists in a relative deficiency in the number of valves and is necessarily congenital. Certain pathologic changes, however, are found subsequently, as the result of an effort to compensate for the valvular deficiency. Among them are hypertrophy of the connective tissue of the intima and adventitia, and a muscular hypertrophy of the media. Various operations have been recommended for the radical cure of varicose veins, chief among which are those of Trendelenburg and Madelung. The majority of surgeons have adopted an operation that is a modification of the Madelung, and consists in the removal of the isolated sections of the veins. From a study of the statistics furnished on this subject it would seem that the Trendelenburg operation is indicated when the saphenous vein is only slightly dilated either above or below the knee, especially in patients of advanced years. When, however, the vein is dilated throughout its entire course, and, if the patient be young, the Madelung operation is to be preferred. [C.H.F.]

October 4, 1898. [45. Jahrg., No. 40.]

1. The Occurrence and Treatment of Traumatic Tetanus. R. SEITZING.
2. Chronic Valvular Heart Disease Complicating Pregnancy. R. JESS.
3. The Ambulatory Treatment of Tuberculous Inflammation of the Hip-Joint. KONRAD PORT.
4. The Place of Nursing in Scientific Therapeutics. MARTIN MENDELSON.
5. The Management of Breech-Presentations. MÜLLER.
6. Progressive Multiple Ossifying Myositis. A. ROTH.

1.—Current views as to the **pathogenesis of tetanus** are based partly on established facts, and partly on hypothetical theories. It is, however, known that the tetanus-bacillus generates at the point of infection certain toxins, which are conducted to the spinal cord, in part through the channels of circulation (in animals) but essentially along the nerves in the meshes of the perineurium. Either in the subarachnoid space or in the spinal cord itself, the toxins exert their toxic influence on that portion of the cord with which they were first brought in contact, thereby producing so-called regional or localized tetanus. Should, however, the tetanus-toxins be elaborated in sufficient quantities and continue to

spread along the cord the convulsions will become general. This much has been proved by experimentation on animals, and there is every reason to believe that the process is the same in man. As is well known, tetanic convulsions in the human being are almost without exception general, differing in this respect from those in animals, in which not infrequently they are limited to a particular group of muscles. This dissimilarity between man and beast is accounted for on a purely mechanical basis. The subarachnoid space is much smaller in animals than in man, and in the latter it offers more resistance to the diffusion of toxins, while, being relatively much larger in man, so that the toxins diffuse rapidly, and thereby induce at once general convulsions. The motor ganglion-cells of the anterior horns of the cord seem to have a peculiar susceptibility to the toxins of tetanus. It is questionable whether the morphologic changes in these cells that have been recently described are characteristic alone of tetanus. As to the value of the antitoxin-treatment, the clinical results thus far obtained do not warrant a verdict altogether in its favor. On the contrary the efficacy of the treatment is still in doubt, and will remain so until it has been given a more extensive trial. Until then one must resort to previous methods of treatment, the most important feature of which is the early excision or cauterization of the wound. One or other of these is to be employed in connection with the internal administration of such narcotics as morphin and chloral. [C.H.F.]

2.—JESS has made a careful study of **chronic heart-disease as a complication of pregnancy**, and reports a series of 18 cases, including 6 of mitral stenosis, 6 of mitral insufficiency, and 6 of combined mitral stenosis and mitral insufficiency. He asserts that the greatest danger of collapse occurs in the first few hours subsequent to parturition. The uterine contractions drive into the general circulation a vast amount of blood that has been contained in the uterine venous channels and the already overworked heart fails. This is foreshadowed by dyspnea and cyanosis due to non-oxygenation of the blood. [W.A.N.D.]

4.—[While Mendelssohn's effort to elevate **hypurgy** or the care of the sick to the rank of a discipline may be somewhat quixotic, it will certainly accomplish good by calling attention to the influence of environment and other not strictly medical factors upon the minds of the sick. The article does not admit of satisfactory abstracting.—D.R.]

5.—Müller states that in Germany the treatment of **breech-presentation** is without exception one of expectancy, naturally because of the greater danger to the child. At the end of labor a danger arises from the separation of the placenta and the severance of the communication between the fetal and maternal circulations. Quick extraction of the child can generally be effected at this time without much difficulty, especially if the feet have appeared so that greater ease in manipulation is afforded. In other cases the fingers must be hooked into the groin and the breech thus drawn down. In some cases Müller employs a fillet passed by means of a male metal catheter around the hips and through the interval between the thighs. [W.A.N.D.]

6.—After reviewing fully the literature of the subject of **progressive, multiple, ossifying myositis**, Roth records the case of a girl, 4½ years of age, whose father had died of pulmonary tuberculosis, but whose family history, otherwise, was negative. The child had been comparatively healthy, and at the time of observation was fairly well nourished. The disorder of the muscles began in the upper extremities, but became almost universal. The muscles were firmly contracted, and the seat of numerous bony-deposits. There was some contraction at the knee-joints and elbow-joints. As the patient lay in bed, she presented the typical appearance of one in a tetanic convulsion. In every instance, the bony deposit had some connection with the skeleton, except in a section of bone in the region of the anterior superior spine, histologic examination of which revealed a marked proliferation of the intermuscular connective-tissue. The occurrence of these bony deposits is to be accounted for largely by the increased activity of the periosteum. This agrees with the clinical observation that all the bony deposits have some attachment to the periosteum. The pathologic changes in the inter-muscular tissue would seem to play a less important part in the etiology, and for this reason the term myositis is inappropriate, and



the disease does not originate in the muscular tissue. The majority of observations, including the present, agree that heredity is not accountable for any of these cases. It is more than probable that there exists a congenital diathesis, as in the majority of the cases the lesions manifest themselves in infancy. As to the predisposing causes, traumatism and sex seem to play a minor role. Of 39 cases published, 30 were in males, and 9 in females. Despite the general involvement of the muscular tissue there are no complications in the internal organs, and as for this reason metabolism is not affected, the patients, not only are not emaciated, but on the contrary appear well nourished. As yet no case has been reported in which a fatal issue can be attributed to the disease itself. Numerous remedies have been tried in the treatment of this affection, but none has attained any appreciable success. Among those that have been tried without success are sea-baths, mercury, potassium iodid, decoctions of sarsaparilla, guaiac, and many others. It is suggested that some favorable results might be obtained by eliminating from the diet the bone-forming salts, such as calcium, magnesium and phosphates. By this means one might expect to obtain absorption of the excess of salts in the bony deposits, and thereby a betterment of the condition. [C.H.F.]

### Deutsche medicinische Wochenschrift.

October 13, 1898. [24. Jahrg., No. 41.]

1. Pyrosal and Phenosol. BURGHART.
2. The Significance of Bacteria in the Etiology of the Gastro-intestinal Diseases of Infants. TH. ESCHERICH.
3. A Case of Syringomyelia with Cheiromegaly. M. A. LUNZ.
4. The Existence of Paranoia—Verrücktheit. J. BRESLER.
5. Two Cases of Ictus Laryngis. L. LINKENHELD.
6. A Case of Stone in the Bladder and Urethra. C. LONGARD.
7. The Use of Roentgen Rays in the Detection of Fine Glass Splinters. V. LINSTOW.
8. A Case of Akromegaly. EUGENE PEISER.

1.—**Pyrosal**, a synthetic compound of salicylacetic acid and antipyrin, is with difficulty soluble in water, alcohol, and ether, and is readily decomposed by acids and bases into its constituent parts. **Phenosol** is made by heating together salicylacetic acid and phenetidin. The first contains approximately 50% antipyrin and 36 or 37% of salicylic acid, while phenosol consists of 57% phenacetin and 43% salicylic acid; the dose of each being about 0.6 gram ( $7\frac{1}{2}$  grains) given from 2 to 6 times daily. Both remedies have yielded satisfactory results in acute rheumatic affections; and while they do not prevent complications or relapses, and may occasionally fail, they are, on the whole, more prompt than salicylic acid and its congeners. [D.R.]

2.—Many of the acute and chronic **gastro-intestinal catarrhs of children** are due to the character of the food or the changes that it has undergone outside of the body, through which it acts as an irritant to the delicate mucous membrane of the infant's intestine. The organism of the child has several means of defence against the acids and poisons that may be formed in the intestinal canal, namely, removal of the offensive material by increased peristalsis, profuse secretion of a strongly alkaline fluid and the prevention of further ingestion of food through anorexia and vomiting. It is surprising, however, that despite the careful sterilization of food, grave and rapidly fatal diseases can develop, even in breast-fed infants. These acute infections in their sudden febrile onset, their constitutional manifestations, their inflammatory complications and their irresistible downward course, approach the type of true infections; and it is probable that they are dependent upon specific bacteria, which settle in the intestinal canal independently of the mode of nutrition, and then penetrate into the interior of the body. Marfan and Booker have pointed out the occurrence of streptococci in the intestinal organs of children suffering from digestive disturbances, and Hirsch and Libman have demonstrated the occurrence of the same microorganisms in the intestines and their contents in similar cases. Streptococci may also be found in the urine, in the blood, and in the internal organs. These enteritis-streptococci resemble the pneumococci of Frankel, but are unencapsulated and in the human being they form long chains. The clinical picture

varies. In mild cases there are only slight signs of irritation on the part of the small intestines, characterized by serous squinting stools; while in the more severe cases the symptom-complex may be that of cholera infantum. Apart from their occurrence in this disease, the streptococci are a frequent source of secondary infection in already existing digestive disturbances, and may contribute to or be responsible for the fatal termination. The opportunity for infection is abundant, for such cocci have been found in milk. The streptococci are, however, not the sole cause of disturbances like those described. In some instances it was possible to demonstrate the staphylococcus and bacillus pyocyaneus. Regarding the role of the bacillus coli, it must be remembered that agonal or postmortal invasion of the organs by it is very common; yet there are cases of epidemic intestinal disturbances, in which the colon-bacillus is found in the intestinal discharges, and must play a part in the process; furthermore, some organism has been found by Pfandler as the cause of the cholecystitis of infants. A curious discovery was made on applying the serum-reaction. It was found that only the colon bacillus cultivated from the urine in a case of cholecystitis would respond by agglutination, while other colon-bacilli did not. A colon-bacillus agglutinable in the serum of a patient was also isolated from some cases of colitis that set in acutely during the summer-season. The disease had a protracted course; the stools were mucopurulent and mixed with blood; the abdomen was retracted, of mushy consistence, and the descending colon was contracted and palpable. The evacuations contained almost a pure culture of colon-bacillus and, in one case, large numbers of Megastoma entericum. Similar cases have been described by Fingelstein; and Escherich believes that they represent a specific dysentery-like affection occurring sporadically as well as epidemically, to which he would apply the name **infectious colitis**, or, if the bacillus coli is proved to be the cause, **colic colitis**. The treatment is chiefly prophylactic. Milk should be sterilized, the child's mouth kept clean, over-feeding avoided. If there is a chyme-infection with acid fermentation, evacuation of the bowel and a water-diet, with avoidance of the fermentescible sugars, is indicated. When the disease follows milk-feeding a preparation of flour is substituted, and vice versa; in cases of proteid-decomposition, dextrin and Liebig's soup or the various infants' foods have been found beneficial. Extract of malt and honey are also useful when constipation exists. Medicinal disinfection of the intestine has failed entirely. Large, airy rooms will do much to prevent intestinal diseases. Persons with pyogenic affections should remain away from infants, and the latter, when sick, should be isolated. The care of infants should, if possible, be in the hands of special nurses. Escherich rightly says that the clinician to-day has to deal with a problem similar to that which confronted the obstetrician in connection with puerperal fever at the time of Semmelweis. [D.R.]

3.—Lunz reports the case of a woman, epileptic since her sixteenth year, who, in connection with the symptoms of **syringomyelia**, had a general **enlargement of the right upper extremity**. The case was somewhat peculiar on account of the absence of atrophy of the muscles on the left side and the hypertrophy on the right. [The term cheiromegaly, which, following Marie, Lunz applies to the latter condition, is ill-chosen, as it means really enlargement of the hand. Schlesinger's term of macrosomia is a little too general. A good designation is still wanting. D.R.]

4.—Bressler attempts a psychologic analysis of the mental disturbance in **paranoia**, holding that only he is paranoiac whose personality has been transformed. There is a large number of insane persons who are constantly subject to hallucinations and delusions, who yet remain what they were and preserve their individuality. These are not paranoiacs. The alteration of the *ego* is connected with the development of delusions of grandeur. Two kinds of delusions of grandeur must be recognized: (1) Those that are merely exaggerations of the normal actual attributes of the *ego*; (2) those that substitute attributes entirely foreign to the former *ego*. It is this latter type that characterizes paranoia. There is in the paranoiac a disagreement between the apperception of the outer world, the so-called secondary *ego*, and the apperception of the corporeal or cenesthetic *ego* (the primary *ego*). The constant dwelling on the primary *ego* induces an exaggerated state of self-consciousness, for



which the individual seeks adequate expression that usually eventuates in delusions. In addition to the delusions of grandeur the paranoiac harbors delusions of persecution. The latter are not accompanied by a transformation of the ego, and are usually the first to appear and terminate in the grandiose delusion in which the personality sinks into oblivion. [D.R.]

5.—Linkenheld reports the case of a well-to-do man, 63 years old, who, after some mental excitement, had just lit a cigar, when he experienced a tickling in the throat, and had a violent coughing spell during which he fainted. Two other attacks had occurred under similar circumstances. A second patient, a Belgian nobleman, 62 years of age, had just begun to smoke a cigar after a heavy dinner, when he felt a tickling in the throat that induced severe cough, during which he fell unconscious from his chair. Another attack occurred some time later under similar circumstances. The attacks are believed to be identical with those described by Charcot as **laryngeal vertigo, or ictus laryngis**, the condition being supposed to be dependent upon a sudden cessation of respiration and motor activity from irritation of the superior laryngeal nerve. In other cases there is vasomotor disturbance, with sudden stoppage of the heart and consecutive cerebral anemia. Both of the patients in the cases here reported were advanced in years, had arteriosclerosis and some nasal disturbances with increased secretion and both smoked excessively. The mechanism of the ictus in these cases is explained as follows: Through the use of strong cigars, the sensory fibers of the pharyngeal branches of the vagus nerve and superior laryngeal are in a state of irritability. If the chronically irritated mucous membrane is then still more irritated, whether through a heavy dinner or an exciting conversation, the slightest stimulus, as inhaled tobacco-smoke or secretions flowing down from the mucous membrane above, suffices to induce tickling, with reflex cough, and irritation of the vagus-endings sufficient to cause slowing of the heart or stoppage, with cerebral anemia, is produced. The underlying condition then, is one of mild nicotin-poisoning. In neither patient was there any clear evidence of tobacco-poisoning, such as palpitation, etc., but both had of their own accord, after the occurrence of the fainting spells, greatly reduced the amount of tobacco used; but even in the absence of any nicotin-influence, the condition is readily explained as being due to irritation of the posterior wall of the larynx by the nasal mucous dropping down from above. The cases were somewhat different from those described by others in the absence of vertigo. [D.R.]

6.—Longard reports the case of a man who, at the age of 20, had been operated upon successfully for a patulous urachus. Ten years later he developed symptoms pointing to vesical calculi, with pain referred to the left kidney. Examination failed to reveal any enlargement of this organ, while the skiagraph demonstrated the presence of 5 calculi in the region of the bladder. Suprapubic cystotomy was performed; but 4 calculi could be found, and, curiously enough, the remains of a silk suture (introduced at the urachus-operation) were found in the center of each calculus. After the operation the symptoms persisted, and a skiagraph revealed a shadow to the left of the symphysis pubis. An encysted calculus was at once thought of, and a second suprapubic cystotomy performed, only to find that there was no calculus in the bladder-wall at all, but in the ureter. Repeated skiagraphs gave evidence that the stone had passed spontaneously into the bladder and was not encapsulated. The employment of skiagraphy as an aid in differentiating between a ureteral and an encysted calculus thus suggests itself. As a rule, the latter is likely to occupy a more central position in the bladder, while the former lies in the region of the ureteral outlet. [C.H.F.]

8.—Peiser reports a case of **akromegaly** in a man, 54 years old, with temporal hemianopsia, but presenting no other special peculiarity. [J.S.]

### Wiener klinische Wochenschrift.

October 13, 1898. [11. Jahrg., No. 41.]

1. The Bacteriology of Pyelitis. RICHARD KRETZ.
2. A Case of Initial and Postinitial Sclerosis of the Eyelid. LEON GRUDER.

### 3 Phenocoll, Analgen, Chinopyrin and Euchinin as Antimalarial Remedies. NAVEH LEWKOWICZ.

1.—Kretz reports a case of **pyelitis** in a man, 36 years old, interesting on account of the discovery in the purulent urine of bacilli that were identical morphologically and culturally with influenza-bacilli. The condition was found accidentally, there being no symptoms referable to it. Kretz is not willing to assert that the bacilli discovered were really influenza-germs. [D.R.]

2.—As to the relative frequency of **syphilitic disease of the eye**, statistics differ widely; so, too, is the exact proportion of chances of the eye to other extra-genital chancres undetermined. It may be stated that, next to the lips and fingers, the eye is the most common site for an extragenital lesion, as the habits and social conditions of one country differ from those of another, and those of large cities from those of the country-districts, great variation is to be expected in the statistics on the subject. The unusual frequency of primary chancre of the lid among the Russian peasantry is explained by the custom of licking the inflamed eye, or bathing it with urine. The most common site is on the lower lid; occasionally the upper lid is involved and more rarely the conjunctiva. The lesion itself does not differ from that seen elsewhere in the body; it is usually solitary, although a limited number of cases (7) are recorded in which there were two initial lesions. The contagion is transmitted indirectly by sponges, handkerchiefs and towels, and directly by kissing, licking and the like. The prognosis is generally not grave; small cicatrices will follow resolution, but no gross lesions are to be anticipated. Enlargement of the preauricular glands has no special significance, as this is a complication met with in connection with numerous other ocular affections. Gruder reports a case of double chancre of the lid, in which the manner of transmission was believed to be through the kisses of a syphilitic child. [C.H.F.]

3.—Phenocoll, analgen, chinopyrin, and euchinin have been recommended as useful against malaria. Lewkowicz has tried them and finds that the first two are of no value. Euchinin, however, is highly useful and without the bitter taste of quinin. In cases in which hypodermic injections are indicated chinopyrin can be used. [D.R.]

### Berliner klinische Wochenschrift.

October 17, 1898. [35. Jahrg., No. 42.]

1. Protective Material Against Staphylococcal Infection. OSKAR BAIL.
2. Hysteric Diaphragmatic Asthma. ERNST BARTH.
3. Stenosis of Esophagus in the Sequence of Scarlet Fever and Diphtheria. FRANZ EHRLICH.
4. Recent Advances in Science and their Bearing on Medicine and Surgery. RUDOLF VIRCHOW.
5. Two Cases of Primary Malignant Tumor of the Epiglottis. ARNOLD SCHILLER.
6. The Method of Employing, and the Effect of, Soluble Metallic Mercury. OSCAR WERLER.

1.—Bail has tested the **protective influence** of exudates containing **leukocytes** against **staphylococcal infection**. The exudates were obtained from the pleural cavity after injections of aleuronat-emulsion, and were used either as obtained or after centrifugation. Several times a fatal dose of the staphylococcus-culture was mixed with the leukocytes and injected into the pleural cavity. In the majority of cases no infection occurred, but when large doses of staphylococcus-culture were employed, the animals died rapidly. The exudate had no protective influence if it had been heated to 60° C., or if it had been mixed with leukocidin, or had been exposed to the action of distilled water. The leukocytes appeared to exercise their protective influence if injected after the bacteria. Neither the mononuclear leukocytes, nor the plasma, nor the red cells, seemed to manifest bactericidal action. In those animals that died of chronic infection, the site of the original injection rarely exhibit marked local changes, and it seems reasonable to conclude that the cells contain some substance that inhibits the bacteria from exerting their injurious influence. Other pathogenic microorganisms were not tested, because of lack of material. [D.L.E.]



2.—Barth gives a brief description of the various forms of diphtheria preliminary to a discussion of **hysterical disturbance of respiration**. (The paper is unfinished.)

3.—Erichsen states that no other case of **stenosis of the esophagus** as a result of scarlet fever has ever been reported. A 5-year-old boy had scarlet fever, with severe ulceration of the throat. There was no other history to explain the subsequent stenosis of the esophagus. No suspicion of syphilis or of swallowing caustic substances existed. The first difficulties in swallowing solid food came on shortly after the attack of anginoid scarlet fever and progressed until all attempts to swallow solids were followed by almost immediate vomiting. The child had become much emaciated. Sounding of the esophagus disclosed an impassable stricture between 18 and 20 cm. from the incisor teeth. As sounds could not be passed through the mouth, and the child was too young to make the use of the esophagoscope advisable, gastrotomy was performed and retrograde dilatation was attempted, but this was only partially successful. The esophagoscope was now introduced through the stomach and a tight constriction was seen. An attempt was made to dilate the stenosis by having the child swallow silver balls after the method of König, but it was unsuccessful. Then a spiral sound was introduced, causing some dilatation, and an attempt was made to introduce a permanent tube through the stenosis, but this could not be done, so that after a few larger sounds had been passed, a laminaria tent was introduced. This seemed somewhat successful and a larger one was introduced, but in attempting to pull it out the thread broke. Attempts to drive the tent on with olive bougies were unsuccessful, and it was finally dislodged by introducing a stiff bougie through the esophagoscope, and was passed by the anus a few days later. Water-pressure was then used and increased the diameter of the constriction to a slight degree. The subsequent introduction of sounds brought the diameter up to 12 mm.—about the same as the normal part of the esophagus. The gastric fistula was closed, and, though not fully healed, the child seemed to be in entirely good health. [D.L.E.]

4.—See this JOURNAL, Vol. II, p. 725.

5.—Schiller reports **two cases of primary malignant tumor of the epiglottis**, in both of which he operated. In one the growth proved to be a papillary carcinoma, and in the other a sarcoma. The conspicuous symptoms were difficulty in swallowing, especially of solid food, difficulty in breathing in the recumbent posture, and a sensation of a foreign body in the throat. In neither case was there any alteration of voice. Laryngoscopic examination in connection with the clinical history will enable one to diagnose with some degree of certainty the character of the growth. If it be a carcinoma it is usually of the papillary variety, with a certain amount of infiltration at the base of the tongue and some ulceration in the pharyngo-epiglottic folds; and there is commonly pronounced pain in the early stages; while most of these conditions will not be present if the tumor be a sarcoma. As to the operative treatment the question will always arise as to whether or not the intralaryngeal or extralaryngeal method is to be adopted. The earlier the diagnosis is made, the easier will it be to remove the growth by the intralaryngeal method. Should the extralaryngeal method be deemed necessary one must use his own discretion as to the performance of preliminary tracheotomy. The latter procedure has previously been regarded as obligatory, but in Schiller's opinion this is not the case, his judgment in this matter being guided in a large measure by the amount of hemorrhage that is to be expected. He prefers the half-sitting posture to that of Harmer's, as in deep narcosis no blood can flow into the trachea, and hemorrhage will be less than if the operation be performed with the head hanging over the edge of the table. Too much stress cannot be laid upon the importance of the after-treatment, for despite the greatest care and attention to detail inspiration-pneumonia may develop, as in one of Schiller's cases. During the first few days after the operation nourishment should be administered by enemas, and after that through a tube introduced into the mouth or nose. [C.H.F.]

6.—Werler notes that the **colloid preparations of mercury** are especially valuable because they are not irritating, and, therefore, allow of the use of larger doses; they are also more readily and surely absorbed. He has an oint-

ment made for inunction and considers his results from this very valuable, as it took a shorter time to rub in the ointment, and irritation of the skin or mercurial eczema never followed. Other preparations can be made for subcutaneous and internal use. Mercuric colloid is a metallic, shining, brownish-black substance of granular form that is readily soluble in water. [D.L.E.]

### Centralblatt für allgemeine Pathologie und pathologische Anatomie.

September 1, 1898. [9. Band, Nos. 16, 17.]

1. The Influence of the Nervous System Upon the Localization of Pathogenic Microorganisms. HOFBAUER and CZYHLARZ.
2. The Pathogenesis of Fever. UGHETTI.
3. Rhythmic Changes in the Tension of the Pulse (Allotensio Pulsus). JANOWSKI.
4. Recent Investigations Upon the Thymus Gland. ALBERT KLEIN.

1.—Hofbauer and Czyblarz have performed several series of experiments upon animals, injecting microorganisms into the blood-stream in order to determine the influence of the **trophic centers** in the nervous system upon the **localization of infection**. In the first series four rabbits were used. The sciatic nerve was cut, and then emulsion of staphylococcus pyogenes aureus was injected into a vein of the ear. In all of the cases cultures from the joints related to the nerves that had been cut were much the more seriously infected. In the second series the primary trunk of the abdominal sympathetic nerve was exposed by celiotomy and cut. Ten experiments were made, and in all it was noted that the limb on the operated side formed a site of lessened resistance. A third series of observations consisted in hemisection of the spinal cord. No particular result could be deduced from experiments upon five rabbits, and in a sixth animal, in which both of the abdominal trunks had been cut at a preliminary operation, the results were the same. After a brief consideration of the results of other experimenters in this line, it is concluded that the increased accumulation of microorganisms circulating in the blood in a tissue or organ deprived of its nervous influence is not caused by paralysis of motility or sensibility, but only by paralysis of the vaso constrictors, that is to say, it depends upon the hyperemia that has been induced. [J.S.]

2.—Ughetti replies to the criticism of Löwit upon his article on fever, contending that all experiments that attempt to show the existence of some chemic pyrogenetic substance have been inconclusive on account of errors of technic or of deduction. Moreover, there is no substance known to chemistry that will induce rise of temperature without previous destruction of the blood-corpuscles. Any substance injected into the blood-current that contains corpuscular elements, even if these are too small to produce embolism, will cause fever, and the same is true of substances that modify the red blood-corpuscles, such as distilled water. Finally, in many febrile infectious diseases, microorganisms are found in the blood. Ughetti has been able to induce fever by the intravenous injection of antipyrin, providing the solution is sufficiently concentrated. He is skeptical concerning the existence of pyrotoxin, (1) because even nonpathogenic bacteria injected into the circulation will induce fever, and (2) because this substance has been obtained from bacteria that are not of themselves pathogenic. In conclusion, it is argued that all hitherto investigated poisons, including all auto-intoxications, even uremia, cause hypothermia. Further elevation of temperature occurs in all cases in which corpuscular elements are found in the blood. Ughetti appears to take a great deal for granted in order to strengthen his case. [J.S.]

3.—Janowski has long believed that in conditions in which at one time high vascular tension, at another low tension, exists, or in those conditions such as aortic insufficiency, in which there is at one time a quick pulse and at another a slow pulse, it should be possible to demonstrate the period of transition by means of the sphygmograph. Such demonstration he has been able to make in a patient suffering from mitral obstruction and insufficiency. During a period of violent palpitation of the heart, with a pulse of from 190 to 220 per minute, the sphygmograph showed a



rather regular alternation of deep and then several shallow waves. The series of waves was somewhat as follows: a deep, soft wave, then a wave of high tension, another wave of low tension, then two waves of high tension, and persistent repetition. The interesting feature is the existence of irregularities of the pulse characterized by various tensions of the different waves. During a subsequent observation in another attack, a somewhat similar tracing was obtained. [J.S.]

4.—Klein gives a long and careful critical review of the recent literature concerning the **thymus-gland**. [J.S.]

### Journal de Médecine de Paris.

October 2, 1898. [18. Ann., No. 40.]

#### 1. Reflex Amyotrophies. MALLY.

1.—Mally defines **reflex amyotrophies** as a class of muscular atrophies that are caused by a change in the gray matter of the spinal cord. The lesion of the central nervous system usually follows a traumatic or an inflammatory articular lesion, and is produced at a distance from the primary lesion by a reflex mechanism. The amyotrophy usually attacks the extensor muscles; at the shoulder the deltoid is always the muscle most affected, although the scapular muscles, the pectoral muscles, the biceps, and the triceps may be involved. The affected muscles may be completely paralyzed, so that spontaneous dislocation of the humerus may result. Frequently there is marked spasm, manifested by exaggerated mechanical excitability or by distinct epileptoid convulsions. In the evolution of the disease the atrophy and the paresis appear simultaneously and when cure takes place they disappear at the same time. The reflex atrophy frequently appears rapidly and then remains stationary. Traumatism, rheumatic arthritis, gonorrheal arthritis, and gouty arthritis are the principal etiologic factors in the production of the condition. Tuberculous arthritis (white swelling) is not accompanied by reflex atrophy with spasm. The disease presents two degrees: a mild form that is due to purely dynamic functional trouble of the nerve-cell and that is readily cured; and a grave form that is due to definite organic change in the cells of the anterior horns of gray matter of the spinal cord. In the latter cases the paresis is distinct, and the atrophy rapidly becomes marked and then remains stationary, and the spasmodic phenomena may be extreme. The condition is to be distinguished from hysterical paralysis. In the region of the shoulder the condition is to be differentiated from paralysis of the circumflex nerve by the electric reactions, which are those of degeneration in the latter instance, while in the former condition the excitability of muscle and nerve will be considerably diminished for both the faradic and the galvanic currents. The use of electricity is recommended for the relief of the condition. [J.M.S.]

October 9, 1898. [18. Ann., No. 41.]

#### 1. Post-Operative Paralysis. PHOCAS.

1.—Phocas reports two cases of **post-operative paralysis**, one in the person of a married woman, aged 46 years, who was submitted to abdominal hysterectomy for fibroma. After the operation the patient presented well-marked hemiplegia, involving the right arm, the right leg, and the right side of the face, and accompanied by complete aphasia. The paralysis was much ameliorated three months after the operation, but had not completely disappeared. The second case was that of a married woman, aged 37 years, who had submitted to total abdominal hysterectomy for pyosalpingitis. The operation occupied an hour and a half, and was followed by typical radial paralysis of the left forearm, which had disappeared completely five weeks after the operation. The conclusion is reached that paralysis may occur as a direct sequence of surgical operations and particularly in women. The disturbance may sometimes be localized to one member, and it may sometimes be general, involving an entire side of the body. These paralyzes do not seem to have an identical origin, and further study must be made for a full comprehension of the pathogenesis and the prognosis. [J.M.S.]

October 16, 1898. [18. Ann., No. 42.]

#### 1. Convulsions of the Newborn, Due to Alcoholism in the Nurse. HENRI MEUNIER.

1.—Meunier concludes (1) that grave convulsions may occur in children that nurse from a woman that uses wine or other alcoholic drink immoderately; (2) that these convulsions are preceded by a period during which the child becomes nervous, irritable, and generally hyperesthetic; the convulsions resemble the classic picture of eclampsia, but are distinguished by the rapidly increasing number of the attacks and the occurrence, in a short time, of a permanent convulsive state; (3) that these convulsions are not preceded by gastro-intestinal disturbance or by fever; they occur, on the contrary, in children in whom the nutrition seems satisfactory and in whom the weight-curve may be above the normal; (4) that the causal condition can be established only by exclusion of the other habitual causes of infantile eclampsia; (5) that the disappearance of the convulsions with a change of nurse or by the elimination of alcohol from her diet, indicates that alcohol may be brought to the system of the child by the milk. It is not necessary that the amount of alcohol consumed by the nurse should be great when the child has inherited an abnormal excitability of the nervous system. [J.M.S.]

### Revue de Médecine.

October 10, 1898. [18. Ann., No. 10.]

1. Idiopathic Pulmonary Congestion. CARRIÈRE.
2. The Role of Heredity in the Etiology of Certain Diseases. KABANOW.
3. Rupture of the Heart. FR. DUPLANT.
4. Note on a Case of Occupation-Paralysis in an Alcoholic. CH. FÉRÉ.
5. A Case of Chronic Pseudomembranous Bronchitis. JEAN LÉPINE.

1.—Carrière reports in detail 16 cases of "Woillez's disease" or **acute idiopathic congestion of the lungs**. The common etiology of the condition is either exposure to cold or traumatism. Shortly after the action of such a cause, and without distinct premonitory symptoms, the disease begins with a chill. The temperature usually rises rapidly to from 102° to 104° F. At the same time the patient complains of violent pain in the side, and dyspnea appears soon after. During the course of the disease, these symptoms continue; the temperature remains elevated, the dyspnea is persistent and is both inspiratory and expiratory, and the pain is commonly intense, but may be relieved by local applications. The seat of the pain is variable; it is not always on the same side as the lesion, and it does not persist in the same place. Sometimes it affects both sides, constituting almost girdle-pain. It is sharp and paroxysmal, and is increased upon the least respiratory effort. The explanation of this pain is somewhat difficult, the probable one being that it is reflex from the irritation of the lung. The dyspnea is produced by the pain upon attempted respiration, by the interference with the circulation, and by the toxemia of the disease. Cough is usually present, but it may be entirely absent through the whole course of the disease. When present it is commonly not severe and is short. Expectoration usually is present in variable amount. The sputum is commonly viscid and often tinged with red, the viscid portion usually floating about in a liquid somewhat resembling glycerin. The disease usually persists for 4, 5, or 6 days, or even less, and then disappears rather by lysis than by crisis. The microorganisms found by Carrière were chiefly staphylococci and pneumococci. Staphylococci were found three times upon puncture of the lung, twice in conjunction with pneumococci. The physical signs consist in increase of the volume of the affected side, probably as a result of increase in the volume of the lung, owing to the congestion. Respiration is usually of the normal type, but rapid. The side affected is usually immobile. Tactile fremitus is never completely abolished, but it is usually lessened; frequently however, it is normal. Although Woillez stated that, properly speaking, there is never dullness on percussion, Carrière says that he has observed imperfect resonance over the site of the lesion. On auscultation, expiration is prolonged, and the vesicular murmur is usually feeble or obscure, but it never disappears entirely. Sometimes the breathing is exaggerated and of cog-wheel type, and often it is rough. Rarely has it been found whistling, as described by Woillez, but it is not



uncommonly blowing; this blowing respiration appearing first at one spot, then vanishing and appearing elsewhere. Crepitant rales are frequent at all periods of the disease. Subcrepitant rales also are commonly heard, as are moist rales of all qualities. Egophony is rare, but Carrière has found frequent a somewhat similar symptom which he calls echophony, the sound of the voice being followed by a short repetition of the vocal resonance, which resembles an echo. (The article is to be continued.) [J.S.]

2.—After a general discussion on the influence of **heredity**, Kabanow reaches the conclusion that the affections of the various organs are largely dependent upon extrinsic etiologic factors, such as cold, acute infections, excesses, etc., the infectious diseases playing but a comparatively unimportant role. He has observed that abrupt changes in the financial circumstances of a family, or removal from one locality to another differing very widely in climate, or changes in other circumstances capable of influencing the patient's emotional or physical nature, are of great importance in the production of a tendency to certain forms of disease, and more particularly of the nervous temperament. The general tendencies are divided into nervous and arthritic forms, and that form in which there is a general loss of nutrition, the primary being usually the nervous and arthritic temperaments. The nervous temperament alone tends to lead finally to gastro-intestinal or pulmonary disturbance, with resulting general impairment of nutrition. A combination of the nervous and arthritic temperaments tends to cause weakness of the cardio-vascular system and of the kidneys, and, more rarely, affections of the gastro-intestinal tract, and of the lungs. The latter result of a neuro-arthritic temperament finally ends usually in generally imperfect nutrition. Inter-marriage between families of varying types of pathologic heredity produces a mixture of heredities, though the type of imperfect nutrition is likely to control the neuro-arthritic type and to have the greater importance in producing subsequent disease. The final result is the extinction of races that have these pathologic tendencies. [J.S.]

3.—Duplant reports the case of a man, 60 years of age, with a history of probable syphilis, who had been a constant drinker. Further than this, with the exception of an eruptive fever, the man had been free from disease. He had had pain in his left side for a long time, and had grown weak, and for 5 days this pain had been extremely intense and lancinating. He had besides had severe dyspnea and edema of the legs. When seen he was extremely dyspneic and cyanosed, and had a weak pulse, which was so rapid that it could not be counted. There were signs of a slight effusion into the left pleura. The base of the triangle of cardiac dulness was below, as it is in pericardial effusion. The heart-sounds were dull and irregular. Murmur and gallop-rhythm were absent. The patient died in the course of a few hours. Upon opening the thorax, the pericardium was found filled with blood-clots which were of three different types, some being evidently recent and free in the pericardial cavity, while others of the same kind were within the wall of the heart between the parietal layer of the pericardium and the muscle, and finally there was an old, firm, white, and fibrous clot, the size of a mandarin, lying over a semi-lunar perforation in the left ventricle, about 4 cm. in length and 1 cm. in width at the widest. Within the ventricle was a large depression about 4 cm. in diameter, extending to the pericardium, and in the center of which was the perforation. The surrounding myocardium was filled with black, bloody-looking masses, evidently the vestiges of an old infarct. The clot upon the outside extended through the perforation and practically filled it, as well as the excavation within. Histologic examination showed hemorrhage into the pericardium and infiltration of the walls of the heart with blood; the muscle near the infarct stained badly, and there were large numbers of round cells between the muscle-fibers. The vessels were surrounded by a thick band of connective tissue, evidently an old sclerosis. The muscle-fibers showed poor striation and the nuclei were faint. Some fibers presented pseudo-fibrillation. These conditions correspond with those that are commonly found under like conditions: the left ventricle is usually ruptured, and the perforation is generally linear and consecutive to an infarct. It is believed that the clot present in the perforation had first formed in the excavation that resulted from the infarct, and by gradual pressure had broken down the thin wall, filled the aperture, the escape of blood

being so slight that life was prolonged for 5 or 6 days. Examination of the heart microscopically with special reference to the presence of segmentation of the fibers failed to disclose this condition. As to the clinical signs of such conditions, it is pointed out that the form of dulness indicated a pericardial effusion, and as there was no sign of inflammation of the pericardium, as the patient had atheroma, and as there was no history of rheumatism, tuberculosis, or uremia, one might be justified in thinking of hemopericardium. The smallness of the pulse and its absence at intervals, coincidently with extreme weakness of the heart-sounds, were in favor of hemopericardium. The diagnosis would have received further corroboration had anginoid pains, vertigo, or syncope been present. [J.S.]

4.—Féré reports the case of a man, 48 years old, who had been a marked alcoholic, and had for several months exhibited alcoholic hallucinations and marked mental depression. On one occasion the man engaged in fishing for 8 hours, holding the rod in his hands almost uninterruptedly during this time. Directly after this, the man was surprised to find together with a sensation of general severe fatigue, that his right hand was extremely weak, and there was a feeling of numbness along the external border of the forearm to the thumb. On examination subsequently, it was found that there was almost complete paralysis of the radial group of muscles, with pains in distribution of the same nerve, and tenderness between the brachialis anticus and the long supinator. Treatment was followed by improvement in the pain, and gradually also in the paralysis, the latter disappearing entirely. The localization of the disturbance in the radial group of muscles is notable, and the case seems to belong to the class designated as neuritis from exertion. [J.S.]

5.—Lépine reports the case of a man, 40 years of age, with an asthmatic ancestry, but without known arthritic antecedents, but who had himself been always nervous, and had had chorea and rheumatic pains and attacks of bronchitis, and one outspoken attack of pneumonia. Following this he had suffered from dyspnea, cough and expectoration, the sputa frequently containing false membrane; and his physical condition had become quite distressing. He had been treated in various ways without success, but in view of his occasional rheumatic symptoms, alkalies were administered and an absolute milk-diet established. After a month the expectoration of false membrane had practically ceased, and after three months it had not reappeared, and the man was practically entirely well. [J.S.]

**Epithelioma of the Glands of the Neck: Removal of both Internal Jugular Veins and both Sterno-mastoid Muscles.**—R. A. Stirling (*Inter-Colonial Medical Journal of Australasia*, September 30, 1898) reports the case of a man, aged 52, a persistent smoker, who had noticed 8 years previously a carcinomatous growth on the right side of the lower lip. The growth was removed but recurred, and operation was repeated every year for 4 years. When first seen he had a large epithelioma of what remained of the lip, with a hard mass beneath the right jaw. This was removed and he remained free from disease for 2 years, when it returned in the glands on the outside of the internal jugular vein. The glands, vein, and muscle involved were removed. A seventh operation was performed a short time ago for recurrence at the root of the neck, attacking the common carotid and involving the neighboring nerves. This was removed, taking care to dissect the nerves free, and the patient left the hospital on the tenth day, contrary to advice, with no apparent ill effect from operation. Removal of both internal jugular veins is of interest from its rarity. Stirling has been able to find but one instance in literature, in which the patient died shortly after the operation because the collateral circulation had not been established. [M.B.T.]

#### A Formula for Acute Gastroenteritis:

Bismuth subnitrate..... 4 drams.  
Salol..... 1 dram.  
Camphorated tincture of opium..... 3 fluidrams.  
Tincture of ginger..... 3 fluidrams.  
Chalk-mixture, to make..... 3 fluidounces.

Mix.—Two teaspoonfuls every three hours until the stools are formed; then one teaspoonful thrice daily.

—HERWIRSCH (*Phila. Polyclinic*.)



## Original Articles.

## A CASE OF LANDRY'S PARALYSIS.

## Autopsy; Pathologic Report: Life Prolonged by Artificial Means for 41 Days after the Establishment of Respiratory Paralysis.

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with

## PATHOLOGIC REPORTS

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AND

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THE following case of Landry's paralysis is reported, not alone because of the rarity of the disease, but also because it is hoped that it may prove of interest and value as a suggestive contribution to the knowledge of its etiology, pathology, and treatment. The details may appear unduly tedious, but they are not unimportant as relating to the exact mode of onset.

Matilda A., 20 years old, was admitted September 30th, to the St. Paul City and County Hospital as a private patient of Dr. A. B. Ancker and was by him transferred to the care of Dr. Greene. The patient was a Swede, engaged in general housework. Her previous history was negative. There was no evidence of venereal disease, past or present. The family-history also was negative. On September 27th the girl arose early, feeling perfectly well. She performed her ordinary duties as usual, and no unusual articles of food were taken. At about 3 P.M. she suddenly became "light headed," and her vision "seemed dim"; but she kept at work until 5 P.M., when she took a light meal and retired, complaining of headache. On September 28th, she arose and began her usual work, but was obliged to return to bed, feeling weak, faint and feverish, with headache and nausea. She took only a cup of coffee. Her symptoms increased steadily, and at 6 P.M. she arose and, dressing with difficulty, walked several blocks to consult a physician. She then returned, went immediately to bed and was seized with violent nausea and severe vomiting, which lasted all night, recurring at frequent intervals. During the following day (September 29th), the nausea and vomiting continued, gastric irritability preventing the retention of either food or medicine; and in the evening the patient began to experience severe pains involving the entire body. Upon Thursday (30th) she arose and attempted to dress, but was compelled by her general weakness to return to bed. Her physician saw her and advised that she be removed to a hospital, and she was admitted at 3.30 P.M., supposed to be suffering from typhoid fever.

Upon admission her mind was clear, and she was well nourished, with an expression somewhat anxious, the tongue coated, the temperature 102°, the pulse 120. She complained of extreme general weakness and pain in the lower extremities. The pupils were contracted, but equal, and they responded sluggishly to light and in accommodation. The lower extremities were somewhat rigid though not tender, and motor power was preserved. Rigidity was more marked in the left than in right leg. The lungs and heart were normal. There was no glandular involvement. The abdomen was distended and tympanitic, tenderness being marked in the epigastrium only. No rose-spots were present, and the bowels had not moved for three or four days. The girl had evidently been subject to habitual constipation, for, upon further examination, the sigmoid flexure and the descending colon were found to contain a large quantity of impacted feces, the

boggy mass extending up to and passing under the left costal margin. This mass was removed by digital and instrumental means, followed by colon-flushings, which brought away great quantities of hard feces and large bunches of grape-skins. It may be added that, during the three or four days following, similar masses were washed out by means of enemata. The sphincters were normal, and expulsive power remained present throughout the illness.

The urine was drawn by catheter until the fecal accumulation was removed, after which time it was voided naturally. The urine contained a large amount of indican, but was otherwise normal.

On Friday morning (October 1st, fourth day), at 2 P.M., there was noted an entire loss of power in the muscles of the left leg, and similar though less complete involvement of the right leg. Sensation was normal. The temperature was 101.6° F., the pulse 120. In the evening, both limbs were completely paralyzed, while sensation was preserved. The knee-jerks were abolished. The temperature was 102.6° F., the pulse 120.

On Saturday, October 2d, at 2 P.M., the temperature was 101.6°, the pulse 120. There was paralysis of both lower extremities and of the abdominal muscles, with rigidity of both arms, forearms, and hands. There was some complaint of soreness. The mind was still perfectly clear. At 7 P.M. of the same day, there was paralysis of the upper extremities, while the deep reflexes were still absent, sensation was preserved, and slight dyspnea was manifest. At midnight of October 2d (fifth day), Dr. A. B. Ancker, superintendent, and Dr. Allen, senior house-physician, were summoned, and they found the patient cyanotic, gasping for breath and evidently without power over the respiratory muscles. The girl had become partially unconscious. Artificial respiration and oxygen-inhalations were at once begun, and strychnin was administered in full doses. This treatment was continued throughout the night, with manifest improvement in the cyanosis.

On Sunday, October 3d (sixth day), artificial respiration, Sylvester's method, was continued during the day. Atropin and strychnin were administered, and calomel and colon-flushings brought away more bunches of grape-skins. The patient had intervals of consciousness and could at such times express herself clearly, though in a faint whisper. The pupils were sluggish and contracted. Paralysis was now complete; the reflexes were lost, although faradic excitability was retained. Deglutition was at this time somewhat difficult. There was no facial paralysis, but absolute respiratory paralysis. Artificial respiration would keep the patient from cyanosis and partially or completely conscious, but when it was suspended momentarily cyanosis appeared and she became comatose. The temperature was 102°, the pulse 140. The urine still contained an excess of indican. Colon-flushings and stimulation were continued. The condition remained unchanged until Tuesday morning, October 5th (eighth day), when the temperature dropped to 100°, and the pulse to 96. The mind cleared and the girl took light nourishment freely. She could now move the toes of her left foot. Upon the following day, Wednesday, October 9th, she could move the toes of the right foot and slightly flex and extend the left foot. The temperature was 98° F. It was hoped that this meant that she had a chance of recovery, but from this time until death, on November 12th, the girl's condition underwent but little change. She had a good appetite, was perfectly rational, her eyes had become clear, their pupillary reaction normal; deglutition and speech, as well as the urine and stools, were normal. There was no marked muscular atrophy, no reaction of degeneration, no loss of control of the sphincters, but artificial respiration had to be continuously maintained. The chafing and soreness caused by the Sylvester method becoming unendurable the patient was placed upon a water-bed and simple intermittent pressure upon a water-bag placed over her very flexible chest, combined with the flexion of the body produced by the wave of the water-bed, sufficed to keep her free from cyanosis. During the night she slept naturally, unless artificial respiration was suspended, when she became cyanosed; her cervical accessory muscles would contract spasmodically, and she would wake terrified, and her lips move in an unavailing effort to frame a cry for help. Various attempts were made to induce her to use an apparatus for forced respiration, but without avail, and artificial respira-

tion was maintained by manual means for forty-one days, until November 12th, when sudden death made a hopeless situation of a hopeless problem.

The patient was admitted as a private case of Dr. A. B. Ancker, resident superintendent and chief of staff, to whom and to Dr. Allen, senior house-physician, I am especially indebted. Dr. Ancker not only generously transferred the case to my care, but also placed at my disposal every possible aid and adjunct to treatment and gave valuable and material assistance throughout.

To Dr. Arthur Sweeney and to Dr. C. Eugene Riggs, my colleagues upon the neurological side, I am especially indebted for valuable suggestions and for careful and painstaking examinations. But for the generosity of Dr. Riggs in proffering the use of his especial laboratory for the study of neural pathology, much of the pathologic work of Dr. Wilson would have been impossible.

The autopsy was made twelve hours after death, by Dr. J. L. Rothrock. The body was that of a somewhat emaciated young woman, weighing about 115 pounds. Rigor mortis was well marked, and postmortem lividity was pronounced on the posterior surface of body.

On opening the calvarium, dark fluid blood escaped from the vessels as they were severed. The vessels of the pia mater were full, the brain intensely congested and slightly edematous. The longitudinal and lateral sinuses contained dark fluid blood.

The cerebral hemispheres were symmetric and firm, and the pia mater intensely and uniformly hyperemic; but there was no evidence of meningitis. The pia mater stripped easily, leaving a smooth surface. The lateral ventricles contained some fluid and the vessels were filled to a degree comparable with those of the cortex of the brain. The floor of the fourth ventricle showed no gross pathologic change, save fulness of the vessels. The cerebellum also presented no macroscopic change beyond fulness of the vessels. Section of pons, medulla and brain disclosed no gross lesion.

The spinal meninges were not especially congested (probably because considerable blood had escaped from the severed vessels when the brain was removed). On section, the cord exhibited evidences of probable degeneration of the gray matter, especially the anterior cornua, and this was most marked in the middle cervical and mid-dorsal regions.

The larynx presented no pathologic change.

The left pleural cavity was free from adhesions and contained no fluid; the lung was poorly expanded and partially collapsed, the pleural space being greatly diminished by encroachment of the diaphragm, which rose as high as the fourth rib. The right pleural cavity contained 150 cu. cm. of clear fluid and some comparatively recent pleural adhesions on the posterior surface of the upper lobe. The lower lobe was collapsed.

The right lung was larger than the left, but only about one-third the normal size, only partially distended with air, with some hypostasis of the anterior portion of the lower lobe, while the posterior and inferior portions were collapsed, and the middle lobe was congested.

The anterior border of the upper lobe of the left lung was partially collapsed and contained but little air. The lower lobe was completely collapsed and pieces of it sank in water; the lung was small, being only about one-fourth the normal size. The anterior border of the upper lobe was normal in color.

The pericardium contained about 10 cu. cm. of clear fluid. The heart stopped in systole. The organ was small and firm. The left ventricle contained dark fluid blood, the right dark-red clot. The leaflets of the mitral valves were normal along the border, but at the base each presented on its auricular surface a small patch of atheroma. The aortic leaflets exhibited no change, but the aorta immediately above contained patches of beginning atheroma. A section through the coronary arteries disclosed slight thickening of their

walls. The heart-muscle was moderately firm and on section presented no evidence of degeneration. The vault of the diaphragm extended to the upper border of the fourth rib in the parasternal line.

The abdomen was slightly but uniformly distended. The duodenum and the cecum were slightly distended.

The stomach was markedly distended, the fundus reaching to the seventh interspace in the axillary line, and the lower border to a point 8 cm. below the umbilicus, the greater portion of the viscus lying to the left of the median line. On section, the stomach was found to be almost empty, containing only a little fluid and showing some evidences of chronic inflammation, most marked towards the pylorus.

The liver was normal in size and exhibited no gross lesion.

The pancreas was normal.

The intestines presented no lesion. The spleen was about half again its normal size. On section, it appeared markedly hyperemic. It was softer and more friable than normal. Its cut surface was uniform and showed no other gross lesion.

The left kidney was normal in size. Its capsule stripped easily, showing the vessels in the cortex to be somewhat injected and forming stellate figures. Here and there in removal the capsule tore with it some of the cortex, leaving a roughened surface on section. The cortex was of normal thickness, but darker than normal. Both suprarenal capsules were normal. The right kidney was similar to the left. A small retention-cyst, 1 cu. cm. in diameter, was found in the medulla. The generative organs were normal.

Sections of the sciatic, pneumogastric, sympathetic, phrenic, median and intercostal nerves were examined and presented nothing abnormal to the naked eye. They were reserved for microscopic examination, also sections of brain, spinal cord, liver, kidney, spleen, and mesenteric glands. Cultures from the nerves, brain, spinal cord, heart's blood, spleen, etc., remained sterile.

The histologic examination was made by Dr. Louis Blanchard Wilson.

At 9 A.M. on November 12, 1897, 24 hours after death and 12 hours after the autopsy, there were received at the Riggs Pathological Laboratory in 4% formaldehyd-solution the following specimens (marked Tillie A.), sent by Dr. Greene: an entire brain in its membranes; an entire spinal cord in its membranes; portions of the sciatic, pneumogastric, sympathetic, phrenic, median, and intercostal nerves; portions of liver, kidney, spleen, and mesenteric glands.

Alternate portions of the third frontal convolution, of the ascending parietal convolution, and of the cerebellar cortex were hardened in 95% alcohol or in formaldehyd-bichromate solution and stained respectively by Nissl's methylene-blue method and Berkley's modification of Golgi's method. The pons was divided at six levels, the medulla at three, and the spinal cord into its morphologic segments. These were hardened separately in 95% alcohol or in formaldehyd-bichromate solution, and regularly alternating portions (or segments) were stained by Nissl's methylene-blue method, Berkley's modification of Golgi's method and Weigert's hematoxylin. The peripheral nerves were hardened in formaldehyd-bichromate and stained with aniline-blue-black and Weigert's hematoxylin. The portions of liver, spleen, kidney and mesenteric glands were hardened in formaldehyd, then in alcohol, and stained with hematoxylin-eosin and with methylene-blue, followed by picric-acid-rubin.

Though a large number of sections of brain and cerebellum were examined after treatment in the manner noted, no abnormality was discovered except a slight general congestion of the blood-vessels of the cerebrum. Sections of the medulla showed intense congestion of all the blood-vessels. The walls of the larger vessels were infiltrated with leukocytes, which in some instances also completely filled the perivascular spaces. Many of the larger cells appeared normal with Nissl's stain. The bodies of others were swollen and showed few or no granules, the staining being light and evenly diffused. The nuclei were granular and with indistinct outlines. In some, both nucleus and nucleolus were very eccentrically placed. Golgi preparations showed the cells well impregnated, the bodies larger than normal, the dendrites in good condition, but a few of the neuraxons—some of which were traced for long distances—containing



many moniliform swellings at irregular intervals. No fiber-degeneration was shown by Weigert's stain.

The intensity of the changes in the cervical and other portions of the cord was remarkable, as compared with those in the medulla. All the vessels were intensely congested, and in the gray matter their walls and surrounding spaces were filled with leukocytes. In addition, both red and white cells were profusely distributed throughout the anterior horns and gray commissure. Nissl's stain showed some apparently normal cells in the posterior horns, and a few also in the posterior vesicular columns, though most of those observed in this group had swollen, evenly staining bodies and almost indistinguishable nuclei. In the anterior and postero-lateral groups were found scattered cells that were even yet more degenerated. The bodies of the few anterior-horn cells that were impregnated by the Golgi process were badly contoured; the dendrites were much distorted and broken, and the neuraxons all bore numerous moniliform enlargements.

Though several sections from every third segment throughout the cord were examined after staining with Weigert's hematoxylin, no tract-degeneration was discovered. A small, triangular area at the exit of the anterior roots decolorized, while the anterior roots themselves showed only here and there a fiber that had not given up all its stain.

Longitudinal and cross-sections of the optic nerves and cross-sections of the optic chiasm showed intense congestion of the capillaries. No fiber-degeneration was observed; nor could it be made out in either the pneumogastric or the phrenic nerve. In the cervical sympathetic, two of the fasciculi had all the fibers almost completely degenerated, and two others had more than half their fibers in the same condition. The median and intercostal nerves contained many fibers scattered throughout the fasciculi that were undergoing degeneration. In the larger group of fasciculi in the sciatic nerve, four bundles contained many degenerated fibers. In the small group more than half of the fibers in each of two bundles were degenerated. At all the levels examined the fasciculi containing degenerated fibers were opposite each other, and in the extreme periphery of the section.

No morbid change was observed in any of the sections from the liver.

The number of blood-cells was much above normal in the section from the spleen.

No morbid change was present in the mesenteric glands.

Sections of the kidney showed hyalin degeneration of a few of the glomeruli and of patches of epithelium in the tubules. In some isolated areas there was well-marked desquamation of the epithelium. There was some interstitial extravasation of blood in small areas near the cortex. A few casts—blood and epithelial—were present in some of the straight tubules.

Numerous sections of alcohol-hardened material from each of the organs were obtained and examined for bacteria, but none was demonstrable.

The microscopic findings would indicate that the pathologic process had been a parenchymatous ascending anterior poliomyelitis, of an intense and prolonged type, involving the whole length of the spinal cord and extending to the medulla and pons. It would appear also that the process was central and extravascular in origin. The peripheral nerve-lesions were secondary, as were probably also those of the kidneys. From the foregoing report it will be seen that the case is clinically typical, that its development is quite certainly to be ascribed to autointoxication of intestinal origin, that it is pathologically an acute ascending poliomyelitis, and finally that it was possible, despite the severity and the extent of the pathologic lesions and the early arrest of respiration, to prolong life for 41 days by artificial means.

Of the large number of cases of acute ascending paralysis that have been reported as Landry's paraly-

sis, comparatively few conform clinically to the description of Landry and fewer still have been studied in a manner capable of adding anything to our knowledge of this curious symptom-complex.

The admirable paper by Bailey and Ewing,<sup>1</sup> and the no less excellent and more recent articles by Thomas<sup>2</sup> and by Mills and Spiller<sup>3</sup> contain, in addition to most careful and exhaustive case-reports, a discussion of the bibliography that is so comprehensive and complete as to render unnecessary any reference in this paper to that aspect of the subject.

Landry described the first case in 1859, the patient, a man, 43 years old, presenting the following symptoms: Rapidly ascending paralysis, involving successively the legs, arms, trunk, and tongue, the patient dying on the eighth day of asphyxia resulting from complete respiratory paralysis; there was slight fever, while control of the sphincters, the muscle-sense, faradic excitability and the special senses remained normal. The deep reflexes were absent.

Upon autopsy the brain and cord were reported normal, and as, unfortunately, no examination of the peripheral nerves was made, the case went on record as lacking postmortem evidence of disease. It must be remembered that at this time the present technic of neural pathology was unknown, and it would have been impossible to demonstrate by the methods then in use important degenerative changes that would now be easily detected.

Bailey and Ewing in their analysis of the literature discarded no less than 32 cases as being wholly unworthy, and it would appear as if many more might properly have been so treated. Some were clinically atypical; in others the postmortem evidence was lacking or insufficient. Accepting their classification, we may make the following comments as showing the general unreliability even of many of the cases that are admitted to their tables: (1) In 16 cases no lesion was found upon microscopic examination. In only 6 of these cases was any report made as to the condition of the peripheral nerves. (2) In 14 cases the lesions were said to be confined to the spinal cord. In many of these the pathologic findings are but vaguely stated. In several the strong resemblance to poliomyelitis is noted and vascular lesions and degenerative changes in the ganglion-cells are reported. (3) In 4 cases the lesions were said to be confined to the peripheral nerves. (4) In 4 cases both the peripheral nerves and the cord were involved. (5) In 6 cases described as instances of infantile paralysis the symptoms were such as to entitle them to be placed clinically under the head of Landry's paralysis. Ascending paralysis terminating in asphyxia was present in 5, one only being clinically deficient.

<sup>1</sup> W. J. Bailey and E. E. Ewing, *J. Nerv. Ment. Dis.*, 1898, 4, 18.   
<sup>2</sup> J. H. Thomas, *Ann. Surg.*, 1898, 27, 188.   
<sup>3</sup> M. J. Mills and J. H. Spiller, *J. Nerv. Ment. Dis.*, 1898, 4, 18.

In only 18 of the 44 cases is the etiology even suggested; 3 cases are referred to cold, exposure, or fatigue; 2 cases are referred to alcoholism; 1 case is supposed to be due to syphilis; 2 to typhoid fever; 3 to "epidemic"; 1 to malaria; 2 to influenza; 2 to variola; 1 to diphtheria; 1 to pulmonary tuberculosis.

Bacteria have been found in a small number of cases and have been of the most diverse description. The greater number of well substantiated cases with full pathologic findings have shown no germs either by cultural methods or in stained sections.

I believe that autointoxication, as indicated in the case here reported, must occupy an important place as an etiologic factor. Doubtless any sufficiently virulent

The sphincters were normal or nearly so in 21 cases; involved in 11 cases.

The duration of the disease varied as follows: Class 1 (no lesions), from 6 to 28 days; class 3 (lesions in the cord), from 3 to 28 days; class 2 (lesions in the peripheral nerves), from 5 to 12 days; class 4 (lesions in both cord and nerves), from 7 to 17 days.

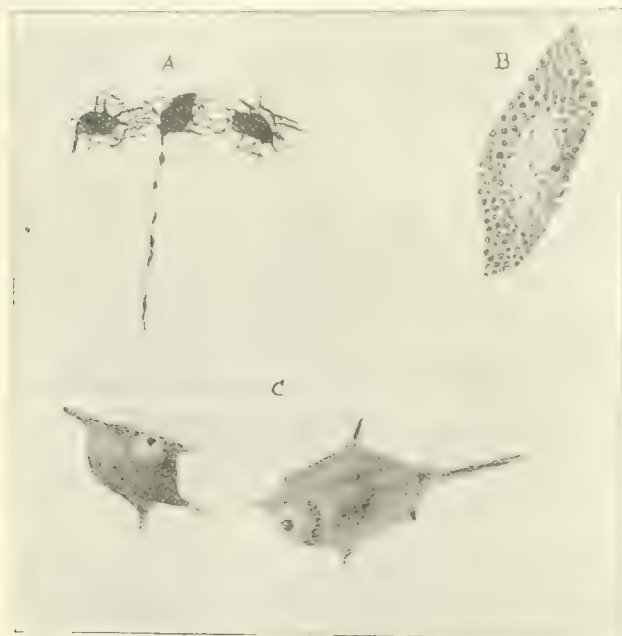
Of the 44 cases 29 occurred in males, 10 in females; while in 5 the sex is not stated.

The age-distribution was as follows: Under one year, 3 (class 4); under 5 years, 2 (class 4); between 11 and 20 years, 7; between 21 and 30 years, 12; between 31 and 40 years, 9; between 41 and 50 years, 6; between 51 and 60 years, 2; age not stated, 3.

There were thus 51% between the ages of 21 and 40; and 95% in patients under 50 years of age.

If we consider Landry's paralysis to be an acute ascending motor paralysis, without involvement of sensation; alteration in electric reaction, or disturbance of sphincters, and tending to a rapidly fatal issue through involvement of the respiratory mechanism, we must feel that many of these cases are deficient clinically, while the pathologic reports would indicate that several distinct diseases have been described as Landry's paralysis. We may also entertain a reasonable doubt as to whether any cases have occurred without pathologic change demonstrable by present methods. Dana says that it is pretty well demonstrated that the disease is, in its ordinary form, an "acute toxemia of the peripheral motor neuron," and he further states that it is identical with paralytic rabies—meaning, it may be presumed, that the rabic poison is one of the several toxins capable of producing this disease.

I have been unable to find any record of recovery in a case of Landry's paralysis involving the respiratory mechanism, nor indeed of any case in which an attempt was made to prolong life by artificial respiration. The result of this measure in the instance here reported would seem to justify the belief that in cases without lesion, if such actually exist, or in milder cases even of this same type, it might be possible to tide over the period of toxemia and save the life of the patient. The following suggestions as to treatment are therefore submitted: (1) That artificial respiration with proper apparatus be instituted as soon as the breathing becomes seriously embarrassed; (2) that oxygen be freely administered; (3) that a saline solution be thrown into the circulation, preferably after removal of a considerable amount of blood by phlebotomy; (4) that calomel be given and that the colon be repeatedly washed out by large enemas. That such measures would prove sufficient one cannot affirm, but I believe that in the light of our present knowledge of the disease and the clinical history of this case, no patient should be allowed to die of ascending paralysis without having had the benefit of a trial of some such therapeutic procedure.



Figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

A. Anterior horn cells, anterior group, from sixth dorsal segment. Note diffuse staining, displaced nucleus, and distorted nucleolus. B. Vessel (cut obliquely) from anterior horn. Fifth dorsal segment. Held's modification of Nissl (x 100 diam.). Wall and perivascular space filled with leukocytes. C. Cells from middle third of medulla. Held's modification of Nissl (x 500 diameter). Note—Diffuse staining, displaced nucleus, and distorted nucleolus.

infection might cause the disease, but the majority of reported cases lack such an element in their etiology.

As to symptomatology, ascending paralysis was present in all; sensation was normal or nearly so in 26 cases; "pointing to neuritis" in 13 cases; not mentioned in 5 cases.

The reflexes were normal in 2 cases, in both of which no lesion was found; diminished in 2 cases (one in class 1, and one in class 2); lost in 31 cases; not reported in 9 cases.

The electric reactions were retained in 17 cases; absent in 1 case; not definitely reported or not tried in 26.

The temperature was 99° F. or under in 20 cases; there was moderate fever in 14 cases, fever due possibly to complicating disease in 4 cases. The temperature was not stated in 6 cases.



CICATRICIAL STENOSIS OF THE COMMON AND PANCREATIC DUCTS, SIMULATING CARCINOMA.<sup>1</sup>

BY E. R. LARNED, M.D.,

of Johns Hk.

EVER since 1578, when Alberti endeavored to classify the diseases of the pancreas, and since 1640, when Wirsung discovered its excretory duct, have physiologists studied the functions of this gland and pathologists endeavored to explain and classify its lesions. Notwithstanding the richness of the results of clinical and experimental studies undertaken by careful investigators during the last decade, our knowledge of this so-called "abdominal salivary gland" is far from complete. Our inability to make *early* and accurate diagnoses of certain lesions of the pancreas has been the obstacle to the proper treatment of many seemingly obscure ailments. Medical literature does not contain so many reports of pancreatic diseases but that an additional case will be interesting in showing the fallibility of certain so-called pathognomonic signs and symptoms. A brief resumé of the anatomy and physiology of the pancreas will tend to a better comprehension of the case.

The pancreas lies transversely and obliquely across the posterior part of the abdomen at about the level of the first lumbar vertebra; its right extremity, or head, being included in the concavity of the duodenum, its body rests on the mesenteric vessels; its tail crosses over the left kidney, the tip resting upon the spleen. The inferior border of the head overlaps the anterior surface of the beginning of the oblique part of the duodenum. Anteriorly, the lesser peritoneal cavity, the stomach, the transverse colon and the omentum are superimposed upon it. Posteriorly, the pancreas is in relation with the solar plexus, the abdominal and mesenteric vessels and the pillars of the diaphragm, which separate it from the spinal column.

The pancreatic duct, or the canal of Wirsung, is lodged in the posterior and superior portions of the gland, and in its course from the tail of the organ it receives contributing ductlets. The duct proper joins the ductus communis choledochus before the latter perforates the coats of the duodenum; the two ducts emptying into the gut through a common opening, although it is not uncommon for the pancreatic duct to have a separate opening into the duodenum. The caliber of the pancreatic duct is a little less than  $\frac{1}{8}$  inch. Its walls are thin, and of two coats—an external fibrous and an internal mucous coat lined with columnar epithelium; the mucous coat contains a few scattered follicles.

The pancreas receives its blood-supply from the splenic branch of the celiac axis, which supplies the body and tail; the superior pancreaticoduodenal branch of the hepatic and the inferior pancreaticoduodenal branch of the superior mesenteric, which supply the head and right third of the body; the venous

return being through the splenic and superior mesenteric veins. The lymphatics of the pancreas terminate in the lumbar glands. The nerves of the pancreas are filaments from the splenic branch of the solar plexus.

In structure the pancreas resembles the salivary glands with certain differences: It is loose and soft in texture, has no distinct capsule, but is surrounded by fine areolar tissue, which also connects together the lobules of the gland, although the posterior wall of the lesser peritoneal cavity covers closely the anterior surface of the pancreas, acting like a partial capsule.

The case under consideration occurred in the practice of Dr. Wm. Dougall, of this city, for whom I undertook its pathologic study. The clinic history is as follows:

Mrs. L. B., a married American woman, 60 years of age, mother of two children, became ill during the night of August 21, 1895, and after being attended by an amateur practitioner for two weeks, came under Dr. Dougall's care on September 2d. The patient complained of rapid beating of the heart, pain in the pit of the stomach, loss of appetite, and nervousness, but she had no headache. The objective symptoms were irregular and rapid pulse, vomiting of greenish frothy mucus, tongue smooth and pale, breath sweetish and not unlike that of diabetic persons. Ptyalism was marked during the entire course of the illness, although no drug likely to cause this symptom had been given. The temperature was normal; respiration accelerated; the stools normal in frequency and amount, but clay-colored.

Examination showed the patient to be slightly emaciated, her countenance drawn and apprehensive. There was tenderness on deep palpation over the epigastrium, but no tumor or swelling could be felt.

There was no enlargement of the glands of the cervical, axillary and inguinal regions. The patient's previous history was that she had had a severe attack of peritonitis years before, and had several attacks of influenza one or two years previously. No history of any constitutional ailments in any of her relatives could be found. The patient had never indulged in alcoholics.

A provisional diagnosis of gastro-duodenitis was made, and symptomatic treatment instituted, together with a restricted diet.

Plain food with small doses of nitrohydrochloric acid seemed to nourish the patient for a few days, when vomiting would ensue and she would relapse into her original condition.

A curious fact that should be mentioned in connection with feeding this patient is the idiosyncrasy to beef in any form that she exhibited. Her distaste for beef was such that she discovered, and was utterly unable to take the smallest quantity of extract no matter how modified or disguised.

Finally, on September 20th, as for some days, everything given by mouth was rejected. Nutrient enemata of beef-tea, liquid peptonoids, milk and egg-albumin, were resorted to, with small quantities of good Scotch whisky, by the mouth.

There was no improvement. The bowels became looser and the stools somewhat bile-stained and upon examination showed quantities of fat. Examination of the gastric fluids disclosed no abnormality.

On October 1st, a sample of the patient's urine was given me for analysis. The fluid was reddish-yellow, and deposited a sediment. The quantity voided in 24 hours was not known. The specific gravity was 1.017. Chemic examination showed the reaction to be acid, the total solids less than normal. An absence of sugar, and albumin present to the amount of 1% by bulk. Microscopic examination disclosed hyaline casts and numerous oil-globules. No bacteriologic examination was made.

From the results of the examination of urine, feces and gastric fluids, combined with the symptomatology, a diagnosis of disease of the pancreas, possibly carcinoma, was made and the case pronounced hopeless.

The patient steadily became weaker, with frequent attacks of diarrhea, and on October 26th, the temperature rose to 103°

<sup>1</sup> Read at the Meeting of the Will County Medical Association, Oct. 11, 1895.

and finally 104°, death ensuing on the morning of the 27th. We secured the privilege of a hurried autopsy, which was held 11 hours after death. Permission to remove certain organs being denied, small portions were taken for further examination.

The body was that of a woman well advanced in years; the limbs, head and chest were slightly emaciated. Rigor mortis was slight. There was no palpable inguinal, cervical or axillary glands. General jaundice existed. The pannicu-

denum, common, cystic and hepatic ducts and the head of the pancreas were matted into a solid mass by such firm adhesions that an attempt to separate them only resulted in rupturing the gall-bladder and the duodenum, and further efforts at dissection were abandoned. There were no calculi in the gall-bladder or biliary ducts. All of the surrounding tissue were deeply stained with bile.

The pancreas was harder than normal and pale; it was removed for further study.

The spleen was somewhat enlarged, but regular in contour, its capsule was adherent. The tissue cut less easily than normal, was dark purple in hue and contained several small phleboliths on its cut surface. Dark blood oozed from the surface. The Malpighian bodies were not prominent. There were 3 supernumerary spleens, the largest being about  $\frac{3}{4}$  in. in diameter and contained a phlebolith nearly  $\frac{1}{4}$  in. in diameter.

The adrenals presented no abnormality.

The kidneys were alike in appearance, being enlarged and paler than normal. The capsule was thickened and not adherent. The cortical markings were rather indistinct, the pyramids dark red.

The stomach was dilated, its peritoneal surfaces attached to the intestines by adhesions. The viscus contained a small amount of greenish mucus. There were no gross appearances of carcinoma. The mesenteric lymphatic glands were enlarged. The thorax was not opened, as we were obliged to cease our investigation at this point.

The anatomic diagnosis was diffuse fibrinous peritonitis; hepatogenous jaundice; passive hyperemia of the liver; ascites; duodenitis; cyst of the gall-bladder; subacute splenic tumor; passive hyperemia of the spleen; chronic interstitial nephritis; dilatation of the stomach; subacute gastritis; passive hyperemia of the pancreas; stricture of the common and pancreatic ducts.

Examination of the pancreas showed its tissues to be firmer than normal, but uniform in texture, except at the outlet of the duct, where the knife met with considerable resistance. The cut surfaces showed a normal gross appearance, the lobular markings being unchanged. The splenic artery and arteries of the head were tortuous, and had greatly thickened walls. There were no gross appearances of fat-necrosis or of carcinoma. The pancreatic duct was flattened, its caliber obliterated, and the walls of the duct imbedded in a firm mass of connective tissue.

The histologic study embraced the pancreas, liver, spleen, and kidney. Pieces of these organs were prepared for microscopic examination; some hardened in Zenker's, others in Flemming's fluid, and still others in 4% alcoholic solution of formaldehyd. After being carried through the usual solutions, etc., rather more than 200 sections were prepared, some stained with eosin-hematoxylin, some with safranin, and others with ferrum-hematoxylin, according to the method of Heidenhain.

On microscopic examination the pancreas showed several typical areas of fat-necrosis, one or two of which were evidently postmortem, and indicative of self-digestion. In other places there were well-marked evidences of inflammatory conditions. Many vacuolations were seen where fatty degeneration had become complete, although some of these spaces were due to the dropping out of the lobular contents during the manipulations. Cross-sections of the smaller branches of the pancreatic duct showed great increase of connective tissue, degeneration and exfoliation of the epithelial lining of the duct, pointing to an extension of the original inflammatory condition that caused the obliteration of the duct near its outlet. The veins were congested, and there was an infiltration of small round cells in the interlobular connective tissue. In several places Langerhans' bodies were seen. A cross-section of the main pancreatic duct near its entrance into the common duct showed what remained of the duct to be imbedded in a mass of scar-tissue. (Fig. 1.) The lining of the duct was completely obliterated, and the columnar epithelium formerly lining it had entirely disappeared. The fibrous coat was many times its original thickness. Scattered through the scar-tissue were small islets of pancreatic tissue that had become involved in the inflammatory processes. The tissue of the gland in the immediate vicinity of the duct showed great increase of connective tissue. A cross-section of the larger artery, supplying the head of the pancreas, showed marked arteriosclerosis. (Fig. 2.) The pancreas presented no evidence of carcinoma.



Fig. 1.—Section of Pancreatic Duct near Outlet.  $\times 165$



Fig. 2.—Superior Pancreatico-Duodenal Artery.  $\times 55$ .

lus adiposis was about  $1\frac{1}{2}$  inch in thickness. The abdominal muscles were soft and anemic. The peritoneal cavity contained a small amount of yellowish fluid. The omentum was heavily loaded with fat, but no areas of fat-necrosis were seen. The liver was larger than normal, brownish-red in color, with greenish areas here and there; its capsule was smooth and adherent; the lower border was nodulated, one nodule markedly protuberant and about one inch in diameter. The liver-substance did not cut easily, the cut surface being greenish-brown. There was considerable oozing of blood from the cut surface. The liver was congested.

The intestines were everywhere attached to each other and to adjacent structures by multiple adhesions. The duodenum was congested and attached to the stomach by adhesion. The gall-bladder was distended, holding about three ounces of dark-green viscid bile. The wall of the gall-bladder, duo-



The liver exhibited advanced fatty infiltration, with here and there an increase in the connective tissue, though hardly enough to be dignified by the title "cirrhosis." Under high power (750 diameters) many liver cells were seen to be multinucleated, probably as a result of efforts at regeneration. The mitotic figures could undoubtedly have been seen if sections had been properly prepared for this purpose immediately after death. The bile-ducts were dilated and showed exfoliation of their lining and great increase of connective tissue, evidences of cholangitis.

Efforts were made to ascertain the presence of germs in the cirrhotic areas and cells, according to the method recently described by Prof. Adami, and although a number of attempts were made and the technic was carefully carried out, the results were negative. Certain minute granules were seen in many places, as described by Adami, but under a power of 1,800 diameters neither cocci nor bacilli could be made out.

The kidneys presented a beautiful picture of the chronic interstitial inflammation.

The spleen displayed little of interest, save chronic passive hyperemia and great increase in the fibrous coats of the arteries and veins.

The pathologic diagnosis was as follows: Cicatricial stricture of the pancreatic duct, fat-necrosis, congestion, and arteriosclerosis of the pancreas; cholangitis, fatty infiltration, and atrophy of the liver; chronic interstitial nephritis, chronic passive congestion, and arteriosclerosis of the spleen.

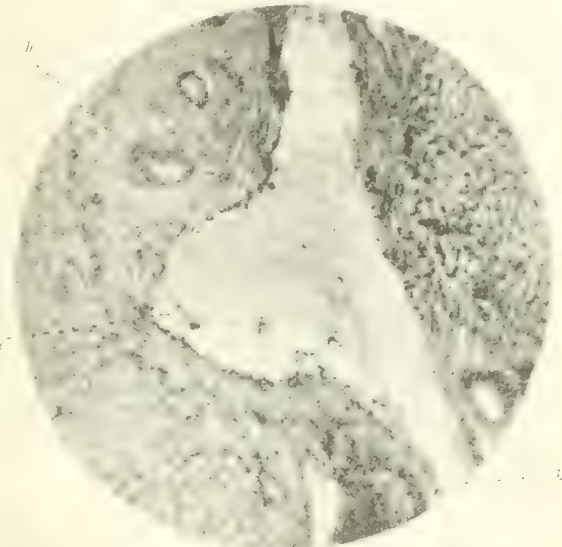
Studying this case in the light of the autopsy and histologic studies, we hold that a diagnosis of carcinoma of the pancreas would have been inaccurate, although the train of symptoms and course of the illness strongly pointed that way. The patient had all the so-called symptoms of pancreatic carcinoma, viz., sudden onset, severe epigastric pain, vomiting, ptalism, clay-colored stools, lipuria and steatorrhea, but she did not have glycosuria at any time. She had as symptoms of nephritis: lipuria, hyaline casts, albuminuria, diminished secretion of urine and of solids, fatty feces, but her kidneys seemed to give her no trouble, and the existence of a life-threatening disease of the kidneys was not suspected until the results of the urinary analyses became available.

Senn has shown that elastic constriction of the pancreas near the common duct results in obliteration of the pancreatic duct, followed by such remote results as increase of connective tissue and fatty degeneration of the cells of the gland. According to Charcot and Gombault, the same results are produced in the liver by ligation of the bile-ducts. Results analogous to those produced upon lower animals by these investigators were produced upon the liver and the pancreas of this patient by the constriction of the multiple adhesions found at the autopsy and which perfectly performed the part of the ligatures. Complete and long-continued stricture of the pancreatic duct and common duct was followed by their obliteration, distention of the gall-bladder, fatty degeneration of the parenchyma-cells of the liver and pancreas, with increase of connective tissue. The chronic interstitial nephritis was coincidental.

The immediate cause of death was probably cholemia, as evidenced by the sudden hyperpyrexia (103°

forty-eight hours ante mortem and 104° just before death) and by the jaundice and postmortem findings.

Among the reported cases, the first who drew attention to stenosis of the pancreatic and choledoch ducts was Kuntzmann, who in 1820 described the case of a man who had jaundice, dropsy, and fat in the stools, and on postmortem was found to have induration of the pancreas and obliteration of the canal of Wirsung. Reeves collected 16 fatal cases in which there had been fat in the stools, and in only five was the pancreas healthy; induration of the gland, with obliteration of the duct, being the pathologic condition in several, but just how many is not stated.



g Bile-duct. h Hepatic artery. c Crystals of bile pigment. k Hepatic vein.  
FIG. 3.—Section of Liver.  $\times 165$ .

Bright has recorded the case of a young man, 19 years old, who had jaundice and fatty stools, and who died of marasmus. At the autopsy, the pancreas was found converted into a hard mass, firmly adherent to the duodenum; the choledoch duct was closed and the gall-bladder was dilated with retained bile.

Glycosuria has been considered an attendant symptom of obliteration of the pancreatic duct, no matter how caused; but in this connection the experiments of Munk and Klebs seem to prove that glycosuria points to lesions of the solar plexus and not of the pancreas; for when they partially or wholly extirpated the solar plexus in dogs, permanent or transitory glycosuria resulted, while when they extirpated the pancreas or ligated the duct glycosuria was invariably absent; nor could they produce glycosuria by section of the hepatic or splanchnic nerves.

The case here reported would seem to be confirmatory of the deductions drawn from these experiments, as at no time did glycosuria appear.

#### SUMMARY AND CONCLUSIONS.

(1) Differentiation between pancreatic carcinoma and stricture of the pancreatic duct is difficult, and only

possible after a careful study of the history and symptomatology, with the aid of laboratory researches, and in certain favorable cases after exploratory celiotomy. (2) The patient had no carcinoma. (3) Glycosuria is not a symptom of pancreatic disease. (4) Ptyalism will almost invariably be found in cases of pancreatic disease; and, in the absence of its well-known causes, the presence of this symptom should cause us to inquire carefully into the condition of the pancreas. (5) Active surgical interference for relief of the strictures would have been useless and dangerous, and is only of benefit in a limited number of cases when the adhesions are comparatively recent and few. (6) Medical treatment in such cases is useless. (7) Surgical treatment must be limited to measures affording an outlet for the retained secretions. Cholecystenterostomy probably would have materially prolonged the patient's life, could she have withstood the immediate effects of the operation. (8) Surgical treatment of the pancreas itself in such cases is unnecessary, as it has been shown by various writers, particularly Senn, that (a) in obstruction of the pancreatic duct the secretion is removed by absorption; (b) that atrophy of the gland from the nutritive or degenerative changes is not incompatible with health, and (c) that complete obstruction of the duct is seldom followed by the formation of a cyst that might necessitate the formation of a pancreatic fistula. (9) The prognosis of such cases is invariably bad.

### THE TREATMENT OF INTERNAL HEMORRHOIDS.<sup>1</sup>

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PROBABLY more ingenuity has been exercised in devising methods and measures for the relief of internal hemorrhoids than for that of any other single complaint. The first recorded cases are found in the earliest chapters of human history, appearing in the strange guise of a curse or plague sent upon the Philistines by Jehovah for taking the ark of the covenant from the children of Israel. The remedial agency employed in these cases was likewise supernatural in character, consisting in placing golden images of the "emerods" in a coffer by the ark and returning it to the Israelites. Though the rationale of the remedy's action, it must be confessed, is somewhat obscure, it was effective; for we are told that the sufferers were healed and the curse removed.<sup>2</sup>

Thus, accepting the biblical account, we learn that the first cure of hemorrhoids was wrought by a miracle. From that time on, for many generations, the modern conception of rational therapeutics was violated with a

uniformity and persistence truly remarkable; and the marvelous cures recorded by the older writers as having been effected by means of charms, amulets, and wonderful decoctions would argue that miracles did not cease with the repentance of the Philistines. Even to-day there are in every community certain individuals who carry buckeyes in their pockets, both as preventives and as sure cures, and others of even the more enlightened class, who deem the pile-remedy of some ignorant old darkey more potent for good than the combined wisdom and skill of the entire medical profession. An historic review along these lines might afford entertainment; but our object is profit, not pleasure. We come at once, then, to the consideration of the subject proper.

The treatment of internal hemorrhoids, like that of nearly all diseases, naturally divides itself into two classes, medical and surgical. Of the former comparatively little need be said, and that only in deference to the requirements of the timid doctor and the prejudiced patient; for in the presence of this malady, as usually encountered, one incontrovertible fact confronts us, namely, that when the disease-process has resulted in the formation of organized tumors medication, local constitutional, or combined, is utterly powerless to remove them. However much, then, may be accomplished by such measures toward the relief of symptoms, it must be accepted and borne in mind that medical treatment is merely palliative, not curative.

Called to a case or consulted by a patient for internal hemorrhoids, operation for any reason being impossible, the treatment required will depend largely upon the conditions present. Should the tumors be prolapsed and strangulated their replacement in the rectum would be the immediate indication. In many cases this is by no means a simple matter, for before the physician is consulted the desperate efforts of the patient will have resulted in bruising the parts and increasing the spasmodic contraction of the sphincter, thus adding tenfold to the difficulty of the undertaking. A little patience and dexterity, however, will generally accomplish it. If the tumefaction is great, application of ice-cold water, or a bag of crushed ice will usually reduce it and at the same time contribute much to the patient's comfort. Then the entire mass should be well anointed with olive-oil or other lubricant, the index-finger slowly inserted into the bowel, and, around it as a center, gentle taxis made with the fingers of the other hand. Such procedure will not often fail. If it should, in order to prevent gangrene and its consequent dangers, division of the sphincter muscle or performance of the radical operation would be the only alternative. Pain is rarely severe except when the tumors are protruded, and, in such event, relief speedily follows reduction. The only other condition that might demand special attention is hemorrhage. This is seldom so excessive as to place life in immediate jeopardy; but on account

<sup>1</sup> Read before the Southern Kentucky Medical Association, Hopkinsville, May 24, 1898. <sup>2</sup> Old Testament, I Samuel, 5 and 6.



of its tendency to frequent recurrence it constitutes one of the chief dangers of the disease. When the symptom calls for special treatment the local application of ice, cold water, or styptics, with rest in the recumbent position, is generally all that is necessary.

Speaking in general terms of the non-surgical treatment we may say that it consists more in hygienic than in medical measures, and that, properly considered, its object is palliation and prevention rather than cure. Summing them up in very brief form, the main reliances may be said to be: Keeping the bowel-function regular; careful avoidance of costiveness; the habitual use of cold water, especially after stools; regulation of the diet; exercise of judicious kind and amount; the employment of astringent and emollient applications and rest in the recumbent position when inflammation is present or an attack is threatened. The action and the utility of these measures are obvious. I stop for a word of comment upon only one. The usefulness of cold water in the treatment of this disease does not seem to be fully appreciated, when the truth is that in the large majority of cases its value is greater than that of any other topical application. The therapeutic action of this agent in constringing and toning bloodvessels and allaying inflammation is well known. Yet in the hemorrhoidal disease, with every indication for its employment present in a peculiar and marked degree, it is practically ignored. In these cases it is my rule to lay special stress upon the toilet of the rectum; to interdict the use of ordinary detergents and to direct that the parts be freely bathed with cold water after each stool, and that a moderate quantity be thrown into the bowel once or twice daily with the syringe. By this means, together with careful observance of the hygienic points before mentioned, the patient may keep himself comfortable for an indefinite time.

By way of introduction to the consideration of the surgical treatment, it is well to recall the conclusions reached upon several important points in our former discussion: (1) With, possibly, very rare exceptions hemorrhoids are not salutary; (2) the existence of acute inflammation is not sufficient reason for temporizing; (3) hemorrhoids are always pathologic, and, the internal variety especially, a menace to the patient's health. Consequently, when at all troublesome, the surgeon is justified in advising operation, unless by reason of extraneous conditions it be positively contraindicated.

The operative procedures that have been devised for the cure of internal hemorrhoids are both numerous and varied. With one or two exceptions they are all of ancient origin, being in every essential particular identical with those practised by Hippocrates and his disciples more than twenty centuries ago. Modern surgery can lay claim to no credit in this field of work, except such little as attaches to modification of method and improvement of technic. The only forms of surgical treatment that are, properly speaking, of recent origin,

are electrolysis and the injection method, and it is a matter of considerable doubt whether either of these possesses any special merit.

The list of operations includes: (1) Dilatation of the sphincters; (2) electrolysis; (3) the topical application of caustics; (4) crushing; (5) torsion; (6) injection; (7) excision, including Whitehead's operation; (8) ligation; and (9) removal by clamp and cautery. It would obviously be impossible to discuss all these methods in detail, nor is it either necessary or desirable to do so. The majority can only be condemned as inefficient or unsurgical and may be disposed of in a very few words.

(1) In the initial stages of the complaint, when the disease-process has not advanced beyond the point of dilatation and varicosity of the vessels, divulsion of the sphincter might act as a beneficial measure; but after the formation of organized tumors it would manifestly be powerless to cause their disappearance. The manipulation is of decided value, however, as a preliminary to the radical operation, rendering the parts easy of access and doing away in large measure with the after-suffering of the patient.

(2) Electrolysis is rarely resorted to except by those who regard electricity as a universal panacea. It is practised by passing a needle attached to one electrode into the pile-tumor, placing the other electrode in contact with the body at an adjacent point and turning on the current for from five to ten minutes. This treatment is claimed to cause gradual absorption and atrophy of the tumors. It requires, however, to be often repeated, is uncertain as to the result, and is by no means free from pain.

(3) The application of chemical caustics to the surface of pile-tumors has nothing to recommend it. The action of such agents is slow and painful, and the whole process is unsurgical. Only in the rare variety of internal hemorrhoids known as capillary or nevoid should this treatment be considered. Here a drop of nitric acid applied to the growth is one of the best and most certain means of effecting a cure.

(4) Crushing and (5) torsion are methods similar in principle and differing only in the means employed. Of the former, Mr. Pollock, of London, was the most notable modern advocate, he having devised a special instrument for the purpose. In the torsion method, of which Dr. Manley, of New York, was the originator, the same object is sought to be accomplished with the fingers, each pile-tumor being grasped separately and crushed and twisted to a pulp. The ecraseur has been employed for a similar purpose, especially by the French surgeons, the celebrated M. Chassaignac being perhaps its most conspicuous advocate. None of these methods is in keeping with modern ideas of surgical practice and all are open to grave objections. The great danger of secondary hemorrhage should alone be sufficient to prevent their use.

(6) The injection-method of treatment requires a somewhat fuller consideration, not because of any merit it possesses, but in order the more intelligently to condemn it. This method first came into prominence about the middle of the present century, when it was largely practised by traveling charlatans who claimed to have "discovered" it; but the principle involved is an exceedingly old one, though there is no record of its having been applied to the treatment of hemorrhoids previous to the time mentioned. The subject first gained the notice of the regular profession through the investigations and endorsement of Dr. Andrews, of Chicago, who published several articles on it in 1879. Since that time it has received thorough trial at many hands, and almost invariably the verdict has been unfavorable. The method consists simply in injecting a few minims of certain solutions into the substance of the pile-tumors by means of a hypodermic syringe. The agents employed and the strength of the solutions have varied widely. Carbolic acid seems at present to be most in favor. It is mixed with glycerin or olive-oil in proportions ranging from 5 to 95%.

Now, such remedies could only act to the desired end in one of two ways, either by producing atrophy of the tumors or by causing them to slough. If the former occur the result is only temporary; if the latter, it is most likely disastrous. Dr. Kelsey, of New York, whose experience with this plan of treatment has been very extensive, sums up the disadvantages as follows:

"(1) Pain; (2) ulceration; (3) marginal abscess; (4) fistula; (5) the impossibility of giving any definite prognosis as to the length of time necessary to effect a cure or the amount of suffering the treatment will entail; (6) the fact that the treatment does not result in a radical cure, but that the tumors reappear after two or three years."<sup>3</sup>

He also mentions the possibility of decided vesical symptoms, with scanty urine and pain in passing it, and the danger of deep inflammation and suppuration of the perirectal cellular tissues. His concluding remarks upon this aspect of the subject are:

"—and all the patient actually gains in the most favorable case is the avoidance of a safe operation which he fears, while he submits to an uncertain one which he does not fear because of his ignorance, together with a few days of misery during which he would be better off in his room."<sup>4</sup>

It is not to be supposed that all or any of these untoward results invariably follow the injection-treatment. In fact it will frequently give perfect satisfaction to both patient and operator, but the only cases I can conceive in which it would be advisable to resort to it are such as for valid reasons will not permit of the radical operation. It is no longer a question of experimentation. Were there no other objection to this treatment, the single one that it is not curative is sufficient to condemn both the method and those who habitually practise it.

(7) Excision. Though advocated and practised by some of the most renowned surgeons of both ancient

and modern times, this method of treating internal hemorrhoids is the most dangerous in the entire list of operative procedures. At the same time it is perhaps the easiest of execution. The danger consists in the great liability to hemorrhage and the extreme difficulty of controlling it. To minimize this danger many innovations in technic have been introduced from time to time, such as passing a needle deeply through the base of the tumor to prevent retraction after excision, endeavoring to ligate the vessels separately as encountered, etc. None of these is to be relied upon, and in spite of the resources of modern surgery, he is a bold and reckless operator who will undertake the removal of internal hemorrhoids without first providing adequately and absolutely against danger from hemorrhage. The operation known as Whitehead's belongs in this class. It is based upon the pathologic idea that the disease is not limited to the tumors, but involves the entire hemorrhoidal plexus. Hence it contemplates the removal of the whole pile-bearing area. This is effected by making a circular incision at the margin of the anus and dissecting the mucous membrane up to the required height. The proper amount is then cut off and the proximal end is drawn down and sutured accurately to the skin at the site of the original incision. This is certainly a radical operation. It is equally certainly not often justifiable. The pathologic idea upon which it rests is doubtless the correct one, but no such extensive mutilation is necessary to effect a cure. The dangers of hemorrhage and anal stricture that attend the operation are by no means inconsiderable; and the impairment of function inevitably resulting from obliteration of the pecten, or sense-organ of Stroud, is alone an objection of sufficient importance to raise grave doubts as to whether it should ever be resorted to. The so-called "American operation," about which much noise is made in certain quarters, is but a modification of Whitehead's procedure, differing from it in no essential respect, having no advantage over it, and open to the same objections.

Of the two remaining methods (8) ligation and (9) removal by clamp and cautery, very much has been said and written. These are the great rivals for the favor of the American profession, each having its points of merit and advocates of recognized authority to sustain them. The principles involved in both operations are as old as medical history, and as perfected and practised to-day both have records almost, if not quite, unprecedented in surgery as to number of cases and successful results. The question of superiority, then, cannot be settled by appeal to statistics, the mortality under either method in the hands of the competent operator being practically *nil*. The pronounced difference of opinion as to their comparative value is to be explained upon the ground of individual preference based on personal experience; but it has seemed to me, viewing the matter without prejudice and with-

<sup>3</sup>Diseases of the Rectum and Anus, Fourth Edition, p. 187. <sup>4</sup>Ibid., p. 188.



out regard to my personal preference, that the ligature-operation has several points of distinct advantage, namely, its more simple technic and, when properly performed, entire freedom from danger of secondary hemorrhage. No intricate apparatus, demanding the attention of an extra assistant, is required, and the cumbersome clamp is replaced by a simple silken cord. Freedom from danger of hemorrhage, however, is the more important item; and argument is scarcely needed to substantiate the claim that there is far less liability to this accident when the vessels are guarded by a well-applied ligature than when they are closed merely by a thin crust of seared tissue. It would seem, even to the most casual observer, that the profession had long since passed judgment as to the relative merits of the two modes of hemostasis. If the cautery had been found the safer and better, its comparative ease of application would cause it to be used far oftener than it is in all forms of surgical work; for I contend that the main purpose of cautery or ligature is the same in any case, whether the operation be the removal of internal hemorrhoids or hysterectomy, *i. e.*, the prevention of hemorrhage. In hospital-work, where a skilled physician or nurse is in constant attendance, this danger is of course reduced to a minimum; but when the operation is performed in private houses, as it is in the great majority of instances, at least by the members of this Association, the surgeon does well to select that method that will enable him to leave his patient with the greatest assurances of security. It is claimed by its advocate that the clamp-and-cautery method possesses certain peculiar advantages, notably, less after-pain, fewer occasions for resort to the catheter, and a somewhat more speedy convalescence; but the fact is that when the ligature-operation is properly performed such advantages do not obtain; and, even if admitted, they could only be rightly regarded as minor points in comparison with the safety of the patient.

The primary and concluding steps of the two operations are identical. The patient having been thoroughly prepared, anesthetized and drawn well to the edge of the table (preferably in the lithotomy-position), the sphincters are cautiously but completely divulsed, when, if not already prolapsed, the tumors will immediately come into view. Beginning below, so that the field will not be obscured by blood, each pile is caught by a volsella or other forceps and lifted out from the gut-wall. Then, with curved scissors, its base is dissected up from the anal aspect for a distance varying with the size of the tumor. This can be done with perfect safety, as the only bloodvessels of importance are those connected with the superior hemorrhoidal artery and enter from above. For this reason care should always be taken not to encroach with the dissection upon the mucosa and connective tissue on the proximal side of the growth. At this point the similarity of technic ceases. If the clamp is to be used, it is

adjusted transversely to the bowel, with one blade fitting accurately into the sulcus made by the scissors, and by means of the thumbscrew tightly compressed. Then, a portion of the tumor outside the grasp of the clamp is removed with knife or scissors, and the cautery at a dull-red heat is applied until the remainder is well charred. The instrument is then slowly loosened, but left in place until it is certain that no vessel will begin to spout. In case the other method is adopted, a strong silk ligature, such as is used for pedicles in abdominal work, is fitted into the dissected furrow and tied with sufficient force to shut off entirely the circulation, and so as to bring the knot upon the sound mucous membrane above. When the tumor is of large size it is advisable, after the dissection is complete, to bisect the remainder of the base with a curved needle carrying a double ligature and tie each half separately, previously so manipulating the two ligatures as to lock them at the center. The larger portion of the tumor is then cut away, special care being taken to leave enough to prevent the ligature from slipping. Here the technic of the two methods again becomes identical. The stumps are well dusted with iodoform and returned within the bowel, gauze is packed lightly into the anal canal, and a generous pad of absorbent cotton is applied and retained with a T-bandage snugly adjusted.

The after-treatment is simple. An opiate may be required for the first twelve hours and the catheter may have to be used for several days. Not later than the fourth day, preferably on the third, a laxative should be administered, and a copious enema of warm water, followed by an ounce or so of oil, given when a movement is felt to be impending. The subsequent dressings are similar to the first, and, like the operation itself, should always be made with strict antiseptic precautions. The ligatures will come away of their own accord in from five to ten days, and under either plan of treatment recovery should be complete within two weeks. With reference to the ligature-operation, strict observance of the following points will enable the objections urged against it to be largely overcome: (1) The divulsion of the sphincter should be so thoroughly done that the muscle will be completely at rest for the first few days; (2) the preliminary dissection should be carried to the highest point compatible with safety. As is well known, the parts above the anal canal are but very slightly sensitive, and, in addition to marked lessening of the pain, the time required for the ligatures to become detached is greatly shortened by this means; (3) the material of which the ligature is composed should be soft-twisted, not braided, silk, so that it will excite only a minimum of irritation. For the same reason the knot should be made to rest upon the sound tissue above.

In my more recent experience, using this method exclusively, I have had no case in which pain has been a

feature, and the results have been so uniformly satisfactory as to leave nothing to be desired.

### THE PRESERVATION OF THE HYMEN.<sup>1</sup>

By HANNAH M. THOMPSON, M.D.,  
of Wilmington, Del.

I CANNOT claim any originality in the subject selected for my paper. The subject, as well as the idea of presenting it before this Association, was suggested by my good friend, Dr. Howard A. Kelly. I had written Dr. Kelly a private letter opposing his extreme position in a paper published in the *American Journal of Obstetrics*, for January, 1898, on the "Preservation of the Hymen." In his reply he says, "It would be a splendid thing if you would make an article of your letter *in extenso*." Were it not for Dr. Kelly's hearty encouragement I would have hesitated in making public a letter addressed to one who has been for many years a rare and valuable personal friend. I am, besides, emboldened with courage sufficient to take exception to a physician of Dr. Kelly's ability and prominence, because I believe (if we grant the subject of any importance at all) its open discussion may contribute something to the advancement of science and of our profession.

In order to bring the article referred to directly before us we will briefly review its most important points. Dr. Kelly commences his paper by quoting the ancient opinions. He says that in Celsus' "De Medicina," written about the time of Christ, in operations for calculi the caution is added, that in the virgin the finger must be introduced into the anus, while in a married woman it may be introduced into the vagina; and that Severin Pineau, in his work written at the end of the sixteenth century on the signs of virginity, quotes the ancients as his authority for the dictum that it is "criminal to rupture the hymen."

"And such," says Dr. Kelly, "has been the attitude of the profession through all the centuries of the past. Honorable men have ever carefully guarded as sacred the rights and interests of the young women who have trusted their persons to their professional care, and the barrier which nature has erected at the vaginal introitus as the sole *prima facie* evidence of virginity, has been preserved intact." He goes on further to say, "That it has remained for our day and generation, at a time when a study of the diseases of women has become a fashion for practitioners of medicine to ruthlessly disregard all moral considerations and make digital examinations of young women with pelvic pains at the menstrual periods, or those presenting any abnormality of the menstrual flow or complaining of a leukorrhea."

Aside from hospital cases Dr. Kelly finds in his private case-book the records of 28 cases out of a total of 550, that have come to him from other physicians, fully assured that they have some grave "womb-trouble" who have no pelvic disease whatever, and who ought never to have been examined.

Quoting again from this paper:

"While male physicians are great offenders in this respect, many of the women who practise medicine are far worse! Indeed, they often seem to possess no conscience whatever in dealing with these sacred interests of their own sex."

The woman-doctor, whom the young girl naturally consults (while there are many noble exceptions amongst women-physicians, he says), feels it necessary, in order to completely investigate every case, to inspect the genitals and to insert her finger into the vagina, and she generally ends by putting in a speculum, too, and tampons, and so begins a never-ending course of so-called treatments. Sooner or later, in many cases, an infection is introduced, and the young woman is fortunate if she escapes finally a radical operation for removal of her oviducts and her ovaries. In Dr. Kelly's words: "The records of this country within the past 20 years could show thousands of such victims at first unnecessarily insulted, and then robbed of their distinctive organs of sex for imaginary ailments or diseases acquired. Such is the character of this evil. My own experience leads me to conclude that these vicious practices are both general throughout our country, and that they affect our young womanhood to the extent of inflicting an unnecessary injury upon many thousands yearly."

In order to make his opinion the more emphatic in this matter, Dr. Kelly characterizes this reckless habit of investigating the sexual organs of young women not only as "criminal," and as "insulting," but as a "species of rape."

The concluding pages of this interesting article are practical directions and suggestions in answer to the question, What is the remedy for this evil?

With this brief review of Dr. Kelly's paper, we are led to inquire: what is the structure and purpose of the hymen, and what its scientific and moral value?

Is Dr. Kelly's position, and criticism of women-physicians justifiable in view of the facts of the case?

The different forms of the hymen, circular, cribriform, denticular, imperforate, etc., do not so much concern us in this discussion, as its different recognizable conditions that we meet in practice:

1. The hymen tightly closed, barely admitting a small index-finger. This is a positive evidence of virginity.
2. The relaxed hymen, easily admitting the finger without a tear. The woman may be a virgin, may not be; may even be a married woman.
3. The hymen torn in one or two places, indicative of digital or instrumental examination, sexual relations, or childbirth.
4. The hymen with multiple tears indicates childbirth.

The moral value of this organ, the fold of mucous membrane at the vaginal entrance, as a proof of virginity, must rest upon its scientific value, its positive quality. All our text-books, all our authorities, and, I assume, the experience of every medical practitioner, agree that the hymen is not a certain or definite quantity, that it is in fact a most uncertain organ, and that it cannot be depended upon scientifically, much less morally. We must, of course, admit that the presence of the tightly closed hymen is a positive evidence of virginity; but, on the other hand, there can be no denial, of as certain a scientific fact, that the relaxed hymen—present in a very large class, I observe—is not proof of non-virginity. It has been known to exist

<sup>1</sup> Read before the Atlantic Association of Women's Medical Colleges, May 20, 1898.



after marriage, to form a barrier to childbirth, and it is found, by every observing examiner, in many cases of young girls who are undoubtedly virgins. We cannot but sincerely pity the young woman whose proof of virtue rests upon such an uncertain foundation as a fold of membrane so fragile and so frail as to be ruptured by the nozzle of a syringe, or a menstrual flow—for these are facts—or which loses its tone and integrity from simple catarrhal disease or general muscular relaxation.

We agree with Dr. Kelly that it is the duty of the physician to respect the rights of every woman who comes to him as much as he would if she were his own daughter or his sister; but we do not agree with him that her sacred interests are much involved, or that her morality depends upon a "demonstrable physical sign," such as is furnished by an intact hymen. And granted that this organ provides a scientific basis for moral deductions, how unchivalrous, how ignoble, and without true refinement must be the heart and mind of that husband, that father, or that brother, who can contemplate any situation in private life that would demand or suggest at the hands of a woman a *proof* of her virginity.

It is true that there are occasionally cases on trial in our courts of justice, cases of rape or suspected infection in single women, in which an intact hymen might be of weighty importance.

Further, if this organ was intended as a guarantee of moral character, and for moral protection either of man or of woman, would we not have some reason for reflecting upon the wisdom and righteousness of a Creator that has failed to make equal provision, and to give a like guarantee of an uncorrupted manhood?

As physicians we know too well that for every woman who enters the marriage-relation tainted in body there are thousands of men reeking with disease; and there is no demonstrable test to distinguish these, no proof, for the young woman, of the virginity or virtue of young men; but I forbear dwelling upon this line of thought which this subject and this article of Dr. Kelly's has opened up in my mind.

We must also unhesitatingly object to such expressions, applied to medical examinations for medical purposes, and with medical motives (even if such examinations are sometimes ill-advised), as "criminal," "insulting," and "a species of rape." Such expressions as these introduce, to my mind, suggestions and relations that are not appropriate, and not in the direction of purely medical or gynecologic investigations and considerations. When our gynecologists look upon these subjects from the physician's standpoint entirely, our ears will not be pained by such terms as rape and masturbation, used in the sense they have been, in scientific papers and scientific discussions, by eminent gynecologists.

As regards the ancient opinion in this matter and their greater care, as Dr. Kelly claims, in the preservation of the hymen, I may answer that we are not much

given to quoting the ancients or considering their opinions of much weight in matters of science, much less do we accept their views as the most enlightened on the subject of the sacred rights and interests of woman, or on that of the relations of the sexes, nor in fact on any question pertaining to the highest social or medical refinement.

If the sweeping charge brought against the majority of women-physicians by Dr. Kelly for unnecessary vaginal examinations, as well as the more grave one of infection introduced by such examinations and by local treatment, is true to the extent of many thousands injured yearly, then indeed is the woman-doctor gravely in error in her methods and, on the whole, not a public benefactor to her sex. Are we ready to accept this dictum of our learned friend? Is not the rule of every conscientious physician the rule of the woman-physician, never to resort to local examination in the case of any woman, unless the history of the case indicates definite local disease; and, in the case of virgins or single women, to use every reasonable means to preserve the integrity and natural relations of all the structures examined, on the conservative principle of preservation of organs? In my experience there are so many cases of relaxed hymen in virtuous young women that I long ago came to the conclusion that it had no moral significance. In this, our American young women appear to differ from the ancient Jewish maidens. On account of the vulvar and vaginal relaxation so frequently found in our day, local examination, even the first time, is in my experience generally easy and painless. Also in the tightly closed hymen, by proceeding slowly and with extreme care, a thorough examination and local treatment, when necessary, can usually be conducted without rupturing the membrane. I had recently a case of this kind, in which I was obliged, on account of the extreme hyperesthesia, to make several visits, but finally made a satisfactory examination and introduced small tampons, and later a Hodge pessary, without a break in the membrane. Several weeks afterwards the pessary became displaced, and in endeavoring to adjust it the hymen was slightly torn. This patient and another examined for the first time on the same day, with no difficulty on account of a relaxed hymen, were examples of the folly of postponing examinations because the subjects were young girls. They were both aggravated cases of retrodisplacements with adhesions, one of whom was becoming addicted to the use of morphin on account of her terrible sufferings. I have not found local treatment to be demoralizing when properly carried out, and not too long continued. In neurasthenic subjects continuous local treatment is likely to induce hypochondriasis, a result more lamentable than slight physical injuries. Good judgment, sound common sense, and a sense of high moral obligations, are the guides in deciding what cases to examine, and the method of examining, and I have not found that women-physicians were more deficient in these qualities than men-physicians.

In the matter of palliatives, I feel sure that gynecologists, whose work is largely operative, attribute too little importance to things that look small. No woman, and especially no man, who has not known the suffering of even slight displacements, the distress of cervical adhesions, the dragging weight of an hypertrophied uterus, can realize the infinite comfort of a firm vaginal packing of absorbent wool or cotton. We know many women, even young women, who by a little palliative treatment of this kind now and then are relieved to such an extent as to become active workers in different occupations, instead of chronic invalids. It is undoubtedly true that many patients are treated locally for so-called chronic ovaritis, and for various pains and aches of a general origin, without benefit; which treatment doubtless has led to infection and destruction of the sexual organs in many cases.

I quite agree with Dr. Kelly that it is best in many cases to make the examination under anesthesia, and also that it is best that such cases should be in the hands of a trained examiner. I also agree with him that very small cylindrical specula should be used in the case of virgins. I have had no experience with the series of specula Dr. Kelly has devised for this purpose. They vary in caliber from 8 to 18 millimeters, and I should judge would be excellent for these cases.

Dr. Kelly advises rectal examination altogether, in cases of single women, not only because it spares the hymen, but because it is actually indispensable to a thorough investigation. I must confess, however, that I am unable to make a satisfactory and thorough examination without combining vaginal with rectal exploration.

Dr. Kelly, we think, answers in part the question why women-physicians rupture more hymen than men-physicians by his admission that more virgins consult women than men; and while his paper is the furthest from proposing women-physicians as a remedy for the evil that he condemns, yet indirectly we might claim such a suggestion; for it is well known that women-examiners lessen some of the effects of vaginal examinations to which he alludes, the shocking of the sensibilities, the disagreeable remembrance, etc. Besides, the smaller and more delicate digits of women are better adapted to such work.

That women-physicians are less conscientious than men-physicians in that which concerns the highest or moral interests of their patients, we do not think has been proved by Dr. Kelly's paper. While we will agree that it is right to preserve the hymen by all reasonable means, as we would preserve nature's handiwork in general, we fail to understand how any sacred interests are involved in a physical feature that science and experience condemn as untrustworthy. I have, besides, the testimony of many of my young women-patients, as well as that of adult men and women conversant with special anatomy, who reject the idea of the great moral significance of the hymen as well as the

idea of crime and of insult connected with its destruction, for lawful purposes.

The position held by Dr. Kelly is, I think, largely a matter of sentiment, and sentiment founded upon tradition; a holding to the letter of the law, against science, reason, and experience, as well as against justice and the principle of character as the basis of morals. A morality or a code of morals that knows no sex, when fully recognized and firmly established, will preserve and perpetuate our most sacred rights and interests, and affect for good, not only woman, but the race at large. Are we to look vainly to our leading gynecologists, those who claim to have our highest moral interests at heart, to strike some higher notes, worthy of their powers, and of the object to be attained, than we find in this paper on the preservation of the hymen?

### A CASE OF TOTAL PARALYSIS OF THE ROOTS OF THE BRACHIAL PLEXUS.

BY LEO NEWMARK, M.D.,  
of San Francisco, Cal.

PARALYSIS of a part of the nerves composing the brachial plexus is not rare and occurs in various combinations. The combined palsies, named Erb's and Klumpke's, for instance, are well known; but lesions of the brachial plexus as extensive as that about to be described are sufficiently uncommon to justify the publication of the following notes:

On May 13, 1895, O. de B., then a lad 16 years old, was engaged in starting an engine, to do which he had to initiate the revolution of a large fly-wheel by turning it by its spokes. While thus employed, his foot slipped and his right arm was caught in the wheel, which just then received additional momentum from the power of the engine. In some manner the machinery very soon stopped and the patient was found lying on the floor near the wheel, with his right hand above his head. The right upper extremity was immediately observed to be paralyzed. There were bruises about the shoulder and chest on the right side, as well as in the face, and there was a scalp-wound at the back of the head. No fracture or dislocation of bones had occurred.

The boy was referred to me by Dr. Greth on August 15, 1895; and since then I have examined him a number of times, the last time in the early part of October, 1898. The tenderness that originally existed in the right supraclavicular fossa and over the right shoulder has disappeared. The atrophy of the affected tissues has meanwhile increased. At the age of 16 years the patient had grown to a height of at least 6 ft. 1 in. I regret that I neglected to measure his stature then. In August, 1898, his height was 6 ft. 3½ in. (in his shoes). This fact is mentioned to show that the accident that befell the patient occurred during the period of active growth, and it is not without its bearing on the question whether the present condition of the bones of the paralyzed limb is due to active atrophy or to arrested development.

When not supported the right upper extremity hangs limp at the patient's side. All voluntary motion is abolished in the fingers, at the wrist and at the elbow. The only movements at the shoulder are those subserved by the trapezius and levator anguli scapulae; these muscles are preserved and react in a normal manner to electricity. The supraspinatus and infraspinatus, the rhomboids, the pectoralis major and minor, the teres major and minor, the latissimus dorsi, the subscapularis, the serratus magnus, and the deltoid muscle, as well as the rest of the musculature of the limb, are wasted away. (Fig. 1.) In the posterior triangle on the right side of the neck the transverse processes of the vertebrae can be much more easily palpated than on the left. The supraclavicular



vicular fossa is very shallow and the intercostal spaces on the right are abnormally visible. In the beginning of the period of observation the affected muscles presented the complete reaction of degeneration, which later gave way to loss of all electric contractility.

When the patient is standing, and allows the arms to fall at his sides, it is noticeable that the right shoulder is raised a little higher than the left. The right scapula is drawn toward the vertebral column, the distance between them being 2.6 cm. in the attitude just mentioned, while the left scapula is 9.5 cm. distant from the spine. Passive supination of the forearm cannot be accomplished, movement being possible only from pronation to the position midway between pronation and supination.

The radiographs<sup>1</sup> (Figs. 2 and 3) show well the atrophy of the right radius and ulna. With the fluorescent screen the atrophy of the humerus also is easily discernible.

more than 0.5 cm. beyond the inner border of the area of complete anesthesia, but in the upper half of the arm it extends well on to the posterior surface.

The right pupil is smaller than the left when both eyes are exposed to bright diffuse daylight. In dim light the right dilates somewhat, but the left much more. In strong convergence the right pupil is still a little narrower than the left. The right palpebral fissure is also narrower than the other.

The temperature was taken several times in the external auditory meatus and was found invariably to be higher on the right side than the left. At one observation, when the lobe of the right ear felt warmer to touch than the left, the temperature was 99° on the right and 98.2° on the left; at another, when the left external ear was warmer to touch than the right, the thermometer registered 98.5° in the right and 97.7° in the left meatus. A third measurement, taken at a time when there was no difference in the temperature

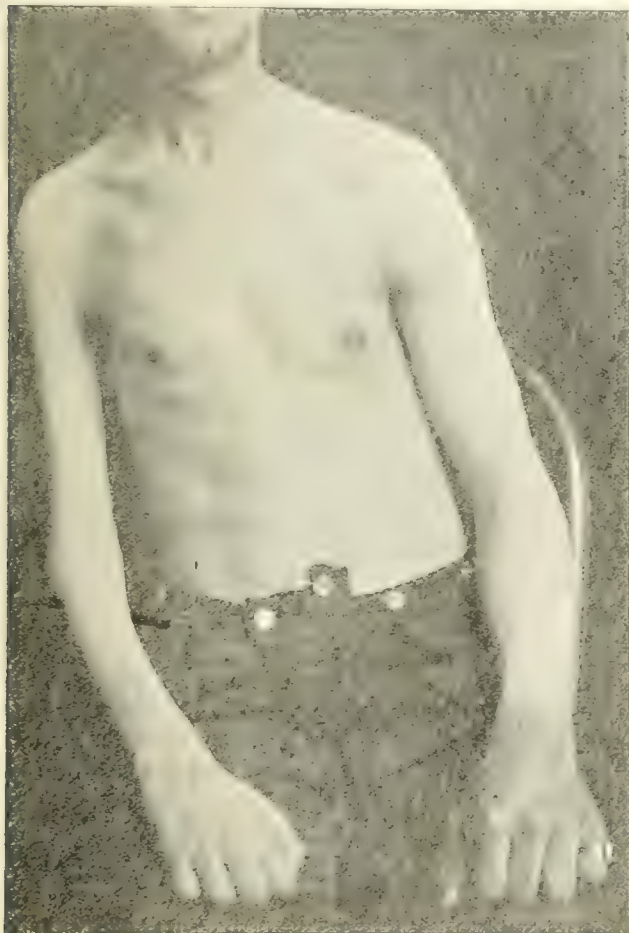


FIG. 1

The nails of the affected fingers grow as well as those of the other side. They are not so smooth as the latter, being marked by transverse ridges.

The skin is dry, cold and livid. On one occasion pilocarpin was injected into the right forearm, and on another into the left; the physiologic effects exhibited themselves with equal rapidity. Half a grain produced profuse sweating in both armpits, and moderate sweating in the left forearm and hand, but none in the right. Both arms remained dry.

As the diagrams<sup>2</sup> (Figs. 4 and 5) indicate, an area of complete anesthesia occupies the whole of the hand and forearm, and the anterior and antero-lateral aspects of the arm. The transition from this area to that of intact sensibility is not perfectly abrupt, but is intercepted by a region in which delicate touch is still perceived, but not as keenly as in normal parts. This diminution of sensation extends not



FIG. 2—Right forearm, covered by cloth.

of the two ears appreciable to touch, showed 98.8° in the right as against 98.6° in the left ear. Pilocarpin produced equal perspiration in the two halves of the face.

The patient appeared for treatment and examination at very irregular intervals, and submitted to desultory applications of electricity. It is hardly likely, however, that a more persistent electric treatment would have benefited him.

The paralysis of such muscles as the rhomboids and the serratus magnus, whose nerves arise before the formation of the three cords of the plexus, and the affection of the pupil, as well as other symptoms indicative of implication of the communicating branch of the first dorsal nerve with the sympathetic, enable us to locate the lesion in the roots of the brachial plexus. All the motor

<sup>1</sup> Made by Dr. Philip Mills Jones, in September, 1898. <sup>2</sup> Kindly drawn by Dr. W. G. Hay.



FIG. 3.—Left forearm, bare.

fibers proceeding from the fifth, sixth, seventh, and eighth cervical and first dorsal nerves have been interrupted, the last, at least, close to the intervertebral foramen. The disturbance of sensation is less complete, but such a disproportion between motor and sensory defect is common enough, and is exemplified in Ross<sup>23</sup> patient (whose motor and sensory troubles, however, were less extensive than in the present instance), and in that of Onanoff.<sup>4</sup>

The mechanism of the lesion was probably a rupture of the roots of the plexus by traction on the arm. The possibility of such an occurrence appears from the report of a case by Flouber<sup>5</sup> in 1827, in which, as shown at the autopsy, forcible extension of the arm for the purpose of reducing a dislocation of the humerus tore off the four inferior roots of the plexus close to the spinal cord.

### THE MECHANICAL PRINCIPLES INVOLVED IN THE OPERATION FOR CORRECTION OF DEFLECTIONS OF THE NASAL SEPTUM.<sup>1</sup>

By E. B. GLEASON, M.D.,

of Philadelphia.

ALTHOUGH deviations of the nasal septum from the median line occur in great variety, yet the larger proportion of them involve little more than the posterior three-fourths of the triangular cartilage and the immediately adjacent bony structure. I do not remember to have seen a case in which the posterior edge of the vomer was not exactly in the median line, and it is extremely rare for the anterior edge of the septum to be involved.

As the posterior portion of the vomer is rarely if ever involved, it follows that the breathing-space of the wider naris is not increased as the result of septal deviations, and, hence, when the occlusion of the obstructed naris is complete, the patient is deprived of one-half his nasal breathing-space; a fact that I do not remember to have seen clearly stated. It is not true that the wider naris compensates for decreased space in the narrower; but a deviation obstructs nasal breathing-space to the same extent as an exostosis. Congestion also occurs in the dilated portion of the unobstructed nostril and frequently causes hypertrophy of the inferior turbinal.

For purposes of study of the mechanics involved in operations for the correction of deviation of the nasal septum an ordinary rubber ball thrust through a piece of card-board will answer a useful purpose. The resiliency of the rubber is not unlike that of the cartilaginous septum, and its curvature, surrounded by a plane surface, represents fairly well the condition that exists in most instances of deviated septa. This curvature represents the redundancy of the deviated septum about which so much has been written. The equator



FIG. 4.—Anterior view of right arm. Anesthetic area shaded.

FIG. 5.—Postero-lateral view of right arm. Anesthetic area shaded.

<sup>1</sup> *Bull.*, April, 1884. <sup>4</sup> *Archives de Neurologie*, 1891, xxii. <sup>5</sup> Mentioned by Pagensteiner, *Ueber Lähmungen des Plexus Brachialis*, *Archiv f. Psychiatrie*, 1892, Bd. 23.

<sup>23</sup> Read before the Section on Otology and Laryngology of the College of Physicians of Philadelphia, October 4, 1898.



of the ball represents the apex or crest of the deviation. It is true that the curvature of the deviated area of a deflected septum is rarely if ever that of half a sphere; yet for most purposes the rough model of a deviated septum made of paste-board and a rubber ball answers very well indeed to illustrate the mechanics of operations upon deviated septa, and our imagination very readily will alter the regular curve of the spherical rubber to suit the more common types of septal deviations.

The first fact that the model suggests is that although it is often convenient to speak of horizontal and vertical deviations, yet in reality redundancy in all directions must exist in every deviated septum, and it is therefore folly in the so-called horizontal deviations to speak of cutting out or otherwise providing for any vertical deviation that *may* exist, because from the nature of the conditions such redundancy must exist in every case.

The two factors that interfere with the success of operations for the correction of deflections of the nasal septum are redundancy and resiliency, the latter being by far the more difficult to overcome. Some of the older operations attempt to overcome redundancy by an incision along the angle or crest of horizontal deviations and then bringing the septum into the median line with forceps or finger. Under such circumstances, the edges of the cut override each other, and redundancy, at least in a vertical direction, is amply provided for. Roberts goes still further, and by multiple incisions provides for redundancy in all directions, and also to a greater or less extent for the *resiliency* of the septum, for he clearly states that unless this be overcome the operation is not likely to succeed.

In a paper published in the *New York Medical Journal* for October 3, 1896, Dr. A. W. Watson states that "In many cases, especially where the deviation is marked and low down, it is impossible to bring the lower fragment into line." From this it follows that in all such cases, in which an incision was made at or below the crest of the deviation, the upper fragment or flap of the septum rode over the lower, hooked over it as it were; and to a certain extent was supported by the lower. In fact it is impossible for anything else to occur if the lower flap be practically immovable. The operation of providing for redundancy by means of a straight or slightly curved incision along the crest of the deviation and then bringing the septum into line, the upper fragment of necessity riding over or hooking over the lower is very old. Sajous performed it in 1881, and to him probably belongs the credit of originating it.

Now because of the position of the incision, at the apex of the deviation, the septal redundancy is *equally* divided between the two flaps, and hence from a theoretic standpoint there is little or none to utilize for purposes of support. Watson, in the paper already referred to, sought to overcome this difficulty by beveling the incision, but a bevel in so thin a structure as the septum in such material as cartilage in most cases can amount

to nothing in resisting the resiliency of the septum; and, as a matter of fact, in all operations in which the incision is made in the deviation, it is impossible to obtain sufficient overlapping to secure adequate support against the resiliency. For this reason great stress is laid upon the *pin*, upon which dependence often was placed in Philadelphia for resisting the resiliency of the septum and which for months tends to bring the septum back into its original position.

So important has the matter of support been considered that Watson enlarges upon the subject, and the pin originally employed by Roberts has been modified by both Gibb and Watson, the latter of whom seems to think that the fact that his pin is tolerated by the tissues for three or four weeks is an essential element of success.

At the meeting of this Section on October 6, 1896, I exhibited five cases of deviation of the septum operated upon by a new and unique method, inasmuch as a U-shaped incision was made not *in* but *around* the deviated area. From what has been already stated, the practical advantages of this departure from all previous operative methods are at once apparent. All of the septal redundancy is contained in a tongue-shaped flap, and hence when it is thrust through the hole in the septum that it covers, all of this redundancy is utilized in the best possible manner for supporting the septum in its now median position.

There is also another point to which I did not give sufficient importance at the time I read my first paper on this new operation; and that is the manner in which the tongue-shape of my flap tends to counteract the resiliency of the septum; for it will be apparent that resiliency is only active at the neck of a comparatively long narrow flap and hence has a powerful leverage to overcome before it can thrust the inferior edge of the flap back through the septum. This becomes apparent on referring to the rubber ball, on one side of which, along the equator, I have made a beveled incision and on the other a U-shaped incision. The vast difference in the pressure exerted by the two flaps is manifest by touching them with a finger.

Because of the increasing leverage that resiliency has to overcome and because a nearly vertical portion of the septum above the deviated area can sometimes be reached, I have been careful in my more recent operations to prolong the vertical crura of the U-incision upward as high as possible, sometimes utilizing a knife or scissors for this purpose in addition to the saw. The neck of the flap is also carefully bent at as nearly a right angle as possible, in order to still further reduce the resiliency, which should be only sufficient to barely retain the overlapping edges in contact.

It is because resiliency is so nearly counteracted by this method of operating and because all redundancy is utilized as a means of support, that in at least 80% of my cases no other support is necessary.

The essential idea of the operation is that a cut is made about the deviated area except above where the tissues form a sort of spring hinge, the tension of which can usually be reduced by manipulation until just sufficient to suit the purposes of the operator, and the entire deviation swung into the median line like a door upon this hinge and locked into its new position not only below but also in front and behind.

This idea, so far as I know, is entirely unique and original, although overlapping of the upper flap over the lower occurred in the operations of Sajous, Roberts, and Seiler, as well as that of Watson. The incision at the crest of the deviation, judging from published descriptions, was also *beveled* as a matter of necessity or convenience when the knife was introduced along the floor of the narrower nasal chamber, as there was so little room to turn it into a horizontal position.

It will be noted that in comparison with my U-shaped incision, an incision at the crest of a septal deviation is straight in the vertical plane; but in the horizontal plane curved in proportion to the amount of horizontal redundancy; hence probably a pin was found in experience the best method of support because the sloughing which issued when it was worn for some time tended to provide for horizontal redundancy; the incision originally straight becoming cross-shaped and the flaps triangular.

I have operated on three cases of deviated septum this summer, and have brought them here to illustrate the points stated. In none of them has a tube been used for more than twelve hours after the operation. One of the cases shows very nicely the great overlapping that has been secured, at least  $\frac{1}{4}$  inch, and it will be readily understood why no tube was necessary in this case. Another of the cases was operated on nine months ago by what the operator perhaps thought was my method, as only plugs of gauze were used for support. As shown by the scar, his incision was at the apex of the deviation and hence there could be little overlapping except that resulting from beveled edges. The patient states that although the septum was thrust into the median line twice on occasions subsequent to the original operation, and the plugs were changed ten or twelve times, his breathing-space was no greater than before. My operation was done on this same man three weeks ago, and I fancy that it will be agreed that the septum is as nearly in the median line as it is possible to place it. No support was used after the operation.

I will say, however, that it is in cases like this, in which there is not complete occlusion of the obstructed naris, that support by a tube or pin is most likely to be required, because there is less redundancy to utilize. Did I now only operate on selected cases, that is cases in which there is complete occlusion of the obstructed naris and consequently a great deal of redundancy, I am under the impression that nearly 100% instead of

only 80% of the cases would secure septa in the median line without the use of pin or tube.

### INFECTION FROM THE HANDS IN PULMONARY PHTHISIS.\*

By E. R. BALDWIN, M.D.,

Of Saranac Lake, N. Y.

It should not occasion surprise that tubercle-bacilli can be found upon the hands of patients in the advanced stages of tuberculosis, for we need hardly consider the early stages, in which the expectoration is usually slight.

In reviewing the abundant literature on different modes of infection in tuberculosis, scant mention is made of soiled hands as one carrier of the germs. Nor is this strange when the overwhelming importance of inhalation has been so emphasized. It is safe to say that the danger from a few bacilli on the fingers is very slight, or it would have demanded attention ere this, and I am aware that it is difficult to mention this subject without danger of exaggeration. Neither do I pose as the exponent of a new terror from microbes. As for that, it would be easy to conceive of infections with all the diseases in this category conveyed by the dirty hands of some people.

Fortunately for the race, disease is not a question of infection alone. Therefore, it was not so much with the expectation of determining the degree of danger from the hands that the following experiments were undertaken, as to note the differences in respect to the presence of bacilli between otherwise cleanly persons using handkerchiefs and those depositing their sputum on cloths or in cuspidors.

As opportunity offered during the past year or more, I have washed the fingers of 10 private, and 18 sanitarium-patients,<sup>1</sup> all of whom were known to have expectoration containing bacilli. Five of the private patients were bedridden. All the others were ambulant, those from the sanitarium being generally in better condition than the private patients.

Fully one-half of the private patients were using cuspidors and occasionally their handkerchiefs. The rest used either cuspidors only or cloths. Two used handkerchiefs only and these of finest fabric. The sanitarium-patients uniformly denied using handkerchiefs.

In no case was an intimation given of the object of the experiment before it occurred, as this might have induced some to defeat the purpose of the test by an abnormally careful toilet. This was especially guarded against in the sanitarium-patients by calling them together without previous notice, and by private examination. The patients had washed their hands before the test-washing within periods varying from 10 minutes to 12 hours.

\* Presented at annual meeting of American Climatologic Association, Bethlehem, N. H., September 1, 1898.



The following technic was used: Carefully cleaned, sterilized, plain glass finger-bowls with glass covers were used to catch from 5 to 10 cu. cm. sterilized 0.1%  $\text{Na}_2\text{CO}_3$  solution, which was poured between the palmar surfaces of the fingers, while the patient rubbed them together in the bowl. The alkali was used to render the solution slightly soapy. Separate bowls were used for each patient.<sup>2</sup> Two small guinea-pigs were then used for inoculation with the washings of each private and 5 of the sanitarium-patients. The

TABLE I.—PRIVATE PATIENTS.

DATE.	NAME.	OCCUPATION.	HABITS AND APPEARANCE.	STAGE OF DISEASE.	RELATIVE NO. T.B. IN SPUTUM.	AMOUNT OF SPUTUM.	RECEPTACLE USED FOR SPUTUM.	HOUR OF LAST WASH.	HOUR OF TEST-WASH.	T.B. IN CENTRIFUGED SEDIMENT.	WHITE OF EGG.	PERITO. & GLOIN.	INOCULATION.
1897													
May 26	Miss B.	Musical Student	Apparently clean	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	Profuse	Handkerchief only.	6.00 A.M.	9.00 A.M.	Not examined	.....	46 days	* 68 days
July 11	Miss C.	School-Teacher	Apparently clean	Chronic pulmonary tuberc. with cavity. Ambulant.	Few	Moderate	Handkerchief only.	7.00 P.M.	8.00 P.M.	Not examined	.....	46 days	* 67 days
Aug. 27	Mr. F.	Merchant	Not cleanly	Chronic pulmonary tuberc. and intestinal tuberc. Ambulant.	Numerous	Moderate	Cuspidor and handkerf.	9.00 A.M.	11.00 A.M.	Few	300-200	.....	.....
Aug. 31	Mrs. T.	Housek'p'r	Scrup. clean	Advanced pulm., intest. and laryng. tuberc. Bedridden.	Numerous	Moderate	Linen cloth roll.	9.00 A.M.	11.00 A.M.	None	67328	.....	.....
Sept. 27	Mr. W.	Student	Clean	Acute pulmonary tuberc. with cavity. Bedridden.	Very numerous	Profuse	Cuspidor and cloth.	9.30 A.M.	10.30 A.M.	Not examined	44040	.....	.....
Nov. 18	Mr. D.	Teacher	Clean	Pulm. and laryng. tuberc. with cavity. Ambulant.	Fair number	Profuse	Cuspidor, handkerf. rarely.	1.00 P.M.	5.00 P.M.	Numerous	60420	.....	.....
Nov. 22	Mrs. D.	Housek'p'r	Clean	Pulmonary, intest. and laryng. tuberc. Bedridden.	Fair number	Profuse	Cuspidor and absorbant gauze.	7.30 P.M.	7.00 A.M.	Numerous	200270	.....	.....
Dec. 7	Miss F.	Housek'p'r	Very clean	Chronic pulmonary tuberc. with cavity. Bedridden.	Not noted	Profuse	Cuspidor and handkerf.	9.00 A.M.	5.00 P.M.	None	217215	.....	* 133 days
Dec. 7	Mrs. R.	Housek'p'r	Very clean	Chronic pulmonary tuberc. with cavity. Ambulant.	Fair number	Slight of pus	Cuspidor only.	2.30 P.M.	2.40 P.M.	None	245235	.....	.....
Dec. 9	Mr. A.	Engineer	Quite cleanly	Chronic pulmonary tuberc. with cavity. Bedridden.	Very few	Profuse	Cuspidor and cloth.	8.00 A.M.	6.00 P.M.	Not examined	240240	.....	* 69 days

## 5 SANITARIUM-PATIENTS.

1898													
Mar. 10	Mr. K.	Undertaker	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Numerous	Moderate	Cuspidor only.	9.30 A.M.	10.30 A.M.	None	245175	* 112 days	10 days cachectic
Mar. 10	Mr. B.	Clerk	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not stated	Moderate	Cuspidor only.	8.00 A.M.	10.00 A.M.	None	240270	.....	.....
Mar. 10	Mr. A.	Farmer	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Numerous	Profuse	Cuspidor only.	8.00 A.M.	10.00 A.M.	None	240270	.....	.....
Mar. 10	Mr. G.	Jeweler	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	Profuse	Cuspidor only.	8.00 A.M.	10.00 A.M.	None	240200	.....	.....
Mar. 10	Mr. S.	File-Setter	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Numerous	Moderate	Cuspidor only.	9.00 A.M.	10.00 A.M.	None	250300	.....	.....

TABLE II.—SANITARIUM-PATIENTS.

Mar. 24	Mr. F.	Clerk	Average cleanliness	Chronic pulm. tuberc. with cavity. Ambulant.	Moderate	Moderate	Cuspidor only.	2.00 P.M.	5.45 P.M.	6-7		
Mar. 24	Mr. B.	Commercial Traveler	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	1/2 cuspidor in 24 hrs.	Cuspidor only.	5.15 P.M.	5.15 P.M.	None		
Mar. 24	Mr. T.	Store-Inspector	Dirty	Chronic pulmonary tuberc. with cavity. Ambulant.	Few	3/4 cuspidor in 24 hrs.	Cuspidor only.	8.00 A.M.	5.45 P.M.	1-2 (?)		
Mar. 24	Mr. E.	Piano-Maker	Dirty	Chronic pulmonary tuberc. with cavity. Ambulant.	Few	1/2 cuspidor in 24 hrs.	Cuspidor only.	8.00 A.M.	5.45 P.M.	None		
Apr. 2	Mr. M.	Clergyman	Very cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	1/2 cuspidor in 24 hrs.	Cuspidor only.	8.30 P.M.	12.45 P.M.	None		
Apr. 2	Mr. K.	Hospital-Attendant	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	1/2 cuspidor in 24 hrs.	Cuspidor only.	8.30 P.M.	12.45 P.M.	1-2 (?)		
Apr. 2	Mr. V.	Wall-Paper Printer	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Numerous	1 1/2 cuspidor in 24 hrs.	Cuspidor only.	8.30 P.M.	12.45 P.M.	1-2 (?)		
Apr. 2	Mr. D.	Iron-Worker	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Moderate	1/2 cuspidor in 24 hrs.	Cuspidor only.	8.30 P.M.	12.45 P.M.	1-2 (?)		
Apr. 5	Miss H.	Waitress	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not noted	1 cuspidor in 24 hrs.	Cuspidor only.	8.30 P.M.	12.45 P.M.	3-4		
Apr. 5	Mrs. R.	Housek'p'r	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not noted	1/2 cuspidor in 24 hrs.	Cuspidor only.	11.00 A.M.	12.45 P.M.	None		
Apr. 5	Miss G.	Housek'p'r	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not noted	Not noted	Cuspidor only.	8.00 A.M.	12.45 P.M.	None		
Apr. 5	Miss G.	Housek'p'r	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not noted	1 cuspidor in 24 hrs.	Cuspidor only.	8.00 A.M.	12.45 P.M.	4-5		
Apr. 5	Miss K.	Stenographer	Cleanly	Chronic pulmonary tuberc. with cavity. Ambulant.	Not noted	None (?)	Cuspidor only.	Not noted.	12.45 P.M.	None		

\* Tuberculous. † Not tuberculous. ‡ Killed.

others were simply examined microscopically for tubercle-bacilli. One pig in each experiment was inoculated with 0.5 cu. cm. in the peritoneum, together with an equal quantity subcutaneously in the right groin, while the other received 0.5 cu. cm. in each groin. The Koch syringe used for all inoculations was boiled in alkaline solution before use. The remaining wash-water was centrifugated in clean, well-burned glass tubes and the sediment examined for tubercle-bacilli.

The results are tabulated, and it will be seen that after inoculation with the washings from 8 out of 10 private patients, one or both pigs became tuberculous, although in some the disease was extremely chronic, indicating that few bacilli, or those of weak virulence, had been inoculated. After inoculation with the washings from 2 of 5 sanitarium-patients, one pig in each was found to have tuberculosis of very chronic type. Lesions starting from the point of inoculation were demonstrated in all the positive cases. The tuberculin-test was applied in a few doubtful ones. No relation between the severity of the disease in the patient and that in the animal could be made out, and I am inclined to think that it was merely a question of the number of inoculated bacilli.

In two sets of animals, only 1 became tuberculous, the other being found healthy when killed. The same result occurred in Cornet's<sup>3</sup> experiments in seven instances, and was ascribed by him to the small number of bacilli in the inoculated dust. Only 1 pig of the 30 died of apparent septic infection, a result probably due to the small amount of inoculated material.

It is significant to note that the two negative results among private patients concerned ladies who were scrupulously careful by the use of cloths and cuspidors, and frequent washing to keep their hands from being soiled. On the other hand, the two who used handkerchiefs only, were found to furnish infection readily. In two cases in which the expectoration was profuse, tubercle-bacilli were numerous in the centrifugated sediment, though in most cases, when found microscopically at all, there were very few. From the experiments of Surmont<sup>4</sup> and Di Mattei,<sup>5</sup> it is hardly possible that they were excreted in the sweat. Confusion with smegma-bacilli was guarded against by washing the stained specimens with alcohol.

The sediment obtained from 3 of the 13 sanitarium-patients contained a few bacilli, a result that justifies the opinion that handkerchiefs are little used at that institution. It appears that the better the social status of patients the more reluctant they are to use cheap, destructible handkerchiefs, cloths, and cuspidors. It is well known that the dried expectoration from washable handkerchiefs has long and correctly been regarded as a fruitful source of infection disseminated about living-rooms, and it needs no further argument to condemn their use. Whether there is any added danger from the hands, as direct or indirect vehicles of infection, depends principally upon the question of infection by ingestion, and I shall not presume to enter into that subject fully.

It is fair to suppose that the small amount of infectious material conveyed to clothing, bedding, furniture, books, money, pencils, etc., will have lost most of its virulence by the time it is dried and become dust. Inhalation-tuberculosis must be rare from such sources. On the other hand, when the bacilli remain moist their virulence is retained and the subtlety and frequent latency of tuberculous infection make it worth while to consider every possible source. And if it shall be shown, as Prof. G. Sims Woodhead<sup>6</sup> holds, and Walsham<sup>7</sup> recently supports, that primary tonsillar infection is much more common than formerly supposed, then the hand as a carrier of the bacillus deserves more attention. The researches of Hodenpyl,<sup>8</sup> Jonathan Wright,<sup>9</sup> and others are opposed to such a view, and it remains to be proved that the bacilli can pass the tonsils and cervical or mesenteric lymphatics without causing lesions before they reach the bronchial nodes. Tuberculous lymphadenitis is nevertheless sufficiently common in the cervical nodes, especially in children; although primary mesenteric tuberculosis appears quite rare from the statistics of W. P. Northrup<sup>10</sup> and L. Emmet Holt.<sup>11</sup>

The popular idea of the danger from tuberculous cattle is exaggerated and I venture to suggest that some instances of the disease attributed to cow's milk may not exclude the much more common human source.

If virulent bacilli can be demonstrated on the fingers of patients of average cleanliness, what may not be the chances of food-infection in the homes of the unclean!

We may gather a few points from these experiments:

1. Living tubercle-bacilli are not infrequently present on the hands of patients who are not careful in the use of handkerchiefs, cloths and even cuspidors when the expectoration is abundant.

2. No precaution against contamination of the hands can avail better than the use of cuspidors, combined with frequent ablutions with soap and water.

3. With the present usage of society, people are not likely to use pocket-cuspidors, except in institutions. Consequently, handkerchiefs will be used in public; especially as anti-spitting laws are forcing individuals to use them. There is, therefore, urgent necessity for a cheap, comparatively impervious and soft handkerchief that can be burned.\*<sup>12</sup>

This could be specifically recommended by physicians and boards of health for all diseases with expectoration. A rubber-cloth pocket lining that could be washed would also be a desirable addition to suits made for invalids.

In closing I wish to acknowledge the assistance of Dr. J. A. Wilder in the details of the experimental work.

#### REFERENCES.

1. A Rhonda k Cottage Sanitarium.
2. The work was carried out at the Saranac Laboratory for Study of Tuberculosis.
3. Cornet: Ueber Tuberculose, 1890.
4. Surmont: Recherches experimentales sur les suers des tuberculeux. *Etudes de Tuberculose*, vol. 2, 1888-90.
5. Di Mattei: Sulla trasmissibilita per mezzo del sudore dei tisici. *Archiv p. Speriment. Med. Farm.*, vol. 12, 293-307.
6. Woodhead: Channels of Infection in Tuberculosis. *Lancet*, 1894, p. 960.
7. Walsham: Latent Tuberculosis of the Tonsil. *Lancet*, May 7, 1898.
8. Hodenpyl: The Anatomy and Physiology of the Faucial Tonsils, etc. *American Jour. Med. Sciences*, March, 1891.
9. Wright: Tuberculous Infection of the Lymphoid Tissue, etc. *N. Y. Med. Jour.*, September 26, 1896.
10. Northrup: Tuberculosis in Children, etc. *N. Y. Med. Jour.*, February 21, 1891.
11. Holt: Tuberculosis in Infancy and Early Childhood, etc. *Medical News*, December 12, 1896.
12. Wise: Handkerchiefs for Consumptives. *Lancet*, November 14, 1891.

\*Such as are suggested by A. T. Wise, dipped in a solution of potassium nitrate, are, like absorbent gauze and paper handkerchiefs, too porous to be ideal receptacles for sputum.



# The Philadelphia Medical Journal

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In the interest of professional progress, we have had reprints made of the article by Dr. Salmon, together with the related correspondence, published in the present number of the JOURNAL, and have distributed them to members of Congress, and to the members of the *Humane Society*, meeting in Washington next week. With the proper support to warrant it, a vast amount of effective work can be carried out by medical journals devoted to professional progress. We promise to undertake many such tasks in the future, if the profession so wish and authorize. By "authorization," we mean a vast increase in our subscription-list through the zeal of our subscribers. We frankly say that this is the professional duty of every physician.

**Inventor's-Mania**, may one day become a distinct type of mental disease. A year ago Mr. Tesla wrote as follows:

"I have made extensive study and experiment, to the end of finding some means of clearing the human skin of these deadly microbes, and I have succeeded in inventing a means by which it can be kept free from their ravages." Part of Mr. Tesla's plan was the use of "a battery I have myself invented." With this battery I have charged human bodies so successfully that microbes have been thrown off in a perfect shower, some of them being thrown as far away as four and five feet."

Since then "discoveries" have been announced by the same authority for doing more impossible things than were ever dreamed of by Kelvin or Edison. One after another the wonders slip into oblivion like the great healers, the miraculous specifics, and the marvellous nostrums. But there is one invariable constant—the public avidity for the same thing with a mere change of names.

**Kindness to Animals, or Hatred of Science, Which?**—In the transfer of a car-load of animals across the continent, or of a ship-load to Europe, there is a hundred times more suffering, more awful torture, than in all the laboratory-experiments of the whole world since science has existed. Laws exist on the statute books, which, if carried into effect, would do away with these atrocities. In entire frankness we ask what is the conclusion logically necessary from the crusade of the antivivisectionists against scientific investigation? Plainly it is not pity for suffering that is the dominant motive with them, but the old medieval hatred of science. If it were horror of suffering the infinitely greater evil

would be attacked first. Antiscience is neither ingenuous nor is it logical. A tithe of the zeal expended would eradicate the hideous, illegal, unnecessary torment in the shipment of cattle. We even protest that there is more suffering from the callousness and brutality in the markets and restaurants of one city in one day, than in all the laboratories of the world during the same day. What are the antivivisectionists doing to stop it? What shall be thought of the motives of people who ignore all this and forbid Dr. Salmon to speak to them? The old superstition that persecuted "heretics," Galileos, and Quakers, is by no means dead.

**The Unknown Benefactor.**—It is extremely rare that a public speaker, and especially a politician, gives expression to a truth so little recognized as that alluded to by Governor Hastings at the memorial meeting in honor of Dr. Pepper, which was held in the Chapel of the University of Pennsylvania on November 29th.

"Perhaps the tendency of the age is lacking in appreciation of such work as he accomplished. It seems that official station is a prerequisite to distinction. A man who is prominent in political life may be heralded as a genius or a statesman, while the modest scholar or modest citizen may toil and give his life-work to accomplish something for humanity and his country, and leave behind him untold blessings, and himself sink into a forgotten grave. Let this not be the corollary to the accomplished problems in the life of William Pepper. Let those who live after him see that the fields he traversed, the burdens he bore, the star upon which his eye rested, the methods by which he worked out the triumphs of his life, bear their full fruit in the accomplishment of the purposes for which his life was spent."

The verity implied in these words is far truer than the speaker perhaps knew, and is pathetic and even tragic, yet deeply appreciated by those whose eyes pierce the masks of superficiality and hypocrisy which conceal the work of many "famous" men, of men who work only for those things in which success will bring personal renown or advantage. There are always plenty of men who will honor the institution which will give them or which has given them fame, money or power, the party that will give them office, the college or trustee that will dub them LL.D.; men will always be ready to help the popular desire, but manage in some way to secure personal good. There were institutions not represented at the memorial meeting, and which were stimulated, founded, or helped by Dr. Pepper, which are of as profound beneficence as any that were then bespoken. The pathos of social progress is often illustrated in the fact that to honor in words is by

no means to adopt and emulate the praised spirit of unflinching heroism and splendid unselfishness.

**The influence of trees** on climate, on precipitation, on atmospheric conditions generally, and so upon health, are questions not yet answered to the full satisfaction of those who would know. History or tradition tells of regions more humid, more fertile, or more salubrious before the adjacent forests were removed, but positive evidence is sadly lacking, because forests have not had time to grow since reliable observations began. In other words, we need examples of *reforestation*, from which to draw conclusions and formulate laws. The scientists of Europe are trying to settle the question, but, outside the reforesting work of Demontzey in France, little has been determined. The efforts of the latter to reclaim areas made waste by removal of the forests have been so far successful, that soil, once useless, is now valuable for agriculture, and some amelioration of atmospheric conditions in the vicinity is reported. An instance of the apparent result of what might be called accidental, rather than systematic, reforesting in this country has just been reported. On a large plantation in the Mississippi bluff-lands of Southern Louisiana, the freeing of the slaves caused a considerable area to be left uncultivated after the war, and the land grew up in trees—pine and oak, with other species intermixed. Since the trees have attained some size, the owner has noticed a decided increase in the precipitation, and states that fields near the woods, once too dry for corn, are now too wet for cotton. He is so convinced of the value to the soil of near-by woodlands, that he has planted numerous belts of trees over the plantation connecting with the larger body now about 35 years old. Of course, one should be slow to accept evidence of this sort as conclusive, yet, as it confirms the more scientific investigations along the same line, it is interesting. There appears to be no doubt that the influence of forests at least mitigates atmospheric and climatic extremes, and we may hope soon to have conclusive evidence of more positive and direct benefits.

**Suggestions to Writers, No. 16. Contagion and Infection.**—In connection with our discussion of the "contagiousness" of leprosy it seems not inopportune to make a plea for a more uniform and more intelligent use of the words "contagion" and "infection" and their derivatives. The *Century Dictionary* defines "infection" as:

"The communication of disease or of disease germs, whether by contact with a diseased person, or with a part of a diseased matter, contaminated clothing, etc., or by poisonous exhalations from any source."

The definition would be more in accord with present usage and modern notions if it read simply "the communication of disease through whatever means." The essential points are the transmission and the develop-

ment of the disease. The mere conveyance of germs is not infection, as their mere presence is not disease.

Contagion is thus defined by the *Century Dictionary*:

"Infectious contact or communication; specifically and commonly, the communication of a disease from one person or brute to another. A distinction between contagion and infection is sometimes adopted, the former being limited to the transmission of disease by actual contact of the diseased part with a healthy absorbent or abraded surface, and the latter to transmission through the atmosphere by floating germs or miasmata. There are, however, cases of transmission which do not fall under either of these divisions, and there are some which fall under both. In common use no precise discrimination of the two words is attempted."

Thus, it will be seen that the definition here suggested for infection comprehends also contagion. With none of the diseases with which either or both of the terms are associated need the transmission assume any particular form. As we have already stated, the essential points are transmissibility and generation of disease. Such difference as at present may be conceived to exist between the two words is of degree and not of kind. We may here point out that an intoxication differs from an infection essentially in the matter of transmissibility. The infection is transmissible because it is dependent upon a propagable cause; the intoxication is not transmissible for the opposite reason. There are, further, certain diseases that, while transmissible, are not in the present acceptation of the term infectious. Among these are the parasitic diseases of skin, intestine, muscle, etc. Let us, therefore, end the contention that has been waged as to the distinctions between the words "infection" and "contagion" and their derivatives, and agree for uniformity's sake in their synonymity, making their essential characteristic the transmissibility of the diseases in connection with which they are employed.

**An Answer to Critics of the Medical Department of the Army**, and an excellent one, is given by our esteemed contemporary, *The New York Medical Journal*, in its issue of December 3d. The essential difference as to preparedness in the Navy and in the Army is clearly appreciated; the Army was not a permanently organized system, so that when the strain came upon the unorganized mass ineffectiveness and blundering was the inevitable result. Green soldiers also, it is pointed out, succumb to disease in great numbers, and time to harden, and to train them, as also the officers of experience, were wanting. Our contemporary closes with these words:—

"We said from the first, and we repeat it more emphatically as fresh evidence comes to light, that the administrative part of the army medical department accomplished all that could have been accomplished under existing conditions. The only means of avoiding such another calamity, should a further war ever be forced upon us, lies in having all the necessary material available in time of peace, and all the officers likely to be required already fully trained in their executive and administrative duties. Men can, as we have seen, be quickly enlisted and comparatively rapidly knocked into shape. But officers require time to be educated, and material calls for time to be produced."



From another source, showing how unpreparedness may be met and conquered, comes a yet more convincing answer in the shape of a report by Dr. Francis R. Packard, First Lieutenant and Assistant Surgeon of the Second Pennsylvania Volunteer Infantry, published in the *Charlotte Medical Journal* November, 1898. "A Healthy Regiment, and the Reason it was so," is the title of the article in which it is shown that in this instance there was but one case of typhoid fever during the entire period of service, and this patient was delirious and moribund when brought to the hospital. There was no death except in this case and no other case of serious illness. The reasons for this most remarkable result are given and analyzed. Such a splendid history can only arise from the clear intelligence, foresight, and demands of the surgeons in charge, seconded by the thoroughgoing cooperation of every officer as regards the well-known laws of hygiene, camp-sanitation, cleanliness, and a discipline, that however harsh in appearance is in the end the most perfect kindness. Such surgeons and officers fortunately were in command of this regiment. Indiscipline, appointments for the sake of nepotism and political favoritism are not properly criticised by the *New York Medical Journal*, and Dr. Packard's article shows by implication that the evils in other cases might have been more efficiently met.

**Ovarian Organotherapy.**—Probably the first definite attempt in regular practice in modern times to apply animal tissues to the cure of disease was made, 1852, by Dr. Jackson, of Philadelphia, who used as a tonic the blood of bullocks dried in vacuo; but Pliny tells us that the ancient Greeks and Romans ate the testicles of the ass for the purpose of curing impotence. The use of glandular extracts was revived in 1889 by Brown-Sequard's advocacy of orchitic extract for impotence and several nervous affections, and the interest was profoundly stimulated by the results which Prof. George R. Murray, of the University of Durham, in 1891, obtained by the use of thyroid extract for the cure of myxedema. Since that time we have clinical reports of the use of various glandular products, such as cerebrine, medulline, adrenal and splenic extracts, etc., with varying results.

Prof. Werth, of Kiel, was the first who made use of ovarian organotherapy in the troubles which accompany the disappearance of the secretion of the ovary, following either the natural menopause or surgical intervention. If the conclusions reached by Curatulo are correct, this seems the rational method of treatment. Curatulo believes that the ovaries, like other glands of the animal economy, have, according to Brown-Sequard's general doctrine, a special internal secretion. These glands continually throw into the blood a peculiar product, the chemical composition of which is completely unknown, and the essential properties of which tend to

favor the oxidation of phosphorized organic substances, of carbohydrates and of fatty substances. Vogt states that medication by testicular juice is generally abandoned, but that the use of ovarian extract is gaining in favor. The splendid results obtained by Jayle in the treatment of the artificial and natural menopause, with those of Jacobs, who found that in 41 cases in which disagreeable symptoms followed the induced menopause 40 were relieved, certainly warrant a fair trial in these most annoying cases. Stouffs, of Nevelles, has reported instances of chloroanemia with amenorrhea, in which all symptoms of anemia disappeared, and menstruation returned with the use of oophorin. From various reliable clinical reports it has been found useful in the following diverse conditions: To combat the troubles of the menopause, to overcome sexual atony, and to relieve chlorosis; also in osteomalacia, and for such nervous maladies as hysteria, neurasthenia and exophthalmic goiter. As ovarian organotherapy is a mode of treatment without danger, and as physicians are often in despair what to do for the postoperative menopause, it commends itself for thorough trial.

It is interesting to note in this connection the experiments of Knauer. He has successfully transplanted the ovaries of rabbits to other localities remote from their normal place, such as in muscular tissue or in the peritoneum; and these ovaries are not only nourished but perform their functions, viz., to develop, mature and expel ovules. The possibilities of transplantation can only be determined by more extensive experimentation. Meanwhile the observation of Martin (*Brit. Med. Jour.*, September 17th) that there is physiologically no difference between a woman with half an ovary and a woman with two ovaries while there is a great difference between one with half an ovary and one with none, is a cogent argument in favor of permitting a fragment of ovarian tissue to remain in performing ovariectomy. This fragment is all that is necessary to preserve the full influence of the gland on the body.

**Chorea or Hysteria?**—The interesting case of so-called chorea of the larynx, reported in the *JOURNAL* for November 26th, by Dr. P. S. Donnellan, suggests an important question of diagnosis. The patient was a boy, aged 10 years, who developed, without apparent cause, a cough which consisted of a series of expiratory "barks" like those of a small dog. The cough was rhythmic in character, averaging about 30 to the minute, and was entirely involuntary and unaccompanied with dyspnea or expectoration. It ceased during sleep, and was not associated with any disease of the respiratory organs. It was, moreover, entirely expiratory; hence there was no true spasm interfering with inspiration. These symptoms, so accurately described by Dr. Donnellan, are so strictly in accord with those of the affection known as "hysterical cough" that there can be little doubt, we think, about their true nature. This

was further shown by the prompt recovery which followed treatment.

Hysterical cough has been made the subject of an elaborate thesis, published in 1874, by Lafon. According to this author it is a local affection, without spasm, asphyxia or expectoration, and without involvement of the respiratory function. It may be continuous, but usually it occurs in paroxysms. When it assumes the intermittent type the paroxysms are quite regular in their occurrence. They are preceded by a pricking sensation in the larynx, and the cough has always the same rhythm and timber. It ceases usually, but not always, during sleep. This symptom may be transformed into other forms of hysteria, or it may disappear spontaneously. Lafon taught, erroneously, that hysterical cough was seen only in young women—a prejudice concerning hysteria that can no longer be pardoned. He pointed out that the cough may be primary, as it was in Dr. Donnellan's case, *i. e.*, without other precedent or accompanying hysterical stigmata. Lasègue also published a complete monograph on hysterical cough as early as 1854. The affection has been generally recognized in Europe, and even to some extent in America, and its hysterical character is too pronounced to admit of doubt. The habit of describing it as a symptom of *chorea* seems to be general only among the laryngologists—but neurologists will doubtless agree that it has nothing of the true *chorea* about it, and that this misuse of the term "*chorea*" probably dates from the time when many of the more bizarre phenomena of hysteria were called "*chorea major*." This error was especially common in Germany.

Hysterical cough has also been called the "dog-cough," from its barking character. The French have even described a "*délire des aboyeurs*"; a kind of *barking mania*, which may be epidemic. In one village in Brittany this mania occurred at certain periods of the year in connection with some ceremonial at the shrine of a saint. It was evidently a form of epidemic hysteria.

Hysterical cough may be associated with herpes in the fauces, with aphonia, vomiting, and even sublingual ulcers. The affection has been cured with a great variety of drugs and other means—thus showing still more plainly its hysterical nature. Graves, of Dublin, had a protracted case in a young girl which gave rise to a fear that pulmonary tuberculosis was developing; but the patient was cured finally by an old woman with one dose of turpentine. In a hospital in Philadelphia, recently, such a case, in which there were also vomiting and tremor, was cured by suggestion.

Mulhall, of St. Louis, demonstrated the truly rhythmic character of hysterical cough by measuring the intervals between coughs. The patient coughed 15 times in a minute, or 900 times an hour, or, allowing 8 hours for sleep, 14,400 times a day. Mulhall measured the intervals and found an astonishing regularity.

Such a case is the terror of a household, and in a hospital is a genuine calamity. The monotonous and purposeless cough (like a *stage* cough, Mulhall called it) is exasperating to every one but the patient. The correct diagnosis is, of course, most important for cure.

**The Psychology of Religion.**—Dr. Edwin D. Starbuck, in a dissertation presented to Clark University for the degree of Doctor of Philosophy, has made a noteworthy contribution to the study of religious growth. His method is not less remarkable than his results. The former is in accordance with that adopted by the prevalent school of scientific psychology: it proceeds by a statistical and tabulated study of the phenomena of religious experience as related by the individuals themselves, and attains results that are capable of objective demonstration. The thesis is consequently a contribution not only to mental physiology but also to mental pathology in this most comprehensive field of human experience. Dr. Starbuck, himself, does not apparently realize the full force of his work in the domain of psychiatry, but it is especially to this aspect of it that we have been attracted.

The author demonstrates quite clearly that certain psychologic laws control the development of the religious instincts. Beginning in childhood he traces the influence of early training; then the awakening in adolescence of a capacity for independent thought; then a storm and stress period; then a period of reaction or of inquiry and doubt, and, finally, a period either of settled belief or skepticism. This is all done by a series of ingeniously arranged tables, which permit of a rapid survey of the field.

Religious experience, as a mere psychologic phenomenon, has many phases of hope and fear, doubt and belief, but the one phase that appears to us most vital from Dr. Starbuck's tables, is the subjective sense of personal unworthiness. It is at this point that the study becomes of special importance to the student of psychiatry. This phase of mental depression (for such it is) is commonly and characteristically named by theologian writers the sense of sin. We think that no one can read the author's paper and not realize that this mental phase is the most conspicuous.

From the standpoint of the psychiatrist this sense of debasement of the ego is fraught with great danger to the mental health in some persons, and from the theologian standpoint it would be more wisely controlled if recognized as usually due to a departure from strict mental hygiene. We should judge from Dr. Starbuck's paper that this sense of sin or degradation arises often—but not always—from errors in the sexual life, and this is in accord with the observations of psychiatrists. Failure to attain other ideals—especially in social progress and amatory relations—undoubtedly acts also to create in sensitive minds a morbid feeling of personal unworthiness. Physical defects and ill-health



may also act thus. It should never be forgotten, however, that this form of psychalgia, or mental pain, from whatever cause, is the fundamental lesion in perhaps the largest group of cases of mental alienation, *i. e.*, melancholia. The morbid fear of death and of the future life does not seem to be as active a cause of this mental state as is commonly supposed.

From the strictly medical standpoint, what we should like to suggest to the scientific psychologists would be a statistic and analytic study in a large number of ordinarily healthy persons of their experience at various periods of their lives of this painful alteration in the ego, which we call the sense of personal unworthiness. We would dissociate it entirely for this study from the religious or theologic instincts, and confine the inquiry merely to this particular mental phase. We are convinced that few persons escape this experience entirely at some period of their lives. Psychalgia may exist in an infinite variety of forms and in many degrees. It is an integral factor in psychic development and experience, and has played a large part in human history. It is with many the object of constant mental discipline—with some the initial phenomenon of degeneration. We suggest that it should be studied with reference especially to the sexual and amatory instincts, to ambition and social progress, and finally to the physical health. To regard it as a phase necessarily or merely of religious growth is, we are convinced, too narrow a view and one calculated to ignore most important aberrations in the development of human faculty.

**Editor and Reader, No. 6. Two Ideals in Medical Journalism.**—To give the results of the whole discussion into a sentence it may be said that all journals are more or less clearly divisible into two classes, the professional and the selfish. Certain journals are most clearly professional, *e. g.*, those publishing only scientific original articles, whilst others are as definitely the outcome of pure greed or pure vanity. Sometimes greed and vanity combine to produce astonishing and unique examples of teratology. There is, again, a somewhat numerous class in which the commercial motive of the publisher, or the selfishness of the editor, is pretty well concealed, but yet often enough slips into the open to put the classification beyond doubt. But there is one criterion that in doubtful cases decides the matter pretty sharply: What has been the policy of the journal in the past in the expenditure of its financial profits, and in the use of its power? Has it, like the *Lancet* and *British Medical Journal*, for example, established commissions for the extinction of professional evils, and the encouragement of professional reforms? Has it spent its money and exerted its influence in defending the members and the whole profession against unjust law-suits? Has it fought powerful quackery and, by speaking out, laid itself liable to legal prosecutions, whereby only professional crime can sometimes be conquered? Has it in any expensive or effective way striven to bring the profession into unity as a living organism, watchful and jealous of disease and injury to any part? Has it hired or stimulated men to oppose pernicious legislation and to get proper laws passed, or good laws executed? Has it done anything in these or a dozen other directions showing a greater interest in the pro-

fession than in itself, or has it spent its money in a hundred ways to advertise itself, its books, its editor, its circulation? Is the editor always getting himself interviewed and quoted in the daily papers? If so, beware of him! Has he given the greatest amount and the best quality of medical literature possible for the money, or has the journal kept its subscription-price high, the number of its pages low, and the quality of its literature cheap and of the sort easily obtainable? Have its publishers grown rich, and what have they done for the profession that has enriched them? Have its publishers stolen the books of foreign medical men and republished them without their consent, and without paying for the right? Have its publishers been generous with material and illustrations (given gratis to them by the profession) to other medical authors working for the good of professional literature and knowledge, or have they shown the spirit of the huckster and sharper in their dealings with physicians? In subscribing for a journal it is one's duty to ask a few such questions as these.

**Every Subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to aid us. In addition we trust you will write these friends a personal request to examine the sample copies we shall send.

**Fatal Pharyngeal Hemorrhage.**—G. E. Brewer (*Yale Medical Journal*, December, 1898) reports the case of a man, 25 years of age, who had had symptoms of peritonsillar phlegmon for over a week. Spontaneous rupture occurred and was followed by slight hemorrhage, which recurred on several occasions, at one time resulting in syncope. Because of its continuance a careful examination was thought necessary and on the posterior surface of the palate near the posterior pillar a small granulating surface covered with a clot was discovered. This was cleansed and sprayed with a solution of tannin and the patient was advised to remain quiet in a recumbent position. Hemorrhage recurred, however, and a gauze roll was drawn through the mouth into the pharynx and nose by means of a Bellocoq's cannula. A short time afterwards this was displaced by a violent attack of coughing, and bleeding recurred, resulting in a fatal exsanguination. [M.B.T.]

**Removal of a Needle from the Liver.**—G. A. Peters (*Canadian Practitioner*, November, 1898) reports the case of a boy, 11 months old, who seemed to suffer intense pain in the region over the right rectus muscle near the median line. A small red discolored point was found in this region. The abdominal cavity was opened and adhesions were found binding the liver to the abdominal wall. The needle, which was found buried in the liver, was easily removed. The wound was closed without drainage and healed by first intention. It is believed that the needle was sticking in the mother's bodice at the time it penetrated the abdominal wall. [M.B.T.]

**Gunshot-wound of the Abdomen with 13 Perforations.**—J. M. B. (New Orleans *Medical and Surgical Journal*, December, 1898) reports the case of a boy, 9 years old, who was shot by a 32-caliber bullet which entered one-half inch to the left of the anus and emerged an inch to the right of the umbilicus. Nine perforations of the small intestine, 1 of the rectum and 3 of the bladder were found on opening the abdomen. The wounds were closed by Lembert sutures, with the exception of one at the neck of the bladder and one in the rectum, which were inaccessible. A glass drainage-tube was inserted, through which urine escaped for several days. The patient was discharged well about a month after the injury. [M.B.T.]

**Bubonic Plague in Madagascar.**—The Secretary of State received a cable message November 30th from United States Consul Gibbs at Tamatave, Madagascar, saying that the bubonic plague had broken out at that place.

## Reviews.

**Text-book of Medical and Pharmaceutical Chemistry.** By ELIAS H. BARTLEY, B. S., M.D., Ph.G., Professor of Chemistry and Toxicology in Long Island College Hospital; Dean and Professor of Organic Chemistry in the Brooklyn College of Pharmacy, etc., etc. Fifth Edition, revised and enlarged. With 96 Illustrations. 8vo, pp. 738. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$3.00.

While he is the better physician who has a good all-round scientific equipment, there are certain departments collateral to medicine without a sound knowledge of which the practitioner is like a mariner at sea without a compass. How can the physiology of digestion and the nature and constitution of the tissues and structures of the body be understood, not to speak of their derangement and the administration of remedies for its correction, without a comprehension of the chemic principles that underlie these various conditions? The medical man need not, however, be an expert chemist; as he need not be an expert pharmacist; but the more thorough his knowledge of both chemistry and pharmacy, as well as of physics, the better exponent of his art will he be. For these reasons there is need for books on medical chemistry, and perhaps also for medical pharmacy and medical physics, if one may be permitted the specialization. The volume before us falls within these lines and fulfils a most useful purpose. The first edition appeared in 1885 and was prepared to occupy the field between the voluminous text-books devoted to chemistry in general and the smaller works, which did not contain as much as the ambitious student desired. The first part of the book deals with such fundamental facts in chemical physics as are necessary for a comprehension of the descriptive portions that follow, including a consideration of such subjects as matter, specific systems of weight, gravity, and measures, heat, light, electricity, solution, diffusion, dialysis and crystallography; the second with the elementary theories of chemistry, including a presentation of the subjects of notation, nomenclature and chemic reactions; the third part describes the natural history of the elements and their principal compounds; part four treats of such organic compounds as the physician is likely to have to do with; and part five of physiologic and clinical chemistry, the ferments, nutrition, foods and diet, digestion, milk, the urine. An appendix contains rules for the spelling and pronunciation of chemic terms, tables of weights and measures, of specific gravity, of solubilities and a glossary of unusual chemic terms. The index occupies 28 pages. The present edition bears evidence of judicious revision. The nomenclature and orthography of the U. S. Pharmacopoeia have been followed, although the rules formulated by the American Association for the Advancement of Science are quoted in the appendix. The book is sure to continue in the popularity it deserves.

**A Text-Book of Obstetrics.** By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania. With 653 Illustrations. Pp. 820. Philadelphia: W. B. Saunders, 1898. Price, Cloth \$5.00; Sheep or Half morocco, \$6.00.

The number of excellent textbooks on obstetrics is so great that any new book to merit and secure the attention of the profession must possess a high grade of excellence. Such merit is possessed by Dr. Hirst's book. Coming as it does from the pen of an author who has devoted himself exclusively to the practice and teaching of obstetrics and gynecic surgery, during the past twelve years, and who has served during this period as consulting obstetrician and gynecologist to 8 of the principal hospitals in Philadelphia, the work is preeminently a practical one, and will be valuable whether in the hands of a tyro in obstetrics, or in those of a veteran practitioner, who wishes to ascertain the latest and best in this line of work. Illustrations, which are indispensable in a work on obstetrics, are extensively employed, the majority of them being from original photographs and drawings. The

subject is considered under seven main divisions: I. Pregnancy; II, The Physiology and Management of Labor and the Puerperium; III, The Mechanism of Labor; IV, The Pathology of Labor; V, Pathology of the Puerperium; VI, Obstetric Operations; VII, The New-Born Infant. The important subject of puerperal sepsis is treated in a masterly manner, with due consideration of the value of antistreptococcic serum. We note with interest the author's unusual experience in the performance of Cesarean section and his preference for the Porro to the Sanger operation. It is his conviction that celiohysterectomy in a case requiring Cesarean section is the preferable operation, with a lower mortality and a greater freedom from complications, not only in the puerperium, but in the patient's future existence. Over thirty pages are devoted to the physiology, pathology, and diseases of the new-born infant. Schultze's method with mouth-to-mouth insufflation is considered the best method of treating asphyxia neonatorum, Sylvester's method being condemned because the muscles are too weak to inflate the chest of the new-born infant. The book admirably fulfils its purpose, "to serve as a guide to undergraduate students and to physicians in active practice." It is clear, lucid and concise, well printed, thoroughly illustrated, and has a good index. A textbook from the pen of one writer, when that writer is able to speak with authority, will always possess certain advantages over composite publications.

**Ophthalmic Surgery and Medicine.** A Manual, by WALTER H. H. JESSOP, M.A., M.B. Cantab., F. R. C. S. Eng. With 110 illustrations and 5 colored plates. Pp. 469. London: J. and A. Churchill, 1898.

Into the field so long monopolized by the handbooks of Nettleship and Swanzy comes a new candidate for favor, and too with a reasonable prospect of success, for the author has put forth a volume that bears evidence at every point of plebifying the known scientific facts and bringing them within the comprehension of the undergraduate for whom the book is written. It is no easy task to write clearly on ophthalmology for students, but by the aid of copious illustration this end is fairly accomplished in the volume before us. The description of different operations and of cataract operation in particular is very good. Naturally we do not agree with the author at every point as to etiology and treatment, but the main facts as stated are all of pretty general acceptance, and the insistence on the immediate and remote consequences of long uncorrected eye-strain is gratifying indeed, the more so as such a manual falls into the hands of the undergraduate in medicine, and it is only by educating the oncoming generation of physicians to the realization of this truth that the doctrine of prevention by refraction may meet with the wide acceptance it deserves. The volume is of handy size, well made, of fair paper and type, and capitally indexed. It should find a warm place in the hearts of many students as a safe guide to the known truth in ophthalmology.

**The Human Body.** A Text-book of Anatomy, Physiology and Hygiene with Practical Exercises. By A. NEWE L MARTIN, D. Sc., M.D., M.A., F.R.S., Formerly Professor of Physiology in the Johns Hopkins University. Fifth Edition. Revised by GEORGE WELLS FITZ, M.D., Assistant Professor of Physiology and Hygiene in Harvard University. Pp. 408. New York: Henry Holt & Co., 1898. Price, \$1.20.

This book is one of two or three from the almost innumerable briefer courses in physiology in which real, reliable, practical, scientific knowledge is presented in a form suited for younger students. In too many of the books of this class little attention is paid to accurate statement of the valuable facts with regard to the functions and care of the organs of our bodies, so long as the chapter on narcotics is made sufficiently prominent to secure the recommendation of school-committees. The general plan of the book is too well-known to need comment. Revision was much needed and Dr. Fitz's work has brought the book well up to date. The addition of the chapter on emergencies, additional experimental exercises and many illustrations have added decidedly to the value of a book already most admirable.



## Correspondence.

### FOREIGN BODIES IN THE EAR.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—*

SIR:—I beg to report two unusual cases of foreign bodies in the ear:

CASE I.—Miss L., an actress, was referred to me by a medical friend on September 6, 1895. She had been complaining of "buzzing" in the left ear for 3 months, which would be temporarily relieved by a slap on the head. She had had periodic attacks of this kind for some years. The ear first troubled her 11 years before, after having got a grain of wheat in it. She said that this was removed at the time, but that the recurrent attacks of tinnitus followed its removal. Six days before the patient came under my observation, my medical friend had removed a plug of cerumen from her left ear, and since she had suffered from severe pain, as well as tinnitus. As the tympanic membrane was congested and apparently bulging, inflammation of middle ear was suspected. By the following day, the pain had decreased markedly, but the bulging remained the same. I was now led to probe carefully the fundus, where posteriorly and inferiorly the naked probe came in contact with some gritty substance, gentle pressure upon which caused severe pain. Persistent syringing brought forth nothing. Gentle prying with a naked probe at several successive daily visits finally dislodged a grain of wheat, which had lodged in the fossa between the tympanic membrane and the floor of the meatus, and was covered with adherent epithelial scales. The removal of the grain of wheat, which had evidently been in the ear for eleven years, was followed by rapid recovery, and there has been no recurrence of any of the symptoms since.

CASE II.—Mr. S., a lieutenant in the Navy, came to me for some throat disorder. In the course of examination an excess of cerumen was detected in the right ear, removal of which, by syringing, brought out the anterior extremity and both wings of a good-sized roach. Mr. S. remembered that 14 months previously a roach had crawled into his ear while he was asleep. The ship's apothecary, after persistent efforts with an ear-spoon, removed a portion of the roach, and reported the ear clear. The greater portion of the insect, which remained behind, gave no trouble, and its existence was only discovered by chance after 14 months. I am aware that cases have been reported in which foreign bodies have remained in the ear for even 50 years without causing any inconvenience, but I would add the foregoing cases as an additional argument in favor of the now generally accepted precept: In the presence of recent foreign bodies in the ear a syringe is to be used, with hot water only; in the event of this failing the case should be referred to an expert.

Very truly yours,

GEO. C. STOUT.

Philadelphia, 34 South 18th Street.

### LABOR IN A PRIMIPARA WITH DOUBLE VAGINA.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—*

A SHORT time ago I was called to see Mrs. D., and found her in labor. On examination the breech presented, and as the os was dilated to a diameter of less than an inch, I assured the woman that it would take all day, or possibly longer, to deliver her of her baby. On my return, some hours

afterward, I found that there was practically no change in the condition of the parts, and I left her for the night. The next morning the pains were more active and the os and vagina were quite dilatable. On introducing my finger into the vagina I found it quite large, but on a second examination it appeared considerably contracted. This at once struck me as unusual, and I withdrew my finger and in a few minutes reintroduced it. Again it was large, and on attempting to dilate the cervix I discovered what I thought was a large anterior lip pressed to the right. While pressing this my finger slipped into a sort of pouch leading to the outlet of the vagina. I then made an ocular examination of the parts and found that within the labia majora I had a double hymen and a double vagina. On introducing my finger into the smaller canal I found a fair-sized vagina, and through it I could examine the cervix uteri. This at once explained what I thought was an ordinary vagina, large and spacious at one examination and just the reverse at the next. I now made a thorough investigation and found an almost complete double vagina, the septum extending up to within  $\frac{1}{2}$  inch of the os. While all this was going on I felt a foot, the left one, presenting at the now open os, and in a short time I had it in the larger vagina. The question of treatment then came up, and as the septum was attached to the anterior and posterior walls of the vagina, and as one foot was in one vagina, and there was a possibility, if the other foot came down, of its going into the other vagina, thus straddling the septum, I told the patient that the best plan would be to cut the septum and then I could deliver her with much more safety to herself and her baby. She refused to have this done and said she would take her chances. Labor was now progressing rapidly, and, fortunately, the buttock came in view and the other leg remained flexed on the body. I introduced my fingers and pressed the septum over to the right as much as possible, and in a few minutes the body was born, and, by pressure on the uterus, I soon had delivered a living baby.

On looking at the vaginal outlet I saw a large flap hanging over the perineum, which, happily, was not torn. Picking this tongue or flap up in my fingers I could stretch it about 3 inches, and found it was attached to the posterior vaginal wall. It was fully an inch wide and had a raw, bleeding anterior surface, where it had been torn from the anterior vaginal wall. Possibly the chin, as it escaped from the uterus, caught the upper part of the septum and thus made a clean dissection, as there was not a particle of it left on the anterior vaginal wall. I treated this flap antiseptically and replaced it in the vagina, turning the raw surface to the left, and advised having it removed in a few weeks. The woman made a prompt recovery and had no trouble while in bed. On getting up, however, this flap again protruded from the vagina, and though a source of discomfort, the patient declines to have it removed.

Respectfully,

CHAS. J. HOBAN, M.D.

1546 S. 15th Street, Philadelphia.

**School-Hygiene in Japan.**—An order has been promulgated by the Japanese Minister of Education to the effect that medical inspectors of schools, in addition to inspecting the schools at the commencement and the termination of the scholastic year, must also visit them once a month to inquire into their sanitary condition and remedy any defects noted.

## American News and Notes.

### PHILADELPHIA, PENNSYLVANIA, ETC.

**State Hospital for the Insane at Norristown, Pa.**—Dr. George M. Stiles, of Conshohocken, Pa., has been appointed by Governor Hastings a trustee of the hospital, to succeed the late John Jones.

**Diphtheria in New Jersey.**—An epidemic of diphtheria is reported to have broken out in the fifth ward of Camden, N. J., and another in Mount Royal, near Clarksboro, the latter necessitating the closing of the schools.

**Jewish Hospital, Philadelphia.**—Plans are being considered for the enlargement of the institution, not only by the erection of a new building, but also by adding several stories to those already in use. Active operations, however, will not be commenced until spring.

**Obituary.**—DR. A. GRAHAM REED, a native of Lowville, N. Y., a graduate of the medical department of the University of Pennsylvania, class of 1861, a surgeon in the Union Army, and since the war a practitioner of medicine in Philadelphia, of pneumonia, December 4th, aged 61 years.

**The Samaritan Hospital,** of Philadelphia, has acquired title to a handsome mansion adjoining the present hospital-building. Extensive interior alterations will be made to the structure, after which it will be used for dormitories, nurses' library, reception-rooms, physicians' quarters, and kitchen and dining-rooms, while the present building will be devoted exclusively to hospital-purposes proper.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending December 17, 1898:

Monday, December 12—College of Physicians—Section on General Medicine.

Tuesday, December 13—Pediatric Society.

Wednesday, December 14—County Medical Society.

Thursday, December 15—College of Physicians—Section on Gynecology.

**The Association of Ex-Resident and Resident Physicians of the Philadelphia Hospital** held its twelfth annual dinner at the University Club on December 6th, with an attendance of some 70 members. Letters were read from Dr. Alfred Stillé, the president, and from Dr. J. H. Jamar, and toasts were responded to by Dr. Wm. Osler (by invitation), Theodore Diller, J. Wm. White, H. C. Wood, Alfred Stengel, C. S. Potts, Jos. T. Buxton, and Richard C. Norris. The function of toastmaster was ably performed by the Chairman of the Committee of Arrangements, Dr. J. Chalmers Da Costa.

**Water-supply of Reading, Pa.**—At a meeting of the Reading Medical Association, held November 28th, the subject for discussion was the water-supply of the city. The subject was presented under the following heads: (1) A systematic plan for flushing the city-mains so as to keep the pipes free from precipitation; (2) the raising of the inlets to the mains, so as to take in the water 15 or 20 feet from the bottom of the storage-reservoir; (3) the plan that the water-board should procure some good household-filters in quantities and sell them to the consumers at cost; (4) a serviceable plan for the filtration of the total supply. The water-board proposed some time ago to create a loan for the erection of several plants for slow filtration, but this proposition was defeated at the last election.

**To View the Dead Before Granting Certificates of Death.**—A project is being discussed to introduce into the next Legislature a bill making it a necessity for physicians to view all dead persons before they grant a certificate of death. The object of those furthering the project is not only to prevent the burial alive of persons supposedly dead, but also to prevent the perpetration of frauds upon insurance-companies.

**Clinical Instruction in Infectious Diseases.**—In response to requests from the University of Pennsylvania and the Woman's Medical College that advanced students be granted the privilege of visiting the Municipal Hospital of Philadelphia and receiving clinical instruction in infectious diseases, the following resolution was, at a meeting of the Board of Health, held December 6th, introduced by the Sanitary Committee, to whom the matter had been referred:

"Resolved, That the physician in charge of the Municipal Hospital be authorized to give instruction to ward classes in said hospital under such regulations as he may formulate, and which shall be approved by the Director of Public Safety and the Sanitary Committee of the Board of Health, provided that such instruction may be discontinued at any time by order of the Director of Public Safety or the Board of Health."

**Pollution of the Schuylkill River.**—Of the various communications sent out by the State Board of Health to persons and corporations detected during the recent investigation of polluting the Schuylkill River, fifty replies have been received by the Health-Officer, Dr. Benjamin Lee. Eleven of those acknowledging the communications have promised compliance with the recommendations of the Board; the remainder have either given evasive answers or have signified their intention of antagonizing, if necessary, the Board in the courts. Of the latter, twenty-two have claimed that they were not creating nuisances. Two state that they are creating no greater nuisance than their neighbors. Five are reported by the Inspector of Bucks County as not committing a nuisance. Two replies are to the effect that the borough has given them authority to drain into a sewer connecting with the river. Two ask for information as to the nature of their pollution. Five establishments are closed. One company agrees to abate nuisances when a general movement is made to this end. It is now proposed to institute suits in the courts against the offenders to compel abatement of the nuisances.

**Vital Statistics of Philadelphia,** for the week ending December 3, 1898:

Total mortality.....	399	
Children under 5 years.....	118	
Diseases.....	Cases.	Deaths.
Diphtheria 35, membranous croup 9	122	44
Pneumonia.....		41
Apoplexy 20, inflammation of the brain 11, paralysis 5, softening of the brain 3.....		39
Pulmonary tuberculosis.....		38
Marasmus 17, inanition 11.....		28
Heart-disease 18, inflammation of the heart 4, fatty degeneration of the heart 3.....		25
Nephritis 18, uremia 7.....		25
Senility.....		20
Bronchitis.....		16
Convulsions.....		15
Gastroenteritis 9, cholera infantum 4.....		13
Carcinoma.....		12
Typhoid fever.....	106	10
Casualties.....		10
Peritonitis.....		10
Scarlet fever.....	28	2
Smallpox.....	2	0



**Association of Western New York and Pennsylvania Railroad Surgeons.**—At a meeting held in Titusville, Pa., November 10, the following officers were elected: President, Dr. C. W. Coulter, of Oil City, Pa.; vice-president, Dr. G. E. Ellis, of Dunkirk; secretary and treasurer, Dr. O. M. Dooley, of Buffalo. The next meeting will be held in Dunkirk during October, 1899.

**Scranton (Pa.) Physicians Swindled.**—The newspapers give accounts of a man who claimed to be an agent of an insurance-company of Boston, having visited Scranton, Pa., and, as a result of interviews with about a dozen physicians, induced them to accept temporary appointments as medical examiners for the company, until such time as regular appointments could be forwarded. He then secured their applications for policies, and accepted cash, checks, or notes in payment for the premiums. He cashed the checks at once, had the notes discounted, and immediately left the city, with an unpaid hotel-bill. The man has not since been seen or heard of, nor have the appointments materialized.

**To Prevent the Spread of Diphtheria.**—Imbued with the idea of preventing the spread of diphtheria among the children attending the public schools, Dr. Charles S. Means, common councilman from the 3d ward, recently introduced into Councils the following:

"An Ordinance to compel children attending public schools within the county of Philadelphia to be immunized with antitoxin for the prevention of diphtheria.

"Section 1. The Select and Common Councils of the City of Philadelphia do ordain, that on and after September 1, 1899, all children in attendance at the public schools within the county of Philadelphia shall be immunized by injection with antitoxin to prevent the contraction and spread of diphtheria.

"Section 2. The Director of the Department of Public Safety is directed to instruct the Medical Inspectors of the Bureau of Health to carry out the provisions of the first section of this ordinance."

**Inspection of Meat in Philadelphia.**—At a recent meeting of the Woman's Health Protective Association, Dr. W. Horace Hoskins delivered an address upon the inspection of meat as at present carried out in this city. He said there is practically no system of meat-inspection, and that little has ever been done to improve what little system there is. Philadelphia has about 100 private slaughter-houses, and only 3 men are employed to inspect the meat that comes from them. There is no protection, whatever, against the slaughter and sale of diseased meat. The dressed meat that is brought here from the West, is far safer to eat than that of the East, because the Western States, in conjunction with the Federal Government, spend hundreds of thousands of dollars each year for the inspection of animals before and after they are slaughtered. It is a notorious fact that this city is the dumping-ground for all the worn-out cows for a radius of 50 miles. When a cow or other animal is of no further use to a farmer he sells it to some one for consumption in Philadelphia. It is a well established fact, that from 10 to 15% of this class of animals are tuberculous. Dr. Hoskins advocated a rigid system of meat-inspection, and insisted that if this were established, it would not, as those opposed to the plan assert, necessarily lead to the abolition of the numerous small slaughter-houses, nor appreciably increase the price of meat.

**The Late William Pepper.**—At a stated meeting of the Faculty of Medicine of the University of Pennsylvania, held October 17, 1898, the following minute on the death of PROF. WILLIAM PEPPER was presented by Prof. James Tyson, and adopted:

The Faculty of Medicine, desiring to record its realization of the calamity which has befallen the Medical School, in common with other institutions and the community, in the death of its late member and former Provost, Dr. Pepper, feels that its object can be best

accomplished by selecting for mention from among the many undertakings of his life, those which are, to a degree, the measure of his loss, some of those which especially pertain to the department with which he was most closely associated.

First in importance was the conception and completion of the hospital of the University. This undertaking, initiated by a communication from the Society of the Alumni to the Trustees of the University, in 1871, and involving the securing from the city, at a nominal cost, a tract of land worth at least \$200,000, an appropriation of \$100,000, and again \$100,000 from the State, in addition to the raising by subscription of \$350,000 for endowment, was completed in its first stage by appropriate ceremonies of inauguration held at the hospital, June 1, 1874. Success in this project was due, in part, to the Gibson Wing, rendered possible by the generosity of the late Henry C. Gibson, incited by the persuasion of Dr. Pepper, whose efforts also secured a liberal endowment for the same; the Maternity Hospital and Agnew Pavilion, in behalf of the latter of which he again successfully invoked the aid of the State, while his own purse completed the conditions that made it possible. Next may be mentioned the part he took in securing the prolongation of the medical course from two to three years, consummated in 1877, and inaugurated by his notable address, delivered October 1, 1877, and entitled, "Higher Medical Education the True Interest of the Public and the Profession." Closely followed by the foundation of the Dental Department, in 1879, and the construction and furnishing, at a cost of \$90,000, of the Laboratory Building, in which were accommodated the laboratories of Chemistry and Dentistry and the Dissecting-room, the Veterinary Department, in 1884, sufficiently allied with the Medical School to be mentioned in the same connection; also the Biological School, in 1884, and the course preparatory to medicine in the College Department.

The Laboratory of Hygiene was conceived by him, and though rendered possible by the munificence of Mr. Henry C. Lea, his influence with Mr. Lea was an important factor in securing it, while the conditions of the latter's gift involved the raising of \$200,000 for endowment collected through the efforts of Dr. Pepper. It was completed in 1891. Close on this followed the prolongation of the course in medicine from three years to four, and the magnificent gift of \$50,000 to secure its consummation. These acts, more particularly associated with the Medical Department, culminated, in 1895, with the erection and partial endowment of the William Pepper Laboratory of Clinical Medicine, as a memorial to his father, William Pepper. To these events must be added the duties so successfully performed of Lecturer on Morbid Anatomy, from 1868 to 1870; Lecturer on Clinical Medicine, from 1870 to 1876; Professor of Clinical Medicine, from 1876 to 1884; Provost of the University, from 1881 to 1894; Professor of Theory and Practice of Medicine and of Clinical Medicine, from 1884 to the date of his death, on July 28, 1898.

Believing, as the members of this Faculty do, that the position of the Medical School to-day, in the front rank of similar institutions, is largely the result of his acts, they desire also to record this conviction, together with an expression of their grief at his untimely death, and of grateful recollection of his sagacious counsel and hopeful perseverance in behalf of their personal interests, as well as of those of the Medical School.

**Obstetrical Society of Philadelphia.**—At a regular meeting held December 18th, Dr. J. M. BALDY reported the successful removal of an enormous multilocular ovarian cyst from a little girl, aged 10½ years. A diagnosis of ascites had been made and the case was considered incurable. The patient was much shocked by the operation, as the tumor was densely adherent. After the first few hours convalescence was uninterrupted.

DR. L. C. PETER reported a case in which the product of conception had been retained in the uterus for about 5 years. The patient was a multipara, aged 30 years, with a history of missed abortion. Later, prior to curetment, particles of bone, fetal structures, and calcareous materials were removed from the uterus. Ordinarily the uterus expels the product of conception at, after or before the end of normal gestation, but a dead, mummified fetus, or even a decomposing mass, may in some cases be indefinitely retained. The causes of this retention may be (1) mechanical obstruction, as in case of contracted pelvis or fibroid tumors of the uterus; (2) adherent placenta; (3) loss of irritability of the reflex center for uterine contraction.

DR. THOMAS S. CULLEN discussed the subject of endometritis from the pathologic standpoint, giving the results of 5 years' work and study at the Johns Hopkins Hospital. In 1,800 cases examined pathologically, endometritis was found in only 49. The appearance of the endometrium varies in



the child, in the adult, and in old age. Certain changes occur during menstruation and pregnancy; yet all are normal. In the study of this condition the change in surface-epithelium, the glandular structure, and the stroma should be noted. The best classification is into acute and chronic. Glandular endometritis may be eliminated, and the polypoid form is rarely found. The etiology of endometritis is, in the majority of instances, gonorrheal or puerperal. Normal endometrium is often found when pyosalpinx is present. Pain, leukorrhea, and sanguinolent discharges are often present, but clinically there is no reliable or definite symptom upon which to base a diagnosis; the latter being possible only by microscopic investigation. All suspicious cases near the menopause should be curetted and the scrapings examined. The great value of this examination resides in the determination of malignancy, if present. Constitutional disturbances often produce profuse leukorrhea when endometritis is not present. The treatment consists in dilatation, curetment, drainage, and hot douches. Often the "let-alone" policy, locally, is the best. The subject was discussed from the pathologic standpoint by Drs. McFARLAND and WILLIAMS, and from the clinical point by Drs. MONTGOMERY, BALDY and NOBLE.

**Philadelphia Neurological Society.**—At a meeting held November 28th, Dr. F. X. DERCUM presented a specimen of **tumor pressing upon the medulla oblongata**. The patient, a woman, 26 years old, had been shown at a previous meeting, and presented stiffness of the neck, ataxia of the arms, greater on the right, and loss of stereognostic sense in the right hand. In the discussion, Dr. W. G. SPILLER suggested that the loss might have been caused by pressure upon the direct cerebellar tract. He knew of no other case in which it had not been produced by lesion of the parietal globe.

H. C. WOOD reported 3 cases of **atypical nervous disease** occurring in two brothers and a sister. The first patient, whose case was described by letter, was a man who had suffered at long intervals from several attacks of short duration, pain in the legs, with some impairment of motility. The second patient was a brother, whose case had commenced with severe pains in the left side. Subsequently there was loss of power on the same side, with atrophy of the muscles, disappearance of the reflexes, and the development of a typical arthropathy at the knee-joint. The third patient was a sister who had suffered with pains in the right arm and hand, then in the right foot, and then in the left arm and hand. Subsequently, there was some loss of power on the right side, and the movements of the limbs of this side were rather awkward and stiff. The reflexes were exaggerated, but there was atrophy of the muscles of the right hand. Although not insisting that all three cases represented the same disease, Dr. WOOD called attention to certain similar features; notably the fact that all commenced with severe pain in one or other parts of the body, followed subsequently by loss of power, but the remarkable fact being that all three cases occurred in the same family. In the last case he made a provisional diagnosis of myotrophic lateral sclerosis combined with involvement of the posterior columns. In the discussion, Dr. C. K. MILLS argued that all 3 cases were probably of different nature; their occurrence in the same family being accidental. Dr. W. M. G. SPILLER suggested that the second patient suffered from some disturbance of the peripheral neurons, on account of the presence of both motor and sensory symptoms. In conclusion, Dr. WOOD called attention to the fact that in all three cases pain existed without tenderness.

Dr. JOHN K. MITCHELL presented a young man who suffered from **periodic family paralysis**. The attacks had commenced at the age of 13 years, had recurred at first at intervals of about 3 months, gradually increasing in frequency until at present the patient has 3 or 4 attacks per month. He is one of 6 children, all the others being healthy. His mother, his mother's father, and a cousin of the latter, appear to have suffered from the same disease, although in a milder form. The mother at present has some loss of power in the legs, while the knee-jerks are slow and diminished in force. She does not walk easily, and is prone to fall at night. The attacks of the patient usually come with a premonitory feeling of weakness, followed the next morning by complete paralysis of all the limbs. The reflexes are absent, the reaction of the muscles to faradic stimulation through the skin is absent, although when acupuncture needles are employed, and the muscles are stimulated directly, the response is apparently stronger than normal. The respiratory muscles are not involved, and the pupillary reflexes remain normal. During the attack a systolic murmur is audible in varying degree and situation, disappearing during the interval. The toxicity of the blood appears increased, but the urine, however, exhibits no abnormality.

Dr. E. LINDON MELLUS, of Baltimore, read a paper, illustrated by lantern slides, upon **secondary degeneration in the pyramidal tracts of monkeys**. The technic employed was to remove a small portion of the cortex, first determining the part of the body it innervated by means of direct electric stimulation, and killing the animal at the end of 2 months. Sections were made through the brain and cord, and stained by Marchi's method.

Dr. W. M. G. SPILLER described a **hitherto unrecognized tract of the central nervous system in man**, which he had observed in the study of a brain the seat of a hemorrhage situated in the upper part of the lenticular nucleus, and the external and internal capsules. At about the level of the exit of the fifth nerve from the pons, a bundle of degenerated fibers could be seen leaving the lateral portion of the pyramidal tract and passing backward on the same side. At the junction of the pons and the medulla oblongata, this bundle had taken a position lateral to the upper part of the lower olive, and as the olive increased in size the tract of the degenerated fibers assumed a position lateral and posterior to it on the periphery of the medulla oblongata. This tract was traced as far as the first cervical segment.

## NEW YORK.

**New York School of Clinical Medicine.**—Dr. Carl Beck has resigned his professorship in surgery.

**Dr. Newton M. Shaffer** has resigned as Surgeon in Chief of the New York Orthopedic Dispensary and Hospital.

**St. Vincent's Hospital, New York.**—Dr. Herman Biggs has been appointed visiting physician in succession to the late Dr. Joseph O'Dwyer.

**Explosion on the "Bay State."**—By the explosion, on December 6, 1898, of a tank of ammonia on the hospital-ship *Bay State*, at a wharf in Brooklyn, two men were killed and six others seriously injured.

**The O'Dwyer Scholarship, College of Physicians and Surgeons.**—At a recent meeting of the trustees of Columbia University, it was determined to establish the "O'Dwyer Scholarship" in memory of the late Dr. Joseph O'Dwyer.



**"Christian Science" and its fellow, Osteopathy,** are beginning to show themselves in Buffalo, N. Y. We are informed that the physicians of that otherwise blessed community are, like those of other localities, too chivalric to endeavor to drive the disciples of those fads hence.

**University of Buffalo.**—At a recent meeting of the faculty of the Medical Department, Dr. Eli H. Long was appointed professor of therapeutics and materia medica, thereby relieving Dr. Charles Cary of a portion of his work. Dr. Cary still retains the chair of therapeutics and clinical medicine.

**The Abram Jacobi Ward for Children at the Roosevelt Hospital.**—At the meeting of the trustees of the Columbia University, on December 5th, Secretary John B. Pine announced a gift of \$50,000 from an anonymous donor for the endowment of a children's ward in Roosevelt Hospital, to be known as "The Abram Jacobi Ward for Children." It is to be used for the purpose of clinical instruction for the students in the College of Physicians and Surgeons, and the trustees of Columbia are to have the right to nominate the persons giving instruction in this ward.

**Buffalo Academy of Medicine.**—Section on Pathology.—At a recent meeting, Dr. C. D. Aaron, of Detroit, Mich., read a paper on carcinoma of the intestine and presented an illustrative specimen. Drs. Allen Jones and C. G. Stockton also presented a specimen of carcinoma of the intestine. Dr. Stockton read a paper on vertigo, giving a comprehensive skeleton review of the literature, and calling attention to, and emphasizing the necessity of, having the eyes carefully examined, and treated if need be, in cases of obscure etiology. He reported several cases of pronounced vertigo, in which the degree of ocular abnormality was considered too trivial to cause the marked symptoms, and in which appropriate treatment of the eyes had permanently relieved the distressing manifestations.

**School-Board Physicians.**—The New York Board of Education recently decided upon the appointment of physicians who are to examine applicants for teachers' certificates as to their physical condition. The fee for each examination is not to exceed \$3, and is to be paid by the Board and not by the applicants as heretofore. The following is the list of appointees:

For Manhattan and Bronx—Drs. Samuel M. Brickner, A. M. Jacobus, Vanderpoel Adriance, Alexander Lambert, P. J. Lynch, Matthias Nicoll, Jr., J. R. Tillinghast, Nathan B. Van Eten, Josephine Walker, W. Gill Wylie. For Brooklyn—Drs. D. G. Bodkin, Fred E. Hamlin, Frank R. Newman, J. H. Raymond, W. S. Searle. For Queens—Drs. W. J. Burnett and J. C. Wharton. For Richmond—Drs. William Bryan and George P. Jessup.

**By the will of the late David T. Leahy,** recently filed for probate in New York, the following bequests to charitable and educational institutions are devised: To the Catholic University in Washington, \$10,000; to St. Mary's Hospital, Brooklyn, \$10,000; to the Little Sisters of the Poor, Brooklyn, \$10,000; to St. Vincent de Paul Society, Brooklyn, \$10,000; to St. Mary's Maternity Hospital, Brooklyn, \$10,000; to St. Joseph's Home for Destitute Girls, Brooklyn, \$7,500; to the Newsboys' Home, Brooklyn, \$5,000; to the Convent of Mercy, Brooklyn, \$1,500; to Visitation Academy, \$2,500; to the Rev. Nelson H. Baker, Superintendent of the Home for Destitute Children, West Seneca, N. Y., \$2,500; to St. John's Guild, Manhattan, \$5,000; to the Home for Consumptives, Brooklyn, \$5,000; and to the Bureau of Charities, Brooklyn, \$5,000.

**The Manhattan Eye and Ear Dispensary** treated during the past year 19,435 patients, who made 88,485 visits to the dispensary. In the eye-department 12,995 were treated, in the ear-department 3,366, in the throat-department 3,073; and in the wards 1,425, who received 17,863 days' board, of which 6,836 were free; 2,632 children were treated at the clinics. Treatment was refused to 1,579 patients, as they acknowledged their ability to pay for medical advice. More than 27,000 prescriptions were dispensed during the year. Since the founding of the hospital in 1869, 257,420 patients have been treated. The total expenses for the year were \$32,519.57, including payment for completion of the annex.

**The New York Lying-In Hospital.**—According to the one hundredth annual report of the Society of the Lying-in Hospital, just issued, among the 51,117 births reported by the Board of Health for the year ending October 1, 1898, in the Borough of Manhattan, 23,892 mothers were dependent on the care of midwives, and only 27,225 were treated by physicians. These include all charity-patients, and of the whole number more than 9% were cared for and nursed by the Society of the Lying-in Hospital. Of the 3,744 patients attended, 2,216 were treated in tenements and 379 in the wards of the hospital. During the year instruction was given to 245 students, 32 physicians, and 54 nurses. The expenses of the institution were \$27,541.06. A new hospital, offered by J. Pierpont Morgan, is shortly to be erected.

**The Biochemistry of the Bacillus Tuberculosis.**—At the last meeting of the New York Pathological Society, Dr. P. A. LEVENE presented an interesting preliminary communication on this subject. The object of the work was to study the chemic nature of the body-substance of the tubercle-bacillus with regard to the toxic effect of the different constituents. Only the first part of this research had yet been completed. The tubercle-bacilli were raised on proteid-free media, and the growths were then transferred directly from the flask on a suction funnel and repeatedly worked with small quantities of water. They were next dried *in vacuo* over sulphuric acid, and ground in a mill for two or three days. The resulting powder was then extracted with an 8% solution of ammonium chlorid. This extract proved to contain three proteids, whose coagulation-points were respectively 60–64° C., 70–72° C. and 94–95° C. The first two, like globulins, could be precipitated by magnesium sulphate, and the third acted like albumin, being precipitated only by ammonium sulphate. On further investigation, however, the proteids of the first fraction, as well as those of the second, proved to contain phosphorus, thus showing their nucleoproteid nature. The residue of the ammonium-chlorid extract, on digestion with pepsin and hydrochloric acid, and extraction with weak alkali, yielded a nuclein. A sample of tuberculoplasm, prepared after Buchner, had also been investigated, and had proved to contain only the first proteid. Dr. Levene directed special attention to the coincidence of the coagulation-point of the first proteid and of the sterilization-point of the tubercle-bacillus.

**New York County Medical Society.**—At a meeting held November 28th, the inaugural address of the president, Dr. S. O. VANDER POEL, dealt with the **medical aspect of life-insurance.** It was explained that the reason why life-insurance companies cannot safely insure persons having slight albuminuria, cardiac disease, or the like, and who seemed, to the general practitioner, in every other respect good risks, is that all the actuarial calculations had been based only on selected lives, and there is not at hand the necessary

experience regarding large groups of such "substandard lives." During the past six years DR. OSCAR H. ROGERS has been busily engaged in collecting such data for one of the large companies in New York City, so that it was hoped that it would soon be possible to extend the benefits of life-insurance to this large class of persons.

DR. WILLIAM H. THOMSON read a paper on **Cuban Malarial Fever**, in which he described his experience at the Roosevelt Hospital with 100 of the returned soldiers who had been infected with this fever at Santiago. Of this number, 63 were actively febrile, and of these febrile cases, 40% had chills, but only 10% had true intermissions. The malarial plasmodium was found in 90% of all the cases, the commonest form being the crescentic. In by far the larger number of the febrile cases the usual delirium was replaced by a peculiar taciturnity. The most striking features were marked anæmia and severe prostration. Of the 100 cases, 65 were treated with large doses of quinin, arsenic or Warburg's tincture, but the general results were far from satisfactory. The quinin acted most efficiently in cases marked by distinct periodic remissions, and Warburg's tincture was still more efficacious, but arsenic was of doubtful benefit. Cold baths were used in only 6 cases, as they were not well borne and failed to control the fever. A group of 47 of the febrile cases was treated by administering, twice daily, 15 grains each of quinin and powdered ginger, and half an ounce of paregoric, and 14 other febrile cases were treated with Warburg's tincture as a control. In 22, or 47% of the first group, the temperature permanently fell to the normal within 24 hours, and, after continuing the treatment for 10 days or two weeks, the patients were discharged. In 10 cases, or 21%, the temperature did not reach the normal for 36 or 48 hours; and in 5 cases, or 10.6%, the treatment had to be stopped on account of nausea; in 3 the treatment failed to control the fever. Six of the cases turned out eventually to have typhoid as well as malarial fever. Only 2 of the patients receiving the paregoric treatment exhibited the usual effect of opium; the others were, on the contrary, aroused from their lethargy. Of the 14 cases receiving Warburg's tincture, in 2 the temperature reached the normal in 24 hours; in 12 the fever was not controlled for periods varying from 48 hours to 10 days. All of these cases recovered in about 24 hours after the paregoric treatment had been instituted. In the 39 afebrile cases the paregoric treatment yielded as good results as in the febrile group. Sir William Roberts claims that the antimalarial properties of opium reside in an alkaloid commonly called narcotin, but which he says is better described as "anarcotin." Dr. Thomson added that in the cases just reported the opiate had acted the reverse of a narcotic—rather as a general cardiac and nervous stimulant. Twelve of the typhoid-fever patients had been treated by artificial Nauheim baths, and it had been noted, by comparison with 12 other patients, used as a control, that this form of bath kept the temperature reduced for a much longer time than did the simple cold bath. Nine cases were treated by daily lavage of the intestine with saline solution, with the result that the quantity of urine was increased and the symptoms generally improved.

**New York Academy of Medicine: Section in Orthopedic Surgery.**—At a meeting held November 18th, DR. W. R. TOWNSEND read a paper entitled **The Prevention of Deformity after Excision of the Knee in Children**. He reported the histories of 8 cases seen within the past 2 years, in which excision had been performed in early life. All of these cases presented some shortening and

flexion-deformity. Two showed bow-leg deformity and one knock-knee. Two had motion and six were firm. He quoted various views to show that the operation was indicated only in exceptional cases. He showed the necessity of long-continued after-treatment, either by plaster-of-Paris or some form of brace if deformity is to be prevented, for many cases of apparent bony union begin to present deformity months after the operation, and in some it rapidly increases. The different methods of correcting the deformities were referred to, and forcible correction under an anæsthetic was advised only in those cases in which by slight pressure the flexion-deformity could be overcome. In several cases osteotomy or another excision was advised. Braces and operative procedures were advocated for the bow-leg and knock-knee deformities. DR. R. WHITMAN added foot-drop, from division of the external popliteal nerve, as a possible disability following excision of the knee. DR. R. H. SAYRE said that operative surgeons are too prone to think that supervision of a case may cease with healing of the wound, whereas they will learn, if they followed their results for several years, that relapses are frequent in cases that are not protected for long periods of time after operation. This is especially true, not only of excision, but also of club-foot and various rachitic deformities. DR. A. B. JUDSON said that these deformities are simple in kind: lateral bending, which caused knock-knee or bow-leg, and antero-posterior bending, producing flexion or hyperextension. The mechanical treatment also is simple, consisting of the application of pressure and counterpressure in such directions as to oppose the deformity laterally. DR. V. P. GIBNEY said that if the case were desperate enough to demand excision, amputation would be the preferable operation. DR. TOWNSEND said that if the patient referred to were a man instead of a boy he would advocate amputation.

DR. TOWNSEND also read a paper on **Elongation of the Femur following Necrosis**, and presented a man 55 years of age, a laborer by occupation, whose right femur was 2½ inches longer than his left. He walked with scarcely any limp, and wore a shoe raised 1½ inches. The history he gave was that he was perfectly well until the age of 12, when, from some unknown cause, a swelling occurred on the lower and inner side of the thigh, and when it broke, some pieces of dead bone came away, and pieces continued to come away for nearly a year. Up to the time of this swelling the two limbs had been of equal length. The lengthening began to be noticed about the age of 13, and had reached its maximum when the man became of age. The knee-joint had always been freely movable and is now perfectly so. The necrosis affecting the lower end of the femur evidently had produced an irritation and increased growth of the cartilage and bone at the junction of the lower epiphysis with the shaft. Lengthening from this cause had been noted in osteitis, but this is the greatest amount Dr. Townsend has ever seen. The circumference of the thighs and legs is the same, and there is a small, depressed white cicatrix above the inner condyle. DR. SAYRE said that the suggestion had been made, that after excision of the knee the epiphysis of the opposite leg be scratched in order to prevent it from outstripping the affected limb in growth. The effect of irritation of the epiphysis in the patient exhibited would, however, indicate that artificial irritation may cause increased instead of diminished growth. Dr. Sayre recalled a case in which osteitis affecting the hip had caused increase in the length of the limb, but not so much as in Dr. Townsend's patient. DR. GIBNEY said that Dr. James Berry, of Portsmouth, N. H.,



had analyzed a large number of cases of osteitis of the knee-joint, and in all of them there had been elongation. DR. WHITMAN recalled a case similar to that of Dr. Townsend. A man was admitted to hospital for fracture of the femur, which was found to be  $1\frac{1}{2}$  inches longer than its fellow. There were several sinuses of indefinite duration. The thigh was amputated because of failure in repair. At the point of fracture the bone was hypertrophied and eburnated, which accounted for the non-union. The lengthening had been due to constant irritation of a fragment of necrosed bone. The most common cause of elongation of bone is specific disease.

DR. WHITMAN exhibited a boy, 17 years old, affected with typical left **coxa vara** of  $2\frac{1}{2}$  years' duration. A perineal crutch, after being in use for about 8 months, was discarded 9 months ago. There had been no other treatment. The trochanter was above Nélaton's line and displaced forward, causing a noticeable change in its contour. The leg was adducted and rotated outward and a moderate degree of compensatory knock-knee was present. Flexion of the thigh was checked at  $120^\circ$ , but extension was greater than normal. These appearances and changes indicated that the neck of the femur was depressed beyond a right angle with the shaft and twisted backward. Operation was advised in order to secure relief from the discomfort caused by lameness and restricted motion. Osteotomy would be done below the trochanter to correct the adduction and outward rotation. In younger subjects, with less advanced deformity, a cuneiform section should be made from the base of the trochanter to actually restore the proper angle of the neck.

DR. S. KETCH presented a man who had applied for relief from a condition that could not be classified among the affections known as orthopedic, the diagnosis lying between **erythema nodosum** and **neuromata**. The patient was a Russian, 35 years of age, and a pedler. He complained of intense pain in the lower extremities, coming on 18 months ago in the right leg and a few weeks ago in the left. The pain was more severe when he was resting and was limited to an increasing number of points below the knee, one being at the lower part of the posterior surface of the right thigh. At these places there were slight reddened swellings, pressure on which caused pain altogether out of proportion to the appearances. There was a moderate degree of double flat-foot, of which he did not complain, and a slightly varicose condition of the veins. Otherwise the man appeared perfectly well and denied rheumatism and venereal disease. DR. WHITMAN did not think that the pain was due to neuromata, because the swellings did not correspond to the course of any nerve and the appearances were not those of neuromata. DR. SAYRE said that, as there was some evidence of acute inflammation of the veins, the trouble might have had its origin there. DR. KETCH said that acute erythema nodosum might well cause an inflammatory condition of the veins.

**New York Academy of Medicine; Section on Obstetrics and Gynecology.**—At a meeting held November 25th, DR. BALLERAY presented a **carcinoma of the uterus** removed from a woman 57 years old. The specimen was obtained from a case that was one of a series of similar ones that had come under his observation during the past year, and which emphasized the fact that the profession at large is becoming more alive to the importance of early diagnosis and treatment in these cases. Although this woman had had only three or four attacks of bleeding, she sought medical advice, and submitted to operation at a time when good results were to be expected.

DR. PHILANDER A. HARRIS exhibited a specimen of **tuber-**

**culosis of the endometrium**, removed from a woman near the menopause. Curetage had been done last June, and the diagnosis had been based on the results of microscopic examination of the material so removed. Extirpation of the uterus and appendages was accordingly practised.

DR. H. J. BOLDT presented a fresh specimen from a case in which **malignant disease of the uterine body had been mistaken for a fibroma**. This error in diagnosis had been made independently by three well-known gynecologists, because, as was shown by abdominal section, the uterus and intestine formed one mass, and above this was a mass of omentum, which was rolled up into another hard tumor.

DR. PAUL F. MUNDÉ reported a case of **aneurysm of the uterine artery**. He said that, so far as he knew, the case was unique. The patient, a woman, 32 years old, came to him complaining of a throbbing or burning sensation in the lower part of the pelvis. He had seen her in consultation about two years previously, when there had been a pelvic abscess discharging into the upper part of the vagina. This opening had been enlarged, and in due time the abscess healed. Examination, this second time, showed in the left vaginal vault a sharply pulsating tumor, which yielded an exceedingly distinct thrill in the part near the cervix. The tumor was almost the size of a hen's egg, and was evidently an aneurysm. After some study of the case it was concluded that ligation of the internal iliac artery would probably control the circulation through the aneurysm better than ligation of any other vessel. The patient, having been placed in the Trendelenburg position, a long curved incision was made, the artery was exposed and separated from the ureter, and then ligated with stout chromicized catgut. The finger of an assistant in the vagina detected when the circulation had been effectively controlled. The operation proved to be much more difficult than most abdominal operations. The pulsation in the aneurysm disappeared for a time, but was present again, though a slight degree only, at the end of a week. In order to complete the cure it was decided to resort to electropuncture. On two occasions, at intervals of three days, galvanopuncture was employed, a current of 3 m. a. being passed through the sac. After the second séance the aneurysm was noticeably harder, and two weeks after this, when last seen, the pulsation in the tumor was scarcely perceptible. A careful search of the literature had failed to show the record of another case of aneurysm of the uterine artery.

DR. MUNDÉ reported also a case of **vesico-utero-vaginal fistula presenting unusual complications**. During the manipulations of the first operation for closing this fistula, the finger had suddenly broken through into the vesico-uterine space. In spite of immediate suture and careful after-treatment, it was discovered at the second operation that this rent had not healed. The abdomen was then opened, and the rent found and sutured; but it was noticed at this time that the bladder-tissue was so friable that the stitches already inserted were tearing out. The operation on the original fistula proved to be a failure, and it finally became necessary to close this fistula again and turn the cervix into the bladder. Dr. Mundé had found but one similar case on record.

DR. MUNDÉ reported still another case, one of **suburethral abscess**. He pointed out that the occurrence of abscess in the urethro-vaginal septum was not mentioned in the older textbooks. The case had been successfully treated by free incision, antiseptic irrigation, curetting and swab-

bing with phenol iodid, and by subsequent drainage. DRS. F. A. HARRIS, E. B. CRAGIN, and ROBERT L. DICKINSON added three more of these cases to the list.

DR. HERMAN J. BOLDT read a paper entitled: **Functional Neuroses and their Relation to Diseases Peculiar to Women.** He said that a woman predisposed by heredity to hysteria is more liable to develop such neuroses in conjunction with some abnormality of the pelvic organs than one free from such inheritance. The increasing frequency of these disorders can be explained, in part at least, by the common custom of training the intellect of growing girls without regard to their physical development. Among the exciting causes are physical and mental strain, over-indulgence in alcoholics, sexual excesses, and lesions occurring during childbirth. Functional neuroses of the skin are quite commonly observed in connection with menstruation. Melancholia, occurring at the menopause, is a well-known example of the psychoses observed in women. Pelvic inflammation, by pressure on the nerves, or displacements of the uterus may give rise to intense neuroses. Sometimes pressure on a pelvic exudate will at once produce pain in the back or abdomen. Among the vasomotor neuroses mention was made of hemicrania and that form of goiter occurring during pregnancy. For many of these cases, and especially for those persons suffering from inflammatory conditions involving the ovary, Dr. Boldt said that he had found gold and arsenic bromid exceedingly beneficial. In arranging the diet, preference should be given to foods containing phosphorus, fat, and iron. Attention must be given to the habits and exercise. While the surgical treatment is, at times, important, no operation should be performed on these patients except under the clearest indications. More harm than good has resulted from oöphorectomy in cases of functional neuroses. In the discussion, DR. BACHE EMMETT expressed the opinion that more stress should be laid upon the influence of cicatricial tissue in the cervix upon the nervous system. DR. EDWARD D. FISHER said that it must be exceedingly rare for a direct reflex from any part of the body to produce a neurosis; the so-called functional neuroses are mainly the direct offspring of a depraved state of the system—a malnutrition. For example, nymphomania and masturbation never produce disease directly, but they quickly lead to nervous exhaustion. DR. L. DUNCAN BULKLEY said that as a dermatologist he has had frequent occasion to note the aggravation or recrudescence of cutaneous eruptions during menstruation, and the influence of this function on the degree of pruritus. A remarkable skin-neurosis was a form of general herpes occurring during gestation, and disappearing when the uterus had been emptied. DR. MUNDÉ said that although he has successfully operated in several cases for the relief of epilepsy or hysterio-epilepsy, he took the position that such a course should be avoided until one was convinced that the neurologist had exhausted all of his resources. The operation of "normal ovariectomy" should be consigned to oblivion. DR. S. BARUCH thought the question at issue was one of how best to improve the general health, and thus supply the requisite nutriment to the cortical centers. Hydrotherapy had served him well in meeting this indication.

#### NEW ENGLAND.

**Harvard Infirmary.**—James Stillman, president of the National Bank of New York City, has given \$50,000 to Harvard University for the erection of the projected infirmary, that will bear the name of the donor. Mr. Stillman will also

contribute annually for four years \$2,500 for the maintenance of the institution.

#### WESTERN STATES.

**Dr. Henry Lloyd** was recently elected coroner of St. Louis, Mo.

**The Hospital of the University of Colorado,** a new edifice three stories in height, erected at Boulder, Col., at an expense of \$15,000, was formally opened November 19th.

**Des Moines (Iowa) Pathological Society.**—At the first annual meeting held November 8th, the following officers were elected: President, Dr. E. D. Door; vice-president, Dr. G. E. Currie; secretary, Dr. M. F. Patterson; treasurer, Dr. D. W. Smouse.

**St. Louis Academy of Medical and Surgical Sciences.**—At a meeting held December 6th, the following was the scientific program: Thesis for membership, entitled: Straits of Early Life, by Dr. James Osbourne; Plica polonica (with specimens), by Dr. A. H. Ohmann-Dumesnil; Hypnotism, by Dr. F. J. Taintor.

**Wabash Surgeons' Association.**—At a meeting recently held, the following officers were elected: President, Dr. James A. Duncan, of Toledo, O.; vice-president, Dr. J. W. Young, of Bloomfield, Ia.; secretary and treasurer, Dr. C. B. Stemen, of Fort Wayne, Ind. The next meeting will be held in St. Louis, November 14, 1899.

**Denver and Arapahoe Medical Society, Colorado.**—At a meeting held November 22d, DR. LEONARD FREEMAN read a paper on the **Treatment of Enlargement of the Prostate Gland by Means of the Bottini Galvano-Prostatic Incisor,** with a report of 2 cases. He said that most of the present methods of treatment are unsatisfactory, and some, such as castration, decidedly objectionable, the majority of patients refusing to be unsexed and mutilated. Bottini introduced his method 22 years ago. He employs an instrument shaped like a lithotrite, which is inserted through the urethra. It contains a concealed platinum blade heated by electricity, and with it several deep furrows are burned through the glandular substance.

The advantages of the procedure are: (1) There is no mutilation and no external wound; (2) a general anesthetic, often so dangerous in old and debilitated individuals, is not required, the local application of cocaine being sufficient to control the surprisingly small amount of pain occasioned; (3) there is but little hemorrhage, generally none at all, the vessels being sealed by cauterization; (4) there is small danger of infection, and usually but a trivial rise of temperature, the wounds being necessarily aseptic; (5) In most instances the patient may be permitted to get up on the second or third day, a point of much importance in the old and feeble; (6) the effects are often immediate, more or less urine being voided within a few hours, when previously it was impossible to pass a drop; (7) but few if any relapses have been observed. The benefits are due to: (1) The channels burned through the gland; (2) obliteration of vessels, with diminution of congestion; (3) cicatricial contraction. Two successful cases were reported in men aged 69 and 73 years respectively. One of these could, before the operation, pass no urine without the use of a catheter. In both, voluntary urination was completely restored, and whereas only small catheters could previously be inserted, No. 15 soft-rubber catheter could now be passed into the bladder with ease.



Dr. Freeman did not claim that the instrument could be used without danger in every case of enlarged prostate. Old and feeble men, with surgical kidney, would always be in danger from any operation; but considering the character of many cases dealt with, the mortality appears to be lower than that from most other operations for enlarged prostate, and the results better. Somewhere in the neighborhood of 150 cases have been operated upon. The most striking and satisfactory results can be obtained in cases in which no urine has been passed for a long time without the use of a catheter. The bladder will here be found to exhibit a maximum of tolerance. In fact, one of the strongest indications for the operation is a necessity for constant catheterization.

### SOUTHERN STATES.

**Diphtheria at Woodside, Del.**—An epidemic of diphtheria has broken out at Woodside, a town seven miles from Dover, Del., and the public schools have in consequence been closed.

**Presbyterian Eye and Ear Hospital, Baltimore, Md.**—A new annex, costing \$11,000 and two stories in height, has just been formally opened. The first floor will be devoted to diseases of the ear and throat, the second to diseases of the eye.

**Medical Department of Tulane University of Louisiana.**—The regular session opened Monday, November 28th, having been postponed for over a month by the quarantines. The attendance is apparently not affected either by the late opening or by the yellow fever.

**A Tri-State Medical Society** has been formed by the physicians of North Carolina, South Carolina, and Virginia, with the following officers: President, Dr. W. H. H. Cobb, of Goldsboro, N. C.; secretary, Dr. Paulus A. Irving, of Richmond; treasurer, Dr. H. H. Dodson, of Milton, N. C. It is proposed to hold the first meeting at Charlotte, or Raleigh, N. C.

**Presentation to the President of the Board of Health of Memphis, Tenn.**—At an banquet held November 16th, the evening before the assembling of the Quarantine-convention, a handsome silver service was presented to Dr. Heber Jones, president of the Board of Health of Memphis. The presentation was made on behalf of the merchants of the city, as a substantial manifestation of appreciation on the part of the public of Dr. Jones' well-directed and successful efforts to prevent the introduction into the city of yellow fever.

**The Cambridge (Md.) Charity Hospital** will, it is anticipated, be formally opened during the present month. In order to secure an appropriation of \$1,500 made by the Legislature, the incorporators must collect an additional \$1,500, of which \$700 are already promised. The following are the members of the Board of Incorporators: Judge Henry Lloyd, president; W. Irving Mace, secretary; John G. Mills, George W. Woolford, I. N. Elston, Samuel Lehmann, Shepherd Webster, Thomas Drennen, John H. Philipps, E. G. Hopkins, Dr. P. E. Hines, and Dr. B. W. Goldsborough.

**The Maryland Conference of Charities and Correction** met in second annual session in Baltimore, November 29th and 30th, under the presidency of Mr. Frank Woods, who delivered the opening address, touching upon events which had happened since the last conference. Hon. Ashley M. Gould, chairman of the Ways and Means Committee of

the last House of Delegates, delivered an address in which he criticised the present methods of State appropriations, and advocated the formation of a central committee to investigate institutions and disburse funds. Dr. Thomas S. Lattimer delivered an address upon the proper administration of city appropriations under the new city charter of Baltimore. Hon. Josiah Quincy, mayor of Boston, described the public baths of Boston, asserting his belief that cleanliness of the body leads to self-respect, and that the banishment of filth is a long step toward moral rejuvenation. Mr. Franklin B. Kirkbride described the public baths of Philadelphia, and illustrated his remarks by stereopticon views. Various other addresses made the two days' meeting exceedingly interesting. The following officers were elected for the ensuing year: President, Hon. Joshua W. Hering, of Carroll County; executive committee, Elisha H. Perkins, Frank Woods, John M. Glen, Hon. Ashley M. Gould, Stevenson Archer Williams, Thomas E. Carson, Dr. H. E. Friedenwald, Thomas Whelan, and Edward Stake.

**New Orleans Parish Medical Society.**—At a meeting held November 27th, Dr. E. M. DUPAQUIER read a paper on **Subacute Bronchitis in Children**. A large proportion of these cases, he stated, are due to auto-intoxication from the gastro-intestinal canal, and will respond to no treatment not directed toward their cause. He reported several cases in which after failing with the usual remedies, prompt and lasting cure had been effected by proper alimentation and hygiene of the gastro-enteric canal.

Dr. ISADORE DYER spoke of a form of **chronic eczema**, a catarrhal inflammation of the mucous layer of the skin, occurring on the cheeks, forehead, chin and flexor surfaces of the limbs, due to digestive disturbances. On this type of eczema the usual local treatment has no effect, but measures taken toward correcting the indigestion always result in cure. Dr. Dyer held that there is a strict analogy between this variety of eczema and the pulmonary conditions spoken of, both being catarrhal inflammations induced by toxic substances circulating in the blood.

Dr. S. W. E. SCHEPPEGRELL read a paper upon **Schleich's Method of General Anesthesia, Especially in Nose and Throat Practice**. Except in short operations, *e. g.*, tonsillotomy, in which he uses ethyl bromid, Dr. Scheppegrell prefers to use the Schleich Mixture No. 2 to all other general anesthetics. He reported a case of extensive mastoid necrosis occurring in a pronounced diabetic, in which he had operated successfully by using the Schleich Solution No. 2 given by the drop-method on an ordinary Esmarch mask.

**Clinical Society of Maryland.**—At a meeting held December 4th, Dr. WATSON presented a case of **pulmonary tuberculosis** that had been cured by a few months' stay in Colorado. He appealed to members of the Society to make an effort to send more poor patients to Colorado than is the general custom. His patient's life had been saved by his stay in Colorado, and he thought many others could be saved in a similar way. The young man became self-supporting in 7 months. His expenses, including railway-fare to Colorado, had only been \$156 for the 7 months. At this rate a man could live comfortably for \$220 a year, a sum that even many poor persons should be able to raise.

Dr. T. S. CULLEN read a paper on **Erosion of the Cervix Uteri**, in which he showed that many of the cases so diagnosed have not presented true erosions, but merely a congested mucous membrane due to excision of the external os. The proper treatment of actual erosions is curetment with subsequent application of boroglycerid at intervals.

MR. S. H. T. HAYES, in charge of the Walker-Gordon Laboratory in Baltimore, gave an interesting talk on the company's method of preparing **modified cow's milk** as a substitute for human milk.

DR. H. M. SIMMONS read an interesting paper on **Medical Journalism in Maryland**. The fate of the early journals in Maryland was graphically described, and an appeal was made for better support by the profession, of their own local journal, the *Maryland Medical Journal*. Several members of the Society urged the medical men of the State to subscribe for and contribute to the Journal more liberally than heretofore.

**Johns Hopkins Hospital Journal Club.**—At a meeting held November 28th, DR. HARVEY W. CUSHING reported on the **recent literature on Banti's disease**. Reference was made to the relationship of Banti's disease, or splenomegaly with cirrhosis of the liver, to Hodgkin's disease and splenic anemia. The nomenclature is in an unsatisfactory state and requires revision. Banti, of Florence, first described in 1894 the symptoms of the disease called after him. Clinically the disease is divided into three stages. In the first or anemic stage, the spleen commences to enlarge. An anemia of more or less marked grade develops; the temperature may be normal or there may be fever associated with chills. This stage usually lasts from 3 to 5 years, but may run on for 10 years. The second or transition stage is characterized by changes in the urine, slight general jaundice and digestive disturbances, and lasts only a few months. The third or ascitic stage, is characterized by the development of cirrhosis of the liver and ascites. The patient becomes more jaundiced and the anemia increases in gravity. Evening elevation of temperature is common and the patient usually dies in from 5 to 7 months. Severe hematemesis is a prominent symptom of the disease throughout. The anemia is believed to be due to toxic substances formed in the spleen, and these are also responsible for the liver-cirrhosis. Of the various drugs arsenic yields the best results. Most satisfactory results also have followed splenectomy. The report on this interesting disease was suggested by the occurrence of two cases in the hospital-wards, in one of which splenectomy was performed.

DR. W. G. MACCALLUM reported on **Recent Literature on the Bacteriology of Cirrhosis of the Liver**. Particular reference was made to Dr. Adami's work on this subject. In Pictou cattle-disease, which prevails in certain parts of Nova Scotia, and which is chiefly characterized by cirrhosis of the liver, Dr. Adami isolated a diplococcus from the liver. Subsequently a similar organism was found in the liver of a man who had died of cirrhosis of the liver. Still later, Dr. Adami came to the conclusion that the organism is a distorted diplobacillus resembling in some respects the colon-bacillus. The organism is always found inside the liver-cells.

DR. LAZEAR gave an interesting review of an article in *Virchow's Archiv für path. Anatomie*, vol. 153, p. 537, by C. S. Engel, dealing with the question whether **progressive pernicious anemia** is to be considered a reversion to the embryonal type of blood-development? Engel compared the blood of five fatal cases of pernicious anemia with that of the human embryo during various periods of intra-uterine life. As a result of his study he comes to the conclusion, and in this he agrees with Ehrlich, that **pernicious anemia is a reversion to the embryonic type of blood-formation**.

## MISCELLANY.

**Dr. C. R. Greenleaf**, at present Chief Surgeon of the Army, has been appointed by Surgeon-General Sternberg Sanitary Inspector of the Army, having full charge of the Sanitation of Camps, and Inspector of Military Hospitals.

"**Climate**" is the name of a new bimonthly journal emanating from St. Louis under the editorial direction of Dr. S. Claiborne Martin. It is to be devoted "to the relation of climate, mineral springs, diet, preventive medicine, race, occupation, life-insurance and sundry science to disease."

**The Pure-Flour Law.**—An investigation as to the alleged failure of the pure-flour law to raise revenue shows that 89 manufacturers' licenses have been issued in 14 States. The information at the treasury department is that 60% of the manufacturers of adulterated flour have gone out of business, and this is regarded as one of the greatest benefits from the operations of the law. The department estimates that revenue receipts for the year will be about \$20,000, which is considerably more than enough to pay the expenses incident to the collection of the revenue and to the enforcement of the law.

**The Cause of Stammering.**—According to the *Journal of the American Medical Association*, Mr. Henry Guy Carleton, at the dinner of the New York State Medical Association at the Manhattan Hotel, New York City, October 19th, asserted that stammering was due to the presence of the comma-bacillus. In his own case he averred that the malady itself was not congenital, but appeared when he began to talk. According to his microscopic slides he said the microbe was abundantly in evidence after every syllable. He freely gave his discovery to the profession without any design of profit from patent or trade-mark.

**"Under-Average" Life Risks.**—The acceptance of what are known as "under-average risks" is interesting life-underwriters a great deal just now. One of the large companies has had excellent results, it is said, from accepting this class of business, and now has a graded scale of rates so adjusted as to cover almost every contingency. Medical directors are so restricted ordinarily in their selection of lives, that the risk of death may be forecast with practical certainty, and the experience is almost sure to come within the tabular limits. Some believe that the companies should now provide for applicants whose general record is good, although not up to the usual requirements. This can be done with safety, it is thought, by charging a slightly higher rate, or by providing for liens against the policy.

**Specific Medication.**—"I have noticed much has been said about treating the soldiers in the camps. I want to say I had two boys in the Fifty-second Iowa, who came down with typhoid fever after getting home from the South. Both were bad cases; temperature 105°; hemorrhage from nose and bowels. They were not delirious; I prevented that with belladonna, as the condition called for it. My treatment consisted of aconite, veratrum, belladonna, dioscorea, ipecac, carbo-veg., baptisia, echina-chionanthus, nux, and hydrastis, each as indicated. Both made good recoveries. I used specific medicines, as I use no other when I can get them. Everybody thought the boys would die. But thanks to specific diagnosis and specific medication, they made good recoveries."—[Dr. J. C. Power, in *Eclectic Medical Journal*, Dec., 1898.]

**The Dangers from Water-closets on Trains.**—The *New York Medical Journal*, quoting the *Manitoba and West*



*Canada Lancel*, for October, says that Dr. R. S. Thornton, in a paper on "The Wind as a Factor in Spreading Infection," makes the following sensible remarks and suggestion:

"The second point concerns the public health authorities and has to do with the water-closet in use on the railway trains. These are, for the most part, open chutes down which the excreta are projected to the railway track. Many people with ambulatory typhoid, and patients in various stages of the disease *en route* to hospitals or home, use these closets, and thus typhoid stools are spread along the railway, ready for distribution by the wind all over the neighboring country. The same thing might happen were cholera ever to obtain a footing on this continent; but apart from the specific danger in such diseases the method is unhygienic and offensive. It should not be difficult to attach a box below the chute and adopt some modification of the earth-closet, the excreta being removed and buried at divisional points along the line."

**Health Reports.**—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Supervising Surgeon-General of the U. S. Marine-Hospital Service during the week ending December 3, 1898:

SMALLPOX—UNITED STATES.			
MICHIGAN:		CASES	DEATHS
Detroit	Nov. 12-19	Reported present.	
Ecorse Township	Nov. 12-19	"	
NEW YORK:			
New York City	Nov. 19-26		1
PENNSYLVANIA:			
Philadelphia	Nov. 28	5	
	Imported from Norfolk, Va.		
SMALLPOX—FOREIGN.			
BELGIUM:			
Antwerp	Oct. 29-Nov. 5	9	4
ITALY:			
Rome	Oct. 1-8		1
RUSSIA:			
Moscow	Oct. 29-Nov. 5	12	2
Odessa	Oct. 29-Nov. 5	1	1
	Nov. 5-12	1	1
St. Petersburg	Oct. 29-Nov. 5	7	
Warsaw	Oct. 29-Nov. 5		2
YELLOW FEVER.			
COLUMBIA:			
Baranquilla	Oct. 22-29	2	2
	Oct. 29-Nov. 5		3
MEXICO:			
Vera Cruz	Nov. 1-7		3
"	Nov. 17-24		8
CHOLERA.			
INDIA:			
Madras	Oct. 15-21		1
PLAGUE.			
AUSTRIA:			
Vienna	Oct. 22-29		1
BOKHARA:			
Samarcand	Nov. 6	Epidemic.	
INDIA:			
Bombay	Oct. 18-25		109

The United States Consul at Odessa, Russia, reports plague present at several localities in Central Asia, and advises restrictions on shipments of wool to the United States, via Black and Caspian seaports.

**Obituary.**—DR. HENRY A. SAYLOR, at one time prothonotary of Lehigh County, at Allentown, Pa., November 29th, aged 68 years.—DR. CHARLES C. LEE, Baltimore, Md., November 31st, aged 61 years.—DR. C. MORRIS CHESTON, treasurer of Anne Arundel County, Md., Owensville, December 1st, aged 49 years.—DR. W. H. BAKER, Lynchburg, Va., November 31st.—DR. ALBERT J. PHILLIPS, Paterson, N. J., aged 43 years. DR. JAMES S. KELLY, Archbald, Pa., November 16th, aged 27 years.—DR. A. E. SULLARD, Franklin, N. Y., November 19th, aged 79 years.—DR. J. T. WEBSTER, Emporia, Kan., November 12th, aged 44 years.—DR. WILLIAM R. STRAW, Vinita, Ind. Ter., November 21st.—DR. HERMANN VOELLER, Sacramento, Cal., November 14th, aged 65 years.—

DR. A. E. WILLARD, Friendship, N. Y., November 20th, aged 67 years.—DR. D. A. McTAVISH, West Bay City, Mich., November 17th, aged 43 years.—DR. JAMES E. ELLIS, Westchester, N. Y., November 29th, aged 79 years.—DR. FRANCIS JOHNSON, Pawtucket, R. I., November 27th, aged 64 years.—DR. JAMES ALEXANDER MOORE, Helena, Montana, November 29th.—DR. EUGENE PERJOT, New Orleans, La., November 26th, aged 82 years.

**Correspondence Between the American Humane Association and Dr. D. E. Salmon.**—The following copies of letters explain why the address of Dr. Salmon, printed in our present number, was *not* delivered.

#### THE AMERICAN HUMANE ASSOCIATION.

THE AMERICAN HUMANE ASSOCIATION,  
FALL RIVER, MASS.

HON. JAMES WILSON,

Secretary of Agriculture,

Washington, D. C.

DEAR SIR:—The American Humane Association will hold its annual session at Washington City in December next. It would be a great help to the Humane Society throughout the United States if, on that occasion, there could be presented to it from such of the efficient corps of officers of the department of Animal Industry as you, from your intimate knowledge may select, two papers on the following subjects, namely:

*First.*—Diseases of animals in the United States and Territories, territorial boundaries, extent, effect, and what progress is being made in their treatment, and what the Humane Societies of the country may do to assist in their alleviation and prevention.

*Second.*—Abuses of animals, either through design or neglect, territorial boundaries, extent and effect, and what is being done to correct these abuses, and what the Humane Societies in the country may do to assist. These subjects are here simply given in outline.

The papers will, by the Society, be published among its proceedings and distributed throughout the United States. If we knew the names of the gentlemen best qualified to speak upon the subjects named, we would cheerfully address them personally, but not knowing them we send this letter to you. If you can assist us in the matter, you will greatly aid in a good work and put the Society under lasting obligations to you. The papers are usually limited to about one hour in delivery.

I formerly knew Mr. D. E. Salmon, Superintendent of the Department of Animal Industry, having at one time taken his deposition in an important case of imported Texas fever. I do not know whether he is now in the department. If he is, I know of his ability to write upon either of the above subjects. Mr. Brigham, of Ohio, is one of my neighbors. Please, if possible, get for us a favorable answer at as early a date as possible.

Yours most truly,

Signed

JAMES M. BROWN,

Chairman of Sub-Executive Committee.

#### UNITED STATES DEPARTMENT OF AGRICULTURE.

OFFICE OF THE SECRETARY, September 20, 1898.  
WASHINGTON, D. C.,

MR. JAMES M. BROWN, Toledo, Ohio.

DEAR SIR:—I am in receipt of your favor of the 29th ultimo, in regard to the presentation of certain papers relating to animal diseases and abuses of animals, to the American Humane Association at the time of its next annual session in this city, December next. I have referred the matter to Dr. Salmon, Chief of the Bureau of Animal Industry, with instructions that your request be complied with. This department will be very glad to cooperate with your Association with a view of lessening the ill-treatment of animals and the avoidable suffering which is now entirely too common. With best wishes for the success of your efforts in this direction, I am,

Very respectfully,

J. H. BRIGHAM, Secretary.

THE AMERICAN HUMANE ASSOCIATION.

HON. J. H. BRIGHAM,

Acting Secretary Department of Agriculture,  
Washington, D. C.

MY DEAR MR. BRIGHAM:—Yours of September 20, 1898, in which you speak of having referred the matter of my former communication to Dr. Salmon, Chief of the Bureau of Animal Industry, and of the willingness of your department to cooperate with the American Humane Society in its efforts to lessen the ills which fall to the lot of dumb animals, was received in my absence. I wish to express the satisfaction of our committee in learning that the matters have been referred to Dr. Salmon. Will you be good enough to have the

Doctor furnish us for the program, titles expressive of the subjects to be discussed, and if either shall be presented by any other than himself, the name and official position represented by such person? I am

Most truly yours,

(Signed)

JAMES M. BROWN

TOLEDO, OHIO, October 28, 1898.

HON. J. H. BRIGHAM,

Asst. Secretary of Agriculture,  
Washington, D. C.

DEAR SIR:—On the 5th of this month I wrote you a letter of which the following is a copy:

"Yours of September 20, 1898, in which you speak of having referred the matter of my former communication to Dr. Salmon, Chief of the Bureau of Animal Industry, and of the willingness of your department to cooperate with the American Humane Society, in its effort to lessen the ills which fall to the lot of dumb animals, was received in my absence. I wish to express the satisfaction of our committee in learning that the matters have been referred to Dr. Salmon. Will you be good enough to have the doctor furnish us for the program, titles expressive of the subjects to be discussed, and if either shall be presented by any other than himself, the name and official position represented by such person?"

I have no answer to this last letter, and as the meeting of the Association will be called about the middle of December, it is important that we have the information requested, that it may properly appear in the printed program. Please let me hear from you at your earliest convenience. I am, yours most truly,

(Signed)

JAMES M. BROWN.

U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF ANIMAL INDUSTRY.

WASHINGTON, D. C., Nov. 2, 1898.

MR. JAMES M. BROWN,

Gardner Building, Toledo, Ohio.

DEAR SIR:—Your letters of August 29, October 3, and October 28, 1898, to the Secretary and Assistant Secretary of Agriculture, in reference to a paper being read by me at the meeting of the American Humane Society, have been handed to me with the request that I do what I can to comply with your wishes. I do not think it would be advisable to divide the subjects into two papers, as I think the diseases and abuses of animals could best be treated together, at least from the standpoint of the Department work. I should have replied earlier but have been very much pressed with official business, and fear that I shall not be able to give the time to the preparation of the paper which the importance of the subject demands.

I assure you that I appreciate the invitation which you have extended to me to present this matter to the American Humane Society, but must confess that the treatment of this subject in order to express my sentiments, and at the same time meet with a favorable reception by members of your Society, is one of the most difficult tasks which I have recently been called upon to perform. While I have long been interested, and have been practically engaged in the prevention of the diseases of animals, and in lessening the cruelty to which they are subjected, it unfortunately is the case that my views are not the prevailing views of your association. After considering the matter I have decided that the time and labor required would be well spent if we can come nearer together, and cooperate for the humane objects which we all sincerely have in view. The title of the paper which I will prepare will be as follows:

"Diseases and abuses of animals in the United States: What is being done by the Federal Government toward their alleviation and prevention, and what the Humane Societies of the country may do to assist in these efforts."

Hoping that this will be satisfactory, I am,  
Very truly yours,

(Signed)

D. E. SALMON,

Chief of Bureau.

TOLEDO, OHIO, November 21, 1898.

DR. D. E. SALMON,

Chief of the Bureau of Animal Industry,  
Washington, D. C.

MY DEAR DOCTOR:—On Saturday night I received from the Rev. Francis H. Rowley, Secretary of the American Humane Association, a letter which has given me annoyance beyond measure, and which compels me to perform a most disagreeable duty. His letter, written me on the 17th instant, is accompanied by a most vigorous protest from the Washington Humane Society against your name appearing upon our program while the Association is the guest of the Washington Society. The protest is based upon alleged opposition on your part to a bill before Congress for the prevention or regulation of vivisection, which bill was fathered by the Washington Society. It seems that the programs, with your name and subject therein, were already on the press when the fact that you were to deliver an address was discovered by the members of the

local Society. They at once sent this vigorous protest to the Secretary of the American Association, insisting that the continuance of your name on the program would be exceedingly distasteful to the Washington Society and would result in the loss of all of its interest in the approaching meeting. The Secretary felt compelled to act at once, without communicating with me upon the subject; he notified the Washington Society that the American Association would defer to their wishes. This morning I received advance copies of the program with your name omitted.

I need hardly tell you how deeply humiliated I am by this action. Personally, I am confident that the leaders in the American Humane Association would gladly hear the representative of any side of any question that comes legitimately before them, entirely regardless of whether or not the views advanced accord entirely with their own. And as the subject upon which you were to speak has nothing whatever to do with vivisection, knowing, as I do, your eminent ability and experience in the matters upon which we sought your assistance, I am sure that the members of the Association generally would have listened to what you have to say with both pleasure and profit.

You were kind enough to say in your letter of acceptance that in all things you were not in harmony with the Humane Society, but that fact, you are well aware, made no difference to me or to Secretary Rowley. Of course, neither of us knew anything of the local friction that seems to exist at Washington. I beg you to be assured of my deepest regret for the unhappy position in which we all find ourselves as a result of the invitation, which, on behalf of the Association, I so gladly extended to you, and believe me,

Very truly yours,

(Signed)

JAMES M. BROWN,

Chairman Executive Committee American Humane Association.

U. S. DEPARTMENT OF AGRICULTURE,

BUREAU OF ANIMAL INDUSTRY.

WASHINGTON, D. C., November 29, 1898.

MR. JAMES M. BROWN,

Chairman Sub-Executive Committee,  
The American Humane Association,

405 Gardner Building, Toledo, Ohio.

MY DEAR SIR:—Your favor of the 21st instant is received, and I assure you there is no cause for you to feel embarrassment on my account. It is remarkable, however, that the Washington Humane Society should so greatly fear the reading of a paper before your body, upon such a practical subject as I was to present, that it would lose all interest in the meeting in case that part of the program were carried out. If the cause which they are advocating would be so seriously endangered by one man and one paper, with a convention predisposed in their favor, should not this confession of the fact prove embarrassing to them rather than to any one else?

The Washington Humane Society is making a great effort to secure legislation to stop experimentation upon animals even for the advancement of medical science. In this I sincerely hope they will never succeed; but they are alienating from cooperation with the humane societies the great humane forces of the country, viz., the medical and veterinary professions, the biologists, the universities, and the Agricultural Department of the Government. In the meantime the value of such experimentation is becoming more and more apparent, and we are slowly learning, by means of it, how to control the destructive diseases affecting mankind and the lower animals. This Bureau has distributed upon request of the owners of cattle, 500,000 doses of blackleg vaccine, during the past year, reducing the loss from about 15 per cent. to 1 per cent. This year we have demonstrated that Texas fever can be prevented without serious restriction to the traffic in southern cattle, and this discovery will save millions of dollars annually to the people of the Southern and Southwestern States and Territories. We are also introducing a serum treatment for hog cholera which saves 80 per cent. of the animals in diseased herds. These discoveries, made by experimenting upon animals, mean not only many millions of dollars to the country, but they mean the cheapening of the food-supply, which is always equivalent to saving human suffering and prolonging human life, and they also mean the prevention of infinite suffering among the species of animals affected by these diseases.

Under these circumstances it is not time for the liberal and intelligent members of the American Humane Association, who joined that organization to prevent cruelty to animals rather than to secure personal notoriety, to stop and consider whether they are called upon to further support and encourage those narrow-minded and intolerant people whose efforts are a hindrance rather than an aid to the cause of humanity.

Assuring you again of my appreciation of your invitation, and of my sympathy with every intelligent effort for lessening the great sum of misery and suffering to which both our own race and the lower animals are subject, I am

Very sincerely yours,

(Signed)

D. E. SALMON,

Chief of Bureau.



### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon JUAN J. CASENEVA will proceed to Gibara, Cuba, and intermediate points, for the distribution of medical supplies.

Acting Asst. Surgeon ALEXANDER M. F. McMASTER is assigned to the U. S. General Hospital, Santiago, Cuba.

Acting Asst. Surgeon BAT SMITH is assigned to duty at the U. S. General Hospital, Santiago, Cuba.

Acting Asst. Surgeon FELIPE VERANES will report to Captain R. S. Woodson, A. S., for duty in the District of Holguin, proceeding to Gibara, Cuba.

Acting Asst. Surgeon R. R. HUNTER, will proceed, as medical officer in charge of the army sick, to Governor's Island, via steamer "Obdam."

Acting assistant surgeons will report to the surgeon in charge of the general hospital, San Juan, P. R., for duty: M. M. DOLAN, J. J. GILHULL, E. F. McCLENDON, E. PARISH.

Lieutenant-Colonel JOHN VAN R. HOFF, chief surgeon Department of Porto Rico, will proceed to Ponce on steamer "Rita" and inspect the general hospital at that place. During the absence of Colonel HOFF, Captain F. P. REYNOLDS, A. S., will take charge of the office of the chief surgeon.

Captain THOMAS U. RAYMOND, A. S., will make a special sanitary inspection of camp near Fort Winfield Scott and of the fort itself, with a view to the suitability of the casemates therein, for the quartering of troops.

Acting Asst. Surgeons T. A. McCULLOCH, CHARLES Y. BROWNLEE and W. H. I. O'MALLEY are assigned to duty at Honolulu, H. I. Leave for one month with permission to return to the United States is granted Acting Asst. Surgeon AZEL AMES. Nov. 17.

Acting Asst. Surgeon E. G. SCHULTZ will proceed from Fort D. A. Russell to Fort Douglas for duty, relieving Acting Asst. Surgeon J. J. CANNAN, whose contract will be annulled.

Acting Asst. Surgeon FRANK B. ROBINSON, now at Presidio, is assigned to duty in the Division Field-Hospital at that post.

Acting Asst. Surgeon CHARLES Y. BROWNLEE is assigned to duty on the transport "Tacoma."

Acting Asst. Surgeon ALEXANDER M. METTLEROTH is assigned to duty with the Battalion of Signal-Corps stationed at Macon, Ga. The following transfers are made: Hospital-Steward NICOLAS LOMMEL, Fort Reno to Santiago, Cuba; Hospital-Steward MARTIN ROSE, Washington Barracks to Santiago, Cuba.

Colonel CHARLES R. GREENLEAF, A. S. G., will proceed via New Orleans, La., to San Francisco, Cal., on business pertaining to the Medical Department, and on arrival there will report by telegraph to the Surgeon-General.

Lieutenant-Colonel JOHN VAN R. HOFF, chief surgeon, is assigned to duty as chief surgeon, Department of Porto Rico, to date from September 25.

The following-named officers are relieved from the assignments made in G. O. 171, October 21, this office, and they are assigned as follows: Major WM. S. BRYANT, brigade-surgeon, will report to Brigadier-General Loyd Wheaton, commanding First Brigade, First Division, Seventh Army-Corps, for duty as surgeon of that brigade; Major GEORGE B. BUNN, brigade-surgeon, will report to Brigadier-General Henry C. Hasbrouck, commanding Second Brigade, Second Division, Seventh Army-Corps, for duty as surgeon of that brigade.

Acting Asst. Surgeon ARISTIDES AGRAMONTE will proceed to Havana, Cuba, on business pertaining to the pursuance of his studies with reference to the cause and prevention of yellow fever, under instructions from the Surgeon-General of the Army, and under the immediate direction of the chief surgeon at Havana, Cuba.

Leave for one month on account of sickness is granted Acting Asst. Surgeon E. VAN HOOD. Nov. 25.

The following-named acting assistant surgeons will proceed from Fort McPherson, Ga., to the places set opposite their respective names, for annulment of their contracts: JAMES H. McCALL, Huntingdon, Tenn.; EDWIN W. PATTERSON, Washington, D. C.; JAMES C. ROSS, Salt Lake City, Utah.

The leave granted Acting Asst. Surgeon CHARLES S. STERN is extended 20 days on account of sickness.

Hospital-Steward GEORGE W. MULLEN will, upon expiration of furlough, be sent to the hospital-ship "Relief," upon the arrival of that vessel at New York.

First Lieutenant WESTON P. CHAMBERLAIN, A. S., is relieved from duty at the U. S. General Hospital, Fort Monroe, and will report to Major Alfred E. Bradley, brigadier-surgeon, commanding U. S. hospital-ship "Relief" at that place, for duty.

Acting Asst. Surgeon VERDO B. GREGORY will proceed to Huntsville, Ala., for assignment to duty with the Fourth Army-Corps.

Acting Asst. Surgeon FREDERICK HADRA will proceed from San Antonio, Tex., to New York City, for transportation to Santiago, Cuba, for assignment to duty.

Acting Asst. Surgeons L. S. HUGHES and H. H. DUKE, U. S. A., are assigned to duty at the brigade-hospital at Macon, Ga.

Acting Asst. Surgeon GEORGE D. RAMSAY, now at Fort Hamilton, will proceed to Fort Slocum for duty.

Par. 40, S. O. 278, Nov. 25, this office, relating to Lieutenant-Colonel JOHN VAN R. HOFF, chief surgeon, is revoked. Major JOHN VAN R. HOFF, surgeon, U. S. Army, and late lieutenant-colonel and chief surgeon, U. S. Army, is assigned to duty as chief surgeon, Department of Porto Rico, to date from Sept. 25.

Major WM. C. BORDEN, brigade-surgeon, will report to make the physical examination of the Fifth Company, U. S. Volunteer Signal Corps, to be mustered out at Washington Barracks, D. C. The following changes in the stations and duties of officers are ordered: Major EDWIN F. GARDNER, surgeon, is relieved from duty as chief surgeon, Third Division, Second Army-Corps, and will proceed to Fort Monroe for duty in the Josiah Simpson U. S. General Hospital. Major EDGAR A. MEARNS, brigade-surgeon, is relieved from duty with the First Army-Corps, and will proceed to Athens, Ga., for duty as chief surgeon of the Third Division, Second Army-Corps, for duty.

Major RICHARD W. JOHNSON, brigade-surgeon, will report at Chicago, Ill., to make the physical examination preparatory to the muster out of the Seventh Company, U. S. Volunteer Signal Corps.

Major HENRY S. KILBOURNE will report to the Quartermaster-General, U. S. Army, for duty as medical superintendent of transportation.

Major HENRY S. KILBOURNE, surgeon, in addition to his duties as medical superintendent of transportation, is detailed as a member of the board of medical officers convened to meet at the Army Building, New York City, Nov. 15, by par. 83, S. O. 269, Nov. 14, this office, to relieve Major WILLIAM H. ARTHUR, surgeon.

Par. 38, S. O. 277, Nov. 23, this office, relating to Major MARSHALL W. WOOD, surgeon, is revoked.

The following-named acting assistant surgeons will proceed to Camp Forse, Huntsville, Ala., for assignment to duty: R. E. CALDWELL, CHARLES FARMER.

Acting Asst. Surgeon FREDERICK W. FABRICIUS is relieved from duty at the Josiah Simpson General Hospital, Fort Monroe, and will proceed to New York City for transportation to Santiago, Cuba, for assignment to duty.

Acting Asst. Surgeon RALPH L. TAYLOR is relieved from duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, and will proceed to Huntsville, Ala., and report to the commanding general, Fourth Army-Corps, for assignment to duty.

Acting Asst. Surgeon EDWIN P. WOLFE will proceed to Huntsville, Ala., and report to the commanding general, Fourth Army-Corps, for assignment to duty.

Acting Asst. Surgeon FRANK GARNETT YOUNG will proceed to Clarksburg, W. Va., for annulment of his contract.

Hospital-Steward CHARLES M. HAGEN now on sick furlough at Chicago, Ill., from Sternberg General Hospital, Chickamauga Park, will be sent to Fort Wayne for duty.

Acting Asst. Surgeon EDWARD E. BARSTOW, now on duty at Fort Myer, will report in person to the Surgeon-General of the Army for annulment of his contract.

Acting Asst. Surgeon JOHN T. BOOTH, now on duty at Fort Myer, will proceed to Cincinnati, Ohio, for annulment of his contract.

Acting Asst. Surgeon JOHN L. GOLTRA is relieved from duty at the U. S. General Hospital, Ponce, Porto Rico, and will proceed to Buffalo, N. Y., for annulment of his contract.

Hospital-Steward JAMES T. HARBIN, now in chief surgeon's office, headquarters, Seventh Army-Corps, Savannah, Ga., will be discharged.

Major JAMES E. PILCHER, brigade-surgeon, is relieved from duty with the Seventh Army-Corps, and will take station at Savannah, Ga., as medical-supply officer for troops stationed near or passing through that city.

Captain JOSEPH T. CLARKE, A. S., is detailed as a member of examining board of Madison Barracks, vice Acting Asst. Surgeon WM. W. CALHOUN, relieved.

The extension of leave granted Acting Asst. Surgeon ISAAC W. BREWER is further extended to include Dec. 17, on account of sickness.

Acting Asst. Surgeon J. STEBBINS KING will proceed from New York City to Huntsville, Ala., for duty with the Fourth Army-Corps.

Acting Asst. Surgeon CHARLES E. MARROW is relieved from duty on the U. S. hospital-ship "Relief," and will report on the U. S. hospital-ship "Bay State" for duty.

Captain GEORGE J. NEWGARDEN, A. S., now at Savannah, Ga., will return to his proper station, Fort Adams.

Leave for 15 days is granted First Lieutenant IRA A. SHIMER. Dec. 1.

Acting Asst. Surgeon JOHN C. GREENEWALT is relieved from further duty at Fort Thomas and will proceed to New York City for transportation to Cuba for duty.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 Days Ended December 1, 1898.

Surgeon GEORGE W. STONER granted leave of absence for 7 days. Nov. 26.

Surgeon C. T. PECKHAM, upon being relieved by Surgeon H. R. CARTER, to rejoin station at Pittsburg, Pa. Dec. 1.

Surgeon A. H. GLENNAN relieved from duty at St. Louis, Mo., and directed to report at Washington, D. C., preliminary to assignment to duty at San Juan, Porto Rico. Nov. 26.

Surgeon S. D. BROOKS relieved from duty at the Port Townsend (Washington) Quarantine Station, and directed to proceed to Angel Island, Cal., and assume command of the San Francisco Quarantine. Nov. 26.

Past Asst. Surgeon J. O. COBB to proceed to Pittston, Pa., for special temporary duty. Nov. 19.

To proceed to Arizona and New Mexico on special temporary duty. Nov. 29.



Past Asst. Surgeon J. C. PERRY to assume command of the Port Townsend (Washington) Quarantine Station in addition to other duties. Nov. 26.  
Passed Asst. Surgeon G. B. YOUNG to proceed to Philadelphia, Pa., for special temporary duty. Nov. 22.  
Passed Asst. Surgeon M. J. ROSENAU, upon being relieved from duty at the San Francisco Quarantine, to report at Washington, D. C., preliminary to assignment to duty in Cuba. Nov. 26.  
Passed Asst. Surgeon J. A. NYDEGGER granted 3 days' extension of leave of absence. Nov. 29.  
Passed Asst. Surgeon W. J. S. STEWART to proceed to Crisfield, Md., and report upon the advisability of establishing a relief station at that port. Nov. 19.  
Asst. Surgeon S. H. CUMMING granted leave of absence for 7 days. Nov. 28.  
Asst. Surgeon S. R. TABB granted leave of absence for 7 days, to take effect upon being relieved from duty at Vineyard Haven, Mass. Nov. 29.  
Asst. Surgeon C. H. LAVINDER granted leave of absence for 7 days. Nov. 29.  
Asst. Surgeon H. C. RUSSELL granted leave of absence for 7 days from November 16. Nov. 16.  
Asst. Surgeon H. B. PARKER granted leave of absence for 2 days. Nov. 25.  
Asst. Surgeon L. L. LUMSDEN relieved from duty at Egmont Key, Fla., and directed to proceed to Washington, D. C., for orders. Nov. 21. Assigned to duty as sanitary inspector of U. S. transport "Manitoba." Nov. 28.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon G. L. ANGENY, assistant surgeon, relative rank of ensign, from September 16, 1898.  
Asst. Surgeon W. S. THOMAS, resignation accepted to take effect Dec. 1.  
Passed Asst. Surgeon C. F. STOKES, detached from the "Solace" and ordered to duty as member and recorder of the Naval Medical Examining Board, Naval Laboratory and Department of Instruction, Brooklyn, N. Y.  
Passed Asst. Surgeon E. S. BOGERT, JR., detached from the "Solace" and ordered to the Marine Recruiting Rendezvous, New York, N. Y.  
Asst. Surgeon T. M. LIPPITT, detached from the hospital, Boston, Mass., and ordered to the "Solace."

## Foreign News and Notes.

### GREAT BRITAIN.

#### Another Trial for Procuring Criminal Abortion.

—Another English medical man, this time a practitioner in a South London suburb, is to be tried for procuring criminal abortion.

**A Hospital for Chronic Diseases of Children in Liverpool** is among the projects now being considered. A meeting of those interested was recently held and a committee appointed to formulate plans. It is proposed that the treatment of the chronic diseases of children be undertaken on open-air lines.

**The New British Pharmacopeia** is having a large sale. The whole of the first edition, numbering 20,000 copies, has already been sold and a new edition has been ordered. As this sale has taken place within a twelvemonth the publication of the book must be a good speculation for the publishers, the General Medical Council.

#### Christian Scientists Discharged from Custody.

—Miss Kate Lyon, of the household of Mr. Harold Frederic, and Mrs. Athalie Mills, both of whom were accused of being responsible for the death of Mr. Frederic on October 19th while he was being administered to according to the ritual of the Christian Scientists, have been discharged from custody by the British authorities.

**Honors to the Medical Officers of the Anglo-Egyptian Campaign.**—The thoroughly good management that characterized the operations of the Royal Army

Medical Corps in the recent war in the Soudan, has been recognized by the Government in the distribution of honors that has just taken place. Surgeon-General William Taylor, the principal medical officer of the expedition, and Colonel W. H. Macnamara, R. A. M. C., also having an important command, have been made Companions of the Bath, and ten other officers of the corps have obtained brevet-rank, or increased pay, or, most coveted if not most valuable distinction of all, the Distinguished Service Order. Six non-commissioned officers of the corps received the medal for distinguished service in the field and three nurses were decorated with the Royal Red Cross. It is pleasant to chronicle this practical evidence of the value that is set by the War-office on the services of the Medical Department so soon after the reconstitution of the service as a Royal Corps.

**Typhus Fever in London.**—This fever, which has been supposed by medical men and sanitarians to be practically obsolete in London, has recently made its appearance in districts so widely apart as Kensington, Islington, and Southwark. The little outbreaks are limited to one or two cases each, but the presence of these scattered foci of a dangerous epidemic in so overcrowded a city as London in many parts is, cannot be viewed with equanimity by the medical men responsible for the public health.

**The Preliminary Education of the British Medical Student** is the most important subject set down for deliberation by the General Medical Council at its winter-session. The Council, which, under the Crown, is supreme in matters of medical education, has determined that the present standard of culture required of the medical student at his entrance-examination is not high enough. The examination makes no attempt to be a stiff one, requiring only ability to translate French and Latin from easy set books, to do arithmetic and such mathematics as are comprised in simple algebra and the first books of Euclid, and in addition ordinary knowledge of the English language, but the Council finds that some students obtain entrance to the profession who are unable to satisfy this low test. This is because the General Medical Council also recognizes the preliminary examination of other educational bodies as forming a passport to the medical profession. For example, no one who has matriculated at Oxford or Cambridge would be required to pass any preliminary examination on becoming a medical student; but it has lately been felt that the Council has been too amiable to certain institutions for instruction, and has admitted to the study of medicine lads whose preliminary education, though satisfactory to some teaching body, was not up to the standard the Council ought to maintain. The list of preliminary examinations recognized by the Council will therefore be revised, much to the chagrin of at least one institution whose preliminary examination is being made the subject of inquiry. As a matter of fact, the Council can afford to take drastic measures, for the medical profession is overstocked in Great Britain, so that if a few candidates are debarred from entering it no harm will be done.

**So-called Prize-fighting in London.**—The National Sporting Club in London provides sparring contests for the amusement of its members, and although no one suggests that all possible safeguards have not been taken two deaths have resulted in the course of a year or so. One occurred last month, and as a result the manager of the club and several others connected with him in his duties stand committed for trial on a charge of manslaughter. It is probable that the medical evidence will largely decide the issue of the trial. The fight was in no sense of the word a prize-fight,



save that the opponents were sparring for a prize; it was a match of twenty rounds at 8 st., 8 lbs., with 5-oz. gloves, and, considering all the conditions, it is hard to understand how the lads could have hurt one another. The postmortem examination of the deceased, who fell unconscious in the thirteenth round and immediately afterward developed symptoms of cerebral hemorrhage, revealed a clot of blood on the right side of the brain and an abnormally small heart. There was no fracture of the skull and ample evidence that no violent blows were struck and that no serious falls took place during the contest. If a true bill is found against those responsible for the management of the National Sporting Club, and they are sent for trial, we may expect to hear the significance of a small heart, the symptoms presented by the condition during life, the prognosis and the treatment discussed in a court of law, which it need hardly be said is the worst place conceivable for a debate upon so obscure a medical subject. How many medical men would like to assert beyond fear of contradiction that a certain patient's heart was abnormally small? And how small has a heart to be before its possessor is to be debarred from athletic pursuits as though he were the victim of valvular disease?

**Prevalence of Carcinoma in Bath.**—Dr. W. H. Symons, the Medical Officer of Health of the famous old Somersetshire city, Bath, gave his sanitary charge a bad character for carcinoma-prevalence in a recent debate at the Incorporated Society of Medical Officers of Health. Bath, a famous health resort from the days of Sheridan to those of Mr. Pickwick, has during the latter half of the nineteenth century somewhat dropped from its high estate and has become the favorite dwelling-place of retired military men and civil and colonial servants, and particularly of well-to-do widows and maiden ladies. For 40 years the population of the borough has been stationary at about 50,000 persons. The proportion of these over 65 years of age is 76, whereas in other parts of the Kingdom generally it is 45. The proportion able to live without working upon their private means is 101 against 36 for the rest of England. Two-thirds of the population are females. The prevalence of carcinoma is 50% higher than it should be and is increasing. Naturally the medical officer of health looks at the abnormal character of the population for an explanation of this fact, but fails to discover one. While the larger number of elderly people might be a factor it could only be an inconsiderable one. The predominance of females Dr. Symons finds to go hand-in-hand with the wealth of the community, for it is determined by the number of maid-servants employed by the city of Bath. These girls tend to go home if they fail in health and do not therefore affect the statistics. Nor do the conditions of dwelling appear to have any influence in the spread of the disease, for in the course of 30 years only one house has been the scene of 4 deaths, only 6 have been the scene of 3, and very few have sheltered 2 fatal cases. In the vast majority of cases only one death was recorded for each house.

**The London School of Tropical Medicine** continues to engage much attention, both medical and lay, in England. The idea is a fascinating one and appeals to the imperial instincts of Englishmen, which have been much stirred by recent events and are now ready to respond to any impulse. The great colonizing power making a systematic inquiry into the diseases rife in its colonies and sending out to its dependencies young men equipped with knowledge of the various scourges that affect the denizens of India, China, Africa and Australia, and ready to place that knowledge at the disposal of the various communities with courage and self sacrifice

—all this makes a fine picture. Practical people insist, however, that the new Tropical School of Medicine can never be anything but an academy for unnecessary talk, inasmuch as there are no cases of tropical medicine in London from which the clinical features of these diseases can be studied. These unenthusiastic folk say that the various medical schools of the Kingdom are not only fully equipped to study the bacteriologic side of tropical diseases, but are doing so already; while the regular lecturers in medicine in these schools tell the students all that, in the absence of clinical material, can be told of malaria, yellow fever, plague, and cholera; and that the lecturers in the proposed new school cannot possibly do more. The Royal College of Physicians of London has as yet appointed no delegates upon the organizing committee of the new school, an omission that seems to indicate that the college has considerable doubt as to the value of the scheme. Among the medical men of the army, who see more of tropical disease than any other English medical men, it is generally considered that such a school would be of service if it were instituted at Netley, where the invalided soldiery are taken on their return to England; for at Netley there are more than occasional cases of tropical disease in the wards, which cannot be said of any hospital in London, and certainly not of the tiny hospital at Albert Docks, in connection with which the new tropical school is to be established.

**An M.D. Degree for London Students.**—A side light was thrown upon this important subject by a debate that took place at the winter session of the General Medical Council of Great Britain, where proceedings have just terminated. The council had before them the official returns from the Naval Medical Service, the Army Medical Service, and the Indian Medical Service, which showed in tabular form how many candidates had competed during the past year for the vacant commissions in these services, how many had succeeded, how many had failed, and the medical faculty from which each candidate had received his degrees or diplomas. The tables proved a remarkable testimony to the stringency of the examinations held by the Conjoint Board of the Royal College of Physicians of London, and the Royal College of Surgeons of England, which board grants the diplomas most commonly held by the medical student educated in London. Whereas candidates having the M.D. or M.B. degrees of the Universities of Edinburgh, Aberdeen, Glasgow and Dublin, as well as those holding the diplomas of the Conjoint Scottish and Irish Boards, had been subjected to wholesale rejection, the candidates who had passed the tests of the English Board had a high percentage of success, 32 obtaining commissions among 39 who competed for them. It is a gross injustice to the student of medicine in London that there should be no faculty of medicine in the metropolis—as yet—that can give him the title of M.D. in reward for studies of reasonable severity. The M.D. degree of London University, as at present constituted is a distinction of high standing, and the university exacts from those who desire it a very long curriculum and an arduous scientific course apart from their medical studies. Every student is not able to afford to give so much time to preliminary work, and for that matter, the degree was intended for consulting physicians and not for general practitioners. Those London medical students who do not take the degree of M.D. Lond. can, however, obtain no legal right to call themselves “doctor” and are ineligible on that account to compete for many hospital-appointments, although, as has often been said, and as was clearly demonstrated by the tables to which we have just

referred, they pass examinations as hard as, or harder than those passed by the "doctors" of the Irish and Scottish universities. The reconstitution of London University is expected to remedy this anomaly, and it may do so in a short time, for the statutory commission to which powers have been given for setting the new scheme to work commenced its sittings at the end of November.

**The Use of Coley's Fluid in England** has not produced any profound belief in its efficacy, but a recent debate at the Medical Society will certainly cause the leading London surgeons to give this method of treatment thorough trial in cases of inoperable sarcoma. Mr. William Battle, one of the surgeons to St. Thomas' Hospital, exhibited to the society a man who had been shown to the same society last year and drew the deduction from his present satisfactory condition as compared to his past desperate state, that the change was due to injections of Coley's fluid. When exhibited to the Society in 1897 the patient presented a large tumor under the right clavicle, extending down the chest; another above the clavicle, extending into the posterior triangle of the neck and over the sternum, and numerous diseased glands in the axilla. He was at that time taking as much as 25 grains of potassium iodid daily, in spite of which the tumors grew larger, and symptoms of interference with the circulation of the upper extremity became urgent. Sections were taken from the tumors above the sternum and above the clavicle, and the pathologic report upon them was that the growth was a spindle-cell sarcoma. Mr. Battle decided to try Coley's fluid. He injected the arm for three months, during the whole of which time the improvement was marked, and in the end complete cure was obtained. In proof of this, he submitted the patient, in whom no trace of the growths so terribly obvious last year could be detected. An interesting debate arose. The president of the society, Mr. Edmund Owen, frankly declared that he was skeptical as to the diagnosis, and several speakers taking the same point of view, narrated cases in which inflammatory growths of traumatic, tuberculous, and especially syphilitic origin had simulated malignant tumors, and had been reported upon as such by first-class pathologists, but had afterwards revealed themselves as innocent. On the other hand Mr. Mansell Moullin, surgeon to the London Hospital, held that Mr. Battle had "shown the first authentic case of dispersion of tumor by Coley's fluid in England," and stated that he believed that the medical profession possessed in the fluid a remedy for spindle-cell sarcoma, possibly a somewhat dangerous and uncertain one, but still one of whose partial efficacy he had no doubt. Mr. Battle, in reply to his critics, defended his diagnosis very strongly, and the net result of the debate will certainly be a great impulse toward experimenting with the fluid. The hopeless plight of the victims of inoperable sarcoma making it a thoroughly sound proceeding to use any remedial measure for which a good word has ever been uttered by a scientific man. The statistics that follow on the injections will decide the position of the fluid in England.

#### CONTINENTAL EUROPE.

**Dr. de Marignac** has been appointed professor of gynecology in the University of Geneva.

**Dr. Troisfontaines** has been appointed professor of special surgical pathology in the University of Lüttich.

**Dr. Henrijean** has been appointed professor of pharmacology and general therapeutics of infectious diseases in the University of Lüttich.

**Dr. Wilhelm Zimmermann**, prosector of the Anatomical Institute, has been appointed extraordinary professor of anatomy in the University of Berne.

**"Revue Clinique des Maladies Nerveuses a l'Usage des Practiciens"** is the title of a new journal to be published by Maloine, in Paris, the first of the new year, under the editorial direction of Dr. Levillain.

**Work of the Red Cross Society.**—The Spanish Red Cross Society has made a request through the French Embassy to the State Department for illustrations and explanations of all surgical, medical, and human devices used by the United States in alleviating the horrors of war. A request similar to this has also been made to all other governments, the purpose being to publish a volume showing the advances made the world over in caring for the sick and wounded, and in meeting the many distressing situations that arise in times of war.

**Dr. Richard Paltauf**, formerly extraordinary professor of general pathology and pathologic histology at the University of Vienna, as well as prosector to the Rudolf Hospital in Vienna, and director of the Serum-Institute of Austria, has been promoted to the ordinary professorship. The many American physicians who have become acquainted with Professor Paltauf, not only through his contributions to scientific literature, but from having received personal instruction from him during recent years, will be much gratified to learn of this well-merited distinction.

**Vital Statistics of the Austrian Empire.**—The recently published vital statistics for the year 1897 show that the number of births in the empire was 973,332, of which 27,033 were still-births. The number of deaths was 645,886. The number of births is somewhat smaller than in the preceding year, but much larger than in 1895. The number of still-births and the number of illegitimate births have also decreased. Of the total number of obstetric cases, 65 1% were attended by physicians or midwives. In Trieste, 100% were thus attended, whereas in Dalmatia, but 31.5% and in Galicia but 21 4%. The most common causes of death were: Tuberculosis, 86,024; pneumonia, 56,392; diphtheria, 23,049; malignant tumors, 17,079. There was a considerable increase in the latter, there being but 15,757 deaths attributable to this cause in 1895.

**The Bacillus of Chancroid.**—At a recent meeting of the Société de Dermatologie et Syphilographie, Paris, Lenglet reported the successful cultivation in pure culture of Ducrey's bacillus of soft chancre. In four experimental investigations the same bacillus was found in pure culture. Inoculated into the human subject it yielded positive results, and from the resulting lesions, the same bacillus was again successfully cultivated. The organism is a streptobacillus, from  $\frac{1}{2}$  to  $2\mu$  in length and  $\frac{1}{2}\mu$  in width. It stains with the ordinary stains, and is decolorized by Gram's method. Inoculations into the peritoneal cavity, the conjunctival sac, and beneath the skin of animals yielded negative results. The bacillus does not grow upon the ordinary media. The details of the method of its successful cultivation are reserved for a future communication.

**A Curious Case of Phosphorus-Necrosis.**—According to the *Lancet* a case of phosphorus necrosis, due apparently to the inhalation of phosphorous fumes, is recorded in a recent issue of *L'Odontologie*. The patient was a man of good health, consuming about 20 cigars a day and using many matches to each one, as he frequently interrupted the



smoking during his work. It was computed that, for the last 20 years, he had daily inhaled the vapor of phosphorus given off by over 100 matches. The early symptoms were pain in the right eye, with swelling involving the whole side of the face. Suppuration supervened and the pus obtained a free flow into the oral cavity. The patient's condition grew worse and the maxilla was eventually removed. A few months later a fresh operation was necessary, but the patient collapsed, dying from meningitis. The man's teeth were in a deplorable condition, so that it is possible the phosphorus acted through the medium of the teeth as the cause of the necrosis.

**Russian Precautions Against the Spread of the Plague.**—As a consequence of the outbreak of the bubonic plague in Central Asia, the Russians have become alarmed and are taking elaborate precautions to prevent its spread. Although at the time of a recent report, the disease had not spread beyond the confines of the village of Anzov, in the district of Samarkand, the place of original infection, over 75% of the total number of inhabitants, numbering about 400, have succumbed, and others are still ill. Precautions as advised by Yersin have been instituted and some of Professor Haffkine's serum has been brought from India. In the principal Russian towns, 100 physicians and 80 assistants have been registered and are ready to start for their posts of duty at a moment's notice. In addition to the reorganization of three posts of medical observation previously existing along the Persian littoral, others have been established in three towns and villages surrounding Anzov, along the Amu Daris, at six stations along the Transcaspian Railway, and in the mountain-passes in Bokhara. The sanitary condition of all vessels on the Caspian Sea will be the subject of careful scrutiny, and supervision will be increased on the Central Asian Railway, at the mouth of the Volga, and along the entire coast of the Caspian Sea. Dr. Levine, bacteriologist of the Military Academy of Medicine at St. Petersburg, who recently studied the plague in India, has been sent to Anzov.

**The International Medical Congress at Paris in 1900.**—According to the *Lancet*, the Organizing Committee, with Professor Lannelongue in the chair, held a sitting on November 5th at the Academy of Medicine in Paris, and definitely settled arrangements for the congress, which will open on August 2, 1900, and close on the 9th. The entrance-fee, amounting to 25 francs, can be sent either to the general manager at Paris, or to the committees acting in foreign countries. Every subscriber will receive a document showing the extent and arrangement of the section in which he is interested. The congress is divided into five sections: A. Biology: (1) anatomy, descriptive and comparative; (2) histology, embryology, teratology; (3) physiology, physical and biologic chemistry; and (4) anthropology. B. Medicine: (1) general and experimental pathology; (2) bacteriology and parasitology; (3) pathologic anatomy; (4) visceral pathology; (5) medical diseases of children; (6) therapeutics and pharmacology; (7) nervous diseases; (8) mental diseases; and (9) dermatology and syphilology. C. Surgery: (1) general surgery; (2) surgical diseases of children; (3) surgery of the urinary organs; (4) ophthalmology; (5) laryngology and rhinology; and (6) otology. D. Obstetrics and Gynecology. E. State Medicine: (1) hygiene, sanitary medicine, and epidemiology; (2) forensic medicine; and (3) military medicine and surgery, naval medicine and surgery, and colonial medicine. Two general meetings will be held, the one on the opening day of the con-

gress and the other at the end. Only those members nominated and invited by the committee will be able to read papers. All proposals relative to the work of the congress must be handed in to the committee before May 1, 1900. The committee will decide upon these and reserve to themselves the right of examining into their claims. No communication must exceed 15 minutes in length, and speakers in the discussions must not exceed 5 minutes. The text of the papers or communications or discussions must be given in the same day to the secretary of every section. French is the official language of the congress, but English and German may be also employed in the general meetings and in the sectional meetings.

**The Moscow Foundling Hospital.**—In the December number of the *Pacific Medical Journal*, Dr. W. F. Southard details an interesting account of a visit to the Foundling Hospital of Moscow. The institution, which was founded in 1763, by Empress Catharine II, for the reception of abandoned and illegitimate children, covers an area of 90,000 square yards, and is surrounded by a spacious park. The main building contains about 1,000 beds, and a barracks, used during the summer, provides accommodations for 800 more. Attached to the asylum is a hospital containing from 150 to 200 beds for sick children and nurses. Children suffering from contagious diseases are placed in a separate building. In addition, there is a lying-in ward, to which 6,000 women resort annually to be confined. From this source alone about 3,000 infants are received. On leaving the institution, these women receive from \$2 to \$10. At present the institution receives illegitimate children whose mothers are dead, abandoned children, illegitimate children whose mothers are living but unable to provide for them, and legitimate children to the age of one year, in case of sickness or death of the mother or poverty of the father; 14,000 wet nurses are annually employed in the asylum, mostly peasant-girls from the surrounding country, who are paid \$3 or \$4 a month. From the day of the opening of the hospital, when 19 children were received, until the present, the institution has never been closed a day. Altogether about 1,000,000 have been admitted; the daily average now being about 50 or 60 (yearly 17,000). At the time of the visit there were in the institution about 1,200 infants from one day to six weeks of age, and 800 nurses. The yearly expenses amount to \$1,000,000, three-quarters of which is contributed by the government, the remainder being derived from endowments. Parents may remove their children before the age of 8 or 10 years, but if the latter remain longer, the government becomes the parent. The boys are subject to military duty, and if they do not remain permanently in the army, they are usually placed upon farms as laborers. Those who show special aptitude are taught trades. Girls are trained as nurses or midwives. Those who become married receive from the government a dower amounting to about \$20 and a wedding outfit. Dr. Southard speaks of the management of the institution in the highest terms of praise.

**Obituary.**—DR. GRUBY, a native of Hungary, who has occupied a prominent place among the practitioners of Paris for the last half-century, and well known because of his increasing eccentricities, at Paris, aged 88 years.—DR. KELIER, director of a hydrotherapeutic establishment in Paris.—DR. VON SILEK, at one time private physician to the late Emperor Maximilian, of Mexico, and more recently one of the chief medical officers of the Austrian Army, and author of a work on hydrography, at Trieste, Austria, aged 80 years.

## The Latest Literature.

### British Medical Journal.

November 19, 1898. [No. 1977.]

1. Recent Advances in Brain-Surgery. HENRY O'NEILL.
2. The Pathology of Diphtherial Paralysis. A Paper Based on the Examination of Six Cases of that Disease by Marchi's Method. FREDERICK E. BATTEN.
3. A New Operation for Gastrotomy and one for Curettement of Carcinoma of the Cardia. FENTON B. TURCK.
4. On Obscure Hemorrhage from a Single Kidney and its Cure by Nephrotomy. THORILD ROVSING.
5. Acetanilid in Sunstroke. CHARLES J. BARRY.
6. The Application of Hydrochloric Acid in Sciatica, etc. R. A. BAYLISS.
7. Intestinal Antiseptics in Diabetes. FRANCIS A. MONCKTON.
8. Fracture of the Zygoma. C. L. MARTIN.
9. The Treatment of Hematuria by Cantharides. ARTHUR S. GOFF.
10. Notes on Ligature of the Brachial Artery for Wound. P. G. IRVER.
11. Otitis Media followed by Mastoid Abscess in an Infant Aged Five Weeks: Operation: Recovery. D'ARCY POWERS.

2.—See p. 1089.

3.—Turck describes a **new method for performing gastrotomy**, which he claims has certain advantages over other methods, in that it may be more quickly performed, involves less space on the anterior wall of the stomach, and makes a perfect valve, preventing any possible leakage of gastric contents. The plan to prevent leakage, by means of a valve-formation, is one upon which other operations have been devised, especially those of Senn and Fontan. Turck claims priority over each of these. His operation consists essentially in the production of a valvular fold in the passage to the stomach by infolding the wall of the stomach. A fold of the anterior wall from above downward is made, and secured for a distance of an inch or more by three stitches. This fold is brought together around the cannula and stitched. The external opening of this artificial canal is sutured to the peritoneal wall and the posterior wall of the rectus fascia, a trocar is pushed through into the cavity of the stomach, and the wound is closed, leaving the cannula in position. [C.H.F.]

4.—There has been considerable discussion of late as to the etiology of **obscure hemorrhages from the kidney**. This condition has been described by some as renal hemophilia, hemorrhage from an anatomically unchanged kidney, hematuric neuralgia, and hematuria from a healthy kidney. Klemperer, who has given the subject some attention, has come to regard the condition as an angioneurosis, but a careful study of the cases that have been reported in literature will hardly sustain such a view. The recorded cases fall into groups, those that have been exclusively under medical treatment, and those in which the kidney has been the object of palpation, incision, or removal through operation. It is evident that the first group of cases are quite useless in deciding the question definitely, as there has been no examination of the renal structure itself, and none that could exclude the possibility of the hemorrhage originating in some other portion of the urinary tract. Of the second group, which comprises 12 cases, but 2 would seem in any way convincing. In these cases the hematuria ceased after removal of the kidney, a microscopic examination of which yielded a negative result, and no other cause of the bleeding was discovered. Rovsing has had personal experience with 4 cases of this obscure condition, a study of which seems to throw some light upon the etiology. In 2 of the cases the hemorrhage is explained by the displacement of the kidney, a condition that either by torsion of the pedicle with its vessels, or by retention causing an internal acute hydronephrosis, may account for the hematuria. Bacteria were found in the kidney, but the tissues presented no sign of nephritis, and the operation was followed by immediate and complete cure. For these reasons in these cases at least, infectious nephritis must be discarded as an etiologic factor. In a third case the patient quite answered to the description generally accepted as typical in cases of neuralgic hematuria, but the operation

showed the whole cause of the bleeding to be the traumatic effect of stays compressing the kidney between the liver and the ribs. There seems to be absolutely no explanation for the cure that immediately followed nephrotomy in the last of the series, but the fact that no lesion was demonstrable is no excuse for calling such a condition angioneurotic hematuria. Klemperer contends that the diagnosis is easily formed by excluding the usual causes of hematuria, and from the nervous state. He is opposed to either exploratory or curative operations for the condition. This advice must be protested against on the ground that, if operation is not performed in such cases, the most serious of the causes of hematuria, namely, malignant tumor, cannot be excluded. Furthermore, the explanation of Rovsing would seem to indicate that in a certain number of cases of apparently obscure bleeding, a displacement, with torsion of the pedicle and bending of the ureter, or a traumatic injury of the kidney from stays, offers a good and sufficient explanation. [C.H.F.]

5.—Barrie recites a case of **sunstroke** in a boy, aged 16 years, in which the usual treatment resorted to was employed. On account of severe pains in the head 12 grains of antipyrin were administered every 4 hours; 3 or 4 days later, on account of persistence of the temperature and active delirium 5 grains of antifebrin, in conjunction with 1½ ounces of port wine, were cautiously administered, and repeated every 6 hours. One hour after the administration of the second dose the temperature had fallen to 98° F., without the supervention of any bad symptoms; recovery was thereafter progressive. [S.M.H.]

6.—Bayliss recommends the application, by means of a glass brush, of **strong hydrochloric acid** of the B. P. over the tender spots that occur in the thigh and calf of the leg in sciatica. The leg is then enveloped in cotton-wool and is loosely bandaged. This procedure creates no vesication of the skin and the application is painless. It should be repeated every night or every other night according to the condition of the skin. Bayliss has employed this method of treatment rather extensively. Of 16 cases of sciatica 2 were completely cured, 11 considerably relieved, and 3 unimproved. In 10 patients suffering from intractable pain in the heels and plantar region, in the sequence of acute rheumatism, 4 were cured, 1 much relieved, and 5 remained unimproved. The duration of treatment varied from 1 to 5 weeks. [S.M.H.]

7.—Monckton reports a number of cases of **diabetes mellitus** successfully treated by the administration of **sodium sulpho-carbolate and boric acid**. The purpose of the treatment was to check the fermentative changes that resulted in the production of glucose or grape-sugar. [S.M.H.]

9.—Goff reports the successful treatment of an attack of **hematuria** occurring in a female, aged 52 years, by the administration of 5 minims of **tincture of cantharides** 3 times daily. The urine was clear within 24 hours. The cause of the attack was not ascertained. [S.M.H.]

10.—Owing to an injury to the **brachial artery** at the middle third of the arm, caused by a fall on a glass bottle, it was necessary, in order to control **hemorrhage**, to **ligate** the vessel. Although the ligature was applied only on the proximal side there was no subsequent hemorrhage from the distal end, thus showing that it is not always necessary to tie both ends of a wounded brachial artery in its middle third—a point insisted upon by Guthrie and some military surgeons since his time. [C.H.F.]

### Lancet.

November 19, 1898. [No. 3925.]

1. Certain Undefined Factors in the Spread of Disease. J. FOSTER PALMER.
2. Further Observations on a Case of Total Extirpation of Stomach in the Human Subject. CARL SCHLATTER.
3. A Contribution to the Surgical Treatment of Phthisis of the Apex. NORMAN PORRITT.
4. Agoraphobia. J. HEADLEY NEALE.
5. A Case of Phthisis with Peculiar Cardiac Physical Signs. W. HALE WHITE.
6. Laparotomy for Intussusception. R. W. MURRAY.
7. Diphtheria-bacilli in the Urine. FREDK. SMITH.



8. Idiosyncrasy towards Potassium Chlorate. Wm. ROBERT CULLING.
9. Note on a Case of Persistence of Hymen; Retained Miscarriage. W. HANFEE WIGHAM.
10. A Case of Compound Separation of the Lower Epiphyses of both Radius and Ulna, followed by Acute Tetanus, treated with Tetanus-Antitoxin and Irrigation of the Wound with Oxygen-Gas without Relief. (Under the care of CHARLES STONHAM.)
11. A Case of Carbolic-acid Poisoning treated by Venesection and Injection of Saline Fluid; Rapid Recovery. (Under the care of T. OLIVER.)

1.—Palmer considers in this article the following undefined factions in the spread of disease: (1) pathogenetic evolution; (2) retrograde metamorphosis; (3) abnormal objective receptivity. The history of past epidemics only points to a bare possibility of the occurrence of pathogenetic evolution. The question whether or not evolution takes place in the progress of a single case is probably answered negatively. It is certainly not the rule, and the exception may be explained in other ways. Pathologic proof, furthermore, seems to negative such a theory, and therefore one must conclude in the present state of knowledge that the hypothesis of pathogenetic evolution is not supported by any trustworthy proof. On the other hand, the powerful influence of retrograde metamorphosis is well supported by ancient history, modern clinical experience and laboratory-experimentation. As to objective receptivity, the history of past epidemics shows that the pathogenic state is distinctly exceptional, and suggests that some preliminary cultivation is necessary before the human subject falls a victim to the onslaughts of pathogenic bacteria. Clinical observation shows furthermore that there must exist some unsanitary condition to render each individual liable to the influence of microbic life. In short, personal receptivity is the determining cause of the prevalence of disease. Pathologic research has shown furthermore that the pathogenic microbe is powerless to cause disease in an ideally healthy subject. It requires for its development a soil prepared for its reception, and such a soil does not exist in any perfectly healthy organ or organism. A healthy organism is considered one in which the brain is in a constant state of normal activity. There may be external conditions of air, water and surroundings that render such a condition impossible, but in most cases the onset of zymotic disease is the sequel of some individual defect, either hereditary or acquired, some cause of depression of the vital powers, either temporary or permanent. [S.M.H.]

2.—At the time of the report fully 9 months have elapsed since Schlatter performed his **complete gastrectomy** and during this time a number of **chemico-physiologic observations** have been made to determine the effect of the absence of the entire stomach upon the process of metabolism. The patient has gained 8½ lbs. in weight, is engaged all day long at work of various kinds in the wards of the hospital, and suffers no discomfort, excepting a sensation of pressure or tension in the epigastrium after the ingestion of an unreasonable quantity of food. Palpation through the relaxed abdominal walls fails to reveal anything suggestive of recurrence. Wrobleusky called attention to the diminution of chlorin in the urine, but the presence of a normal amount of sodium chlorid in the feces proves that the chlorids were absorbed to the normal degree. Hoffmann explains the long-continued retention of sodium chlorid, on the ground that the stock of the latter which is essential for the organism became exhausted during the preceding long period of partial starvation, and has not yet been restored to its full amount. Both observers called attention to the abnormal acidity of the urine after meals, and attributed this condition to the absence of digestive hydrochloric-acid. Two series of investigations were conducted to determine the effect of the absence of a stomach upon the power of assimilation, the result in each indicating that assumption could not have been better under any circumstances. As to the influence of the gastric juices upon putrefaction it was definitely determined that the entire absence of the gastric juice, charged with hydrochloric acid, has no influence upon the extent to which putrefactive decomposition is developed in the intestine. For this reason it is useless to prescribe hydrochloric-acid with a view of disinfecting the intestine. The final investigations concerning the successive stages of the excretion

of nitrogen in the urine after the investion of food proved that these stages are quite independent of gastric digestion, because removal of the entire stomach from the digestive tract does not cause the excretion curve to deviate in any way from that which is obtained under normal conditions. It still, unfortunately, remains an open question as to which organs give to the curve of nitrogen-excretion its characteristic form. [C.H.F.]

3.—It is to be hoped that some method will be elaborated by which the surgeon can combat tubercle in the lung, as he can in other structures of the body. There is no doubt that a number of cases of pulmonary tuberculosis tend to spontaneous cure and that if only some assistance could be offered nature in her efforts at cicatrization and ultimate cure, the number of cases that would recover would be materially increased. The operation suggested by Porritt is applicable only in cases of apical tuberculosis and must therefore be undertaken early in the course of the disease, that is, before there is any exterior involvement of one lung, before abscess-formation, and before both lungs are involved. The operation consists essentially in resection of portions of the second, third, and sometimes fourth ribs lying between the pectoralis muscle, and the principle involved is that which enters into the treatment of tuberculous lesions elsewhere. The surface of the lung being adherent to the chest-wall, the unyielding ribs hold the cavity apart; if, now, these ribs are removed, and instead of a rigid wall, nothing but flesh covers the lung, the latter can collapse at that point. Obliterate the cavity, it undergoes cicatrization and contraction, and the tuberculous process is, for the time being at least, checked. Another benefit to be derived from the operation is the physiologic rest that is always so desirable in the treatment of inflamed tissues, especially those of a tuberculous nature. This operation may be made more efficient by removing portions of rib from the posterior as well as the anterior wall of the chest. The procedure is not a dangerous one in itself, and is, therefore, to be preferred to other modes of attack, namely, drainage and excision. It may be possible, however, with perfect safety to establish drainage as a secondary measure after adhesions have thoroughly formed between the pleura and the lung. Porritt has performed three operations on the lines laid down. The first patient's life was prolonged and the local effects upon the chest and its contents, showed that the theoretic aim of the operation is capable of practical attainment. The second patient died on the second day, and the third patient, a man of dissolute habits, on the fourteenth day of the operation. [C.H.F.]

4.—Neale believes **agoraphobia** a much more common condition than it is ordinarily thought to be. He was himself a subject and describes his own case. The chief symptom is fear of impending death; next to this dread of an open space, an inability to appear in crowded places. Under ordinary circumstances the danger to life is nothing, but he relates the experience of a carpenter, a subject of this condition, who was suddenly seized with an attack while at an elevation, from which he fell and sustained a fracture of the leg. The agoraphobic can sometimes be recognized in the street by his suddenly pausing, when the attacks come on, to lay hold of some support, and by the fact that he ordinarily walks with a stick or umbrella which is planted at each step some distance from him with the idea of increasing his base-line of support. Professional men are most often attacked, especially clergymen. The disorder seldom attacks the poorer classes. The prognosis is unusually favorable. Sometimes in dyspeptic women the trouble leads to melancholia. The treatment should be conducted on a psychologic basis. [S.M.H.]

5.—White reports a case of **pulmonary tuberculosis** in a man, aged 42 years, in whom the left lung was normal, while there was a large cavity in the upper lobe of the right lung and below the third interspace the lung was absolutely consolidated. Examination of the heart disclosed a beat exactly like the normal apex-beat in the fifth right intercostal space just within the nipple-line. This was palpable and on auscultation over it the sounds were heard louder than at any other point of the chest. There was a faint beat in the third and fourth right interspaces. In the normal position of the apex-beat there was a faint cardiac impulse, over which the sounds could be faintly heard. The normal area of superficial cardiac dulness was absent and the heart



could not be defined on the right side on account of the consolidated lung. The condition was supposed to depend upon a dragging over to the right of the heart, as a result of contraction of fibroid tissue in the diseased right lung. The faint impulse in the fifth left intercostal space was attributed to the normal attachments of the pericardium. Postmortem examination, however, showed the heart in its normal position. The whole of the upper lobe of the right lung was converted into a large cavity, while the middle and lower lobes were completely consolidated. The cardiac sounds must have been transmitted through the consolidated lung, and the adjacent cavity must have acted as a resonator to intensify them. The appearance of the impulse was not accounted for. [S.M.H.]

6.—The dangers attending **celiotomy for intussusception** are not necessarily greater than those attending attempts at reduction by rectal injection, and, as three of every four attempts of the latter procedure fail, the advisability of at once performing celiotomy seems clear. The patient would be in a much better condition to stand a severe operation than if he had already been subjected to rectal injections. Furthermore, the results of the last five years from operative intervention are most encouraging. [C.H.F.]

7.—After injecting a guinea-pig with live broth-culture of **diphtheria-bacilli** Smith noticed that the animal was voiding hemorrhagic urine. The pig was killed and under antiseptic conditions urine was obtained from the bladder and run over the surface of coagulated serum in a Petri dish. After incubation a copious growth of **Klebs-Löffler bacilli** was discovered. A second guinea-pig was then injected with the living culture and killed 5 hours later. The urine was obtained aseptically as before. It was normal in appearance, but produced a plentiful growth of diphtheria-bacilli. These results suggest that, at least in hemorrhagic diphtheria, bacilli may be found in the urine, and it is predicted that, in order to prove the presence of the bacillus in the blood, it will hereafter be searched for in the urine. This finding is of practical importance from a public health point of view, as it suggests the necessity of thorough disinfection of the urine and feces of diphtheria patients. [S.M.H.]

8.—Cullen administered to a man, aged 50 years, a prescription containing 3 minims of liquor arsenicalis, 10 grains of potassium chlorate and 15 minims of tincture of hyoscyamus, each dose of which was followed by a sense of chilliness, eventually terminating in an actual chill. The effect was attributed to the potassium chlorate. [S.M.H.]

9.—Wigham reports a case of **persistence of the hymen** in a young, unmarried woman. On examination an extremely tough and dense hymen was found, with a great convexity downward and outward, and with a feeling of resistance as if something solid existed beyond. There was a small opening in the membrane just below the pubes. After the administration of chloroform the opening was enlarged and a fetus of about the fourth month, with cord and placenta, was found in the globular dilatation of the upper part of the vagina. The state of putrefaction of the fetus indicated that the condition had apparently existed over a month at least. [W.K.]

11.—Oliver reports the case of an unmarried woman, aged 21 years, with a history of having swallowed 7 drams of ordinary commercial **carbolic acid**. She was comatose and collapsed and death seemed imminent. The stomach was washed out with water containing sodium sulphate; 8 ounces of blood were removed from the saphenous vein and 4 pints of a normal saline solution at a temperature of 100° F. were injected into the vein. Atropin sulphate gr.  $\frac{3}{16}$  was administered hypodermically, and half a pint of milk, beaten up with two eggs and one minim of croton-oil, was introduced through the stomach-tube. Recovery was eventually complete. [S.M.H.]

### New York Medical Journal.

December 3, 1898. [Vol. lxviii, No. 23.]

1. The Electrotherapeutic Control of Currents from Central Stations. GEORGE W. JACOBY.
2. Bronchitis, with Special Reference to Abnormal Nasal Respiration as an Etiological Factor. WILLIAM SCHEPPEGRELL.
3. Some Observations on the Occurrence of Malarial Fevers

on the Pacific Coast, with Remarks on the General Diagnosis of the Disease. J. CLIFFORD PERRY.

4. Acute Inflammatory Conditions of the Upper Air-passages accompanied by Laryngeal Edema. CLARENCE C. RICE.

1.—The article is to be concluded in a later issue.

2.—In discussing the **influence of abnormal nasal respiration as a factor in the etiology of bronchitis**, Scheppegrell calls attention to the fact that after the air passes through the normal nasal chambers in the process of inspiration it is almost saturated with moisture, cleansed of all foreign impurities, and of a temperature within certain limits of the normal body-temperature. It is to this nasal function of respiration that we owe much of our ordinary immunity against the microorganisms in the atmosphere. When disturbance or interference with it exists an irritating effect is exerted upon the parts beyond. In a warm, moist atmosphere the evil results of such defect may be indefinitely deferred, but in a colder atmosphere they are quickly manifested. It is owing to this fact that bronchial affections are so much more common in cold weather and in cold climates. The most prominent conditions that interfere with or prevent normal nasal respiration and thus give rise to inflammation of the bronchial tubes are: (1) total absence of nasal respiration; (2) partial interference with this function; (3) lowering or loss of the normal nasal function in respiration; (4) pathologic processes in the nasal chambers by which the inspired air may be vitiated. In the treatment of bronchitis or other inflammatory processes of the lower respiratory tract, this common etiologic factor must receive due consideration. The nasal passages must therefore be carefully examined, and any existing defect therein be rectified, thereby removing the cause of the condition. [S.M.H.]

3.—[In a discussion of the **distribution of the malarial fevers of the Pacific Coast**, Perry reaches the following conclusions: (1) Only the milder forms of malarial fever prevail on the Pacific Coast, nearly always the tertian, occasionally the quartan, and rarely the estivo-autumnal variety; (2) the only localities in Washington in which the fever prevails are along one or two rivers in the Puget Sound Basin, the Columbia-River Valley, the Chehalis Valley, the Yakima Valley and an occasional case in the Columbia Valley of the northeastern part of the State; (3) in Oregon the disease occurs in the Columbia-River Valley, the Willamette Valley, Rogue-River Valley, Umatilla Valley, and a few cases in the lowlands along the Columbia River in Gilliam County; (4) in California the disease occurs in the Sacramento Valley, San-Joaquin Valley, Tulare Basin and Kern Valley, and there is an occasional case in the Santa-Clara Valley; (5) the frequency of malarial fevers in the Columbia River and Willamette Valleys is about 3% of the total cases of disease that come under observation during the summer months. In addition a description is given of the different varieties of the malarial parasite and the technic of making blood-examinations for the discovery of the malarial organism is described. A warning is raised against the error of mistaking for simple intermittent fever, septic infections, pulmonary tuberculosis, influenza, endocarditis, chills occurring during gonorrhea and after the passing of sounds, abscess of the liver, irregular types of typhoid fever and gall-stone fever. If the condition is malaria careful repeated examination of the blood will disclose the malarial parasite. Whether the malarial fever is due to the tertian or quartan parasite can be determined by examination of the blood in the fresh state and noting the characteristic appearance of the hemacytozoa. The estivo-autumnal or irregular forms, especially the remittent fevers, are at times extremely difficult to differentiate from typhoid fever. Here again an examination of the blood will reveal the malarial parasites on the one hand or the Widal reaction of typhoid fever on the other. [S.M.H.]

4.—Rice tabulates 41 cases of **edema of the larynx** in its acute form, including all that have been specifically reported in the journals cited by the *Index Medicus* since the year 1887. Of the 41 cases 21 are reported as having no special cause other than that of simple catarrhal inflammation. Of these 21 so-called catarrhal cases, 1 was associated with nephritis, 2 occurred in alcoholic subjects, 3 were caused by the mechanical irritation of a foreign body, 1 by swallowing carbolic acid, 1 occurred in a child on the twelfth day of an attack of variola, 1 was thought to be due to a mosquito-



sting, 2 were in tuberculous subjects, 1 was associated with polyadenitis, 1 was put down as pyemic, with possible metastatic abscess, in an alcoholic subject; 1 was tabulated as septic, 1 as secondary to retropharyngeal abscess, 1 as secondary to an enlarged thyroid, and 3 were consecutive to syphilitic perichondritis. In 1 case the cause was unknown. The majority of cases reported as catarrhal were evidently supposed to be of the type of simple acute laryngitis. Rice reports 3 of moderate laryngeal edema following circumtonsillar cellulitis that he has himself observed. In 2 of these there was suppuration about the tonsil, in the other there was more laryngeal edema and dyspnea, although the pharyngeal swelling disappeared without suppuration. In the first 2 cases the edema was never grave and in the third it was so extreme that tracheotomy was considered. Of 2 further cases of moderate edema due to traumatism, 1 resulted from the application of the galvano-cautery to a fibrous growth on the lateral wall of the larynx below the tonsil, and the other from the swallowing of a piece of wood that lodged in the pyriform sinus. In 2 other cases the edema was unattended with any appreciable local cause and was attributed to constitutional influences. The first was the result of a rheumatic glossitis, and in the other the nature of the primary trouble was unknown. The existence is questioned of an acute primary edematous laryngitis, irrespective of any other inflammation in this location, but due to some special germ, some septic infection. As the cause of edema of the larynx is more thoroughly studied the cases that cannot be ascribed to either some preëxisting local affection in either the pharynx or the larynx or to some constitutional disease or external irritation will be exceedingly rare. Rice does not believe in the existence of erysipelas of the pharynx or larynx, unless secondary to a similar manifestation on the skin. [S.M.H.]

### Medical Record.

December 3, 1898. [Vol. 54, No. 23.]

1. A Plea for Earlier Recognition and Prompter Action in Malignant Disease. JOSEPH D. BRYANT.
2. Recent Advances in the Normal and Pathological Histology of the Central Nervous System. FREDERICK RANDOLPH BAILEY.
3. Montauk Point and the Government Hospitals. WICKES WASHBURN.
4. Some Thoughts on Retarding the Changes of Old Age. ALBERT SEITZ.

1.—Statistics of the larger cities of Europe and America bear witness to an increase in the percentage of deaths from carcinoma, and it is curious to note that certain parts of the body exhibit a comparative increase in the frequency of malignant growths; especially is this true of the upper of the digestive organs in man—the mouth, tongue, pharynx, and fauces—and of the intestines, rectum, liver, and bladder in women. Thoroughness of operation and improvement in technic are now known to have materially increased the percentage of patients that enjoy immunity for a number of years. In 1835, immunity to the three-year limit was conferred by operation in 11.8% of cases of carcinoma of the breast (Gross), while to-day Halsted reports by the same measure a rate of cure of 52%. The rapidity with which the adjacent tissues and lymph-channels become involved, is an urgent appeal for early recognition and prompt interference, apart from the fact that the frequency of recurrence and the expectation of life are directly influenced by the presence or absence of lymphatic involvement. With regard to perfection of technic and the development of radical operations, surgery has made rapid strides and seems to have reached a limit. Under these circumstances an increase in the immunity offered by operation can only be hoped for when the general practitioner and the laity appreciate to its fullest extent the importance of prompt action and the dangers of delay. [C.H.F.]

2.—Bailey gives an interesting review of the present state of knowledge concerning the structure of the central nervous system. Three methods in particular have contributed most toward this knowledge, those of Weigert, of Golgi and of Nissl. The last has been most valuable in demonstrating the inner structure of the cell, and particularly in permitting a recognition of pathologic changes in it. Bailey adopts the opinion of Held and Dogiel that the

chromophilic bodies do not exist as such in the protoplasm of the nerve-cells, but are precipitated in some manner by various fixing agents; or possibly by a change in the reaction of the cell from alkaline to acid. From various studies made of the structure of the cell, he concludes that the nucleus of the nerve-cell differs in no essential from the nuclei of other cells, as to either structure or function, and that the working mechanism of the cell is due to the cytotreticulum. The cell is nourished by what he calls the cytolymph, that is, the fluid drawn from the pericellular lymph-space and modified by the protoplasm. This exists in two forms, a coarse product, precipitable as the chromophilic bodies, and a thinner substance that nourishes the cytotreticulum. Bailey describes some of the morbid changes that occur in the central nervous system. Parenchymatous degeneration of the nerve-cell occurs in two forms, either as precipitation of the chromophilic substance in fine granules in various forms of intoxication, or as aggregation of the chromophilic substance at the periphery with excentric position of the nucleus, such as occurs after destruction of the neuraxon. Acute exudative inflammation is characterized by collections of round cells in the central nervous system and parenchymatous degeneration of the ganglion-cells. Acute productive inflammation is similar to the last, with the addition of some newly formed connective tissue. Chronic productive inflammation is characterized by the production of connective tissue in the walls and around the blood-vessels, and also by more or less proliferation of the neuroglia. [J.S.]

3.—Washburn describes the organization of the Government Hospitals at Montauk Point. These hospitals were usually situated in the most favorable location, and were well built and arranged. Unfortunately, the army-surgeons put in charge of them had had no previous experience in hospital organization and management, and failed entirely to devise any satisfactory system. As a result, some wards would be crowded, others comparatively empty; some wards would have a superabundance of supplies, others would be in desperate straits, even for such elementary necessities as sheets. The men of the inefficient hospital-corps, were transferred from place to place so frequently that they had no opportunity to learn even the simplest duties; no provision was made at first for laundry-work or the disposal of sewage. As a result, the confusion became terrible, and the soldiers were obliged to submit to an unnecessary amount of discomfort and suffering. The greatest carelessness further was observed in unloading the men from the transports, no pains being taken to care properly for those who were desperately sick, all being bundled indiscriminately into the ambulance. As a result, 75 men, all severely ill, were on one occasion brought to the hospital in a collapsed state, having fallen to the bottom of the stages in which they had been placed upon removal from the transport. After the arrival of the trained nurses and Sisters of Charity, there was considerable improvement in the nursing. In spite of all this, the number of deaths was small; being about 1% of the patients admitted to the hospital. A number, however, suffering from mild disorders were admitted for the purpose of assisting in the wards. [Dr. Washburn appears to believe that the government should either have a number of men in the army trained in hospital-management, or, if this is impossible, it should call men from civil life accustomed to the organization of hospitals to take charge of such as may be necessary in war-times. He calls attention to the fact, that our regular-army surgeons, under present conditions, have no opportunity of acquiring this experience.—J.S.]

4.—Seitz suggests that occasionally, say two or three times a year, persons approaching the period of life when senile changes first appear should restrict themselves to a diet of the tissues of young animals, and to fruits and vegetables, so as to supplement their decreasing resisting power with those elements that prevent fatty infiltration and calcareous change. [J.S.]

### Medical News.

December 3, 1898. [Vol. lxxiii, No. 23.]

1. Resume of 100 Cases of Tuberculosis. HERBERT M. KING.
2. External Esophagotomy for Impacted Foreign Body in the Esophagus. Located by the X-ray. JOHN C. MCCOY.



3. The Gonococcus. WILLIAM C. MITCHELL.
4. The Practical Treatment of Scalds and Burns. N. D. CHAPMAN.
5. Acute Pulmonary Edema Successfully Treated by Venesection. H. B. WHITNEY.

1.—In a study of 100 carefully tabulated cases of **pulmonary tuberculosis**, King was unable to find any distinct heredity in the etiology. The same number of individuals not tuberculous showed almost as marked a history of familial tuberculosis. The ages between which most of the cases occurred were from 18 to 35 years. The most frequent apparent predisposing cause was influenza; following this in order of frequency were pneumonia, typhoid fever, pregnancy or lactation, measles, and gastro-intestinal disturbance of somewhat protracted duration. Often there was no definite existing cause. The primary lesion seemed to be in the upper lobe of the right lung in 47 cases; in the upper lobe of the left lung in 36 cases; and simultaneous in both apices in 8 instances. In other cases, so far as determined, it was situated elsewhere, being but once in the lower lobe of either lung. Thirty-three cases presented also laryngeal tuberculosis, but in all of these the pulmonary condition seemed to be primary. In 90 cases, either the pleura or pericardium, or both, were involved. The genito-urinary system was affected but twice. The most common complications of non-tuberculous character were lobar pneumonia and nephritis. Pyothorax is, in King's belief, usually a secondary infection, as he has commonly found pus-cocci in the exudate from such cases. The most frequent cause of death was "asthenia," the average duration of the disease about 2 years. The most important points in reaching an unfavorable prognosis were rapidity of the pulse, marked temperature-variations, with profound diaphoresis, marked and rapid emaciation, and disturbance of the digestive organs. Pregnancy makes the prognosis materially worse. The amount of expectoration and the number of tubercle-bacilli seem to have no prognostic significance, but Ehrlich's diazo-reaction, when positive, is indicative of a rapid and unfavorable course. Primary infection after the 60th year is usually rapidly fatal, but if reinfection occurs at this period from an old focus, the tendency to self-limitation seems to be marked. In one case, a man, 50 years of age, has had tuberculosis for 30 years. Tubercle-bacilli were found in the sputum soon after the method of demonstrating them became known, and they still persist, while his health seems to be quite normal, although physical signs are present. [D.L.E.]

2. External esophagotomy for impacted foreign bodies should be resorted to at the earliest possible moment once it is determined that it is impossible with the employment of moderate force to remove the foreign body with esophageal instruments. Prolonged and continued use of such instruments should be condemned as they so contuse and lacerate the tissues that, owing to their diminished vitality, there is danger of ulceration if esophagotomy be finally required. If the vitality of the tissues has not been impaired the wound in the esophagus and the cutaneous wound should be completely closed at the operation. McCoy performed this operation upon a 7-year-old child, removing a whistle that had been swallowed 41 hours previously and had become so impacted that the coin-catcher was of no avail. The fistulous tract closed in 7 days and on the sixteenth day the patient was discharged. [C.H.F.]

3.—Mitchell discusses the morphology, cultural characteristics, and methods of cultivating and staining the **gonococcus**. He has had success with Wasserman's hog-serum culture-medium. [D.L.E.]

5. Whitney reports a case of organic heart-disease in which there was certainly mitral stenosis, and, he believes, also mitral regurgitation and aortic regurgitation. An attack of extremely acute edema of the lungs came on, and the patient seemed to be dying. Twelve ounces of blood were removed after medication had failed, and improvement was almost immediate, and resulted in the recovery of fair health. Whitney insists that **venesection** is looked upon by both laity and profession with too much repugnance; though in stating that blood-letting should be resorted to for pulmonary edema only when it is sudden, and the result of an unusual, accidental strain upon the heart, he seems to give it credit for even less good than it can accomplish. [D.L.E.]

### Boston Medical and Surgical Journal.

December 1, 1898. [Vol. cxxxix, No. 22.]

1. District-Visiting Nursing in Obstetric Practice. A. WORCESTER.
2. A Study of 30 Cases of Antral Empyema. FRÉDÉRIC C. COBB.
3. A Case of Pernicious Anemia Complicated by Tubercular Infection of the Lymph Nodes, Liver, and Spleen. FREDERICK L. HILLS.
4. Intestinal Suture of Typhoid Perforation; Recovery from Operation; Death Nine Days Later from the Original Disease. SAMUEL B. WOODWARD.
5. Two Cases of Stramonium (?)—Poisoning. EDWARD A. TRACY.

2.—In Cobb's experience **empyema of the antrum** is one of the most tractable conditions, if the cause of suppuration be removed. For this reason the determination of the etiology is of the utmost importance. From a study of 30 cases the impression has been gained that affections of the teeth play an important part in the causation, so that each case should be carefully examined by a competent dentist. If any doubt exist as to the presence of tooth-roots in the alveolus, this uncertainty may be cleared up by a radiograph. In cases in which ethmoiditis has been discovered in connection with antral empyema, the former should be treated as the probable cause of the latter. Acute cases not related to disease of the teeth respond promptly to cleaning and antiseptic washes. Malignant disease and syphilis must always be considered as possible etiologic factors. [C.H.F.]

3.—Hills reports the case of a woman, 61 years of age, who had been bedridden for 23 years, who subsequently acquired the morphin-habit, and later developed delusions of persecution. After a year in an insane-asylum, she became much better and was able to return to her home in an apparently normal condition. A year before death, she had repeated attacks of indigestion with vomiting, and it was noticed that she was paler. She was brought to the asylum and found to be extremely anemic, and at the same time it was noticed that some of the lymph-glands were enlarged. The red blood-corpuscles decreased from 500,000 to 150,000, the white varied from 13,000 to 20,000. Differential count of the leukocytes showed a slight excess of mononuclear cells. At the autopsy considerable subcutaneous fat was found. The liver and spleen contained many hard yellowish nodules, which could be easily shelled out. The other organs were anemic, but otherwise apparently normal. The lymph-glands were reported to be tuberculous, although tubercle-bacilli could not be detected, and the nodules in the liver and spleen were probably of the same nature. Hills excludes Hodgkin's disease on account of the tuberculous nature of the lesions. Unfortunately, the brain and spinal cord were not examined. [J.S.]

4.—Woodward reports a case of **typhoid fever** in which on the eleventh day of the disease **perforation of an intestinal ulcer** occurred, and about 10 hours later celiotomy was performed and the perforation closed. Though the patient was almost moribund at the end of the operation, he was resuscitated by appropriate measures, only to die 9 days later from the original disease. [C.H.F.]

5.—Tracy reports 2 cases of **stramonium-poisoning** in children who had been given a sample of a proprietary specific for asthma under the belief that it was a compound of licorice powder. Four and a half hours after ingestion both awoke, wildly delirious. The pulse-rate was in the girl 240, in the boy 196 per minute. The pupils were widely dilated, the skin was flushed, and the children were thirsty. The treatment consisted in the administration of a strong solution of Epsom salt, repeated until there was free evacuation of the bowels; and of Dover's powder to control the delirium and to promote perspiration. About 48 hours later considerable improvement had occurred, and ultimately the children recovered. A sample package of the asthma-cure was obtained, and it was found that the directions were to burn the powder and inhale the fumes. There was no indication upon the paper of its poisonous nature. [J.S.]

### Journal of the American Medical Association.

December 3, 1898. [Vol. xxxi, No. 23.]

1. Principles of the Dietetic Treatment of Diabetes Mellitus. C. W. PURDY.



2. Suggestions on the Limitations and Treatment of Juvenile Criminals. DANIEL R. BROWER.
3. State Regulation of Marriage for the Prevention of Communicable and Hereditary Diseases. ALBERT H. BUTER.
4. Artificial Respiration in Relation to State Medicine. EDWARD DAVIES McDANIEL.
5. The Administration of Sanitary Laws. W. P. MINN.
6. Melancholia. FRANK PARSONS NORTHERY.
7. How to Limit the Over-production of Defectives and Criminals. J. H. McCASSY.
8. A Case of Akropegia. HENRY WALDO COE.
9. The Artificial Feeding of Infants in Gastro-Intestinal Disturbances. J. M. G. CARTER.
10. The Surgery of Camp Wicket. N. SENN.
11. The Santiago Campaign. LOUIS KOLIPINSKI.

1.—Purdy regards **diabetes** after middle life as one of the most manageable diseases with which the physician has to do. The diet should be so ordered as to maintain and, if possible, increase the body-weight and strength of the patient, and to best accomplish this a systematic series of frequently recorded observations must be made of the quantity and quality of the food actually ingested; of the quantity and quality of the waste excreted, especially by the kidneys. Quite complete lists of foods for making up the dietary of this class of patients are given. [M.B.T.]

2.—Brower states that the growth of the **criminal class** is nearly three times greater than that of the population. In order to limit these criminals, society must stop their propagation. The marriage-license, in addition to present requirements, should demand evidence that both parties are in good health, that they are not inebriates, epileptic, tuberculous, insane, criminals, nor paupers, and that they have no active venereal disease. Children of vicious parentage should be removed from their bad environment before they become criminals, and the juvenile criminal should not be placed in a common jail when arrested, for in this nursery of crime his malevolent tendency will simply be more fully developed, and, if he is an accidental transgressor, and becomes branded a "jail-bird," his reform is so much the more difficult. The juvenile criminal should be placed in a reform school and under the direct supervision of a physician versed in criminal anthropology until cured and then discharged with money for a start in an honest life. [M.B.T.]

3.—Burr advocates the passage of stringent marriage-laws for **preventing the communication of hereditary diseases**. It is suggested that every one desiring a license to marry should be required to file a certificate of health from a legally qualified examining physician, showing freedom from hereditary diseases, such as insanity or epilepsy, from all active tuberculous infections and from communicable venereal diseases. [M.B.T.]

6.—See this JOURNAL, Vol. I, p. 1182.

7.—Among the measures that McCassy suggests to **limit the over-production of defectives and criminals**, are improved methods for educating and training young children; reform of prisons, adapting the treatment of the criminal to the individual rather than to his crime and making it corrective rather than punitive; and asexualization of the unfit classes. [M.B.T.]

8. Cox reports the case of a married woman, 68 years old, who first manifested signs of mental defect at the age of 50, and was soon taken to a hospital for the insane because of homicidal tendencies. Meanwhile, the extremities became much enlarged, the fingers sausage-shaped, the features thickened, the bones of the chest thickened and enlarged, the thyroid small and the thymus not discernible. [M.B.T.]

9. See this JOURNAL, Vol. I, p. 1094.

10. Owing to the debilitated condition of the **soldiers returning from Cuba** suppurative conditions were exceedingly frequent, and a good share of the surgical work consisted in incising and draining abscesses, some of them of enormous size. Often the men were in such low physical condition that great care was necessary to avoid loss of blood, and stimulants, iron and quinin were given freely in connection with nourishing diet. Among other cases reported is that of a soldier, 22 years old, who had been sick with fever, malaria and diarrhea for 6 months in Cuba, and who, while convalescent from a 3 weeks' attack of typhoid fever, was attacked suddenly with violent pain in the right testicle,

which rapidly increased in size, reaching the dimensions of a small orange in 2 days. Suppurative orchitis followed and on incision and draining creamy pus was evacuated, which contained typhoid-bacilli in abundance. The most important and frequent complications of typhoid fever were bed-sores and abscesses, but careful and attentive nursing did much to reduce the mortality from these causes. [M.B.T.]

American Gynecological and Obstetrical Journal.

October, 1898. [Vol. xiii, No. 4.]

1. A Further Report upon the Conservative Surgery of the Uterine Appendages. A. PALMER DUDLEY.
2. Infective Peritonitis, with Special Reference to a Suggested Method of Improving the Present Methods of Surgical Treatment. J. C. WEBSTER.
3. Malignant Placentoma. JOHN MARSHALL BEFFEL.
4. Some Remediable Forms of Sterility. GIDEON C. SEGUR.
5. Ovariectomy, Oöphorectomy and Salpingectomy without Ligature, Clamp or Cautey, etc., for Ovarian Cyst, Tubal Abscess, etc.; Illustrative Cases by both Vaginal and Abdominal Routes. J. COPLIN STINSON.

1.—Dudley reports two cases of **conservative operations on the uterine appendages for pyosalpinx**. In the first, a case of acute double pyosalpinx of gonorrheal origin, the fimbriated extremities of the tube were adherent to the ovaries and the outer half of each tube was distended with pus. Both tubes were amputated, all but two inches being removed. All adhesions of the ovaries were then thoroughly cured, one or two cysts were punctured, the surface of each ovary was thoroughly touched all over with pure carbolic acid, which washed off with proof-alcohol, and the latter with sterilized boiled water; the tip of the tube was tacked to the ovary with one suture. At no time during convalescence did the patient show a rise of temperature, tympanites or tenderness from the intrapelvic condition. The second case was one of double pyosalpinx in which the left appendage communicated with the bowel. The appendage was entirely removed and the right tube and ovary were resected. An iodoform-gauze vaginal drain was used. The patient recovered. [W.K.]

2.—Webster quotes statistics from many authorities as to the deadly character of infective peritonitis. Treves states that the "surgical treatment has been most discouraging in acute peritonitis following gangrene, operations, and puerperal infection." Although great fatality has attended efforts to relieve diffuse peritoneal infection, considerable advance has been made in the operative treatment of localized infections. That the important element in infective peritonitis is microbic activity is now generally believed. Various microorganisms have been found associated with peritonitis, of which the most frequent are the bacterium coli commune, streptococcus, and staphylococcus pyogenes aureus. Hawkins has found of 61 cases of general peritonitis or appendicular abscess due to disease of the appendix that the bacterium coli commune was present in 57, and the only germ present in 50. In puerperal peritonitis the most frequent organism is the streptococcus. In peritonitis following abdominal section the streptococcus, staphylococcus aureus and albus are most commonly found. The reaction of the peritoneum varies under different circumstances, the small intestine and the omentum being the most sensitive to infection. The influence of microorganisms varies according to the nature of the organism, differences in virulence, and the quantity introduced. [W.K.]

Grawitz has shown experimentally that (a) non-pyogenic microbes introduced into the peritoneal cavity in large or small quantities cause no harm; (b) large quantities of microbes that ordinarily are harmless, may be capable of starting a severe peritonitis if the absorptive power of the peritoneum be impaired; (c) in several instances streptococci and staphylococci injected in a watery solution caused no changes; (d) the introduction of the same quantity with a fluid difficult of absorption led to purulent peritonitis; the same occurred when the peritoneum was injured. [W.K.]

3.—Befel reports a case of **placentoma or deciduoma malignum**, in which a diagnosis of sarcoma of the uterus, with metastasis, was made and operation considered not feasible. On exploration a small piece was removed from a



tumor of the gall-bladder, but marked hemorrhage followed, and in spite of all attempts to check it by packing, with the Paquelin cautery, etc., it continued and the patient died within 24 hours. In a discussion of the diagnosis the following facts are noted: "(1) The development in the uterus of a tumor following abortion is a suspicious circumstance; (2) the history of the rapid development of metastatic tumors in a little over three months shows the marked malignancy of the tumors; (3) the histologic structure of syncytium, ectoblastic cells and blood-spaces, constituting the microscopic features of the tumor, when combined with the foregoing history, leads to a diagnosis of malignant placentoma. There are four theories for the origin of the syncytium: (1) that it is derived from the endothelium of the blood-vessels; (2) that it is derived from the uterine gland-structure; (3) that it is derived from the compacta of the decidua; (4) according to the theory at present most generally accepted the syncytium arises from the ectoblast. [W.K.]

4.—Sagar discusses the **remediable forms of sterility**. Some of the causes of sterility are slight and seem out of all proportion to the effect produced; and yet their removal, easily and readily accomplished, is followed by a cure of the condition. Imperforate hymen, sensitive myrtiform caruncles, catarrhal endocervicitis, malposition of the uterus with chronic inflammation involving the periuterine structures, are causes of sterility. Syphilis is frequently the cause of relative sterility. Any and every deviation from the normal condition of the sexual organism in women, and in men as well, may determine sterility. Its study should include the whole art of gynecology and also the diseases peculiar to men. [W.K.]

5.—Stinson advocates the removal of all such masses as ovarian cysts, non-malignant tumors, abscesses and irreparably diseased tubes, by enucleation without ligature, clamp or cautery; as the simplest, safest and best method. He commences the enucleation at the outer extremity of the ovarian cyst or tumor, etc., and works toward the uterus, using blunt dissection, aided at times by cuts with the scalpel. The dissection should be carried as closely as possible to the mass, which can thus be removed without cutting a vessel. After the removal of the diseased structures the cut edges of the broad ligament are united with continuous catgut-sutures. If drainage is indicated the Morris capillary wick is to be preferred, one or more strips of moist gauze surrounded by gutta percha tissue with several holes snipped in the tissue. The use of non-absorbable ligatures is objected to because of the possibility of sepsis, hemorrhage, sloughing, septic discharge, pelvic exudates, fistulae and adhesions. Two principles are involved in the satisfactory performance of enucleation; the first is to dissect as closely as possible to the uterus, tubes and ovaries, as by this means bleeding is reduced to the minimum, only capillaries or arterioles being divided, and the oozing from which stops almost at once; the second is to keep the immediate work well in view, and if any artery be divided, to catch it at once with forceps and ligate with catgut-ligature. [W.K.]

#### American Journal of Obstetrics and Diseases of Women and Children.

October, 1898. [Vol. xxxviii, No. 250.]

1. The Bacteria of the Vagina and their Practical Significance, Based upon the Bacteriological Examination of the Vaginal Secretion of Ninety-two Pregnant Women. J. WHITRIDGE WILLIAMS.
2. Two Cases of Rupture of the Symphysis Pubis During Labor. JOSEPH B. DE LEE.
3. Castration for Rudimentary Uterus, Absence of Vagina, Menstrual Molimina. HIRAM N. VINEBERG.
4. Remarks on Primitive Amenorrhea, with Report of Case and Presentation of Pathological Specimen. WALTER B. CHASE.
5. Operative Technic for the Intraligamentous Ovarian Cystoma. D. TOD GILLIAM.
6. Emmet's Operation for Lacerated Perineum and Relaxed Vaginal Outlet. I. S. STONE.
7. Vaginismus. J. THOMAS KELLEY, JR.
8. Symphysiotomy. WILLIAM P. CARR.
9. Adenoma of the Breast. E. A. BALLOCH.
10. Ventral Hernia. W. SINCLAIR BOWEN.

#### 11. Report of Celiotomy done under the "Infiltration-Anesthesia" of Schleich for Suspensio Uteri. C. W. STRO-BELL.

1.—As the result of a review of the investigations of Gonner, Döderlein, Krönig and others, and a study of the **vaginal secretion of 92 pregnant women** Williams has reached the following conclusions: (1) He agrees with Krönig that the vaginal secretion of pregnant women does not contain the usual pyogenic cocci, having found the staphylococcus epidermidis albus only twice in 92 cases, but never the streptococcus pyogenes or the staphylococcus aureus or albus. (2) The discrepancy in the result of various investigations is due to the technic by which the secretion is obtained. (3) As the vagina does not contain pyogenic cocci, autoinfection with them is impossible; and when they are found in the puerperal uterus, they have been introduced from without. (4) The gonococcus is occasionally found in the vaginal secretion, and during the puerperium it may advance from the cervix into the uterus and tubes. (5) It is possible, but not yet demonstrated, that in rare instances, the vagina may contain bacteria, which may give rise to sapremia and putrefactive endometritis by autoinfection. (6) Death from puerperal infection is always due to infection from without, and is usually dependent upon neglect of aseptic precautions on the part of physician and nurse. (7) Puerperal infection is to be avoided by limiting vaginal examinations as much as possible and cultivating external palpation. When vaginal examinations are to be made, the external genitalia should be carefully cleansed and disinfected, and the hands rendered as aseptic as if for a celiotomy. Vaginal douches are not necessary and are probably harmful. [W.K.]

2.—**Rupture of the symphysis pubis during labor** is of especial interest in the light of modern symphysiotomy, as it seems to show how nature would terminate a case of obstructed labor. Lee reports two cases. In the first there was found, on examination after delivery, during which the patient suffered great pain referred to the pubis and the region of the left sacro-iliac joint, great tenderness over the symphysis, and on deep pressure an indefinite groove. A tight binder was first applied, later a frame that could be elevated from the bed to enable the woman to attend to urination, etc. At the end of the seventh week the patient walked nearly as well as before labor, and a little later had nothing to complain of. In the second case, in a multipara, in which podalic version had been performed, there was three weeks after labor great pain and tenderness over the pubis; with a hard, dense, fluctuating tumor extending nearly to the navel. The temperature was 104°, the pulse between 100 and 110. Operation revealed a large abscess around the pelvic joint, the ends of the symphysis being 3-inch apart and much eroded. Examination of the pus showed a pure culture of streptococcus pyogenes. Ahlfeld collected 100 cases of rupture of the symphysis pubis up to 1876. The treatment of the fracture, if determined after labor, may consist of a pelvic binder improvised with a roller towel, if the patient can tolerate the restriction; immobilization of the pelvis by adhesive straps, plaster, etc., such as are used by symphysiotomists; or a frame may be used, arranged with a suspension-apparatus so that the patient can be raised from bed. For obstinate cases the joint might be wired or nailed together or resected. [W.K.]

3.—Vineberg reports a case of **rudimentary uterus with total absence of the vagina**. Every two or three weeks the patient would suffer with attacks of vague pains in the lower abdomen and pelvis, lasting from 5 to 7 days. Nothing resembling a uterus could be detected by bimanual examination. Celiotomy was performed for the purpose of removing the ovaries in order to relieve the menstrual molimina. The left ovary was hidden behind the intestines, lying on the pelvic wall, about midway between the true and false brims, and had a small, undeveloped tube attached to it. It lay some distance from the left cornu, with which it apparently had no connection. The right ovary was found, with difficulty, near the vertebral column, at about the level of the umbilicus; there being no pedicle, the ovary had to be cut away with scissors, and the resulting wound was closed by a continuous catgut-suture. Vineberg has collected 26 cases, including his own, with rudimentary development of Müller's ducts, in which the ovaries were removed to relieve



menstrual molimina. All of these had several features in common. The breasts and external genitals were fully and normally developed in all but two cases; in one of these there was simply a deficiency of fat-tissue in the labia majora and minora. In 11 cases the urethra was of unusually large caliber, readily admitting the index-finger; and in these there was total absence of the vagina. [W.K.]

4.—Chase discusses the causes of **primitive amenorrhea** and believes that if menstruation does not appear at the age of puberty, a careful scrutiny on the part of the physician is obligatory and imperative. In a case that he reports, in a young woman, 24 years of age, the amenorrhea was of organic origin. A dermoid and a suppurating multilocular cyst were found and removed. The report of the pathologist on the specimens harmonizes with the theory of the case both from a physiologic and pathologic standpoint: (1) That the dermoid had usurped the place and destroyed the function of the right ovary. (2) In one of the cyst-walls of the multilocular ovarian cyst was found a shrunken ovary the size of a large lima-bean, and within this ovarian stroma was found a corpus luteum spurium. To the presence of this ovarian stroma was due the womanly development, with ovulation and the futile effort of menstruation and its consequent suffering. (3) The case demonstrates the possibility of ovulation without menstruation. (4) It leaves doubt whether the absence of the oviducts was primary or secondary to the grave disease of the ovaries, with the possibility that they were congenitally absent. (5) It presents the rare and exceptional condition of a perfectly developed woman who had an ovary and a uterus, who ovulated, was sterile, and never menstruated, and yet was ruined in health by nature's effort to establish an impossible normal function. [W.K.]

5.—The distinguishing characteristics of **intraligamentous ovarian cyst** are the absence of a pedicle, the encapsulation of the growth, and its proximity or intimate relation to important pelvic structures, such as the ureters, rectum, bladder and large pelvic vessels. Gilliam describes his method of operating for such cysts. [W.K.]

6.—Stone advocates **Emmet's operation for lacerated perineum and relaxed vaginal outlet**, because he has found it to answer all the requirements of restorative and conservative treatment for such injuries. He makes an earnest plea for its performance, to the exclusion of other and less satisfactory procedures. [W.K.]

7.—The special features of **vaginismus** are pain and spasm, produced usually by something that interferes with the external genitals, as attempts at sexual intercourse, or examination by the surgeon. The hyperesthetic spot is usually at the hymen or its remains. Generally some local disease exists, as inflamed hymen, irritable myrtiform caruncles, fissure of the fourchet or vaginal entrance, fissure of the neck of the bladder or anus, vulvitis, vaginitis, endometritis, displacements of the uterus, or pelvic inflammation. The patients are, ordinarily, of a nervous, hysterical type. The indications to be met in the treatment are the neurotic temperament, the morbid hyperesthesia, and the lesions that are the immediate cause. Kelley reports three cases in which vaginismus was present. [W.K.]

8.—Carr relates the histories of two cases of **symphysiotomy** and makes three suggestions in regard to the operation: (1) That the incision need not extend as low as it is usually made, sufficient room may be gained without extending the skin-wound nearer than two inches to the urinary meatus; this greatly lessens the chances of infection. (2) The bone should be carefully separated from the tissues behind and below, great care being taken to keep next to the periosteum. The joint is divided with an ordinary scalpel after a grooved guard has been passed behind the line of incision. (3) The use of strong silver wire for uniting firmly the ends of the bone is advocated; two stout silver wires will stand the strain and maintain perfect apposition, insuring firm union and lessening the time for it to take place. [W.K.]

9.—Realizing the intimate connection between uterus and mammary glands Balloch raises the question: May it not be that the irritation necessary to start the cells into proliferative action is in the one case furnished by the excitement of an ungratified sexual desire, and in the other by an absence of the physiologic enlargement incident to childbearing and lactation? He lays stress upon the following points: (1) Adenomas are not the harmless growths that many believe them to be, as there is great probability that they may and

do become carcinomatous; (2) that the let-alone and do-nothing policy with regard to them should be condemned; (3) medical therapeutics, external and internal, are useless; (4) early recourse to the knife affords a safe and satisfactory method of dealing with them, and will often spare the gynecologist the mortification of seeing his patients fall into the hands of charlatans. [W.K.]

10.—Bowen believes that for the prevention of **ventral hernia** celiotomy-cases should remain in a horizontal position a sufficient length of time. He presents a preliminary report of an operation that has thus far been successful. The essential feature is to split the hernial ring all the way around until the recti muscles are plainly in view and easily approximated, and not to cut away any tissue. If the peritoneum is opened it may be closed with fine catgut, or not at all, as the next sutures will suffice for that. Then fine silk sutures are used to close the lower layer of fascia overlapping the edges; next, fine silk sutures unite muscle and upper layer of fascia, thus giving two layers of permanent sutures for abdominal support. Finally, the skin and subcutaneous fat may be sutured with silkworm-gut or any other desirable material. By means of this "ring splitting operation," tension is lessened, the size of the ring is rather diminished than increased, there are two layers of fascia instead of one, and, as the median line is in this way made thicker, it tends to throw the intra-abdominal pressure away from the seat of former rupture, lessening the probability of recurrence of hernia there. [W.K.]

11.—Strobel reports a case of **celiotomy** in which **Schleich's solution** No. 2 was used to infiltrate the abdominal wall. The patient had mitral and aortic regurgitant murmurs, and chronic bronchorrhea. The uterus was retroverted and adherent. After the abdominal incision had been made through the infiltrated area, a slight amount of chloroform was administered while the adhesions were severed. The uterus was drawn into position, the fundus infiltrated along the line of proposed suspension suture-tracks, and the incision was closed. The patient did well until the seventh day when death occurred from apoplexy. That death occurred at this particular time is regarded as a coincidence rather than a consequence, though of course the excitement may have contributed to the result. [W.K.]

### Deutsche medicinische Wochenschrift.

October 20, 1898. [24. Jahrg., No. 42.]

1. The Actual, Historic and Theoretic Facts with Regard to Immunity. E. BEHRING.
2. A Further Contribution to Weil's Disease. BRUNO LEICK.
3. A Case of Leukemia. WENZEL.
4. The Treatment of Malignant Tumors of the Long Bones. WIESINGER.

1.—The true significance of the word **immunity** has not yet been thoroughly established. Frequently immunity is regional in character; that is to say, an animal is immune to a poison introduced through the stomach or subcutaneous tissues, though it may readily succumb to the disease when the poison is inoculated into the brain. Thus the chicken is immune to tetanus-poison when introduced in the subcutaneous tissues or into the blood, but is killed by a fractional dose placed in the brain. Still it is proper to say that an animal is immune when it is protected against the action of such a dose of the poison as is destructive for other animals under a like mode of application. The reason for the harmlessness of many poisons, such as snake-venom, tetanus-poison or diphtheria-poison, and tuberculin is to be found not in the destruction of these poisons in the stomach, but in the fact that albuminous substances pass only with great difficulty through an intact epithelial wall. Just as soon as the protective epithelium is injured, the poisons enter the circulation. The intact skin-surface acts in a like manner as a protective wall against the introduction of poisons. Roux discovered the fact already alluded to that though an animal may be immune to a poison injected into the blood, it may not be immune to the same poison introduced into the brain. This phenomenon may in some instances be explained on physical grounds, and probably depends on peculiarities of the structure of the cerebral vessels, which will not permit the escape of the toxin in the central nervous system. In other instances it must be dependent on cellular or histologic im-



munity. Another interesting phenomenon of immunity is one observed in some animals, as the guinea-pig, rabbit, and goat, that have been immunized to tetanus by antitoxin. Although these animals are immune to tetanus when inoculated through the blood, they succumb when the poison is introduced into the brain. The immunity against hematogenous inoculation, while the cerebral susceptibility is preserved, is, however, not dependent on the inability of the toxin to penetrate the walls of the blood-vessels, but is due to the fact that the permeability of the blood-vessels for the antitoxin is very slight. If in such an animal during the intracerebral injection of tetanus-poison the cerebral vessels are intentionally or unintentionally injured, then the tetanus-poison introduced into the brain is harmless. The physical conditions, then, of the structure of the blood-vessels play an important part, and, in the phenomenon cited, a harmful one; as they will not, unless injured, permit the antitoxin to escape. Regarding the hereditary transmissibility of acquired immunity, Behring believes that a true histogenic immunity has never been transmitted. Hematogenous immunity, that dependent on the presence of antitoxins in the blood, is transmissible, but only so far as the antitoxin passes from the maternal blood to that of the fetus, or is conveyed through the mother's milk. A father immunized with antitoxin cannot transmit the immunity at all. Ehrlich has designated as passive immunity that produced by the introduction of ready-made antitoxin, and as active immunity that which is induced by primary treatment with the toxin. Behring would substitute for passive immunity *antitoxic*, and for active immunity *isopathic immunization*. There is but little difference between the resisting power of animals immunized isopathically and those treated with antitoxin. If anything, the former are more susceptible to an adequate dose of the poison than the latter. There is no evidence that an animal immunized by treatment with toxin (isopathic immunization) possesses any histogenic immunity. In all probability its immunity is dependent on the presence of antitoxin alone. Adult guinea-pigs and mice, the offspring of immunized parents, possess the same susceptibility as descendants of non-immunized individuals. Furthermore, tuberculous guinea-pigs and goats, which are highly susceptible to tuberculin, do not transmit this hypersusceptibility to their young. From these facts, it would appear that the susceptibility or non-susceptibility of any species of animal is an unalterable thing; and this holds good in a large measure, but is not absolute. There are certain races of animals that are more or less susceptible than others of the same species; for example, the rabbits in Bologna are more susceptible to tetanus than those of Germany; while guinea-pigs in England possess a considerable congenital and hereditary immunity to diphtheria. These peculiarities can only be explained on the theories developed by Darwin: on variation, selection, accommodation and heredity. There are two kinds of poisons: (1) *humoral*, (2) *cellular*. Isopathic immunization is only possible with the latter class, with those that have an affinity for cells. Of the cellular poisons, there are again two kinds: general and specific. Carbolic acid, mercuric chlorid, and the majority of disinfectants are general poisons, both for vegetable and animal cells. The specific cell-poisons have an elective affinity. Tetanus-poison has no action on vegetable cells and in the animal body displays a specific selectivity for certain cell groups; and it does this only in certain, susceptible, animals. Isopathic immunization against general cellular poison is scarcely possible. Cellular poisons, again, may be subdivided into those readily dialyzable and those not readily dialyzable. It is probable that only those toxins that are dialyzable with difficulty can be used for immunizing purposes. Improvements in the technic of immunization seem to have as their object the enlargement of the molecule of the toxin so that it will become less readily dialyzable. It is this difficult dialyzability that helps to explain the incubation-period. [D.R.]

2.—Leick reported three cases of **Weil's disease**, originating on one farm, and now adds a fourth that has arisen in the same locality. This coincidence suggests the possibility that the cases were typhoid fever complicated with jaundice, but this view is vigorously opposed. Widal's test, applied in the early stages of the disease, yielded negative information. Weil's disease, it is believed, is a well-defined entity, having in all probability a specific cause. [D.R.]

3.—Wenzel reports a case of **leukemia**, without any

striking features, although he is more fortunate than most observers in having found in the blood many leukocytes in stages of karyokinesis. Death occurred from asphyxia, from compression of the air-passages by enlarged bronchial glands. During 10 years there have been observed at the Odessa City Hospital, among 12,884 deaths, 12 instances of leukemia, about 1%, which is the general average. Ten were in men, two in women. [D.R.]

4.—In the treatment of malignant tumors of the long bones, two pathologic possibilities must be taken into consideration, and they depend on the two ways in which malignant growths recur: (1) locally, because some active part of the tumor has not been removed; (2) in distant parts of the body, through metastasis. Both of these conditions call for early and thorough operative procedures. If the case is seen early enough, before the growth has spread much into the surrounding soft parts, resection is the method of choice. Wiesinger has operated by resection in 3 cases, as follows: (1) Resection of the upper third of the humerus; (2) resection of the upper part of the right femur, with 20 cm. shortening; (3) resection of the tibia, with 12 cm. shortening. If, however, the growth has extended extensively into the tissues, or if the main artery of the limb is involved amputation is to be resorted to. [G.B.W.]

#### Berliner klinische Wochenschrift.

October 24, 1898. [35. Jahrg., No. 43.]

1. The Amount of Assimilation and the Excretion of Albumin in Diabetes Mellitus. TH. RUMPF.
2. Ankylostomum Duodenale and other Intestinal Parasites. W. ZINN and MARTIN JACOBY.
3. The Thyroid Gland as an Organ for the Excretion of Poisons. F. BLUM.
4. Hysteric Diaphragmatic Asthma. ERNST BARTH.

1.—It is commonly accepted that in all cases of severe diabetes there still remains some power in the organism to assimilate a certain amount of carbohydrates. Rumpf reports the results of some elaborate investigations that he has made in 4 cases of diabetes, determining both their intake and their output of carbohydrates, and in one case at the same time the intake and the outgo of nitrogen. He reaches the conclusion that there are certain cases of severe diabetes in which the power to assimilate carbohydrates is absolutely lost occasionally or permanently. In such cases, the carbohydrates do not prevent nitrogen waste. The apparent severe loss of nitrogen that often occurs in these cases, even after the carbohydrates are stopped, is due to the fact that there persists a marked excretion of sugar through the urine, and this loss in sugar is partly replaced by a considerable conversion of the albumins. In cases of diabetes so severe that there is absolutely no power to assimilate carbohydrates, the use of bread, milk, etc., must be particularly forbidden when the sugar-excretion is greater than the amount of carbohydrates ingested. [D.L.E.]

2.—Zinn and Jacoby have previously insisted that when the ankylostomum has found lodgment among a class of people, it is likely to spread among all who come closely in contact with those affected, and that a man may have many ankylostoma within his body and yet not suffer from ankylostomiasis. To make the proof of these statements clearer, they examined 8 individuals born in Ceylon and 6 from Madras who were living in Berlin. In the stools of each of the former they discovered the eggs of the ankylostomum; in 7 also the eggs of the trichocephalus dispar; and in 6 further the eggs of the ascaris. The stools of all the 6 individuals from Madras contained the eggs of both the ankylostomum and the trichocephalus dispar, and 5 of them also those of the ascaris. In 10 of 12 carefully examined cases Charcot Leyden crystals were found in the stools. None of these individuals showed, however, any signs of ankylostomiasis. The conclusion is reached that the disease caused by the ankylostomum is due to both the loss of blood and a poisoning that the parasite causes. [D.L.E.]

3.—As a result of experimental work upon the thyroid gland, Blum has reached the conclusion, after long believing in the theory of internal secretion, that the gland is really an organ in which toxalbumins combine with iodine, and are rendered innocuous. This opinion is based upon the fact that the thyroid gland contains normally a toxic



substance that, when injected, causes tissue-waste. That the antitoxic function is not peculiar to this gland alone is proved by the fact that dogs from which it has been removed occasionally show amelioration in their condition before death; and in two experiments, in which the glands were removed from dogs a few months old before they contained iodine, neither animal showed the slightest symptom of disease, thus indicating that a compensatory hypertrophy of function had occurred in some other part. In a postscript, Blum calls attention to the analogy between his views and those of Ehrlich upon the reaction of the tissues to diphtheria-toxin. [D.L.E.]

4.—Barth continues his article upon **hysterical paralysis of the diaphragm** and relates the case of a subaltern, 23 years of age, without neuropathic heredity, who, after severe exertion at a drill, suddenly lost his voice completely. This condition lasted 2 weeks and then permanent recovery occurred. Some time later, the man noticed dyspnea and occasionally palpitation. He was well nourished, and his temperature was normal. There was no cyanosis, and no edema. Respiration was effected only with the aid of all the auxiliary muscles, and the lungs extended much lower than normal. The percussion-note was tympanitic, but there was no auscultatory abnormality. Otherwise the man was energetic, gay, and social, and suspicion was aroused that the condition was hysterical. The symptoms suddenly changed to complete paralysis of the diaphragm and partial paralysis of the abdominal muscles, with obstinate constipation. The dyspnea continued; expiration being effected only by the paralytic contraction of the thorax, as a result of gravity and the relaxation of the muscles. Finally, tonic contractions developed in the muscles of the abdomen. Under faradism and careful respiratory gymnastics, recovery ensued. The interesting features of the case are the spasm of the diaphragm lasting for weeks, the absence of all but the normal vesicular sounds in the lungs, the diminished excitability of the phrenic nerve during the period of paralysis, and the absence of all hysterical stigmata. [D.L.E.]

October 31, 1898. [35. Jahrg., No. 44.]

1. Spontaneous Disappearance of Cataracts. H. SCHMIDT-RIMPLE.
2. A Case of Hemianopsia following Traumatism. WICKEL.
3. Changes in Human Ganglion-Cells as a result of Fever. FELIX BRASCH.
4. Plexiform Neuroma with General Multiplicity of Neuromas. WALTER MENKE.
5. The Demonstration of Quinin in Urine by means of Picric Acid. A. CHRISTOMANOS.

2.—Wickel reports the case of a boy who, at the age of 5 months, was thrown down a flight of stairs, striking the back part of the head, and remaining unconscious for several days. About a week later a large fluctuating swelling developed at the site of the injury, which required three punctures. Immediately after the fall, the boy developed strabismus, but otherwise showed no symptoms excepting from time to time severe headache, and he was even able to attend school. The head and hands were in continual movement. At the age of 10½ years, the boy suffered from attacks of discomfort in the head that later were followed by loss of consciousness and epileptic attacks. Considerable impairment of intelligence also was noted at about this time. In the occipital region was a depressed area that was the seat of pulsation. Examination of the fields of vision disclosed the existence of left-sided **homonymous hemianopsia**, which was ascribed to the injury. Reading was possible, however. The internal strabismus of the left eye present was thought to be probably due to the hemianopsia, the patient preferring to see with the larger temporal field of the right eye. It is assumed that there was degeneration or rather a failure of development of the right optic tract. [D.L.E.]

3.—Brasch has examined the **spinal cords** of a number of persons suffering from **fever**, and found that the outlines of the ganglion cells were rounded, that they appeared swollen, and were much paler than normal. The swelling extended to the protoplasmic processes. These results are thought to contradict those of Juliusberger and Myer, who found only a collection of fine granules in the center of the cell. On the other hand, the changes correspond closely with those described by Goldschreider and Flatau as a result

of experimental febrile conditions. These changes disappear very rapidly if the fever subsides, as appears to have been the case in one spinal cord, from a patient suffering from pneumonia, with a temperature of 40° C. in the evening, dropping towards morning before death. In cases of hectic fever, the changes do not occur. It is possible that if a fever persists for a sufficient length of time retrograde changes may occur. [D.L.E.]

4.—Menke reports the case of a man, 23 years of age, who suffered from a painful swelling in the left lumbar region and multiple tumors in the neck. There was no history of similar condition in the family. The swelling was subcutaneous, encapsulated, and easily removed, and was found to consist of a number of nodules, in part connected by fibrils. Microscopically, these nodules were composed of an irregular network of fibers and cells, which were somewhat more concentric in arrangement at the periphery. The skin above the tumor was thickened and more or less infiltrated with the tumor-cells, particularly in the layer of the corium. Nerve-fibers not apparently connected with the tumor showed considerable thickness of this layer. The tumor was concluded to be a **plexiform fibroma** of the neurilemma and corium, probably of progressive growth, and perhaps associated with regenerative development of the nerve-fibers. Menke has collected 56 cases of this condition, distributed as follows: On the head alone, 34; on head and neck, 3; on head and arm, 1; on the head and in the lumbar region, 2; on the neck alone, 4; in the gluteal region alone, 6; on the neck and in the gluteal region (the present case), 1; on the arm alone, 1; on the pelvis and on the thigh, 2; involving the solar plexus, 1. The etiology is doubtful. In 3 cases there appeared to have been an hereditary influence. [D.L.E.]

5.—**Picric acid** in watery solution when added to **quinin-solution** causes the deposition of a thick, yellow sediment of quinin picrate. The precipitate is amorphous and not soluble in cold water. After evaporation of an alcoholic solution of this substance crystals form. Christomanos notes that this reaction occurs also with the Esbach reagent and that it might readily give rise to an erroneous impression that albumin was present. The absence of albumin may, however, be proved by the negative result of the heat and ferrocyanid tests, and by the fact that the precipitate differs in the two instances, having the appearance of a powder when quinin is present. If albumin is thus shown to be absent, one may conclude with considerable certainty that quinin is present. Various other substances tested gave no such reaction. If albumin be present the reaction is of no value, as boiling precipitates the quinin with the albumin. If but a slight amount of albumin is present, however, quinin may be considered present, also if picric acid gives a heavy precipitate, while the other albumin-reagents cause only slight cloudiness. [D.L.E.]

#### Münchener medicinische Wochenschrift.

October 11, 1898. [45. Jahrg., No. 41.]

1. Sarcoma of the Uterus. OTTO V. FRANQUÉ.
2. The Changeable Relations between the Form of the Head and the Mechanism of Labor. ARTHUR MÜLLER.
3. The Disinfection of Dwellings with Formaldehyd. CZAPLEWSKI.
4. A Brace for Persons Affected with Lung Disease. FERDINAND ZENKER.
5. Chronic Valvular Disease as a Complication of Pregnancy. R. JESS.

1.—Franqué gives a report of the cases of **sarcoma of the uterus** that have occurred during the past 10 years among 3,366 cases treated at the Würzburg clinic. There were only 16 cases of this disease as compared with 304 of carcinoma during the same time. Of the former, in 2 the growths took their origin from the mucous membrane, 5 were submucous, 2 were polyps, and the remainder affected the wall of the uterus. The symptoms of malignant degeneration, cachexia, etc., were usually absent, except in cases in which there was frequent hemorrhage or rapid growth of the tumor. The affection arose in the majority of cases soon after the climacteric and in many cases the symptoms were slight or wanting, so that the condition was neglected until a radical operation was no longer possible. The prog-



nosis is most favorable in the mixed polypoid form. One case remained cured for 5 years after 3 operations and cauterizations; another case was free from recurrence after 2 years; and 4 remained well for one year. Two died on the table after operation. The operation was carried out through the vagina or through the abdomen or through both routes combined, in accordance with the nature of the case. Beginning carcinoma of the glands of the cervix was found in one case in connection with sarcoma of the wall of the uterus, and metastasis to the vagina. This combination has now been reported by various observers in 5 cases and can scarcely be accidental. Franqué believes that it indicates a common cause of origin for the two diseases, possibly of infectious character. [W.K.]

3.—Czaplewski has found all of the apparatus used for generating formaldehyd for purposes of disinfection unsatisfactory and has constructed one of his own on the spray-principle that he believes overcomes the defects of the others. [D.R.]

4.—If one could correct by proper apparatus the narrow and contracted chest of the tuberculous patient, and thereby ensure deeper and fuller inspiration, it would not be unreasonable to hope for an improvement in the pulmonary condition, and this improvement may be accounted for in two ways: By deeper inspirations the lung will be functionally more active, and the enforcement of rest may have the same beneficial influence, as when applied in the treatment of tuberculous joints. To put in practice this theory Zenker designed a corset that fits closely to the back from the spines of the scapulæ to the iliac crests, encircling the trunk only below the umbilicus. Two shoulder-straps serve to draw the shoulders back. Thus the anterior wall of the thorax is left entirely free. The object of the corset is to expand the chest and allow of deeper inspirations. It was employed with surprisingly good results on two children suffering from pulmonary tuberculosis. When spinal curvature is present the apparatus serves a two-fold purpose. [C.H.F.]

5.—Jess cites ten additional cases of valvular heart-disease in pregnancy. Many pregnant women, despite their heart disease, are able to surmount the dangers that threaten them. Only one death occurred in the 29 cases. According to von Leyden, 40% of the severe cases of chronic heart-disease perish during pregnancy or during the puerperal period. The danger increases with each pregnancy. Mitral stenosis seems to be more unfavorable than aortic disease. Touching the question as to the advice to be given to young women suffering from heart disease, the physician must be reserved and cautious, although marriage need not necessarily be interdicted for girls in the better walks of life. In persons who have suffered more or less from their heart-affection from childhood, marriage should of course be prohibited. Among the working-classes the existence of heart-disease would be a stronger bar to marriage than in the higher classes. During pregnancy, great care is necessary to anticipate cardiac insufficiency. The induction of labor may have to be considered. This is a grave step and frequently fatal. Nature often comes to the physician's aid in producing abortion, with the expulsion of a dead fetus. When labor has once begun, it should be terminated as speedily as possible, if necessary by the use of forceps or by means of version, under the cautious employment of a narcotic. The expulsion of the child itself should be as slow as possible, and a sack of sand, of from 8 to 10 lbs. in weight, should be in readiness, to be placed upon the abdomen to exert counter-pressure. Cardiac stimulants must be used immediately afterward. Ergot should also be employed, in combination with a stimulant. The lying-in period should be prolonged, if possible, to from 3 to 4 weeks. [D.R.]

#### Centralblatt für innere Medicin.

October 22, 1898. [19. Jahrg., No. 42.]

##### 1. Some Remarks on the Theory of Gout. E. SCHMOLL.

1.—Schmoll reviews the previous theories of gout, and shows that the theory that the disease is caused by excess of uric acid in the blood has been practically abandoned, because, in the first place, such an excess of uric acid has not been demonstrated satisfactorily, and particularly has not been demonstrated in all cases of gout, and furthermore, in other diseases, particularly nephritis and pneumonia, exces-

sive amounts of uric acid are often present in the blood. The most trustworthy investigations of the blood of gouty patients have shown various amounts of uric acid present, but these amounts were in general within the normal range, and there was no regularity in the conditions found. Recent views attribute the origin of uric acid to a reduction of nuclein, and of the alloxur-bases that are contained in the nucleins. There is in most gouty cases an excessive excretion of uric acid, which may be the result of an excessive destruction of cells and the nuclein that they contain as the outcome of an excessive ingestion of nuclein-containing food; or it may be the result of the solution of the deposits of uric acid about the joints. The first proposition is readily investigated by determining the amount of uric acid excreted during fasting. The third proposition is scarcely of importance as compared with the other two, and is with difficulty investigated. As to the foods, it is shown that feeding with thymus or with pure nuclein results in the excretion, through the urine, of about one fifth of the alloxur-bases that are administered in this way, while about four-fifths vanish. It is not known what becomes of them; possibly they go to form nuclein; perhaps they are reduced in the intestinal canal, form uric acid, and are excreted in this form, or they may be absorbed as alloxur-bases, and then be oxidized in metabolism to uric acid, which then forms urea. Schmoll's suggestion as to the nature of gout, is based upon the following considerations: that the increased excretion of uric acid can be due only to a considerable increase in its formation; such an increase cannot be due to any considerable increase in the amount of alloxur-bases administered into the food, as there is no change in this quantity. When attacks come on, therefore, it must be due to increased cellular destruction, with the setting free of nuclein. The cellular destruction would seem to occur in the numerous necrotic areas that Eusebius has noted as occurring in gout, and Schmoll would attribute this tissue-necrosis to excessive retention of nitrogenous metabolic products, for it has been proved by himself and others that there is such retention at the time of attacks of gout. He, therefore, suggests that students of gout occupy themselves with the questions: What substances are retained within the organisms of the gouty; and what circumstances cause the retention of such substances? [D.L.E.]

October 29, 1898. [19. Jahrg., No. 43.]

##### 1. The Visibility of the Contour of the Stomach and Intestine during Respiration. R. STERN.

1.—Stern agrees with the statement that the lower border of the stomach, and even the upper border if the stomach is displaced downward, may be followed during expiration by a shadow indicative of its location. He considers this of much diagnostic significance, thinking it particularly valuable in cases of downward displacement of the stomach, and also as an indication of the size of the stomach. In order to make the method of examination of any value, it is necessary that the patient should lie in a horizontal position and that the light should be good, preferably daylight, and it should fall upon the patient from back of his head. If the abdominal walls are too thick or too tense, or if the stomach is empty, little can be determined by this method. The best time for examination is when the stomach contains at least a moderate amount of material and the intestines should not be entirely emptied beforehand.

#### Centralblatt für allgemeine Pathologie und pathologische Anatomie.

October 1, 1898. [9. Band, Nos. 18, 19.]

1. Experimental Implantation of the Testicle into the Peritoneal Cavity. R. GÖBEL.
2. The Fate of the Amido-acids in the Organs in the Body of Nursing Children Suffering from Gastro-intestinal Disease. ARTHUR KELLER.
3. The Keratin granules. ERNST KROMAYER.
4. Syphilis of the Central Nervous System. (Critical Review.) ERNST MEYER.

1.—Göbel transplanted the testicles of guinea-pigs into the peritoneal cavity, and found, at the end of two days, that the larger portion of the glands was necrotic. At the



periphery, however, a few tubules retained their vitality, and some cells showed mitotic figures. After several days, these tubules also disappeared. The organ now exhibited three zones. Near the peritoneum the cells maintained their structure, but stained diffusely with eosin. These gradually changed, until in the center the cells contracting and staining diffusely with hematoxylin. In a second series of experiments the testicle was cut into small fragments before transplantation. At the end of 24 hours there was some contraction of the cells in the center, and a number of kariokinetic figures in those at the periphery. At the end of two days the tubules at the periphery were normal or slightly increased in size, while just below them was a layer of cells infiltrated with fat, and below this fat a layer of coagulation-necrosis. In the very center of the piece the cells were shrunken and dark. Several days later there was considerable proliferation in the peripheral zones, and the conclusion is reached, that after such operations a portion of the gland maintains its vitality and continues to develop.

2.—Keller undertook to determine experimentally whether the **amido-acids** are converted in the intestinal tracts of young infants into ammonia instead of into urea. During the course of the investigation the children received a fixed diet and, in addition, a considerable amount of various substances. For the preceding and following period, as well as during the experiments, the total amount of nitrogen, the urea and the ammonia were estimated and occasionally the amount of phosphorus. The substances used were glycol, leucin, and asparagin. Glycol caused increase in the excretion of nitrogen and was chiefly excreted in the form of urea. The amount of the ammonium-salts was also increased. Leucin and tyrosin apparently exhibited a similar action. [J.S.]

3.—Kromayer contends that the granules found in the **keratin-substance of the cornea** by Ernest are only precipitated and stained. [J.S.]

October 15, 1898. [9. Band, No. 20.]

1. Pathologic-anatomic Investigation of a Case of Emphysematous Cystitis. W. J. KEDROWSKY.

2. The Direct Influence of Infection upon the Local Resistance of the Tissues to Infection. LEWIS COBBETT and W. S. MELSOME.

1.—Kedrowsky reports the case of a woman, 28 years of age, who developed eclampsia during pregnancy, as a result of which version was performed in the eighth month. Immediately after the operation, the urine contained blood and albumin, and the patient died 6 days later. At the autopsy, the mucous membranes of the bladder, the ureters, and pelvis of the kidney were swollen, contained minute hemorrhages, and numerous bubbles of gas. The kidneys were enlarged and contained a great number of purulent foci. The lungs were in a condition of catarrhal inflammation, and some of the peculiar air-bubbles were found in the endocardium. The spleen was enlarged, and the liver contained small hemorrhages. Microscopic sections of the bladder exhibited congestion, round-cell infiltration, hemorrhages, and small cavities corresponding to the gas-blisters. These were evidently caused by dilatation of the lymphatic spaces and the lymphatic vessels, and some originated in the deeper folds of the mucous membrane. A number of bacteria were found, with rounded ends, somewhat like anthrax-bacilli. In places they formed clumps; in other places they were isolated. Similar bacteria were found in the kidneys and lungs. In the latter organs, the nuclei stained poorly. In cultures, both anaerobic and aerobic, were found short thick bacteria that exhibited distinct polymorphism; appearing in old cultures as cocci or diplococci. These cultures, particularly the anaerobic ones, gave rise to the evolution of a large quantity of gas. The microorganisms were virulent;  $\frac{1}{4}$  cu. cm. of a 24-hour culture killing a mouse, and  $\frac{1}{2}$  cu. cm. a guinea-pig. After 12 days, however, the same amount of culture caused only slight transient sickness in a guinea-pig; the virulence evidently decreasing rapidly during saprophytic existence. The question arises whether the changes were antemortem or postmortem, and if the former, whether they were caused by infection during delivery or occurred accidentally; and if infection occurred during

delivery, whether the eclampsia was primary or secondary. Kedrowsky maintains that the changes were vital; that infection could not have occurred during the operation, for the symptoms existed before, and the uterus was free from any local focus; and that, therefore, the uremia was due to the profound alteration in the urinary organs produced by the peculiar infection. A number of cases are quoted from literature in which emphysema was produced either before or after death. In regard to the identity of the microorganism, its resemblance to the bacterium coli communis is admitted, although its non-motility, its peculiar action upon gelatin containing sugar, and the possibility of staining it by Gram's method, distinguish it from this organism. Attention is called to its various resemblances to and differences from somewhat similar microorganisms described by others. [J.S.]

2.—From the observation that in cases of erysipelas the lesions would disappear in one part while others were developing in adjacent regions, Cobbett and Melsome were led to undertake a study of the local **immunity** produced by circumscribed inflammatory processes. This convinced them that the recovery must be the result of local protecting processes and not of any general immunity acquired by the organism. In order to test this point, rabbits were inoculated in the ear with the streptococcus, and then, as soon as they had recovered, were re-inoculated in the same ear, while the other ear or that of another animal was used for control. It was found that complete local immunity existed in the inoculated ear, but only a slight degree of general immunity. The local immunity appeared to be associated with increased rapidity of the vascular reaction. It suggested itself that perhaps other irritants, beside the streptococcus, would produce the same result, and to determine this point immersion in water at 55°, turpentine injections, applications of cantharides, chloroform, and oil of mustard, were tried respectively. The last appeared to yield the best results. It was found that if the ears were inoculated within 48 hours of the application of the irritant, the resulting erysipelas was of full intensity. If several days were allowed to elapse, the ear was immune; that is to say, local immunity to the streptococcus erysipelatus may be produced by simple inflammation. One experiment indicated, however, that this protective influence is not as vigorous in an animal suffering from some constitutional debilitating affection. A rabbit that had been inoculated in both ears developing 6 days after the second inoculation, erysipelas in the one that had previously been irritated when general infection had occurred. The protective power of inflammation against other pathogenic microorganisms was next tested. The result seemed to show that previous irritation did not prevent infection with virulent pathogenic germs, such as the bacillus of anthrax, the bacillus of diphtheria, and the pneumococcus. Against mildly virulent germs, as the bacillus pyocyaneus, such irritation was fairly efficient. The following conclusions are reached: In every inflamed tissue a contest arises between destructive and protective forces, and the predominance of the one or the other will greatly influence the course of a fresh infection. The primary irritation may be produced by either organized or mechanical irritants, and the protective influence appears to be the result of increased rapidity of reaction. Inflammation may be, therefore, regarded as a protective influence, but it acts only upon the part directly affected. [J.S.]

**Tumors of the Liver from the Surgical Point of View.**—F. Turner and M. Aveyar (*British Medical Journal*, September 10, 1898) describe an operation in which a tumor weighing 270 gm. was successfully excised from the human liver. They also present a valuable detailed summary of the reported instances of removal of hepatic growths. The table comprises 38 operations, 18 of which were performed for malignant disease. There were 6 operative deaths, recovery from the operation occurring in the remaining 32 cases. In the cases of benign growths the ultimate results were good. In the cases of malignant neoplasms recurrence took place in most instances within 6 months. In 3 cases, however, the tumors had not recurred within 2, 2½, and 3½ years respectively. The article ends with a consideration of the regeneration of hepatic tissue. [C.H.F.]

## Original Articles.

INTRADURAL SPINAL TUMOR OPPOSITE THE BODY  
OF THE FOURTH DORSAL VERTEBRA; COM-  
PLETE PARALYSIS OF THE PARTS BELOW THE  
LESION; OPERATION; RECOVERY, WITH ABIL-  
ITY TO WALK WITHOUT ASSISTANCE WITHIN  
THREE MONTHS.<sup>1</sup>

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## HISTORY AND EXAMINATION BY DR. ESKRIDGE.

Dr. E. P. Hershey was called about the second week in September, 1897, to see a boy whom he found paralyzed in the legs. It was observed on successive visits that the symptoms varied from time to time: One day the muscles of the legs were rigid and the next day they were flaccid. At times the boy could move his legs, and at the next visit they appeared completely paralyzed. Sensation was variable; at times the child could feel the slightest touch on the feet or legs, while at others the feet and portions of the legs and body were anesthetic. At his third visit, on September 15th, Dr. Hershey found sensation on the feet, legs and trunk practically normal, with the legs in a condition of flaccid paralysis. The boy still maintained control over the sphincters of his bladder and bowel. On the next day, September 16th, Dr. Hershey asked me to see the patient with him, stating that its variability puzzled him, and that the symptoms at his last visit were strongly suggestive of poliomyelitis. In the absence of a history one would have scarcely hesitated in making such a diagnosis. The parents lived a long distance from the doctor's office, and he had been unable to get a detailed and connected history.

On seeing the patient I learned that he had been ailing for a year or more; that the first symptom of his present illness, dating back a year, had been pain in the right sixth intercostal space extending from the spine to the sternum, and that paralysis had developed in the right leg some weeks before the left was affected. On examination the deep reflexes of the legs were greatly exaggerated, with clonus; while the superficial, including the plantar, cremasteric and abdominal reflexes were absent. The muscles of the legs were rigid, as Dr. Hershey had found them three or four days before. Over the feet and ankles tactile sense seemed to be nearly lost to a camel's-hair pencil or to cotton, but the boy readily recognized my finger when it was brought in contact with his feet. Over his legs several partially anesthetic areas were found. On the trunk, around the anal region and over the external genitalia, sensation to touch was preserved. I observed that the anesthetic areas varied from time to time. I tested tactile sense in the legs and feet some four or five times within a period of eight or ten minutes, and it was not found twice exactly alike.

On consulting with Dr. Hershey, I said to him that I could not make a diagnosis of such a puzzling case from one examination; that some points, especially the radiating pain in the sixth intercostal space, seemed to indicate a tumor of the spinal canal—not of the bone, as there was little tenderness over the spine, and the other evidences of bone-disease were either slight or absent—but such a diagnosis as tumor of the spinal canal, at that time, if correct, would be nothing more than a happy guess on my part. It was decided to

recommend the parents to place the boy in St. Luke's Hospital for ten days or two weeks, and allow me to study his case carefully. He was accordingly placed in the hospital at once.

With the assistance of the resident physicians at the hospital, Drs. Dean and Maxwell, I succeeded, after a prolonged effort, in obtaining the following history:

Robert S., 12 years of age, born of Swedish parents, in Argo, Colo., was admitted into St. Luke's Hospital, with the legs paralyzed, September 16, 1897. The parents were strong and rugged. With the exception that the father has been a constant, although moderate, drinker, the family-history was exceptionally good. There was no history of tuberculosis, syphilis, nervous or mental disorders, in the relatives, near or remote. The other children of the parents were well developed and healthy. The boy had had measles, diphtheria, and chickenpox before his sixth year, and from these he seemed to recover perfectly. In March, 1896, he contracted a heavy "cold," and suffered from severe pain in the ears—first in the right, later in the left. Neither ear suppurated, but the patient became quite deaf, and his parents had great difficulty in making him understand what they said to him. The pain in the ears continued in greater or less degree until September, 1896. Hearing in the right ear was left considerably impaired.

After exposure to cold in September, 1896, the boy suffered from headache, and began to experience slight pain in the wall of the chest on the right side. The pain radiated from the spine around to the sternum in the sixth intercostal space. The headache soon ceased, but the pain in the right side of the chest continued and gradually increased in severity. By May, 1897, the pain was very severe, recurring in paroxysms, during which the child suffered from sharp, shooting pain in the right sixth intercostal space. At about this time he noticed that the right side of the chest in the tract of the pain was tender to pressure.

In May, 1897, at the time that the pain in the right side of the chest was most severe, the boy began to experience difficulty in moving the right leg. The trouble in locomotion first appeared in the right foot. In walking, the front part of the right foot would drag, and if he attempted to run he would frequently fall, on account of the foot not being raised sufficiently high from the ground. The right foot was affected about two weeks before the left, which then began to be involved in a manner similar to its fellow. The child was able to go around on his feet, if assisted by some one, until early in September, 1897. At this time he first experienced pain in the left sixth intercostal space. This was not severe, but radiated from the spine around to the sternum. He had been confined to his bed or chair for 14 days. Two days ago before being examined he experienced such severe pain in the right leg that he cried. The bowels had been sluggish, and urination frequent, evacuation of the bladder being necessary two or three times each night.

On examination on September 16, 1897,—the boy lay in bed usually with the legs extended, but at times the legs flexed involuntarily at the hips and knees. He was unable to move the right leg or foot, and voluntarily to flex the left leg, but he could voluntarily extend it when it was flexed. The muscles that move the left foot were completely paralyzed, but those that move the left leg at hip and knee, especially the extensors, still preserved some power. The left leg lay nearly in a normal position, but the foot was dropped. The right leg lay abducted and the foot was in extreme plantar flexion. The dynamometric record on the right was 84 and 80 on the left. The muscles of the arms and shoulders were strong. The face was unaffected, and the tongue was protruded in the median line.

The knee-jerk was greatly increased on the right with clonus; on the left it was increased also, with clonus, but to a less extent than on the right. Ankle-clonus was present and continuous, but most pronounced on the right side. The tendo-Achillis jerk was decided and attended with clonus, greater on the right than on the left. The plantar, cremasteric and abdominal reflexes were absent. The deep reflexes in the upper arms were increased, in the lower about normal. The pectoralis major and the masseter reflexes were absent.

Tactile sense was lessened or abolished to a camel's-hair pencil or to cotton from the sixth dorsal spine and the sixth intercostal spaces downward. Over the sole of left foot,

<sup>1</sup>Read in the Section on Neurology and Medical Jurisprudence of the American Medical Association, at the meeting held at Denver, Colo., June 7, 8, 9, and 10, 1898.



at times over the sole of the right, and over the toes of both feet simple contact of the brush was felt, but tactile sense here was greatly lessened and inconstant, varying greatly within a few minutes. Over the external genitalia and around the anal region the sense of touch was pretty well preserved. Over various portions of the legs, sometimes in front, sometimes on their posterior surfaces, the contact of the brush was felt, but a few minutes later the boy was unable to recognize the brush when in gentle motion. The same changeable condition of tactile sense existed over the chest and abdomen from the eighth intercostal spaces downward. From the sixth to the eighth intercostal space on the right side there was a semicircular band of complete anesthesia about two inches in width. Loss of tactile sense was apparent, but a little more pronounced on the left side than on the right, except over the anesthetic area just

area on the opposite side. I patiently worked over the condition of tactile sense for more than an hour, trying to obtain results that I could illustrate by drawings. (Figs. 1 and 2.)

The boy was unable to distinguish any difference between a bottle filled with water at 110° F. and one with water at 85° or 90° F. Hot bottles at a temperature of from 130° to 150° F. cause very little sense of heat over the legs, feet, abdomen and lower portion of the chest. In the places in which the heat was recognized it was found greatly delayed, in some places for several seconds, in others for more than a minute. Really hot substances, at a temperature of 140° to 170° F., caused severe pain, without any feeling of a sense of heat. Cold substances were more generally recognized than hot ones. Substances at a temperature of from 70° to 90° F. caused very little sensation beyond that of something in

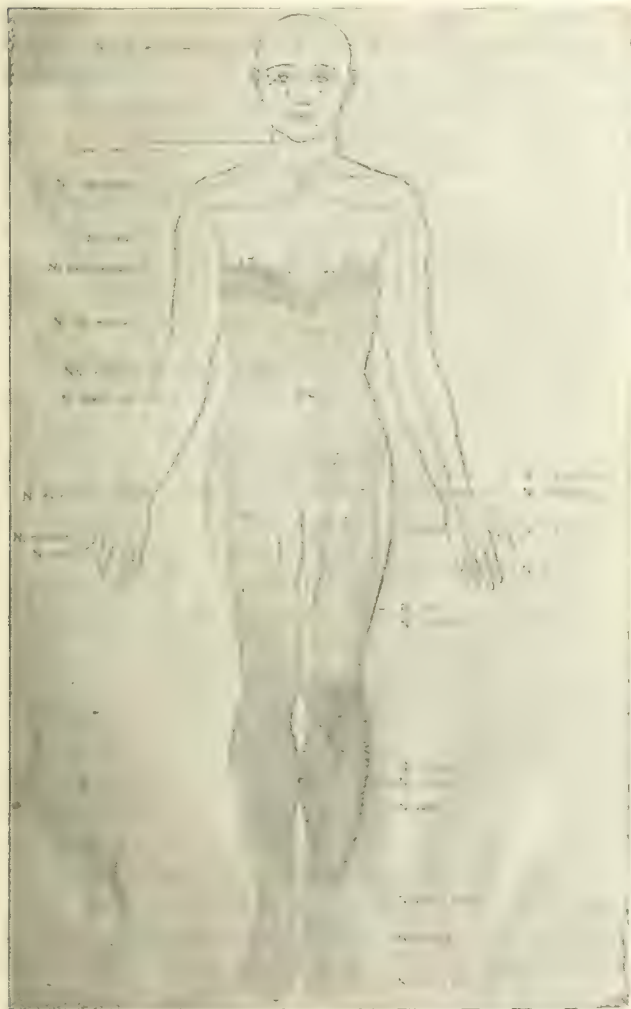


FIG. 1.—Sensory disturbances on September 16, 1897. Horizontal lines represent partial tactile anesthesia; the vertical, the more extensive; the oblique, analgesia. The more darkly shaded areas denote greater impairment of sensation. No area of hyperesthesia, but a narrow band of hyperesthesia occupying the usual situation of the hyperesthetic area, indicated by dotted line.

described. It was extremely difficult to judge of this sense. While the boy was bright, intelligent, and keenly alive to the importance of giving me all the assistance in his power, yet over areas, in which complete anesthesia seemed to exist one minute, the contact of a feather, cotton, or a similar substance could be felt a few minutes later. On trying the camel's-hair pencil in rapid motion the parts between the knees and ankles seemed to be almost completely anesthetic. From the knees to the eighth intercostal space the brush was felt in rapid motion except in changeable and irregular areas. On the right side, from the sixth to the eighth intercostal space the anesthesia was not complete to this method of testing, but it was more nearly so than the corresponding

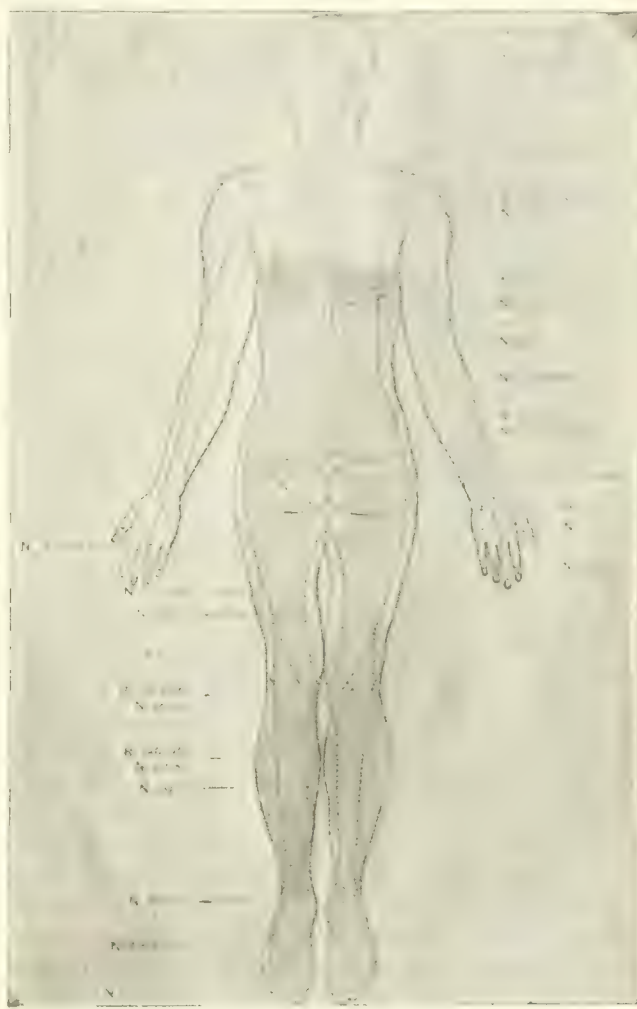


FIG. 2.—Showing sensory disturbances on September 16, 1897. Markings the same as in Fig. 1.

contact. Temperature-sensibility seemed perverted a little higher up on the chest than tactile sense. The latter was normal from the sixth intercostal space upward, the former from the fifth intercostal space upward.

Pain-sense was greatly lessened over the entire area of disturbed tactile sense. The sharp points of the esthesiometer were recognized as sharp over various portions of the body and legs. Dull points were rarely distinguished as such below the sixth intercostal space. Pain and temperature sensations varied from minute to minute, just as the tactile sense was found to do.

Power of localization was greatly lessened, and in some places completely abolished throughout the area of perverted tactile sense.

Pressure-sense was lessened and delayed, but it was not

abolished, even in the feet. Joint-sense was present and nearly normal. Posture-sense for the legs seemed completely abolished on the right side, and much impaired on the left.

Slight pain was complained of on pressure over the fourth and fifth dorsal spines. Lateral rotation of the spines was not very painful, and it was found that on rotating the spines in the cervical region, if sufficient force was employed to move the spinal column, there was complaint of pain. There was no deformity of the spine. The pain and tenderness in the upper and middle dorsal regions, while it was constant, was not at this time acute or very severe. The boy was unable to bring his head forward and place the chin on the upper portion of the sternum on account of stiffness of the posterior cervical muscles. If while on his back I placed my hand under the occiput and attempted to raise his head I found that his whole trunk raised as one piece and that he complained of considerable pain in the middle dorsal region. He still complained of some pain in the sixth intercostal space on the right side, but of very little in the left sixth intercostal space. The arms were not affected. Taste, smell and vision were normal. The optic nerves and fundi showed no evidence of disease. The pupils were equal, normal in size and responded readily to light and in accommodation. All the external ocular muscles acted normally. With the right ear a watch was heard on contact; with the left hearing was two-thirds. A tuning-fork was heard better with the right than the left ear.

After the boy had entered the hospital it was found that he had lost control over the sphincter of the bladder and that the liquid discharges of the bowel escaped from him into the bed before he could notify the nurse.

The temperature was, on admission, 100° F.; the pulse 96; the respirations 22. A few hours later the temperature had dropped to 99°.

Two days later, on September 18th, the boy had lost entire control over the sphincters of bladder and bowel, loss of all forms of sensation was much more complete from the sixth intercostal spaces downward than it had been on September 16th. Over the external genitalia and around the anal region sensation was less impaired than over any other portion of the anesthetic area.

The question of an accurate diagnosis was an important one, as the advisability of an operation and probably the boy's life depended upon it. While I was pretty well convinced in my own mind that there was a tumor in the spinal canal on the right side, and that this was pressing upon the spinal cord and giving rise to the symptoms that I had found, yet to be sufficiently confident of this to advise and urge the parents to have their child subjected to a severe surgical operation, caused me to observe closely and to analyze every symptom carefully.

The diagnosis seemed to me to rest between a primary transverse myelitis, external pachymeningitis, caries of the spine, aneurysm, or tumor of the bone, cord or membranes. The rapid increase of the symptoms, both motor and sensory, within 24 hours after I first saw the boy excluded the possibility of poliomyelitis, which the presence of only motor symptoms a few days before I saw the patient had suggested.

*Primary Transverse Myelitis.*—I use the word primary here to designate a myelitis that is not due to compression. Myelitis is unattended with nerve-root symptoms. In the patient, the history of whose case forms the basis for this paper, nerve-root symptoms had been present on the right side for a period of one year, six months before motion was affected on the same side. In transverse myelitis motion and sensation in the

parts below the level of the lesion are both affected. In this patient there was no history of sensation being involved until a short time before I saw him. In transverse myelitis, especially in the child, the progress of the disease is likely to be regular and comparatively rapid until complete paralysis, at least, supervenes. Although the boy had not been carefully examined before Dr. Hershey saw him, yet the parents and the boy are intelligent, and they are quite positive there had been no loss of sensation in the legs until early in September, 1897, nearly a year after the onset of the first symptoms of trouble in the back. I did not have any hesitation in dismissing myelitis.

*Pachymeningitis.*—The symptoms of pachymeningitis may begin unilaterally and remain worse on one side than on the other, yet they are not limited to one side for a year before the other becomes affected. Pachymeningitis affects more than two nerve-roots. The nerve-root symptoms in this disease are diffuse, as a rule. In the case that I have just reported the fifth and sixth intercostal nerves alone were affected. It is rare for the variable and pronounced cord-symptoms seen in this case to result from pachymeningitis alone.

*Caries of the Spine.*—In the first place there was no cause of caries, such as tuberculosis, or injury to the spine. Pain limited to one or two vertebræ, local tenderness, nerve-root symptoms, muscular rigidity and cord-symptoms were present in the case I have reported. All these symptoms are found in caries of the spine, and some of them are among the early symptoms of bone-disease. The pain was less pronounced than is usually found in caries, and the tenderness and muscular rigidity were diffused. There was no deformity of the spine, although the boy had been confined to bed from paralysis for two weeks, and the cord-symptoms had antedated the complete paralysis of the legs six months. The unilateral character of the nerve-root symptoms for a period of a year, the absence of deformity in a child after the lapse of such a length of time from the initial symptoms of spinal disease, the diffuse nature of the tenderness and muscular rigidity, and the slight amount of local pain, seemed to me sufficient to exclude the probability of caries.

*Aneurysm.*—The age of the patient was almost sufficient to exclude the possibility of aneurysm. In addition the pain was slight and there was absence of all evidence of aneurysm.

*Tumor Involving the Vertebræ* of the upper portion of the spine, unless possibly congenital, occurs rarely in childhood unless it is the result of local traumatism, or is secondary to a tumor in some other portion of the body. A tumor of the vertebræ, while attended with many of the symptoms found in the case reported in this paper, gives rise, in the vast majority of cases, to severe pain. Most of the cases of painless spinal tumors have been growths of the dura or cord. All cases of tumor of the bones of the spinal column



that I have encountered have been attended with great pain. In the case of this boy the presence of severe pain would not have had much weight with me in making a diagnosis. I did not seriously consider tumor of the vertebræ because there were no positive and reliable symptoms of bone-disease.

*Tumor of the Cord.*—It is often much easier to make a diagnosis of intraspinal tumor than one of tumor of the membranes distinct from tumor of the cord-substance. In inoperable tumors of the spinal canal, it matters little, so far as the results are concerned, whether the growth is in the cord or springs from the membranes and secondarily involves the spinal marrow. Growths in the cord are practically always inoperable, while growths in the membranes may be removed, if the diagnosis is made before the cord is irreparably injured. Tumors of the cord and membranes have many symptoms in common, and Gowers says: "It is often impossible to carry the diagnosis farther than the existence of an intraspinal tumor." Without going into a detailed account of the differentiation between tumor of the membranes and tumor of the cord, which is at best elaborate and not always free from confusion on account of the similarity of many of the symptoms of each, let it suffice that I arrived at a diagnosis of tumor of the membranes in the present case for the following reasons: The existence of unilateral nerve-root symptoms for a year; the presence of nerve-root symptoms for six months before the appearance of cord-symptoms; the development of bilateral cord-symptoms two weeks after the parents and the boy first noticed any trouble that indicated a lesion in the cord; and the absence, when I first saw the patient, before absolute paralysis had set in, of the usual symptoms of a unilateral cord-lesion, such as motor paralysis on one side of the body and anesthesia on the opposite, and this too in the face of the fact that unilateral nerve-root symptoms had been evident for a year.

Having reached the conclusion that the boy was suffering from an intraspinal tumor of the membranes, the next question to decide was, Is it operable? A speedy answer to this query seemed desirable if an operation for the removal of the growth were to be undertaken before the cord was damaged beyond all hope of recovery.

By September 20th, four days after the boy had been admitted into the hospital, paralysis was absolute from the sixth intercostal space downward, he had lost control of the spincters of the bladder and the bowel, and sensations in all forms was abolished throughout the area of the paralysis, except over the external genitalia and around the anal region. In these places a camel's-hair pencil in rapid motion was still felt, but not when it was gently placed in simple contact with the parts. There was extreme flexion of the thighs upon the body and of the legs upon the thighs. The deep reflexes were greatly exaggerated; the superficial abolished. It

was still observed that the sensory symptoms were variable. At times the boy could perceive a hard substance in contact with his body below the seat of the spinal lesion, but at other times he could not. The motor symptoms remained the same.

The condition of the deep reflexes and the contracture showed that the cord was not destroyed, and as the severe symptoms were only of a few days' duration it was thought that the cord might recover if the offending substance in the spinal canal were removed.

I recommended an operation, but did not feel like urging it, as the symptoms were so puzzling that I feared to promise much from surgical interference. The parents very wisely decided to leave the matter with Dr. Hershey and myself, saying that they wanted us to do as we would if the child belonged to one of us. Dr. Leonard Freeman was called in consultation, and it was thought best to operate at once.

Figs. 3 and 4 illustrate the sensory condition at the time of the operation. There was no area of hyperesthesia, but a slight band of impaired sensation occupied the usual hyperesthetic area in pressure myelitis.

I endeavored carefully to analyze and study every symptom encountered in this case before deciding to recommend an operation, and to compare them with the symptoms of other spinal tumors occurring in my experience and in that of others; yet there were certain phenomena that I could not account for until the pathologic condition was revealed at the operation. It may be well to consider some of these.

Dr. Hershey found the patient in bed one day, able to move his legs, with apparently little loss of sensation. Two days later the muscles of the legs were paralyzed and flaccid and the condition of sensation changeable and puzzling. Over an area in which sensation was lost one minute, the slightest touch was recognized the next. On the following day, when I first saw the boy with Dr. Hershey, the muscles of the legs were paralyzed, but the muscles were in a spastic condition, and the myotatic irritability was greatly exaggerated. Sensation, as indicated in Figs. 1 and 2, as the result of a prolonged examination a day later, was lost in irregular areas, but still variable. Over a given area the patient could feel the contact of a substance one minute, but a few minutes later tactile sense was nearly lost. It was evident that sensation, although present, was lessened and that the marked vacillating changes that took place in the symptoms from day to day were caused by changes in the intraspinal pressure. It did not seem reasonable that this could be accounted for by the varying conditions of pressure produced by a tumor. But this was as far as I could go in my diagnosis. I admitted to the physicians and to the parents that there were some features about the case for which I could not account and that on opening the spinal canal the boy's condition might be found to be hopeless.

The area of impaired sensation, occupying the usual area of hyperesthesia, puzzled me. I had never before met with it; nor did I recall having seen such a condition reported: I knew nothing about it, and, of course, could not account for it.

In two other cases of pressure on the cord by tumor of the spinal canal I had found sensation impaired less, and finally lost last, in the skin over the external genitalia and around the anal region.<sup>2</sup>

The highest level of the loss of sensation indicated that the tumor was located opposite the body of the fourth dorsal vertebra.

as to the accuracy of the diagnosis. Dr. Eskridge, however, insisted that the tumor would be found a little higher. The third dorsal arch was accordingly removed. It was at once noted that the dural membrane above this point lay more loosely within the canal, and that pulsation was evident, although it was absent below. The dura was immediately incised, giving exit to a large quantity of cerebrospinal fluid, seemingly accumulated behind some obstruction. A smooth, bean-shaped tumor, as large as the end of a finger, was found lying well forward, between the right side of the cord and the dura, beneath the third vertebral arch. The growth, which evidently arose from the arachnoid, was non-adherent and surrounded by loose, fibrous tissue, so that it was comparatively easily shelled from its bed, but one small vessel being divided in the maneuver. The cord was perceptibly flattened laterally. As the edges of the wound in the dura fell easily into apposition, no sutures were inserted, thus



FIG. 3.—Dark shading shows area of absolute anesthesia at time of operation, September 24, 1897; dotted area, shows lessening of sensation. No area of hyperesthesia.

#### OPERATION AND REMARKS BY DR. LEONARD FREEMAN.

The operation was performed, September 24, 1897, the time consumed was 45 minutes. After the usual longitudinal incision and exposures of the bony structures, the spinous processes of the fourth, fifth and sixth dorsal vertebrae were rapidly severed at their bases with heavy forceps; the laminae were readily cut away with rongeur-forceps, and the tense dura exposed for about  $1\frac{1}{2}$  inches. Inasmuch as no tumor or other cause of compression of the cord could be seen or felt, those present expressed by their looks some sarcastic doubt



FIG. 4.—Dark shading shows area of absolute anesthesia at time of operation; dotted area, lessened sensation. No area of hyperesthesia.

saving much valuable time. In order to control hemorrhage from the bone and adjacent tissues, a small amount of gauze-packing was employed, an end being brought out through the external incision. This also answered the purpose of a drain.

Hemorrhage was considerable, but not excessive; and although the patient manifested some shock, this was not extreme. Chloroform was employed as the anesthetic. Profuse perspiration occurred during the latter portion of the operation, and following it. Several high enemas of salt-solution were administered, but were poorly retained.

At no time did the axillary temperature go above  $100.2^{\circ}\text{F.}$ , which it reached at the end of 36 hours. The usual range was between normal and  $99.5^{\circ}$ , although immediately after



leaving the operating room it was 97 F. The pulse at first remained in the vicinity of 130, but it gradually fell to 84 at the end of about 60 hours. The respirations remained in the vicinity of 20 throughout. There was some vomiting during the first 48 hours. The discharge of cerebrospinal fluid, which was at first so free as to require several changes of the dressings, grew gradually less, until at the end of 36 hours it had disappeared. The gauze packing was removed in 24 hours, and the opening closed by tying a "provisional suture."

Union took place by first intention, the stitches being removed on the eighth day.

My thanks are due Dr. A. H. Williams for his careful attention to the dressing and after-treatment.

The following notes were taken by Dr. Eskridge.



FIG. 5.—Showing the relations of the tumor to the cord.

#### NOTES TAKEN BY DR. ESKRIDGE.

At the end of 4 hours pain was felt in the feet and legs. At the end of 11 hours the child felt a desire to evacuate the bowels, and he did so. At the end of 18 hours the feet felt as if they were "asleep." Objectively there was no sensation. At the end of 30 hours, the boy could tell when the calves of the legs were pinched. After 32 hours he experienced pain in both legs, and felt as though he wanted to draw them up. At the end of 45 hours he could tell when the feet were touched with tissue-paper. Sensation much less acute on the thighs. Over the external genitalia sensation was almost perfect. The temperature-sense was good as regards the feet, but nowhere else over the area of disturbed sensation. At the end of 61 hours, a twitching sensation was felt in the left leg. After 68 hours, sensation had returned all over the body, though it was dull and delayed. At the end of 84 hours the boy flexed the right leg, but could not completely straighten it. After 116 hours he knew when his bowels were ready to move, but not in time for the nurse to procure a bedpan. At the end of 171 hours he complained of severe pain in the 7th intercostal nerve on the right side anteriorly. On the

10th day he could move the toes of both feet slightly, and the right foot at the ankle. On the 14th day he extended his legs himself; he was able to turn himself on his side, but he could not yet control his bowels when the contents were liquid. On the 15th day he was able to flex and extend the left leg; he could extend the right leg at the knee, but he could not flex it; he moved the right foot at the ankle, but not the left.

From this time on, improvement was continuous and rapid until complete recovery was attained.

The removal by operation of tumors from within the spinal canal was not attempted until within the last decade, although the procedure was advocated by Leyden as early as 1874, and by Erb in 1878. The first operation was performed by Horsley in 1887, the diagnosis being made by Gowers. A more or less complete cure resulted. The case was almost an exact counterpart in its essential features of the one just reported.

Since 1887 but few operations have been recorded, in consequence, perhaps, of the rarity of the disease and the extreme difficulty of accurate localization. Regarding the diagnosis, Bruns, in his recent work, *Die Geschwülste des Nervensystems*, says that "it will always remain one of the most difficult problems that can be placed before us."

The operation is not devoid of danger—from shock, sepsis, and hemorrhage. Shock, even more than in some other surgical procedures, is directly related to the time consumed by the anesthetic and the operation. We would urge the advisability of fully cleansing the skin of the patient before the anesthetic is administered, so that the operation may be commenced at once without loss of time. The first steps—the incision, the denuding of the bone, and the removal of the spinous processes—are devoid of danger, and may be accomplished with great rapidity if the necessity for economy of time is borne in mind. With properly constructed forceps, even the removal of the vertebral arches can be effected very quickly. The more delicate work, in connection with the cord and its nerves and membranes, requires of course more care and deliberation. A little gauze-packing may often be employed to check annoying hemorrhage, the control of which by other means would require much time and manipulation. We are convinced that it is not always necessary to suture the incision in the dura, a procedure that is at times both difficult and tedious. Especially when the membrane has been distended by a tumor or by retained fluid, the cut edges will come as satisfactorily into apposition as if approximated by stitches, as demonstrated in the case here described. By this means the danger of infection is lessened, considerable time is saved, and an exit is provided for blood that might otherwise accumulate around the cord immediately following the operation. A hernia of the cord is not to be feared, and adhesions are no more likely to form than if sutures are employed. Furthermore, it has not been demonstrated, as it has in connection with the

brain, that such adhesions would be of much importance. A certain amount of drainage is desirable for a short time in order to prevent the excessive accumulation of blood and other fluids without the dura, or possibly within it.

Most intraspinal tumors, owing to their situation within a limited space, are small, seldom larger than a pigeon's egg. At first they are usually spherical, although later they show a tendency to become ovoid or cylindrical, owing to longitudinal growth. They are generally found on one side of the cord, rarely before or behind it. Multiple tumors are uncommon. Those in connection with the membranes seldom attack the cord itself, which renders the chance of successful operative interference much greater than it would otherwise be.

Bruns gives the brief reports of 20 cases of intraspinal tumors that have been operated upon. The tumor was found in all except one, in which the canal was opened too far below the growth. In 18 cases the tumor was removed; in 1 it was not found; and in 1 it could not be extirpated. In 6 cases (30%) either complete cure or considerable improvement was obtained; in 2 the improvement was slight, or temporary only. Twelve patients died; 9 in a short time, from shock, hemorrhage, or sepsis, and 3 later on, from recurrence, marasmus, or further growth of the tumor.

It is thus apparent that the percentage of cases attended with improvement is greater than after operations for tumor of the brain.

In addition to the foregoing list, Chipault mentions two operations, both resulting fatally.

Among all these tumors but 8 were intra-dural. Of these 1 case was more or less completely cured, 1 improved, 5 died, and in 1 the growth was not discovered at the operation. The case here recorded appears to be the second, or perhaps the first, of intraspinal tumor in which complete and apparently permanent relief from all symptoms has been obtained by surgical removal.

#### FURTHER REPORT BY DR. ESKRIDGE.

The tumor immediately after its removal measured in its long diameter 1 inch and in its short  $\frac{1}{2}$  inch. It was slightly concave on one side and convex on the other. From the point of greatest depression a pedicle extended, by means of which the growth was attached to the dura. It was placed in a 5% solution of formalin for eight days, then handed to Dr. E. R. Axtell, pathologist to the hospital, who reported as follows:

"The tumor-mass is globular, somewhat bean-shaped,  $\frac{1}{2}$  inch in length and  $\frac{1}{4}$  in width. Its surface is smooth, especially on its convexity, has a light gray color, and presents in the capsule at one end a small, but dark area of a brownish-black stain. At the slight concavity of the tumor there is a small circular pedicle,  $\frac{1}{8}$  inch in diameter.

"On section the mass shows to the unaided eye a thin, glistening capsule. The cut surface of the tumor presents a fairly dense mass of a pearly-white color, with here and there areas of a hemorrhage, both punctate and pinhead in size.

"The growth had been hardened in formalin. Sections were made, and stained in logwood. It is found to be made up of embryonic connective tissue, with many evidences of attempts at true tissue-formation. Between the cells there

exists a large amount of formative material. Most of the blood-vessels are embryonic, but several have fairly well-developed walls. In many sections small bands of connective tissue are found well developed.

"The tumor presents all the appearances of a soft fibroma."

The brief report given by Dr. Freeman from the daily records of the case shows a slow, but steady improvement in the boy's condition, beginning a few hours after the operation. The improvement took place in the usual manner. First, there was a return of subjective sensation, which had been lost in the parts below the lesion; next objective sensation was noticed; and finally motion in the paralyzed parts was observed.

On the twenty-second day after the operation, October 16th, the boy was well enough to be taken from the hospital to his home, one or two miles distant. At that time some power had returned in nearly all of the affected muscles. The deep reflexes were greatly exaggerated, but the superficial ones were absent. At times there were noticed painful contracture of the muscles of the legs. These caused the patient to cry out with pain, which was felt in the back, at the seat of the operation, and in the legs. Sensation was nearly normal. He was able to retain his urine during the day, but at night there was occasional leaking. The anal sphincter was nearly normal.

Two months after the operation the boy was able to bear his weight on his legs, and walk with the aid of a chair, which he used to steady himself. A short time subsequently to this, he was, by the aid of crutches, walking considerable distances. At the end of three months from the time of the operation he was able to walk without any assistance. At that time the knee-jerks were greatly exaggerated, and ankle-clonus was scarcely perceptible on the left side, but still well marked on the right.

In January, 1898, the patient walked to school and back each day. Soon after this he discarded his crutches at his pleasure. In March, 1898, there was no sign of ankle-clonus and the knee-jerks were not greatly exaggerated. On April 23d, there was no ataxia; the feet were lifted well, and the boy went to school, or ran and played with other children all day long. He had not used crutches for several weeks, and apparently his legs did not tire easily. The muscles of the legs and trunk were strong. The knee-jerks increased, the right to a greater degree than the left. There was no ankle-clonus. The tendo-Achillis jerk was increased, the right a little more than the left. The plantar, cremasteric and abdominal reflexes were present on the right side, but absent on the left. All general sensory phenomena were normal, both subjectively and objectively, except over a small area nearly two inches in diameter situated to the right of the spine about on a level with the sixth dorsal vertebra. This was probably due to the injury sustained by the superficial nerves at this point during the operation for the removal of the tumor. The anal and vesical sphincters acted well. At times when the boy had a desire to urinate, he had a feeling that he would soil his clothes unless he quickly emptied the bladder. He stated that he thought it was only a nervous feeling, as he could retain his water for a considerable time after he experienced a desire to urinate. He had not soiled his clothing, even while asleep, for several months.

I wish to refer, finally, to a few clinical phenomena observed before the operation to see if they are not explicable in the light of the pathologic condition. The dura at the seat of the tumor was greatly distended by a considerable quantity of cerebro-spinal fluid. The growth, as shown in Fig. 5, exerted pressure only on the right side of the cord, yet the symptoms were distinctly bilateral and all the functions of the cord at the site of pressure were almost completely arrested. It is probable that the tumor had caused slight adhesions of



the dura to the pia and these allowed the cerebrospinal fluid to accumulate at one point and exert varying pressure on the cord from all sides at this place. If adhesions of the membranes existed, they were broken up at the time of the operation without being discovered. I cannot see how we could have such an accumulation of fluid at one point in the spinal canal in the absence of adhesions.

From the fact that the spinal cord was surrounded on all sides by watery fluid, and that the pressure exerted by this varied from time to time, the clinical phenomena are all easy of interpretation. The area of impaired sensation taking the position of the usual site of the area of hyperesthesia in myelitis from compression is accounted for by the slight degree of compression that existed at the height of the fluid. The changeableness in the symptoms from day to day, or from minute to minute, can be explained by the inconstancy of the pressure. The absence of the distinct unilateral symptoms generally observed with tumors of the spinal canal, in which only one side of the cord is compressed by the growth, finds an explanation in the pathologic lesion, which was such that the cord was pressed upon by two agents—by the tumor on one side and by the fluid from all sides. We are not at a loss to account for the almost complete arrest of function of the cord before the operation, and its rapid restoration after it, because the fluid caused less serious damage by pressure than would have been the case had all the symptoms been due directly to pressure produced by a solid growth. In this case, as in many other diseases of the nervous system, the diagnosis had to be made more from a careful study of the history and the order of the development of symptoms than from the results of the examination. I last saw the patient early in October, 1898. He was then apparently perfectly well.

### SOME PREVENTIVES.<sup>1</sup>

By A. JACOBI, M.D., LL.D.,  
of New York.

Clinical Professor of Diseases of Children in Columbia University.

WHEN your chairman tendered me the privilege of opening the winter session of your Section, I accepted that honor with great diffidence, for a stranger should not appear before a medical audience of Philadelphia, least so before the College of Physicians, without some good reason. I have no new discovery to communicate, nor even a new name for an old one. What I can offer is less a contribution than an introduction to your labors.

Modern medicine is more successful than that of our ancestors for several reasons. The methods of examination and diagnosis are more numerous and more correct; etiology is better understood—amongst the

recent aids to both etiology and diagnosis bacteriology and chemistry take no low rank—and the means of treatment are both ampler and safer. Medication has become more experimental and the empiricism of the bedside and of the operating-table is growing more imbued with and dependent upon the labors of the physical, chemical, and biological laboratories.

The object of medical science and art, however, is not confined to removing disease; it includes also prevention. Again, it is the laboratories that have furnished new incentives to preventive medicine, by offering new methods or explaining and justifying old ones. The latter were frequently empirical only; still, quite often in the history of medicine, facts had to precede their explanation, and practice theory. An experiment is not necessarily infallible, a microscopical observation has frequently proved a mistake, and numerous clinical experiences which extend over a reasonable time and terminate in equal results are as worthy of acceptance as laboratory-research. They compensate one another and act in cooperation.

Prevention has learned a great deal from modern methods. As I, however, am not a pathfinder, nor even an expert in those branches that are by preference called exact by their creators and augurs, I shall speak of a few preventives that do not exclusively rely upon an immersion-lens, or a disinfecting stove, or on a bacillus-hunt—on all of which, it is true, clinical medicine, sanitary science, and the interest of mankind have to rely. I request you to follow me in the consideration of a few preventives—without accompanying experiments and camera-illustrations. I shall consider some few practical means of preventing deaths from puerperal fever and from the sepsis of the newly born, also of preventing senile morbidity, or rather premature senility, and finally, if your patience and time will permit, of preventing fatal terminations by medication.

The prevention of puerperal fever and of the sepsis of the newly born, both of which are frequent causes of death, is best secured by the proper management of normal labors amongst both the rich and the poor.

What is it that is required to conduct a normal labor? The obstetrician, man or woman, physician or midwife, should have clean hands and body, short-cut nails, and unsoiled clothing; should know enough to distinguish a normal from an abnormal position, and enough of antisepsis to employ soap, alcohol, and corrosive sublimate in the usual proportions; should see to it that the room is aired, and the woman's clothing and her bedding absolutely clean. Her bowels should be moved by an enema; her bladder emptied, if necessary, by a clean glass catheter. A single examination should be made, to ascertain the position of the fetus; a single warm injection given, and no further manipulation permitted, with the exception, later on, in case of hemorrhages, of the administration of hot injections. The scissors with which the cord is to be cut, and the tape to

<sup>1</sup> Read before the Section on Medicine of the College of Physicians of Philadelphia, October 10, 1898.

tie it, should be kept aseptic, according to the simplest known principles.

Immediately after labor a douche should be employed under the following circumstances *only*: If there be hemorrhage, then it should be hot, very hot; if there were purulent discharges before labor; if the fetus had been putrid; if a hand was introduced into the uterus; if there were a laceration. Under ordinary circumstances the woman should be thoroughly washed with an antiseptic, and no soiled material should at any time be allowed to remain after labor, or on any of the following days.

The vagina should be left alone. It is aseptic in ordinary cases; the billions of bacteria swarming in it are not pathogenous; they keep the vagina acid, and do not admit pathogenous germs. Moreover, the operculum of the cervix, which is germ-free in its intrauterine part, acts as a partition between the uterus and the vagina. Finally, the amniotic liquor and blood will flush the vagina and contribute to keeping it aseptic. For these reasons no irrigation is required, or is even admissible before or during labor, unless there be gonorrhea, or carcinoma, or as the preliminary stage of an operation.<sup>2</sup>

Could women of average intelligence, who can read and write, be taught these things? We make doctors of them; why not midwives? Let them know that, under strict laws or regulations, they have to send for a doctor when there is an abnormal position; when labor is unusually protracted; when the woman's general condition appears to render it advisable; when part of the placenta is retained; when the perineum is torn; when there is an unusual odor about the lochia; or when there is an elevation of the vaginal temperature of the mother; or of the rectal temperature of the newly born; or any anomaly about the latter. Every woman can be taught the use of the thermometer; the examination of the rectum in case of the non-appearance of meconium; of the skin for nevi, etc. No physician could do more, or should do more, in a normal labor. When it comes to the mystery of bandaging, a woman can learn that better than most men; and as far as the first bath of the baby is concerned, she can learn how to use water that has been boiled, and how to protect the eyes and the cavities against unclean admixtures.

Is there a need of midwives, or should every normal confinement be attended by a physician? What happens where there is no physician? In villages and townships I frequently heard of farmers' wives who had neither doctor nor midwife, but an untrained neighbor's wife to assist her. There is no question but that she would have been better off if she could have obtained the services of a woman prepared to attend

her during her confinement and afterward to look after her and her baby.

Those of us who are acquainted with the conditions of the poor know that the cases in which the tenement-house women are attended—if the term may be used in that connection—by their friends and neighbors, as uninformed and unclean and incautious as themselves, are very numerous indeed. Diseases and deaths among both women and infants are very numerous. No obstetrical dispensary can take care of all of such cases. If it could, the physician could never render all the services required by mother and child during a week or more. The poor woman wants daily attention, her bed made, her linen changed, her body washed, her baby attended to. No matter whether a daily bath is given, or the baby be washed only, or, as a modern gospel wills it, kept without bathing or washing, the diapers have to be changed, and the baby cleaned and kept clean. The cord is at least to be inspected, the mouth kept out of harm.

In regard to asphyxia of the newly born anybody can be taught the following things: that it may lead to convulsions, paralysis, epilepsy or idiocy; and that it should be prevented, or shortened, by all possible means; that unless there is a vital indication to assist the mother, the baby should be attended to first; and that the necessary means of resuscitation should be resorted to immediately. Any intelligent person can be taught to alternate a warm bath with a cold plunge, or the affusion of cold water, the raising of the head from the soiled bedding, the beating of the nates, tickling the fauces, the momentary inhalation of ammonia; the ligature of the cord when the pulse begins to flag, or instantaneously when deep asphyxia requires measures that cannot be taken while the baby is in contact with the mother; also the method of artificial respiration of Silvester or of Laborde. Any intelligent woman may also learn that she should avoid blowing into the mouth or nares of an asphyctic baby, and should herself under no circumstances employ electricity for the purposes of resuscitation. During her course of instruction she may be told the reasons. She may forget these, but she must not forget the rules, which she must not break without incurring some penalty for her transgression. Personally, thirty or forty and more years ago, when I had a large obstetrical practice, I met many a woman taught in transatlantic countries, who knew most of these things well and obeyed to the letter the rules imposed upon her by teaching and by habit. That was self-understood, and no difficulty was encountered.

The woman can also be taught and be compelled to leave alone a hydrocele, a hematoma of the scalp or of the sternocleidomastoid muscle; a milk-induration of the infant's mamma with the exception of the very gentlest massage; and the usual form of afebrile jaundice. She can learn to treat the cord without fat or oil, and with an aseptic dry powder and gauze; a red eye with

<sup>2</sup> Many of these points, amongst hundreds of other topics, are amply discussed by Dr. A. Brothers, in the William Furness Jenks prize-essay of the College of Physicians of Philadelphia, 1896.



a 1 or 2% solution of silver-nitrate once a day until a doctor sees it; and accidental or an occasional congenital constipation with an enema. She will know that a sore cord or skin, or an eruption, a sclerema, a hemorrhage, a hernia, or a rise of temperature requires the presence of a practitioner, though there are some preliminary measures she should be acquainted with and which she should not omit to employ.

During her instruction she will learn, and when she begins a practice, she will be held to give no medicines whatsoever, and no food-compounds beyond the mixture of aseptic, that is boiled, milk with water or a thin cereal decoction. There are some things she will learn, easily comprehend, and practise, that even no doctor out of twenty knew or lived up to a score of years ago. She will learn how to treat, or rather how not to maltreat, the infant-mouth; that the integuments of the newly born, both epidermic and mucous, undergo spontaneous desquamation and thereby become very vulnerable; that the mucous membrane of the mouth, and particularly that of the alveolar processes, is very thin, so that a mere screaming spell renders its posterior part anemic and tense during the traction of the pterygoid muscle alone; that the slightest pressure by the hand or a coarse cloth during the washing or other cleaning of the mouth may cause ulceration that heals slowly and opens the gates of infection in the buccal cavity to the aphthæ of Bednar at least; to the same extent and in the same way that harm is done later on by the inconsiderate lancing of the gums, which is known not only to injure the tooth, and to alter the gums, but also to furnish opportunities for septic invasions. These are simple things at present. A few years ago they were revelations to us; still they are so simple that they are understood by the plainest mind.

However, if an intelligent woman can learn and do all this, she is not above a doctor. Why should not a doctor have that obstetrical practice, and why should it be taken away from him? Because part of the work outlined and suggested is nursing and not medical. The medical man has no time and no wish for it, and, perhaps, no dexterity. Amongst the well-to-do he employs a nurse for those things. He should live on his medical practice, and not starve on it.<sup>3</sup> That is why he is expected, and hopes, and longs to be, and is, in daily contact with infectious diseases, and liable, almost certain, to disseminate them. Conscience and law should prohibit a medical man from engaging in both general practice and obstetrical work. That is so well understood, that in large cities there are medical men who refuse everything but confinements, which are their specialty. Such rich persons as engage their services know they are applying to a man or woman in whose knowledge

and asepsis they have reason to repose implicit confidence. But the vast majority of parturient women are poor, and it is the families of the poor that have most babies. There are no specialistic obstetricians for the poor; obstetricians cannot live on missionary work; they must be paid; and the vast majority of such cases must go without that privileged kind of service. It is amongst part of this class, as long as it is not absolutely abject, that poor doctors practise and try to make a living and future practice; from scarlet fever and typhoid they go to a case of labor, and from one infected case to the next. In that respect they are not much safer than an uninformed, untrained, unwashed female attendant.

I am told that doctors must live. Surely they must, but perhaps not as doctors. Many would be better off in some other vocation, or business. There are but few of us who are predestined by nature and gift for the practice or science of medicine. Indeed, many of us would have served both themselves and mankind as well in some other capacity as in medicine. For most men and women—most of the man-and-woman question is one of livelihood—embark in their preparations for either their calling or their trade without a fixed character or ethical aim. That is why, from all points of view—too many to be considered here—it is improper to entice the average of immature boys or girls into medicine.

I said, doctors must live, or should live; but the women should also live, and so should the babies.

In order to do so they require the application of simple medical and dietetic and hygienic knowledge, which should be furnished either gratuitously or at the lowest price, that is at such a price as no physician could or should be satisfied with. The community the State, has the greatest interest in saving women and babies, if only for economic reasons; for every human being dying early is a loss of labor and means. From that point of view, and as a matter of morality and ethical duty, none should be sacrificed that can be saved.

The prevention of puerperal fever of women and babies is not an exclusive matter that concerns the poor millions only. Every case of puerperal fever, erysipelas, scarlatina, or diphtheria in a distant tenement-house endangers the rich also. It is from the poor that their help comes, their servant-girls, cooks and coachmen, their laundresses and perhaps itinerant teacher, aye, even their clothing, ready made in a sweatshop.

It is easily seen that sometimes the absence of a busy doctor from the bedside of a parturient woman and her baby may be a blessing. It is the all-around doctor in large practice who has the greatest number of obstetric and of scarlet fever and diphtheria patients. The greater his reputation the worse his cases. How many times I had a tracheotomy and a confinement in the same night, and hurried from the former to the

<sup>3</sup> We are not so fortunate, as, according to Herodotus, the ancient Egyptian doctors, "who had many advantages," he says, "who spent and consumed none of their own property, but ate the ritual offerings, and received every day many geese, and meats, and wine."

distressed woman, in order not to be too late for the final act, I cannot tell now. We know that those were well off who could not wait for the arrival of the doctor, and had to be satisfied with the faint-hearted congratulations of the unwashed and disappointed medical man. In spite of Holmes and Semmelweiss, I am afraid I saw as much puerperal fever as any living obstetrician of those times. The general statistical figures are simply terrible. M. Boehr collected for the years 1816-1875 the deaths in Europe from cholera, which were 170,000, from variola there were 165,000 deaths, from puerperal fever, 363,624. Many of the last occurred after Oliver Wendell Holmes, in 1843, proved puerperal fever to be a contagious disease—while still, in 1844, the great Litzmann characterized it as “a febrile miasmo-contagious disease peculiar to puerperal women”—and after Semmelweiss reduced, by the use of calcium chlorid, the mortality from 12 to 1.2%. The statement that puerperal fever is on the wane at present should be taken with many grains of salt. Since I gave up the practice of obstetrics, personally, I have still been amongst those who had the fever, and not infrequently met with several cases in the practice of a single practitioner, also of a single midwife. The patients die, but do not always appear under the heading of puerperal fever, which is no longer passed by with respectful awe by searching health-officers. Those deaths are ascribed to pneumonia, pleurisy, peritonitis, parametritis, nephritis, or endocarditis. That is the way in which statistics are doctored by the doctors.

I do not pretend to speak here of the ills doctors are exposed to, but of those prevalent amongst the people. In the interest of the people it would be better if there were midwives, sufficiently educated, controlled by health-boards, and willing to make a decent living—sufficient for them—amongst the population at large, where the fees are too small and the services required too onerous for medical men or women. How they should be educated, and how controlled, cannot now be discussed. I believe means to that end could easily be found; more easily perhaps than 25 years ago, when the whole question was brought up in the Medical Society of the County of New York. In that discussion one per cent. of the members present voted for a legal status of midwives. I think I was that one per cent. Then, as now, it had to be admitted that midwives, or such as claimed to be midwives, existed and practised, as the case might be, their innocuous, dangerous, or nefarious methods. But the profession refused to favor the legalization and control of midwives. What was the result? Midwifery schools were established by quacks.

A gentleman who lately opposed, before the section of obstetrics and gynecology of the New York Academy of Medicine, the legalization and control of midwives, said that the average midwife is entirely

incapable of foreseeing complications, and of grasping, and still less carrying out, the principles of antiseptis. That is true of the present midwife whom nobody teaches and nobody looks after. Before we were better taught and looked after, was it we that did better in either internal or operative medicine, or in obstetrics? I remember the time quite well when it was considered discourteous not to request every one of the medical bystanders to examine the abdominal cavity after an operation for strangulated hernia. As the patient was under chloroform, it did him no harm. It did the undertaker lots of good.

We are told by the same gentleman that children suffer even more than the mothers. Stillbirths in Berlin, he says, occur in 3% of confinements, in 8% in New York, where midwives are not controlled, but permitted to practise upon the recommendation of a single physician. I should here add that in Berlin they have hundreds of midwives, instructed and supervised; very few or none in New York.

If we are told that midwives are “most inveterate quacks, and never acknowledge their ignorance,” I should say, let them be punished for it, as a doctor is for his mistakes or crimes. I also share the opinion that “a war of extermination should be waged against the pestiferous remnant of pre-antiseptic midwives and schools of midwifery;” and we all say amen, and—include the doctors.

Our author says it would probably be necessary to respect the so-called “vested rights” of those who formerly practised midwifery. That opinion I do not share; for the law of the land has done away with the “vested rights” of the quack doctors very speedily and vigorously as soon as the right of a citizen to have a respectable or at least “chartered” doctor was once recognized. And why should there be “unsurmountable difficulties” in the way of legal supervision of midwives, when that procedure is so very simple in reference to five or ten times their number of medical men?

Thus, when a bill was proposed to abolish midwives for all future, for the reason that “midwives by their ignorance and lack of cleanliness do great harm to parturient and lying-in women, and assume to administer potent drugs to them without the advice of a physician, and often treat sick women and children, and frequently are guilty of causing abortions,” we are expected to take it for granted that women cannot be taught to learn and to wash, and to keep from doctoring and medicating, and causing abortions, and that it is only a chartered medical man who is able to be clean and aseptic, and unable to cause abortions. “Credat Judæus Appella.”

On the other hand, in the county of Erie, N. Y., “midwives, after having passed a successful examination, are entitled to practise midwifery in normal labors, and in no others; but such persons shall not in any case of labor use instruments of any kind, nor assist in labor



by any artificial, forcible or mechanical means, nor perform any version, nor attempt to remove adherent placenta, nor administer, prescribe, advise, or employ any poisonous or dangerous drug, herb, or medicine, nor attempt the treatment of disease, except when the attendance of a physician cannot be speedily procured, and in such cases such person shall at once and in the most speedy way procure the attendance of a physician. The board of examiners shall have power to recommend to the judge of Erie County the revocation of a license, and said judge shall have power to revoke the same.

"Any person who shall practise midwifery, or, without the attendance of a physician when one can be procured, attend a case of labor within the county of Erie, without being duly authorized so to do under existing laws of this State, or without having received and recorded the certificate named above, and any person who shall violate any of the provisions of this act, shall be fined . . . and shall forfeit any certificate theretofore granted under the provisions of this act." (N. Y. State law.)

It has always appeared to me that a satisfactory instruction and control of midwives are easier than the same in regard to practitioners of medicine. What the former have to learn and to practise is limited. Ignorance and malpractice are readily detected. How difficult that is amongst practitioners of medicine becomes apparent to those who mingle with many in examinations and in consultations. At all events it is clear that a more careful and aseptic guidance of the mother and of the newly born will save the lives of both women and infants. Is that difficult to obtain? If it is, it is not easier for practitioners than for midwives.

Of the deaths of infants that take place during the first year, 25% occur in the first three months. Many of the causes of this waste of life are beyond medical aid. Seasons and climates, race, city or country, soil and dwelling, precocious marriages, financial circumstances, the prices of foods and dress-goods, the prevalence of endemics and epidemics, of alcoholism and syphilis, the ignorance of the people and of medical men, are amongst the most influential causes of excessive infant-mortality. Many of them could be prevented by social improvements, which have to go beyond the puny efforts of floating hospitals and fresh-air piers. Still even they prove that the public conscience and the sense of mutual responsibility are awakening, and it is to be hoped that our people will rise to the recognition of its own perishing reconcentrados, young and old. The English infant-life protection-act of 1872 and the French *loi protectrice des enfants* of 1874 are amongst the first instalments of the public debt paid to infant-life. Foundling hospitals and asylums and special hospitals have partially missed their aims, for no other reason than because the laws of infant-life, health, and mortality were, and still are, but imperfectly under-

stood. It was mainly the frontier territory of the pathology of the very young that was a terra incognita. Our ignorance was the cause of indolence. It became an axiom that nothing could be done with and for small infants. It has taken a long time for us to be taught that no class of our population and of our patients is more endangered by waiting idleness—we prefer to call it expectancy—than the very young; and I fear it will still take a long time before the physician who is thoroughly conversant with the physiology and pathology of infancy will be officially recognized as a peer amongst the teachers of medicine, and pedology as one of the most desirable facts of medical science and art.

As we are only now emerging from the stage of childhood in the evolution of medical education—I should know something about that, having been connected with teaching institutions these 40 years—we should, perhaps, not expect pediatrics to take a high rank amongst the acknowledged branches of learning in our medical schools. As late as 1859 there were no systematic courses of instruction in pediatrics in our country. Amongst the first, however, who paid attention to it at all, were a number of Philadelphians. After Rush and Bard there come Caldwell, in 1776; William P. Dewees, in 1825; Joseph Parrish, in 1826; William E. Horner, in 1829; W. W. Gerhard, in 1833; D. F. Condie, in 1847; J. Forsyth Meigs, in 1848; Ch. D. Meigs, in 1850, and my friend Parry, who died too soon, a few years afterward. The first special clinic, for which a single weekly hour was considered all that could be spared, was established in the New York Medical College in 1886; it died, with the college, in 1865. Since that time similar clinics have gradually been established all over the States; but pediatrics is not yet given a leading part. In most colleges the attendance upon children's clinics is not obligatory this very day. Few professorships exist for pediatrics; and they are mostly nominal. The neglect shown it by the official faculties is readily taken by students as their guidance, and the results are unavoidable. Infants cannot complain, and they cannot vote; even less so than the privates in an army. The old principle, "*infans nondum homo*," an infant is not quite a human being, has not died out yet. That the embryo and the fetus are of still less account is only too true. Genuine humanitarianism has not yet risen to the dignified place held even by the unborn in the teaching of at least two religions—the Jewish and the Roman Catholic. After all, I hold that teaching pedology as an obligatory study, mainly at the bedside in children's hospitals, and raising it to the dignity of full chairs in our leading institutions, is amongst the most valuable means of reducing infant-mortality.

As the principal mortality of the first year is due to disorders of the digestive, and that of the following period to those of the respiratory organs, the preventive

measures to be taken appear to be self-evident. Infant-feeding has been made relatively safe by the methods calculated to destroy pathogenous germs; I say pathogenous, for the presence of others in the milk of women, and in the meconium, and in the stomach of the newly born, as early as a few hours after birth, is either indifferent or beneficial. By rendering infant-food germ-free, a number of diseases and deaths are prevented; mainly, the army of infectious intestinal disorders, with consecutive renal, meningeal, encephalic, and respiratory troubles, not to speak of the chronic marasmus that swells the death-lists often without an appreciable anatomical cause.

Now, beyond the means of prevention furnished by bacteriology, we have not advanced much these scores of years. The same questions belonging to the chemistry of the milk, and to the composition of infant-food, are answered differently in different quarters, with equal assurance. A famous author, in spite of the physiological fact known these 30 years, that there is saliva and pancreatic juice in the infant economy, has only lately been converted to a faith in farinaceous foods, and is experimenting with other than milk-sugar; and he comes to the conclusion, based on I do not know how many sleepless nights, that the feeding on woman's milk may be carried on too long. Many begin also to find out that cow's milk may be done to death by inconsiderate cooking, and that the latter is not rendered more sacred or more wholesome by calling it sterilization.

The belief that infants and children require much food is correct. They require material not only for reproduction but also for increase. In order to gain 25 grams daily during the first half-year, they require daily from 8 to 10 grams of proteid, 2.6 of which are demanded in the interest of growth. But over-alimentation during a normal condition has its serious drawbacks which should be prevented: Dilatation of the stomach, and diarrheal diseases, rickets, adiposity, diseases of the skin, convulsions, biliary and renal colic, and myasthenia and myalgia depending upon the accumulation of phosphates and lactates in the muscular tissues. Over-alimentation may also lead to atrophy in different ways, so that the diagnostician of a case of atrophy has not to look for starvation in intestinal disease only. When the stomach is too full the gut does not digest. A few months ago, before the Moscow Congress, von Mering detailed the following experiment: He cut the duodenum and sewed the two ends to the abdominal wall. When the stomach was full, and the intestine was full, the function of the stomach ceased. When the intestine was empty the stomach would work and discharge its contents. Until then, no normal secretion of hydrochloric acid would take place, but decomposition only. In this way stuffing leads to illness and atrophy. This may happen besides, for reasons that we should be anxious to discover, when there is a sufficient

amount of food, and when the stomach and the intestines and feces appear to be quite normal, so that there is no sugar, and but little albumin and fat left in the feces. Even the bowels were found sterile in such cases. The only changes discoverable were in the middle-ear, in the bladder, and the pelvis of the kidneys, which may have been infected from the intestinal tract. These infants suffer from pain and sleeplessness, furunculosis, phlegmons and gangrenes. This is one of the many classes of disorders in which the ubiquitous claims of bacteriology are not sustained. We have to return to organic chemistry to fathom the most occult mysteries of nature.

In a short evening the problem of infant-feeding cannot be solved. Permit me only to add a few fragmentary axioms that I look upon as best fitted to improve the infant's health and to prevent disease: Cow's milk can never be made like woman's milk. Their physical and chemical compositions differ; mere dilutions do not change the abnormal character of cow's casein. Farinaceous decoctions protect the infant against this abnormal casein better than water. Milk-sugar, though contained in milk, is not always the best sugar to be added to artificial foods. Plenty of water in the food of infants prevents many forms of dyspepsia, and secures normal function of the kidneys and of the liver.

Infarctions of uric acid are frequent, and those of a hemorrhagic and pigmentous nature are not uncommon, and calcareous deposits are at least of occasional occurrence in the kidneys of the newly born. Gravel and stone are frequent in infancy. All these foreign masses lead to disintegration of the endothelia, to hemorrhage, and to inflammation. Moreover, the rapid destruction of the red blood-cells in the normal newly born, and the transformation of hematin into hematinoidin, which is identical with bilirubin and biliverdin, lead to obstructions and thromboses. It is a large supply of water that should be given to every newly born as a matter of course, while the milk-supply is absent or scanty, that will prevent many of the dangerous ailments of the first weeks of life.

An exclusive cow's-milk diet is a mistake, no matter whether pasteurized or sterilized; it may cause one-sided overalimentation, such as has been described, and occasionally it produces, or aids in producing, scurvy. Cow's milk and farinacea require an ample supply of salt.

Patented artificial foods are modern achievements markedly beneficial. Like the compound pills of the wholesale druggist which are dumped on your office-tables, and the medley of composite sweatshop productions of the wholesale book-manufacturers, artificial foods produce horses and carriages, town-mansions and country-villas, bonds, stocks, and bank-directorships. But further deponent sayeth not—this evening.

[To be continued.]



## DISEASES AND ABUSES OF ANIMALS IN THE UNITED STATES.

What is being done by the Federal Government towards their Alleviation and Prevention, and what the Humane Societies of the Country may do to Assist in these Efforts.<sup>1</sup>

By D. E. SALMON, D.V.M.,

Chief of the U. S. Bureau of Animal Industry.

THE farm-animals of the United States have increased to an almost incredible number. There are at present not less than 16,500,000 horses and mules, 46,000,000 head of cattle, 36,000,000 sheep, 40,000,000 swine, and 350,000,000 fowls. The aggregate of suffering among these vast herds and flocks from preventable diseases, from exposure and from abuses, particularly in transit to market, is beyond the power of words to express, and even beyond the power of imagination to conceive. Only those who travel over our great territory, investigating the condition of the animals in all parts of the country, can have even a partial realization of what actually has been occurring annually from time immemorial.

The animals of the United States suffer from a great number of diseases, of course, as animals do everywhere. Some of these diseases are caused by exposure to the elements, some by unsanitary surroundings, some by bad food. The suffering from this source so far as it is preventable must be reached through educational influences brought to bear upon the owners of the animals. It is a slow process, more or less discouraging to those who are impatient for results, and it is often very difficult to see that any progress is being made through our efforts; but when one is right, has a good cause, and uses reasonable arguments, there is really more accomplished in the end in this way than by the adoption of more speedy and arbitrary measures.

In addition to the ordinary diseases of animals, there prevail more or less extensively in this country a number of animal plagues, which are propagated by contagion and which cause suffering and death to an enormous number of individual animals. This class of diseases is preventable by shutting out and destroying the contagion, or by making the animals insusceptible to its influence, and is, consequently, much more easily controlled than are the sporadic maladies first referred to. While, therefore, the Department of Agriculture has given some attention to the education of the farmer concerning the hygienic requirements of his animals, its greatest efforts have been in investigating the cause of the communicable plagues; the conditions under which the contagion is disseminated; the means by which the contagion may be destroyed, and the

methods by which animals may be made immune from the influence of the contagion.

The infectious diseases of swine were among the first to which the attention of the Government was directed, because of the enormous loss which they have caused for many years. At that time, about 20 years ago, it was estimated that from three to five million animals were destroyed annually. This loss has continued to increase until now it reaches the enormous number of from seven to ten millions of animals annually.

Now let us see what the Government has accomplished towards the relief of the vast amount of suffering represented by these millions of sick and dying animals.

The investigators demonstrated that there are two distinct plagues responsible for the sickness among these animals. They have discovered and studied the germs of these diseases. They have shown how these germs leave the bodies of sick animals and are disseminated. They have shown how the germs enter the bodies of well animals and cause disease. They have shown the disinfectants which are most efficient in destroying the germs, and the medical treatment which gives best results. They have tested the stamping-out method, and also the methods by vaccination, inoculation, and the use of antitoxic serum. It should be borne in mind that these investigators had no bias for or against any particular theory or method. What they have been searching for is a practicable plan of controlling these diseases. This practicable and efficient plan has been found in the serum-treatment. The other methods mentioned have, with hog-cholera, either failed or proved unsatisfactory.

The serum-treatment is very simple. It is applied to all the animals in a herd as soon as possible after the disease appears in that herd. Over 1,900 animals have been treated from which we have practically full returns. We have treated herds in which 75% of the animals were so sick they would no longer eat. Within 24 hours many of these animals would already have regained their appetites, and by the second or third day the greater part would be eating and wonderfully improved. The well animals were made immune and the progress of the plague was soon stopped. Of the total number treated 78% have been saved, while in herds near by that could not be treated for lack of serum, only about 15% have recovered. This means that an outbreak of the disease can be arrested within a few days and the further spread of the contagion can be very effectually controlled by the serum-treatment. It means that we now have the power, after 20 years of research and experimentation, to prevent this loss of 7 to 10 million animals a year, and this power will be applied more and more each year, as facilities for making the serum are increased until the greater part or all of the sickness and death from hog-cholera and swine-plague is prevented.

<sup>1</sup> Paper prepared for the Washington Meeting of the American Humane Society. Correspondence explaining why the address was not delivered, will be found elsewhere in the present number of the JOURNAL.

The existence of the contagious pleuropneumonia of cattle among our beasts in the Eastern States was forced upon the attention of the Government by restrictions placed by foreign countries upon our export cattle-trade, and by the fear of the cattle-raisers of the West that the contagion would be carried to their herds, and ruin the great industry in which they were engaged. The contagion of this plague had been imported from Europe, it only existed in half a dozen States, and the proper course was plainly to completely eradicate it. Unfortunately, many people would not believe that we had the European lung plague in the United States, and even the head of the Agricultural Department was sceptical. This gentleman demanded that experiments to test the contagiousness of the disease be made before he would undertake to eradicate it. As Chief of the Bureau of Animal industry, I complied exactly with the conditions specified by the Commissioner of Agriculture. I had new stables erected upon an island where the sanitary conditions could be controlled, and had these stables nearly filled with specially selected cows from Canada, a country where such a disease had never been observed. Among those animals were placed three or four cows affected with the disease that was alleged to be contagious pleuropneumonia. The result was conclusive in the course of a few weeks. The greater part of the Canadian cows contracted pleuropneumonia, and exhibited, when examined after death, the characteristic appearance of the lungs which was long ago described by the veterinary writers of Europe. This experiment removed the doubts as to the nature of the disease, but, in the meantime, the contagion had found its way to Ohio, Illinois, and Kentucky, and we had in that occurrence a second demonstration of its communicability.

Finally, the Agricultural Department was authorized to adopt and enforce the proper measures for eradicating this malady, and within four years from that time every diseased herd in the nine infected States had been traced and disposed of, and not a case has since been found, although nearly eight years have elapsed. This is a very brief statement of a great work such as few other countries have brought to a successful issue. It has saved thousands of animals from the sufferings incident to this disease; it has saved consumers from eating the beef made from the diseased animals, much of which had been systematically put upon the market by unscrupulous butchers; and, it has preserved the beef-supply of our country from one of the greatest dangers with which it has ever been threatened.

Another communicable disease of cattle known as Texas fever has brought intense and protracted suffering to an enormous number of animals. There is an immense district permanently infected with this contagion, and the border line of this district extends irregularly for 4,000 miles from the Atlantic to the Pacific. The cattle from one side of this line dissemi-

nate contagion; those on the other side contract the disease. As there is a constant movement of cattle, it is not difficult to understand that this 4,000-mile line may be traced from one coast to the other by outbreaks of disease.

There were many mysterious features to this plague which it required much time to elucidate. For instance, the cattle which spread the disease are, themselves, apparently in good health, while the cattle that become sick do not disseminate the contagion. Again, susceptible cattle might be mingled with impunity with cattle from the infected district, providing this mingling occurred immediately after their arrival, and did not continue longer than two or three weeks; while, on the other hand, susceptible cattle that later in the season trespassed for even a few minutes on the pastures where the infectious cattle had been would contract a most violent form of the malady. Long-continued experimentation has solved these mysteries, and shown that Texas fever is caused by a microscopic parasite, which lives within the red globules of the blood. The cattle in the infected district carry this parasite permanently, and are so nearly immune to its effects that they remain in good health, notwithstanding its presence in their blood. Not so, however, with cattle which have never before encountered it. With such animals, it destroys the red corpuscles and reduces them to one-third or one-fourth the normal number. An intense fever is produced, and the creatures rapidly waste away, and die after a sickness of one or two weeks.

This microorganism is transferred from one animal to another by an external animal parasite, a particular species of the cattle tick, and unless this tick exists upon the cattle from the infected district they are not dangerous as disseminators of contagion. Moreover, these ticks do not pass directly from one animal to another, but they drop to the ground, lay their eggs, and it is the young ticks which get upon susceptible cattle and cause disease. This complicated process accounts for all the mysterious features which have been noted in connection with the disease.

Now, what do these investigations amount to practically? In the first place, they make it clear that if we can destroy all the ticks upon the cattle at the time they leave the infected district there will be no danger that they will cause the disease. In the second place, they indicate that the cattle in the infected district have acquired immunity by going through a mild attack of disease when young, and that if we can imitate this process with the susceptible cattle that are taken to the infected district, we will save the majority of them from a fatal attack of the disease. In the third place, they indicate that if either the Texas-fever ticks or the microparasite can be destroyed in the infected district the infection would no longer exist.

Substantial progress has been made along each of these three lines. The ticks are very hard to kill and



it has been a very serious problem to find something which would destroy them without injury to the cattle. We have this year, however, hit upon a combination of mineral oil and sulphur which proves successful, and next year many vats filled with this mixture will be placed at convenient points along the border line of the infected district. The cattle will be made to swim through these vats and when they emerge they will be disinfected and free from danger.

It has also been shown that young susceptible cattle may be successfully inoculated with Texas fever during cold weather, that they will then have a mild attack and recover, and that they may afterwards be taken into the infected district without suffering seriously from the contagion to which they are there exposed. With these simple precautions, this much-dreaded disease may hereafter be prevented.

The third problem has not received so much attention; but sufficient has been done to show that these ticks may be eradicated from many sections without excessive expense. Whole counties in Virginia have been freed from infection by keeping the cattle suitably confined for one or two years. It appears that the ticks must have access to cattle once a year in order to perpetuate themselves, and when this access is denied, the species disappears.

Another disease of cattle very common in some parts of the country is known as blackleg, because it often develops as a dark-colored inflammatory swelling in the large muscular masses of one of the limbs. For about a year the Bureau of Animal Industry has been distributing a vaccine which it prepares for this disease. Everyone who uses this vaccine is required to make a report of its effects; and it is only sent to those who apply for it and state the number of cattle they wish to use it on, and the losses which they have experienced from this disease. Half a million doses of this vaccine have already been called for, and the reports show that the losses, which had previously been about 15% in a season, have been reduced to 1%.

A disease which causes much discomfort and suffering to sheep is the common scabies or mange. It is extremely prevalent, and the contagion is scattered throughout the country. Even in the early stages it causes almost intolerable itching, and, later, the skin becomes greatly inflamed, the wool drops off, and the surface of the body may be almost one continuous sore. The poor animals become emaciated and finally die. The continued existence of this disease is a disgrace to our sheep-raisers, because it is very easily cured. The Department is now spreading information broadcast as to the nature of the disease and the best methods for curing it. Measures are also being taken to prevent affected sheep from being shipped from one State to another. This, it is hoped, will make it so much to the interest of sheep-raisers to cure their animals, that the disease will gradually disappear.

These are the most important diseases, to which the efforts of the Federal Government have been directed up to this time. Some investigation has been made of poultry diseases, of tuberculosis of cattle and swine, and of various other maladies which I have not the time to enumerate. The Government has also established a series of animal quarantine-stations at our seaports, and along the international boundary lines to prevent the introduction of contagion from other countries. The Bureau of Animal Industry has, in addition, inspectors at the principal stockyards of the country, engaged in the meat-inspection service, who are instructed to require humane treatment of the animals.

Permit me now to invite your attention to an abuse of animals, which appears to be constant, and which affects an enormous number of individuals. I refer to the transportation of animals, confined in cars for two or three days, and sometimes longer, without food, drink, or rest. In cool weather, even, this causes much suffering, but in summer it is the most outrageous and unjustifiable cruelty. It is a violation of the statutes of the United States, which prohibit the carrying of animals under such circumstances for a longer period than 28 hours. But, notwithstanding the fact that this is a most barbarous practice; notwithstanding the fact that it is a violation of the law; notwithstanding the efforts of the Government to suppress it; notwithstanding the existence of humane societies all over the land, these long shipments, without food, drink, or rest, continue.

For years the Department of Agriculture has periodically issued circulars directed to the railroad companies calling attention to the law and threatening prosecution in all cases where evidence could be secured. Special agents have been employed to take the time of the stock trains and to follow them to their destination. Prosecutions have been instituted whenever a proper case could be made up. The field, however, is so large, and the number of convictions so few, that these long shipments without unloading are still, probably, the rule rather than the exception.

It appears to me that there is a great field here for legitimate humane work which the humane societies of the country have for the most part neglected. If these societies would cooperate with the Department of Agriculture in securing evidence, prosecutions could be brought in so many localities simultaneously, that the railroad companies would soon be forced to make regulations complying with the terms of the law. We can only begin to realize how much suffering the enforcement of this law would prevent, when we consider that six million head of cattle, a still greater number of sheep and not less than twenty million swine are shipped to market each year.

The humane societies can also do much to further the cause of humanity by proper efforts for the education of the public as to the care of animals, the hygienic and sanitary requirements, the common diseases and

the first principles of treatment. I am aware that efforts have been made in this direction, but much of the literature distributed with their authority which has come to my attention has evidently been prepared by persons ignorant of the subjects upon which they have written, and as a result the teachings were absurd and misleading. Such literature injures the societies which issue it, and, also, injures the cause for which the humane societies were established. In my hopeful moments, I look forward to a time, distant no doubt, but which will nevertheless come, when your societies will feel strong enough to drop sensationalism, when their teachings will be free from bias and exaggeration, and when they will work shoulder to shoulder with the great humane organizations of the country—the medical profession, the veterinary profession, the biologists, the Universities, the Bureau of Animal Industry—with the common object of encouraging the investigation and scientific management of disease and the suppression of cruelty and abuses, giving the first thought to mankind, but never for a moment forgetting the lower animals.

# THE RADICAL TREATMENT OF HYPERTROPHIED PROSTATE BY ELECTRO-INCISION. DEMONSTRATION OF THE FREUDENBERG-BOTTINI INCISOR: REPORT OF CASES.<sup>1</sup>

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THE reduction of the obstructing hypertrophied prostate has been a problem upon which surgeons have been working with untiring thought and energy for many years. To enumerate the various modes invoked for that purpose, would in itself require some time. They have embraced pretty completely the armament of therapeutic alteratives; they have drawn on the various devices for applying electricity—general and local faradism, galvanism and electrosis having all had their turn; and surgery has not been spared, either in extent or variety of its application. And what has been the net result? Until recently the procedures relied upon by the profession have been practically three: Prostatectomy, castration and vasectomy. A survey of the status of these operations may not be unprofitable.

Prostatectomy (or, more properly, prostatomyomectomy) has been done either by the suprapubic or the perineal route, or by both combined. Whether the one or the other of these modes be adopted, the operation requires the use of a general anesthetic—chloroform or ether; and, aside from the question of increasing the debility usually already present in such aged subjects, the directly injurious effects of ether and chloroform on damaged kidneys is universally recognized. This

constitutes a decidedly objectionable feature with reference to prostatectomy. The operation itself is unquestionably a formidable one on several accounts. To insure its success, it must be carried out to a degree that involves the tearing or cutting out of much tissue, leaving surfaces exposed to infections, to hemorrhage, and to urinary absorption. Some operators recommend that while one is at it, he had better take out all of the prostate. It is readily conceivable—and experience backs the conception—that such heroic measures, though they may do away with future prostatic obstruction, constitute a serious menace to the life of the individual. The operation may be a success, but the patient, with his debility, his damaged kidneys and his full meed of years, does not live to enjoy the success. A mortality of from 15 to 20% is the penalty paid for prostatectomy; and not the only one, as there are many who, after living through the operation, are yet forced to recognize that it has proved a failure. In discussing this subject with surgeons, I have learned of a number of such failures, which have not yet been reported.

With reference to their probability of cure when undertaken, castration and vasectomy may be reckoned together, as it is believed that they act similarly, having for their intent the reduction of the hypertrophy by the subtraction from the organism of the nerve-stimulus coming from the testicles. I am convinced that the profession is relying less upon these operations than it did a year or more ago. They are certainly followed by a large proportion of failures. Most men are unwilling to sacrifice their testicles or sexual ability, little as that ability may be, on any account; but they are still less willing to make the sacrifice when it is candidly explained that the probability of cure is very small. A mortality of 7 or 8% has attended these operations.

Thus, the operations hitherto in vogue have not been unmixed blessings.

In October, 1875, Enrico Bottini, of Pavia, Italy, first operated for obstructing prostatic enlargement with an electric cauterizer. This instrument burned at one time the greater portion of the prostatic urethra; and although Bottini obtained and reported certain successes with its use, the extent of its effect did not accord with the profession's ideas on the subject, and not much attention was paid to the words of this heretic operator. To say the least, it was considered a high degree of folly to be working with the field of operation so far removed from view, notwithstanding the fact that the urethrotome has been similarly employed without such protests for many years. With an instrument modified from the original, Bottini continued his work—the only man in the world making use of this means—and recorded and reported, from time to time, his remarkably favorable statistics;<sup>2</sup> these finally reached the neighbor-

<sup>1</sup> *Gazzetta*, 1874, tome 8. *La galvanocaustica nella pratica chirurgica*, Milan, 1876; *Archiv für klin. Chirurgie*, vol. xxi, 1877, and vol. liv, 1897, H. J.; and *La Clinica Chirurgica*, July 31, 1896.

<sup>2</sup> Read before the St. Louis Medical Society, October 29, 1898.

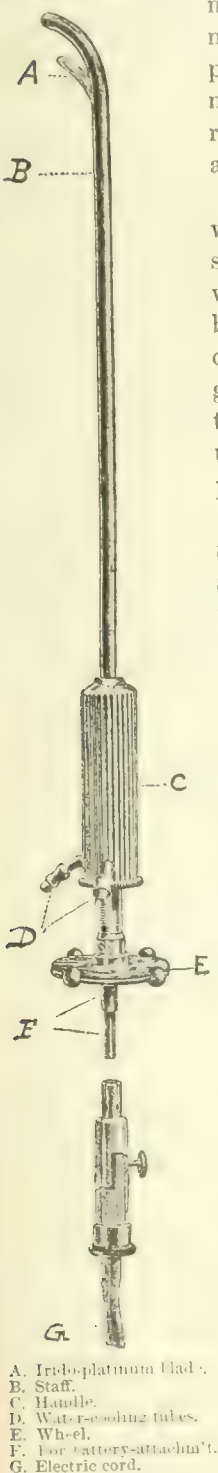


hood of the four-score mark before one of the profession was sufficiently impressed to give it an unprejudiced and extended trial. To A. Freudenberg, of Berlin, must be given the credit of improving and bringing to the favorable notice of the profession the Bottini instrument. He constructed the instrument herewith depicted. His improvements consisted mainly in modernizing the mechanism and rendering the instrument sterilizable by boiling.

The instrument is shaped somewhat like a lithotrite, having a handle, staff, and base for electric attachment, with a wheel to control the play, back and forth, of the iridoplatinum cautery-blade that slides in the groove of the staff. The latter is tunneled for the passage of ice-water up and back through it, for cooling purposes.

The effect desired is that of a *cauterizing incision*, not electrolysis; consequently the blade must be red-hot to produce that effect. An ordinary battery will not suffice. I have been using the ordinary alternating street-current of electricity, modified by an Aloe's converter; or, when operating at the office, where the direct current is made, the only converter that has proved equal to the demands was that furnished by the Wilbrandt Surgical Instrument Co.

The technic of the operation is, briefly, as follows: After a cystoscopic examination, to determine the location of the obstructing prostatic overgrowth, the bladder is emptied as completely as possible. A half-dram or more of 4% cocaine-solution is introduced by means of a deep urethral syringe into the prostatic urethra and vesical neck. During the five minutes allowed for cocaineization, a final test of the electro-incisor is made. The blade is brought to a cherry-red glow and the current is shut off by opening the switch of the converter. The connecting screw on the incisor should not be used for this purpose,



A. Iridoplatinum blade.  
B. Staff.  
C. Handle.  
D. Water-cooling tube.  
E. Wheel.  
F. For battery-attachment.  
G. Electric cord.

as it works too slowly for such a strong current as is necessary.

The water-cooling stream working perfectly under an assistant's charge, the incisor is introduced into the bladder. As it enters, its beak is naturally turned up-

ward. The obstruction is, in the great majority of cases, located at the floor of the vesical neck—the so-called third lobe. This, then, is the principal point of attack. The instrument is rotated within the bladder so that the blade points downward; the beak is thereby hooked over the prostatic bar or third lobe and is drawn forward so as to tightly hug that part of the organ. While it is being held in this position with the right hand, the left forefinger is introduced into the rectum and feels for the point of the incisor through the posterior wall of the bladder. This maneuver tells much with regard to the thickness of the obstructing part and the extent of incision needed, as well as of the proper adjustment of the incisor. The finger is then withdrawn, to prevent any disarrangement of that adjustment. The assistant turns on the current and the cautery-incisor is slowly carried forward through the obstructing bar or nodule. Time given for the advance of the blade insures the thorough searing of the wound-surfaces and wards against hemorrhage. There is practically no bleeding—the most that I have seen being merely a slight tinging of the first fluid coming from the bladder after the operation.

As often the obstructing outgrowth assumes the shape of a collar around the urethro-vesical opening, it is advisable to make more than one incision; and the custom has been to make one incision posteriorly, one anteriorly, and one into the lateral lobe that is most enlarged. I prefer to make them posteriorly and on both sides, omitting the anterior one, as I believe obstruction seldom arises from that direction.

Having completed the three incisions, the blade is returned into its niche and the current is turned off. This latter was overlooked by one operator, who began to take out the instrument with the blade red-hot; the result was embarrassing, to say the least.

Now comes one of the most gratifying features of this operation: The patient gets up and walks to his bed, complaining but little, if any, of pain; no chill, no fever, no hemorrhage; no drainage-tubes to clog, to be washed or re-adjusted; no confinement to bed and no sogging with dripping or seeping urine. The patient simply rests for 24 hours and then gets out as he likes. After one operation, performed at my office recently, on a patient, 75 years old, the man went home on a street-car and was up the whole of the following day; and all he complained of was a little soreness at the vesical neck and an unwonted urgency to urinate when the desire came on.

While there is no especial after-treatment required, I think it best to encourage internal antisepsis by giving urotropin or the salicylates.

Often, for the first few days or a week, the effects of the operation are the opposite of favorable. The swelling of the tissues following the eauterization decreases the size of the outlet, apparently, and the irritation increases the frequency of urination. Sometimes, even

catheterization must be resorted to for withdrawal of the urine. But following that period, just when patient and physician are beginning to have misgivings about the success of the operation, the good effects begin to make themselves manifest. The stream begins to flow more easily, more freely, and is projected more ably. There is likely to be some burning during the passage of the stream—but little notice is taken of this as the stream increases in size.

After a few days a test shows a distinct decrease in the amount of residual urine; from 2 to 4 ounces are already knocked off this barometric signal of backward pressure; and later, in accordance with the increasing completeness of emptying the bladder, there is marked lessening in the frequency of urination. One of my patients was thus reduced from 15 or 20 urinations in 24 hours to 8 or 9. Another, whose residual urine had been a bladderful, *i. e.*, all of his urine was passed by catheter, now shows only from 1 to 3 drams after voluntary urination.

Of course, even with effectual opening of the urinary outlet, it is not justifiable to expect immediate restoration of the expulsive power of the bladder; that organ has been too long subjected to the injurious influences of backward pressure to admit of that. So that it is on this account, I believe, that there is considerable variation, from time to time, in the ease and completeness with which urination is effected. The patient last mentioned, who ordinarily now shows only 2 or 3 drams of residual urine, occasionally "stammers" in his urination, and there will be several ounces left over as a result; but even this hesitancy is rapidly being overcome.

In certain cases it is necessary to repeat the operation because of the incompleteness of the result after the first application. Freudenberg has performed it twice on two patients, and three times on one, before getting the desired result; but it was obtained, finally, in each case. From the reports of these repeated operations, as well as from my own experience, I suspect that the repetitions are superinduced by lack, on the part of the beginner, of skill and experience with the technic. My first two cases had to be treated a second time. But, as has been mentioned, since the operation itself causes so little disturbance and it is followed practically by no reaction, the objection is not a very serious one. The operation can be performed with impunity two or three times, if necessary.

My faith in the efficacy and preponderating advantages of this operation does not, of course, rest solely on my own experience with it. My cases have been too few and the time since operating too short to make any final deductions from them; but when, in addition to the marked evidences of benefit already achieved in them, I get together and study the statistics of others who have done a considerable number of these operations, I must grant the force of the figures.

In the first place, the father of the method, Bottini, has operated, according to the latest reports accessible to me,<sup>2</sup> upon 80 cases, with 2 deaths. Of these 80 cases, 57 were operated upon with his older instrument (catheterizer), while in 23 the newer one (incisor) was used. Of the first group of 57 cases, 43 were successful (32 cured, 11 improved); and of the second group, 23 cases, all were successful. The percentage of mortality is 2.5%; of cures, 82.5%.

Freudenberg has operated 34 times upon 29 patients.<sup>4</sup> I have not been able to obtain full reports of all these, but of the first 13 of the series,<sup>5</sup> 2 died, one from embolic pneumonia, as a result of the operation; the other, 24 days after the operation, from an exacerbation of already present pyelitis, etc. Of the 11 cases remaining, 7 had had complete retention; 4 incomplete. All were markedly benefited by the operation, only 3 having still some residual urine that required occasional catheterization. In one case there had been such a degree of irritation that the patient urinated from 60 to 70 times in 24 hours; this was reduced to 8 or 10 times by the electro-incision. Simon<sup>6</sup> reports 8 cases operated on in Czerny's clinic at Heidelberg, in 1897. Of these 2 died, one as a result of complicating affections of the heart, lungs, and kidneys (nephritis), and the other in connection with coexisting arteriosclerosis, severe urethral strictures, and pyelonephritis. Of the remaining 6 cases, 4 were cured, 1 was benefited, and 1 proved a failure. This last was the first case operated upon in this series. In these cases the instrument, as improved by Bottini (not Freudenberg's) was used. Willy Meyer<sup>7</sup> of New York, was the first to adopt the method in this country. He has reported 3 cases, with one death. Of the 2 patients that survived, one was markedly benefited and the other not at all (but one operation being done in this case). Henry H. Morton<sup>8</sup> reports 5 cases without a death. The results are stated to be as follows:

"Reduced frequency of urination in every case, and removal of the obstruction offered by the prostate, so that the patients could entirely and completely evacuate their bladders. In each case the patients were able to dispense with the catheter, which they had formerly depended upon to empty their bladders."

My own cases are as follows:

CASE I.—Mr. B., 74 years old, well preserved, and in good general health when he came to me January 13, 1898, was referred by Drs. Brokaw. From the history given, the obstruction to the urinary outflow had evidently been gradually increasing for 10 or 12 years, during which time he had been required to get up to urinate at least once nightly; for about 6 years, twice nightly, and for the most of 1897, from 3 to 5 times nightly; for the 24 hours there were from 15 to 20, sometimes 25 urinations. The amount of residual urine was 4 ounces. The urine had a specific gravity of 1022, was slightly acid in reaction, very cloudy, and contained much pus, but no albumin or sugar. For 8 months the patient received palliative treatment, consisting of periodic irrigation of the bladder, nightly catheterization, internal antisepsis,

<sup>2</sup> *Bottini's Report*, *W. M. J.*, April 12, 1897. <sup>3</sup> *New Yorker medic. Monatsschrift*, July, 1898. <sup>4</sup> *New York Medical Journal*, February 12, 1898. <sup>5</sup> *Contribut. für die Klin. u. chir. Harn- u. Sexual-Organen*, B. IX, H. 8, 1898. <sup>6</sup> *Medical Record*, March 5, 1898. <sup>7</sup> *M. Rec.*, September 17, 1898.



etc. This at first caused some improvement, but later did nothing more than retard the progress of the natural course of the disease and its complications.

At the time of operating, September 14, 1898, the patient was, symptomatically, in about the condition described, and there were from 4 to 6 ounces of residual urine. I operated at my office. There was but little pain; no hemorrhage; no fever; no general reaction.

Three weeks afterward the man was urinating from 8 to 10 times in 24 hours; and the residual urine was 2 or 3 ounces. The patient was much elated at the increased size and freedom of the stream. There was less irritation than formerly, but the urine remained cloudy. The improvement was definite and, to the patient, satisfactory; but in view of the fact that I had been ultra-conservative in the extent of my incisions (it being my first trial of the method), I considered it probable that a second and more extensive incision would secure even better results. This was made on October 25th. At this time I practised a maneuver that I had not seen mentioned. In a recent discussion of the technic of the operation,<sup>9</sup> Dr. Freudenberg stated that in one of his cases a fold of mucous membrane of the bladder had become caught and burned by the blade of the incisor; and, to prevent such an accident, he advised that the operation be done with the bladder full of boric-acid solution; that the close contact of the instrument with the prostate would express any fluid that might tend to come between them, admitting of uninterrupted activity on the part of the blade. Experience with this suggestion in a late operation, as well as an experiment in a cup of water, make me doubt its utility. The blade will not get red hot if in contact with any quantity of water; and if there is only a small amount present, as presupposed by Dr. Freudenberg, this would be liable to become superheated and scald the adjacent parts. Therefore, in order to smoothe out the bladder folds and at the same time to avoid interference with the action of the blade, I injected air into the bladder from a bulb-syringe. This was satisfactory in every way. This operation was done too recently to report its results.

CASE II.—Mr. J., 47 years old, married, was referred by Dr. H. M. Pierce. Although of so youthful an age for a "senile" hypertrophied prostate, the effects of obstruction had been progressively increasing for a considerable length of time. Nine years ago (that is, at the age of 38 years) the man suddenly became unable to pass any urine. This complete retention lasted for the greater part of a day. After it passed off, a gradually increasing frequency of urination was noticed both by day and by night. For 10 years, the patient's wife states, he has been getting up once or twice nightly to urinate. In 1897 actual difficulty of expelling the urine was first realized, and it became so severe and painful that the man called on Dr. Pierce. Boric-acid washings and catheterizations yielded temporary relief. No stricture was present, the catheter meeting with obstruction only after reaching the prostatic urethra; and enlargement of the prostate was felt through the rectum.

Later, the patient was lost sight of for a time, and in the meantime consulted other surgeons, receiving vesical irrigations from some, and having one testicle removed by another—all with no relief. On returning to Dr. Pierce this fall, I was consulted, and we found marked anemia, and a cachectic appearance that reminded one strongly of carcinoma; a large bubo, tender and adherent, in the right groin; the right testicle absent; almost entire inability to urinate voluntarily, the reliance being placed altogether on the catheter in lieu of that function. The urine had a specific gravity of 1018, was of acid reaction and intensely cloudy from the presence of pus; it was free from albumin. The prostate could be felt through the rectum, and was the size of an apple. A soft-rubber catheter could be introduced only with great difficulty, and sometimes not at all, whereupon a metallic one would be necessary.

The statement of the patient that the bladder-washings had usually only aggravated the irritation, was borne out by our trial of them. No treatment outside of an operative one appeared to be feasible. I will say that at first I was strongly impressed with the close resemblance to malignancy presented by this case; the youthful age (for "senile" hypertrophy), the inguinal adenitis, the cachectic appearance, etc.,

but a closer study led to a confirmation of Dr. Pierce's diagnosis of obstructive prostatic hypertrophy.

Operation was performed October 3d. Retention was practically complete. There was no reaction. No improvement in the stream occurred until 7 days afterward, when the man passed a good stream of urine. Two days later he did this two or three times in one day—and then there was a halt in his progress, the interruption seeming to be connected with an intestinal irritation that caused diarrheal movements, abdominal pain and griping. After waiting another week or so for more improvement in the expulsive power of the bladder, we repeated the operation on October 20th. Since then the man has become able to empty his bladder at each act, leaving only 2 or 3 drams of residual urine. I have often found this much urine remaining in healthy bladders after voluntary urination; so that I do not believe so small an amount should be dignified with the term "residual."

CASE III was operated on this afternoon, so that no report will be made of it at present.

The question might be very pertinently raised as to whether, granting the tangible advantages claimed for the Bottini method, it will prove applicable to all cases of prostatic obstruction. The pathologic specimens that I present should throw some light on that question. One of these presents the obstruction in the form of a prostatic bar stretching across the posterior aspect of the urethro-vesical opening. Behind the bar is the *bas fond*, a deep receptacle in which residual urine evidently collected in the person's lifetime; and in front of it is an almost equally deep depression formed by the long and deep curve of the prostatic urethra. It seems practically assured that if this bar had been burned through with the incisor, without reuniting afterward, the obstruction would have been done away with. In the second specimen the obstruction assumes the form of a jutting nodule that evidently acted in the manner of a ball-and-socket valve. If the blade of the cautery should miss the nodule in such a case a good chance of failure would, no doubt, be run. For that reason, as well as others (for the purpose of excluding stone, for instance), it is decidedly of advantage to examine the bladder and prostate as thoroughly as possible with the cystoscope before operating. The same cocainization will serve for both procedures. It seems reasonable to expect, though, that if such a nodule received a good searing, either directly through it or on its surface, it would undergo atrophy similar to that noticed in the tonsil after removal of only a portion of the gland by cauterization.

## A CASE OF GENERAL INFECTION BY THE DIPLOCOCCUS INTRACELLULARIS OF WEICHELBAUM.

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THE *diplococcus intracellularis meningitidis*, now recognized as the causative agent of cerebrospinal fever, while found in the meningeal lesions, has not as yet been demonstrated in the general circulation, nor have we known it to play the part of a general infective agent. During the past few months there have been

admitted to Professor Osler's wards a series of 11 cases of cerebrospinal fever, and in one of these the specific organism has been demonstrated not only in the meningeal lesions, but in the blood and in the inflamed joints. The history of the case is as follows:

Jacob B., aged 24, native of the city, was admitted November 4, 1898, supposed to be suffering from typhoid fever. The patient was a packing-clerk in a manufactory, and had always been strong and well. There was no history of contact with any cases of meningitis. On November 1st, after two or three days of slight indisposition, the patient was seized with severe pain in the back of the neck; subsequently he had a chill with nausea, vomiting, and fever. On November 2d he was very much worse. He had become delirious and was feverish. He had diarrhea, and friends noticed that there were "drawing" movements of the hands. There was no retraction of the neck nor any stiffness of the muscles. On November 4th he was seen at home by Dr. Hastings. The temperature was 100.8°; he was delirious; the limbs were very rigid; the spleen was palpable, large, and firm. He was ordered to be sent at once to the hospital. The condition on admission was as follows:

He was a well-nourished man; the cheeks were flushed, the pupils dilated, equal, reacted to light and on accommodation. He was unconscious and could not be roused. The tongue was coated; the throat was clear. The rigidity of the muscles of the neck and back was marked and the body could be lifted with the hand placed under the occiput. The respirations were quick and jerky and there was impaired resonance in the right axilla. The pulse was 140, temperature 100.2°, respirations 44. There were swelling and redness of both elbows, the right wrist, the right knee, and several of the smaller joints of the hands.

On November 5th he remained in very much the same condition, with marked rigidity of the neck and of the abdomen. Purpuric spots developed about the feet. The defective resonance over the right lower lobe of the lung increased, and was present also in the left infrascapular region. The affected joints were more swollen and red. Slight external strabismus had developed. A reddish purple mottling of the skin of the body and extremities was noted. The urine contained a large amount of albumin with hyaline and granular casts and red blood corpuscles. There was a slight urethral discharge. The patient gradually failed and died at 10.40 A.M. on the morning of the 6th, the temperature having gradually risen to 105.5° before death. The leukocytes increased from 17,000 per cu. cm., on admission, to 37,000.

Lumbar puncture was performed on November 5th, and cultures were taken from the blood and from the swollen and inflamed right knee-joint. By the lumbar puncture a rather characteristic seropurulent exudate was obtained. In it the characteristic hemispherical diplococcus was found, both in the leukocytes and lying free, isolated, and in small clumps. Numerous large swollen forms were also seen, all of these readily decolorized by Gram's stain. Cultures from the meningeal exudate were made by inoculating the surfaces of Löffler's blood-serum and glycerin-agar tubes with a large quantity, as much as  $\frac{1}{2}$  cu. cm. After 18 hours in the thermostat at 37° C. the blood-serum and glycerin-agar tubes showed a characteristic growth—small isolated colonies from  $\frac{1}{4}$  to  $1\frac{1}{2}$  mm. in diameter, on the Löffler's blood-serum, raised, soft, viscid and white, on the glycerin-agar, rather translucent. The colonies, as seen by the microscope, being finely granular with regular borders. Morphologically the organisms showed typical biscuit-shaped or hemispherically-shaped cocci, arranged as diplococci, staining well with gentian violet, better with methylene-blue, and decolorizing readily by the Gram stain.

From the knee-joint about 3 cu. cm. of thick, yellow stringy pus was obtained. Hemispherical diplococci, both intracellular and extra-cellular, were found in it, corresponding in morphology to those forms in the meningeal exudate. Of the plates taken from the knee-fluid the blood-serum agar showed numerous small colonies about  $\frac{1}{4}$  mm. in diameter, the agar plates showing also nine or ten smaller ones. The organisms were identical in form and staining-reaction with those from the meningeal exudate.

*The Blood.*—10 cu. cm. were taken. On the blood-serum agar

plates three minute but well-marked colonies grew. They presented the typical hemispherical cocci easily decolorized by Gram's stain. In a tube of undiluted blood at the upper end of the clot which had formed there was a faint grayish patch, in which were diplococci similarly arranged and of similar staining reaction. In all of the cultures there were found occasional, deeply staining, large, swollen diplococci, and others again which remained pale among the neighboring well stained organisms.

Further cultures from the knee and blood gave typical growths on Löffler's serum. The cultural peculiarities of the organisms from the three sources were identical and are as follows: on agar, faint growth of isolated, small colonies; in litmus-milk, no change noted, no coagulation, no acidification; growth was proved by reinoculation from the litmus-milk tubes. In bouillon, a slight cloudiness with a stringy precipitate. On potato (slightly acid) there was no visible growth, though the organisms could be demonstrated on cover slip. In gelatin and glucose agar there was a very slight, disconnected growth, with no evolution of gas in the latter.

Transplants from the undiluted blood-tube gave further growth, nor liquefaction of the former.

In all the protocols the characteristic diplococcus, decolorizing by Gram, could be demonstrated. The feebleness of the growth of the organism was shown by the number of inoculated tubes which remained sterile, and in the fact that after 48 hours on a culture-medium reinoculation frequently gave negative results. The morphologic and cultural qualities show that the organism from the three sources was identical, and was the diplococcus intracellularis meningitidis or meningococcus.

This is believed to be the first instance recorded in which general infection or septicemia has been demonstrated in this disease. In the report on epidemic cerebrospinal meningitis, Councilman, Wright, and Mallory make the statement that "so far as can be learned from cultures of blood, liver, spleen, and kidneys, at the postmortem, septicemia is never produced. The organism may have been present and not grown out on cultures. They are never found except in connection with the lesions of the disease."

The autopsy on this case showed the organisms only in the characteristic lesions in the brain and cord. No serum-reaction could be demonstrated. Of special interest is the fact of the separation of the organism from the inflamed joints, which throws light upon the cause of the arthritis, not infrequently associated with the acute infections, and particularly with cerebrospinal fever.

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**Post-Typhoid Bone-Inflammation Due to the Colon-Bacillus.**—G. Blumer (*Pacific Record of Medicine and Surgery*, November 15, 1898) reports the case of a woman, 45 years old, who had passed through an attack of typhoid fever of 28 days' duration, in which there was severe diarrhea, tympanites, enlargement of the spleen, and typical rose-spots. In the fourth week of the disease the patient complained of severe pain at the junction of the sternum and fourth rib; there was slight deep-seated swelling, but no redness or edema. A hypodermic needle was introduced, but no pus was found. About 5 months later she returned complaining of a nodule in the left breast, which had been developing since her illness. The mass was removed, but the wound did not heal, a sinus remaining which discharged thin seropus. About 3 months later a second operation was done, removing the necrosed portion of the fourth rib at its junction with the costal cartilage. The wound was packed and allowed to granulate from the bottom. Rapid healing took place and the patient remains in perfect health. Bacteriologic examination showed a pure culture of the bacillus coli communis. [M.B.T.]



# The Philadelphia Medical Journal

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**Dr. Allbutt's Lecture.**—We have several times had the pleasure of presenting to the American profession several important contributions of master minds concerning the philosophy, the practice, and the art of medicine, the last being the remarkable lecture of Virchow, published by us synchronously with its appearance in the columns of the *British Medical Journal*. We to-day lay before our readers the equally noteworthy address of Dr. Allbutt, of England, delivered before the Johns Hopkins University, October 17th. Herein will be found the most perfect science, the highest wisdom, and the very poetry of ethics and philosophy, charmingly, synthesized by an intellect of great erudition and power. We find in reading this lecture that our sense of personal dignity is deeper and fuller, and we are more proud of the profession to which we belong, honored alike by the membership and the love of such a man. We expect to begin the publication of the series of Dr. Allbutt's Lane lectures in January.

**The Recurrence of the Calendar Season** suggests a protest against the craze that seems for several years to have possessed certain advertisers, of thinking that the physician is profoundly interested or amused by skeletons, grinning skulls, drunkenness, death, tortures, and hell. We think these things are fully as disgusting to decent medical men as to sound-minded lay-folk. Old-time surgeons and heroes of medicine are made ludicrous by disgusting exaggerations and outrageous diablerie. It is all an evidence of bad medicine, worse advertising, and the worst taste. The ideal of the physician is the reverse of what these bouffe blunderers suggest by their hideous travesties, and their calendar-presents should be postponed until the time of the Greek calends.

**Malaria-Infection** is the subject of much writing, some of it plain in meaning and some of it very obscure. Some are disposed to accept entirely the explanation of the role played by mosquitos as laid down for the insects in the writings of Dr. Patrick Manson, and Major Ronald Ross, of the Anglo-Indian Medical Staff. Others consider the theory of these gentlemen fanciful, if not ridiculous, and do not hesitate to say so in the frankest way. It seems a pity that so much warmth has been imparted to this dispute as regards pathology. It is possible to hold a thing as not proved without

going on to add that it never can be proved, and on the other hand it is possible to look upon a theory as a very promising thesis without adding that the one and only solution has been reached. The middle way is not for the pusillanimous only: the prudent walk there also.

**Mr. Rider Haggard's Story, Dr. Therne,** has made its appearance and proves to be a simply admirable tract in favor of vaccination. The popular romancer has taken the trouble to get up his facts, so that he is able to be clear and convincing as well as eloquent. The story should be widely read, and if medical men are wise they will help to secure for Mr. Haggard a big audience. The antivaccination party in England has benefited immensely by the contemptuous silence with which their literary lucubrations have been received by the medical profession. The public have noted the silence, but have misconstrued its motive, believing it to connote inability to speak. Now Mr. Haggard, a layman, has spoken, and the medical profession cannot do better than adopt Dr. Therne as a popular corrective to the widespread fallacies of the antivaccinator.

**The Medical Journal as Middle-Man in the Nostrum Business.**—There lies before us a letter, written by the editor of a well-known medical journal, flattering the author of a literary article and proposing that, for a consideration, he write a paper for the journal in question upon one of the subjects mentioned upon a separate slip of paper. The choice is given between "write-ups" of several (named) secret preparations "in any disease in which it is indicated," and the manufacturer's name and address are given. This remarkable letter closes with the following suggestion:

If you need any special medicine on the above subjects, you can get it by writing to the manufacturers, or if you need any of the preparations for experimental use, they will take pleasure in sending you all you want. Please let us hear from you by return mail.

Trusting that you will give a friendly reply. We are,  
Very truly yours,

**To Join the County Society** is the duty of every physician—first, because it is to his personal interest to become acquainted with his fellow-practitioners in the same kind and field of work, and to learn from them

the results of their experience; and secondly, because he thus benefits his profession. In season and out of season everyone must advocate the necessity of professional unity, and only by the collective action of the physicians of a locality can influence be brought to bear upon the entire body. Our esteemed contemporary, *The Pennsylvania Medical Journal*, publishes a striking list, classifying the physicians of Pennsylvania, and it reveals a poor showing of regulars united in a common work. The number enrolled is often held to be the number and strength of the entire body of scientific physicians. And having joined the local society, it is just as obligatory to attend the meetings.

**Effects of Bilateral Section of the Pneumogastric Nerve.**—It has been the general view of physiologists that section of both pneumogastric nerves in the animal invariably results fatally, principally on account of pulmonary edema and pneumonia. Professor Pavloff, however, in a recent communication to the Association of Russian Physicians (*Deutsche medicinische Wochenschrift*, Nov. 10, 1898), stated that the chief consequence of bilateral section of the pneumogastric is disturbance of digestion, and that by administering a carefully-selected diet, the animal can be kept alive indefinitely. Care must be taken to prevent the entrance of food into the trachea and bronchi, otherwise edema of the lungs and pneumonia develop. The author had two animals that had lived 6 and 7 months respectively after the operation, and died then from other causes. The correspondent of the journal from which we quote asked the question whether Pavloff's result would not open new fields for the surgery of the neck, to which the editor added the very proper note, "we hope not," and we agree with him.

**The New York "Times"** is bravely instructing the public concerning the Christian-Science delusion, and that it is not only a delusion on the part of some, but is being exploited for money-making purposes by the leaders. The hypocrisy of "healing" and teaching in the name and by the method of Christ, while at the same time charging outrageously high fees, is sufficiently evident to some people. In bringing the evidence before the people the *Times* is setting a worthy example to other newspapers and should be encouraged by every physician. It is a pity, however, that it does not refuse to advertise nostrums in its own columns so extensively. Some day its editors may realize that money-making by means of the nostrum-business is hardly less shameful than by the Christian-Science business. As to the occasional failure fallacy the Christian Scientists are talking so much about, the *Times* thus replies:—

The basis of complaint against these mercenary charlatans is that they glory in their abysmal ignorance and reject methods of demonstrated efficacy in favor of those which are

condemned by reason and experience alike. Real science claims only to delay the inevitable, and when the inevitable comes it is not humiliated or abashed. But it adapts means to ends, and demands and receives, even in case of what the false science calls "failure," the respect due to intelligent and energetic endeavor. The difference is immeasurable.

**The Disposal of Sewage.**—The appointment recently of an English Royal Commission to take evidence upon the best methods of sewage-disposal shows that the present English Government is not afraid to tackle one of the hardest problems in sanitation. Hitherto the only officially recognized method in England has been land-treatment, but when the merit of the various biologic schemes have been brought forward it is possible that the local government board will take a broader view of the matter. At a recent meeting of the Manchester corporation, under Sir Bosdin Leech, it was intimated that the experts appointed by the Rivers committee to report upon the subject of sewage-disposal to the corporation would present a report favorable to the general adoption by Manchester of a bacterial method of sewage-treatment. Such a method has been under observation for over a year at Leeds, and is said to promise extremely well, while the special character of the sewage of Leeds is much the same as that of Manchester. If these two great cities depart from precedent and treat their sewage biologically, the fact can hardly fail to have its effect upon the report of the Royal Commission.

**A Conclusive Proof of the Efficacy of Vaccination**—conclusive to those who have not lost both their logical and their common sense—is furnished by the experience of the Germans, and especially of the German army. A philanthropist could make no better use of his money than to gather these results into a pamphlet and distribute it repeatedly to every faddist of the "Humane," the Antivaccination, and the Antivivisection Societies. He should also secure its insertion as an advertisement in *Life*, and in the other antiscience journals. Dr. Bizzozzero of Rome, according to the *Lancet*, thus summarizes the German experience:—

"Germany stands alone in fulfilling in great measure the demands of hygiene, having in consequence of the calamitous smallpox epidemic of 1870-71 enacted the law of 1874 which 'makes vaccination obligatory in the first year of life and revaccination also obligatory at the tenth year.' What was the result? With a population of 50,000,000, having in 1871 lost 143,000 lives by smallpox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims a year. These cases, moreover, occur almost exclusively in towns on her frontier. If it were true, continued Prof. Bizzozzero, that a good vaccination does not protect from smallpox we ought to find in smallpox epidemics that the disease diffuses itself in the well-vaccinated no less than in the non-vaccinated countries. But it is not so. In 1870-71, during the Franco-German war, the two peoples interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely revaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked by smallpox; but the French army numbered



23,000 deaths by it, while the German army had only 278, and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been revaccinated, had not a single case."

**Hegelian Medicine** is a title that may give a start to good philosophers, but we are perfectly serious in stating that Mrs. Eddy and her crazy followers are good logical and practical disciples of Berkeley and Hegel. The fact suggests that metaphysicians and philosophers should be held accountable for the practical outcome of their thinking should crazy folk attempt to translate it logically into reality. The instigator of the deed is party to the crime. What a sorry world this would be if the utilitarians should be taken at their word by everybody! Probably Spencer would finally object if society should carry out to the full his laissez-faireism, and doubtless Hegel would have found more of the "contradictoriness of identity," than of the "identity of contradictories" had a fat contradictor stepped plumply upon his most tender corn. The idealism that unites non-being and being, that bridges nonentity and concrete being by synthetic identities which wash out of the befuddled mind all sane distinctions and perceptions, that resolves objective facts and things into a haze of subjective obfuscation—all this, however dignified as philosophy and awe-striking to the general, is to healthy minds of our day worthy of no better naming than with the vulgar catchword, *tommyrot*! And the perfect proof is made manifest when word-intoxicated followers give it the *reductio ad absurdum* of downright logical practice, as we are glad to say the Christian Scientists have (perhaps unconsciously) done with Hegelianism.

"In conclusion," says our admirable contemporary, the *New York Medical Journal*, "the whole farrago of nonsense reminds us very strongly of one verse of a student's song on the various philosophic systems of the day, which runs somewhat as follows:

We can't assume, so Comte affirms, a first or final cause, sir,  
Phenomena are all we know, their order and their laws, sir,  
While Hegel's modest formula, a single line to sum in,  
Is nothing is, and nothing's not, but every thing's becoming,  
With a bow, wow, wow, etc."

**The Retirement of Signor Lambert.**—Much violence has been done to medicine by writers of novels and romances in their efforts to inflict disease upon their characters, or to dispose of them altogether *per causas naturales*. The medical profession has often smiled at the miraculous recovery of the afflicted hero or at the wonderful way in which the villain shuffled off the mortal coil; but we are indulgent and overlook the errors in the pleasure that the story gives us. When, however, the guilty novelist belongs to our own profession, then we can scarcely pardon the creation of an impossible medical contingency. Signor Lambert is a famous tenor, who is carrying on a liaison with Lady

Sparter, the wife of Sir William Sparter, a prosperous ship-builder and successful promoter, but a man without refinement or sentiment. Learning of his wife's infidelity, Sir William determines to avenge himself. He buys a book on diseases of the throat, consults a noted laryngologist, procures chloroform, a bistoury, and other instruments, forces his wife to write a letter to Signor Lambert arranging for a clandestine meeting at a lonely house, goes there himself, chloroforms the Signor, and cuts his vocal bands. On awakening, Signor Lambert's voice is completely changed, and he is compelled to leave the stage. Had Conan Doyle made the betrayed husband a physician, the possibility of his taking revenge in Sir William's way might be conceded, but even for a skilled physician it is no easy matter to cut the vocal bands by way of the mouth; how a layman, totally ignorant of everything beyond ship-building and finance, could think of such a refined and far-fetched method to punish his enemy, is inconceivable, and when, after a few hours' reading, a few moments' conversation with a laryngologist, and an inspection of a model of the throat, Conan Doyle makes Sir William succeed in the operation, he is neither true to human nature nor to medical science. When a physician turns his pen to romance, and founds his plots upon his supposed technical knowledge, we have a right to expect some semblance to truth or probability. The story of Signor Lambert's retirement from the operatic stage is preposterous, and would scarcely do credit to a writer of dime novels.

**Destitute Children in South Australia.**—The province of South Australia has a population of about 350,000. There is not in this province, nor in any part of Australia or New Zealand for that matter, a single orphan asylum. The children of the State are placed out in homes and taught to become citizens. The report of the State Children's Council for the year ending June 30, 1898, is at hand. From it we learn that a practically permanent and voluntary council composed of six women and eight men have charge of all the orphans, the criminal, deserted, and destitute children in the State. They appear in every case in any criminal court where a child is a party. There were 194 such cases during the past year; 124 were sent to the industrial schools; 22 were sent to the reformatory; 9 were whipped; 7 were fined; 2 were discharged with caution; and the remainder either dismissed or otherwise disposed of; 89 other cases required adjudication of one kind or another. The council had the care of 1,009 delinquent children in the reformatory and industrial schools—512 boys, and 497 girls; 5 were in the lunatic-asylum; 1 in the blind asylum; 4 in the hospital; 3 in lying-in home; and 14 in gaol—1,210 in all.

Far more interesting, however, is the care given the destitute children. The council at the close of the year had 1,038 such children, exclusive of those in the insti-

tutions. Of these, 633 were boarded out at an average expense of 1s. 3½d. per week each, 264 were out at service, 54 were adopted, 35 placed with relations, 22 placed out with subsidy, and the rest variously disposed of. The children out at service earned £666 4s. 2d., which was placed to their credit in the Postal Savings' Banks.

These children and the homes in which they were placed were inspected and 5,235 reports made by various inspectors; 1,619 additional reports were secured from teachers. 327 applications were received for children. The total cost to the State was £15,655 6s. 11d.

When these children go out into the world they have their small earnings to begin on, and that fund of education and experience which a home-life alone can give. Unlike the children from institutions, they know how to build a fire, light a lamp, sweep and put to rights a room, cook and prepare a meal, do the ordinary chamber-work and chores about the house, and do all these and many more similar things, whether boys or girls. In fact they are fitted to be citizens. Unlike institution-bred children, too, they are not defective in any of the five senses through the ravages of diseases which still infest orphan-asylums, as gangrene did the hospitals of our grandfathers.

**English Experience as to the Connection between Diphtheria and Elementary Schools.**—It has long been a theory of Mr. Shirley Murphy, the medical officer of health to the London County Council, that the prevalence of diphtheria in the metropolis—a prevalence which is not only very large but increasing—is due to the opportunities for the spread of infection offered by the Board schools. Compulsory education drives all sorts of little boys and girls between the ages of 5 and 14 into the same classrooms, no adequate medical inspection is made of them, and as a result the schools become hot-beds and forcing-houses for zymotics. Scarlet fever and measles, having outward manifestations, do not escape parental observation so easily, and children infected with these diseases are kept away from school; but whooping-cough, and especially diphtheria, are insidious in their onset and obscure in their manifestations to the layman's eye; consequently their victims are sent out to mix with and poison their playmates. At a recent meeting of the London County Council the Public Health Committee presented to the Council an elaborate report prepared at their request by Mr. Shirley Murphy, in which the connection between the prevalence of diphtheria and compulsory education was proved by facts and figures undoubtedly to exist. On the strength of this report the committee urged upon the Council the advisability of bringing the facts to the knowledge of the Education Department and of the Local Government Board (as the Government department responsible for the public health); and at the same time expressed a desire

to confer with the London School Board upon the question. The Council unanimously adopted the recommendations of their Public Health Committee, and the outcome may possibly be some system of inspection by the medical officers of health of the various districts of the schools in those districts—this system only being put in force, presumably, when sporadic cases of diphtheria have been notified in the locality. This is almost certain to be the scheme that will suggest itself to the local Government Board, and the Education Department will probably be anxious to fall into line with medical opinion rather than have the schools remain under the stigma of being a source of danger to the community. But what the London School Board may do or say is not so easy to guess, for the medical adviser to the Board, Dr. W. R. Smith, absolutely denies that any connection exists between board-school attendance and the spread of diphtheria. Perhaps when he has read Mr. Shirley Murphy's last report he will doubt no longer.

**The Active Principle of the Suprarenal Capsule.**—

The story of the development of our knowledge of the functions and properties of the suprarenal gland forms one of the most interesting chapters in the history of modern science. Since Addison in 1855 published his epoch-making observations "on the constitutional and local effects of disease of the suprarenal capsules," these organs have formed a most attractive field for the investigator. Brown-Séquard first showed that the adrenals were vital organs, and that animals would not survive total extirpation for more than one or two days. Other experimenters, such as Nothnagel, Gratiolet and Philippeaux, Harley, and Schiff, were unable to confirm Brown-Séquard's observations, and succeeded in keeping some of their animals alive for as much as one and one-half years. Tizzoni, in 1889, and after him, Abelous and Langlois, de Dominicis and Marino Zucco found, after very careful experimentation, that Brown-Séquard's conclusions were, in the main, correct, and that the adrenals were of vital importance. We may then look upon that as an established fact. By observing the symptoms that followed the extirpation of the suprarenal, some conclusions as to the probable functions of the gland in the body could be drawn. Another way of gaining an insight into the functions of the organ was by a study of the properties of suprarenal extract. The principal effect following the injection of this substance, as Schäffer, Oliver, Szimonowitz, and Cybulski and Biedl have shown, by a series of truly wonderful researches, is a remarkable rise in blood-pressure, with a slowing and strengthening of the heart-beat. Curiously enough, it is only an extract of the medullary substance that is active. The extract is, of course, a mixture of a variety of substances, and the determination of the nature of the active ingredient has been zealously attempted by various investigators. Fränkel isolated a sirupy, non-



crystallizable body, which he called sphymogenin, which, chemically, is a benzol derivative. Mühlmann, on the other hand, was able to extract pyrocatechin from fresh adrenal tissue. The most interesting observations, however, that have been published on this important question are those of Professor John J. Abel, which have just appeared in the *Bulletin of the Johns Hopkins Hospital*. Abel separated the active blood-pressure-raising constituent in the form of a benzoate, and has shown that it is neither pyrocatechin nor an immediate derivative of it. In its pure state the active principle is a powder of a light gray to a brownish color, the percentage-composition of which is expressed by the formula  $C_{17}H_{15}NO_4$ . It is a basic substance, resembling the alkaloids, which, on being fused with powdered potassium hydrate, and then diluted with water, gives off an odor of skatol. In its native state in the suprarenal capsule the substance differs very slightly from the isolated base, but this slight difference seems to be sufficient to establish a marked physiologic nonconformity. The isolated substance, so far as it has been tested, does not produce a rise in blood-pressure. The laborious and patient analyses which Dr. Abel has made, the results of which we have only given, are most important, and it would seem that we are on the road toward the final solution of the suprarenal mystery.

**Epilepsy and Shipwreck.**—The commission appointed in England to ascertain the cause of the wreck of the steamship *Mohegan*, has returned an opinion worthy of the immortal Bunsby. This vessel went on to the rocks, recently, near the "Lizard," off the south-west coast of England, on her voyage from London to New York. She was a fine steamer, well appointed and well manned, and her captain knew the sea as well as a London cab-driver knows the Strand. The commission aforesaid has decided that this great vessel, with her cargo of human freight, was wrecked because she was steered on a wrong course. The course should have been west one-half south, whereas she was steered west one-half north. By such small deviations from the rectitude of her way can a great steamer come to disaster!

It now appears that the finding of the commission gives no hint of the wild theory which is at present in every seafaring man's mouth. The skipper of the *Mohegan* is said to have been afflicted with that form of epilepsy known as "petit mal." This disease, it is alleged, plunged him occasionally into that pseudo-hypnotic, or automatic, state, which is characteristic of some forms of epilepsy; and while in one of these states he is supposed to have given the erroneous and fatal order. This is a novel theory and one that cannot be accepted without much mental reservation.

In the first place, if the captain had epilepsy, even in its mildest form, why was he continued in charge of

a large ocean-steamer? The theory that he, like Napoleon Bonaparte, Mohammed, and Julius Cesar, was fitted to command even in spite of fits, could scarcely have commended itself to his hard-headed employers. But putting even such considerations aside, is the automatism of epilepsy likely to lead a man to steer his ship on a wrong course for hour after hour until he brings her up on the rocks? We think not.

The automatism referred to in the newspapers is evidently that mental state seen in the "substitutional" attacks which sometimes occur in epilepsy. These are not necessarily confined to *petit mal*; in fact, they are rather more common in *grand mal*. The acts (criminal and otherwise) to which they lead are usually impulsive, often passionate, and represent, in their explosive character, the epileptic fit which they substitute. They may be accompanied with, or followed by, a stage of mania, or other marked disorder of the intelligence, especially if they are protracted. But the explosive and impulsive character is especially well-marked. In the case of a mariner who wrecked his vessel, we must suppose that the psychosis endured for hours, and yet with such little evidence of disorder of the intelligence, that none of his subordinates noted that he was mentally not himself. Finally, we must suppose that the captain gave a cold-blooded order, the very opposite of what he was accustomed to give; a supposition that is entirely counter to what the epileptic usually really does. In his automatism he usually repeats accurately the events of his waking hours—it is chiefly his passions and impulses that are perverted in the epileptic scene.

This theory of the wreck of the *Mohegan* raises a question in medical jurisprudence that is interesting rather than important. It is too problematical to be accepted very seriously; and until we hear the authentic testimony on which it is founded we shall have to consider it as unproven.

**The Life-conditions of the Oyster under Normal and Abnormal Environment, including the Effect of Sewage-matters and Pathogenic Organisms**, is a subject not only of scientific interest but of vital importance to the community at large. A committee of the British Association for the Advancement of Science, consisting of Professors W. A. Herdman, R. Boyce, C. S. Sherrington, Mr. G. C. Bourne, and Dr. C. A. Kohn, appointed to elucidate these questions has recently published its third and final report. The committee states that since the last report, its members have investigated more fully the question of the amount of copper and iron present in different parts and various kinds of oysters, with results which sustain the conclusions already arrived at. What is, however, of special importance is that the committee has investigated more minutely the typhoid-like organisms, with reference to their occurrence in shellfish. An endeavor

has been made to differentiate these from the bacillus coli communis on the one hand and the bacillus typhosus on the other. The committee examined during the past year, 19 batches of oysters, 17 batches of mussels, 18 batches of cockles, 5 batches of periwinkles, and 1 batch of whelks obtained from shops in various parts of Liverpool. In their efforts at differentiation, not only were the methods commonly in vogue heretofore made use of, but the serum-reaction was employed as well. In 9 of the 19 batches of oysters, a colon-like organism was isolated from the interior of the oysters. In some instances there was almost a pure culture of the colon-bacillus, the Petri dishes giving a very characteristic odor. The reaction in the 9 cases differed; there was the typical colon-group, coagulating milk, forming indol and gas, and giving a decided acid reaction as well as an abundant growth upon potato. There was also a group consisting of very active bacilli, not coagulating milk, not forming indol, occasionally forming gas, and in two cases giving rise to a slight acid reaction in neutral litmus-whey, and in three cases to an alkaline reaction. In each suspicious case the serum-reaction was tried, but always with negative results. It was concluded that this latter group, although giving rise to some of the reactions of the typhoid bacillus, could not be regarded as identical with the true bacillus of Eberth. In the mussels, the colon-group was encountered less frequently; some of the bacilli isolated coagulated milk, formed gas and indol; others gave negative reactions, as in the case of the oysters. Colon-bacilli were not found in the cockles. A coccus, not liquefying gelatin, growing at a temperature of 37°, and sometimes forming gas, was frequently met with. A similar coccus was encountered in the periwinkles. From the whelks a bacillus was isolated, which formed gas at 37°, did not coagulate milk nor produce indol, and only after four days produced a slight acid reaction in neutral litmus-whey. This bacillus thus resembled the second group found in the oyster. To quote from the report:

"These observations show the frequent occurrence of the colon-group of bacilli in such shellfish as we have investigated. Moreover, they clearly indicate that some of the organisms composing this group are more closely related in their reactions to the *Bacillus typhosus* than others are, although none corresponded to that bacillus in all respects. It will be remembered that in our Liverpool Report (1896) we described the occurrence of the typhoid organism after various intervals of time in oysters which we had experimentally infected with typhoid material. To report that we may refer also for a discussion of the results of washing infected oysters in a running stream of sea-water, and for a statement of the diminution of the number of typhoid organism as the time of inoculation recedes. In our Ipswich paper we had shown that oysters were able to live, and did live, under very impure conditions, and were able to make use of sewage-matter as food. We also demonstrated (in 1895) by experiments that those laid down in the proximity of drains contained far more microorganisms than such as were some distance off in purer water. Finally, in last year's report at Toronto, we gave an account of the unhealthy condition of certain green oysters, of the association of the color with a leukocytosis, and of the presence of copper in the leukocytes."

Among the important conclusions of the committee is one to the effect that there are several kinds of greenness in oysters. Some of these are healthy; others are due to an unhealthy state of the oyster; some are due to a greatly increased amount of copper in the oyster; while still others are due to a special pigment, marennin, which may contain a certain amount of iron. It was also demonstrated by quantitative analysis that there is more copper in the green American oyster than in the colorless one, and proportionately more in the greener parts than in those less green. It is therefore concluded that the green color is due to copper. Another important conclusion is that with reference to the colon-group of bacilli so frequently found in the shellfish, particularly the oyster. There was no evidence that these bacilli occur in mollusca living in pure sea-water. But on the other hand, the inference that the presence of the colon-bacillus indicates sewage contamination cannot be considered established without additional investigation. While two groups of bacilli were isolated—the one giving typical reactions of the colon-bacillus and the other approaching those pertaining to the bacillus typhosus, in no instance could an organism giving the typical reaction of the bacillus of Eberth be detected. However, none of the oysters investigated was derived from a bed either known or suspected to be contaminated with typhoid organisms. As the result of their investigations the committee recommends:

(a) That the necessary steps should be taken to induce the oyster trade to remove any possible suspicion of sewage contamination from the beds and layings from which oysters are supplied to the market. This could obviously be effected in one of two ways, either (1) by restrictive legislation and the licensing of beds only after due inspection by the officials of a government department, or (2) by the formation of an association amongst the oyster-growers and dealers themselves, which should provide for the due periodic examination of the grounds, stores and stock, by independent, properly-qualified inspectors. Scientific assistance and advice given by such independent inspectors would go far to improve the condition of the oyster-beds and layings, to reassure the public, and to elevate the oyster industry to the important position which it should occupy.

(b) Oysters imported from abroad (Holland, France, or America) should be consigned to a member of the 'Oyster Association,' who should be compelled by the regulations to have his foreign oysters as carefully inspected and certificated as those from his home layings. A large proportion of the imported oysters are, however, deposited in our waters for such a period before going to market that the fact of their having originally come from abroad may be ignored. If this period of quarantine were imposed upon all foreign oysters a great part of the difficulty as to inspection and certification would be removed.

(c) The grounds from which mussels, cockles and periwinkles are gathered should be periodically examined by scientific inspectors in the same manner as the oyster-beds. The duty of providing for this inspection might well, we should suggest, be assumed by the various Sea Fisheries Committees around the coast.

The recommendation of the committee relative to the periodic inspection of the oyster-beds is of as great import to the community in this country as to that abroad, and merits the careful attention and consideration of sanitarians.



**Editor and Reader, No. 7: For Example.**—For our weekly chat with readers we can find no words so powerful to express a principal phase of the subject as the letter we quote below. We have asked the typesetter to preserve the exact color of the original, but his best efforts must lose much because of his inability to reproduce the chirography. We shall, of course, hide the writer's name, and the name of the large city wherein he resides. Moreover, as medical journalism owes him nothing, and the letter was intended for publication, we cannot be charged with betrayal of confidence. The light thrown upon the difficulties of professional advancement, the revelation of the condition of medical education generally, and especially of the medical college which a few short years ago graduated our correspondent, are highly illuminating. And, lastly, what a lurid gleam it shoots upon medical journalism, and the awful task before the medical editor!

TO THE EDITOR.

*Dear Sir* In looking over your sample copy, I just wondered. How, so Much Many & varied, theories ever got, located in one journal. Pneumonia, as a Starter. Grand as to theory. Sounds like a College Lecture. But no earthly use, to Dr. or Patient. The Name Origin & of a Disease, is good for the Board of Health & the Friends of the Patient. But to the one vitally interested, no use. The Dr don't give Medicine to a Name, they treat the Symptoms, which are never More Alike, than our faces are to each other. And the Dr that treats first and quickly, is the Man that is Wanted. I have seen a Patient die while a Dr Was taking Mechanical Diagnoses. What good was his scientific Methods when the result was nil

Now in Lung Fever & All I know is that there is a Rush of Blood to those parts, caused by, Say, irritation. If Blood Pressure is not removed, result is Death either of the Parts or Patient. My Part is to equalize the circulation by any Means in my Power, and quickly.

When that is done I have time for theory. I can Sum up, this wise the Human Body is one Grand Whole, each part working in unison & Harmony. All is perfect. But Now one part is Irritated. Nature rushes to the rescue, by the Only Means at Hand, a supply, of Blood. But Like Many fools that Plunge forward, there is no Way Left, for retreat. And the natural cure, or what nature intended for Cure is Disease. Now those All too Many Lesions that Science has found. And name as separate diseased conditions & Complications. Are nothing More or Less, than the inevitable result of the one and first, disease and there we are in our reaserches. A Mockery to ourselves, spending hours of hard study on what a Cause, disease resulting & outcome, just a summing up

Typhoid, one Man gives Cathartics enemtas in either constipation or Dierheer. Hit or Mis And spends days of thought On how to differenciate Between Malerial, California Typical, and all the Others.

He forgets that Typhoid Fever commences its journey in the Abdomen & Intestines and that at the first of his injections he may rupture an intestine & cause death at a Moments notice. I have seen a California Professor, with a syringe nozzle, in the Rectum of a Typhoid Patient, when he the Patient died: And he had been up and Around for over a Week. As for Myself this disease is the Most easily diagnosed of Many. And require no Neroces, for the treatment is Simple. If you are in a Malarial district treat accordingly. Secure good nursing. I find the most simple cases the hardest to cure this last year I lost 5 out of 18. Some are incurable from the Start. Others wil get well *inspite* of the Doctor

Meat eating & In Rheumatism. Well climate have More to do with that than Meat. The Irish Man & his diet and muscle in Ireland would do here if, you could impart the Irish climate, with the man. The climate of that Country is Such that the Peasents Can Live for at Least 11 months

of the year without fire, except for cooking. For the Other two months, there is a fire of wood or coal mixed with Peat or Among the very poor, the Stools from Cows or sheep is gathered in the Summer Months & constitute the winter firing. This Burned in An Open fireplace in One Common room, with the wind & rain howling through the roof in Most Cases, goes to show, what the climate must be, the Peasents wear no underwear, except one cotton garment. A mud wall, clay floor, thatched roofs, are found in the dwellings of even well to do Farmers.

Again the Bicycle and a yong man getting impotent or Lost Manhood from the Saddle.

Doubtful unless he took the Cycle to Bed with him.

A Bicycle is hurtful Only according to the taste of the individual rider. In so much that it will develop one Set of Muscles at the expence of or deterioration of Another

The Companions he Rode out with the Places visited. His own Acts as to the Means used and the frequency of trying to allay any or fancied, irritation of the Genital Organs. Was or is the Cause of impotence not the Bycicle

Again the diseises of Bladder or kidneys are more fancied then real. dring Beer, there is sour urine. Wine a sediment results, eat carruts, spinege asparagrull & you chenge Oder color & reaction. Also chenge quantity voided. Hence urinalisis is not reliable.

In Constipation. Wash stomach eat Fruit drink Water & all the rest. And the result Will be to get the stomach & Bowels as flabby and of as Little use, as that ald Shirt you are having Washed so Often: and is Worn out, you may accidentally get a new shirt. But the Patint Cant get a new stomach. So the Dr is the Mycrope to be Killed.

About Mycrobes and all their relation's which is as numerous as our Friends, when we don't Want them.

A few years ago We never thought or Cared whether the Patient had microbes or not. We simply Doctured the Patient.

Now We dont Care a Continental Whether the Patint Lives or dies. If We only get a chance at the Mycrobes. Why We have incubators to hatch them to Order. And the result Will be that unless the Microbe doctors get starved out, there Will be no patients Left to Doctor

How is Microbe spelled. I think for the Dr's that seem to thrive on it they Must Spell it Mycrobe, the Possessive Sence.

I get May journals But I never subscribe And yet it is good to read a journal.

It is like looking into one's self, as it Were, you look and see what a Worthless Cuss you are and how Little you Know.

Read the journal. Well you find that you are not the Only, john Ass, in the Medical Pasture. And their Sole object is to try Who Can Bray the loudest.

Sign One of the Many Print this and see how they Will try to Hit back to Support their theories

It Will Make the journal, in demand

Resp yours \_\_\_\_\_, M.D.

\_\_\_\_\_ th St.

your journal is Worth reading

But I get More gratis than I Can read

**Every Subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to aid us. In addition we trust you will write these friends a personal request to examine the sample copies we shall send.

**An Industrial Use of the Gastrointestinal Tract.**—In Italy there are said to be establishments in which are kept large birds, particularly Indian fowl, to which rough coins bearing the imprint of Tiberius or Caligula are fed. After a time the coins are naturally returned to mother earth, and being then possessed of a beautiful covering, they are said to much resemble true coins of antiquity, and are sold as such.

## Reviews.

**Physiological Chemistry.** By FREDERICK G. NOY, Sc. D., M.D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second edition, revised and enlarged. Pp. 326. George Wahr, publisher, Ann Arbor, Mich., 1898.

In the preface of the book before us the author states that it is written as a laboratory work covering the three great food-stuffs and the fluids and secretions of the body, its object being to teach the student to observe and to reason; to correlate the facts brought out in the laboratory in their relation to physiology, hygiene and disease. The arrangement of the work is good. The directions given are clear and concise, with just enough explanatory text to enable the student to reason clearly on the subject before him. There are a few vagaries in spelling scattered through the book, for example: "Transsudates, exsudates and guaiac" for transudates, exudates and guaiac. The diphthong is retained in such word as "Laevulose." In classifying the albuminous compounds the term "Protein" is used instead of the commonly accepted name Proteid. The word "Proteid" is used to indicate those complex bodies which yield on cleavage the simpler albuminous compounds. These are such substances as Nucleoalbumins, Hemoglobin, Glycoproteids, Nucleins. The book should be a very useful guide to the student of physiologic chemistry, in his work in the laboratory.

**Akromegaly.** An Essay to which was Awarded the Boylston Prize of Harvard University for the Year 1898. By GUY HINSDALE, A.M., M.D., Fellow of the College of Physicians of Philadelphia, and of the American Academy of Medicine, etc. Reprinted from *Medicine*. Pp. 88. Detroit: William W. Warren, 1898. Price, \$1.50.

The Boylston prize for 1898 has been well bestowed, for Dr. Hinsdale has written a most complete monograph on the subject of akromegaly, based upon a study of 130 cases collected from the literature, together with an additional case and a gigantic skeleton supposed also to be akromegalic. History, symptomatology, course and duration, anatomy, pathology, etiology, theories, gigantism, diagnosis, treatment, are all discussed at appropriate length, and a description is given of the body of an American giant in the Mütter Museum of the College of Physicians of Philadelphia. The bibliography includes 377 references. The monograph is generously illustrated. Concerning the etiology of akromegaly the opinion is expressed that the disease is of "trophic nature, depending upon a perversion of function of the pituitary gland; these changes being brought about through the medium of an internal secretion, like that of the thyroid, which acts chiefly upon the trophic fibers of the peripheral nervous system." With regard to treatment the statement is made that this "is more encouraging than the brief references to it in the textbooks would lead us to suppose," and the use of animal extracts, and particularly thyroid extract, is spoken of hopefully.

**Practical Urinalysis and Urinary Diagnosis:** A Manual for the use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, M.D., LL.D. (Queen's University); Fellow of the Royal College of Physicians and Surgeons, Kingston; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys," also of "Diabetes: Its Causes, Symptoms, and Treatment." Fourth, revised edition. With numerous illustrations, including photo-engravings and colored plates. 8vo, pp. xviii, 365. Philadelphia, New York, Chicago: The F. A. Davis Co., 1898. Price, \$2.50 net.

This well-known book is divided into two parts: one dealing with analysis of urine and the other with urinary diagnosis. The former is discussed in eight sections: general considerations, composition of normal urine, proteids, carbohydrates, abnormal urine, urinary sediments, anatomic

sediments, gravel, and calculus; the latter in three sections: diseases of the urinary organs, and urinary disorders, and the urine in other diseases. Appendix A deals with the subject of examination for life-insurance, appendix B with reagents and apparatus for qualitative and determinate analysis. Numerous changes have been made in the preparation of this edition, and some portions of the work have been entirely rewritten. The work is a safe guide and a useful textbook upon the subjects with which it deals.

**Manual of Diseases of the Skin.** With an Analysis of 20,000 Consecutive Cases, and a Formulary. By L. DUNCAN BULKLEY, A.M., M.D., Physician to the New York Skin and Cancer Hospital, etc. Fourth edition, revised and enlarged. 8vo. Pp. 362. New York: G. P. Putnam's Sons, 1898. Price, \$1.25.

In preparing this edition, the author notes that it has been his aim to make the subject-matter simple, elementary, and as complete as is possible in a compendium of a few hundred pages. The diseases are considered systematically according to the author's classification, which, we may remark, is largely clinical and easy of comprehension. The well-digested table of statistics, made up from the author's very large personal experience, is both interesting, instructive, and valuable. We note that among 20,000 consecutive cases of skin-disease, observed and tabulated by the author, there were 5,812 cases of eczema, showing the relative frequency of this affection in New York City. The formulary is sufficiently copious to serve its purpose, the various formulas presented showing careful discrimination in their selection.

We have no hesitation in stating that the book is an excellent and reliable compend of the subject with which it deals, and one that will prove useful to the practitioner as well as to the student. The author's views are conservative and sound, and are in line with the teachings of leading dermatologists in this country and abroad. We are particularly gratified to note that Dr. Bulkley takes a broad view of the treatment of the diseases of the skin, and that due importance is laid upon the proper internal and general treatment of most diseases. The subject of internal treatment has, in our opinion, been sadly neglected in recent years. The days of zinc-oxid ointment, as a panacea for eczema, have passed away, we hope, never to return.

**Diseases of the Heart and Aorta.** By GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P. Ed., F.R.S.E., Senior Assistant Physician to the Royal Infirmary; Consulting Physician to the Deaconess Hospital; Lecturer on Medicine at Minto House, and on Clinical Medicine at the Royal Infirmary, Edinburgh. With 210 illustrations. 8vo. Pp. xxii, 932. Edinburgh and London: Young J. Pentland; New York: The Macmillan Company, 1898. Price, \$6.00.

We have only words of praise for this admirable monograph, which is destined to have a permanent place in medical literature. It is refreshing in these days of ceaseless activity in the making of books to come across one characterized by the completeness and comprehensiveness, the forcefulness of presentation and the authoritative accuracy of this. Dr. Gibson has, besides having done a fine piece of literary and scientific work, rendered a distinct service to the profession, for which he is deserving of its gratitude and commendation. The subjects considered are discussed in 16 chapters, of which the first 5 are of general nature, as follows: morphology, physiology, pathology, symptomatology, treatment. The remaining 11 chapters deal successively with congenital heart-disease, diseases of the pericardium and of the endocardium, chronic affections of the cardiac orifices and valves, affections of the aortic, of the mitral, of the pulmonary, and of the tricuspid orifice, and of the myocardium, complex sensory and motor affections, and diseases of the aorta. We have failed to find, under diseases of the myocardium, any reference to the conditions known as segmentation and fragmentation. A short appendix refers briefly to the application of radiography, and a longer one contains an elaborate bibliography. There is finally a general index and an index of authors. The volume is well supplied with illustrations of a high order and it is well printed in large type upon good paper.



## Correspondence.

## INFORMATION WANTED AS TO "OAK ORCHARD" WATER.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

DEAR SIR:—I find it impossible to procure anywhere a natural acid water which I have used but have not had recent occasion for, the "Oak Orchard" water. Inquiry among dealers fails to bring me any knowledge of it. The insertion of this query will be of great service to me should it produce the information I desire, and no doubt others have had the same want and will be as grateful as

Yours, etc.,

Philada, Dec. 1898.

J. K. MITCHELL.

## VENESECTION IN ECLAMPSIA.—REPORT OF A CASE.

To the Editor of the PHILADELPHIA MEDICAL JOURNAL:—

I WAS called hurriedly, on the evening of August 1st, to see Mary K., who, the messenger stated, had been seized suddenly with "fainting spells and convulsions." Upon my arrival I found the patient to be a girl of 19 years, of well-developed and apparently healthy physique. She had just recovered from a convulsion and was in a semi-comatose condition. Her face presented a dusky flush; the conjunctivæ were hyperemic; and some bloody mucus was spread around the mouth. Her tongue was badly bitten, as no precaution had been taken to guard against this. The family and personal history, as given, was negative, excepting that the aunt said that she believed the girl had not menstruated for one or two months. Examination disclosed the fact that the girl was well advanced in gestation, probably seven months. While making the examination, the convulsions recurred, beginning in a typical way, with divergence of the eyes, spasmodic twitchings of the extremities and facial muscles, grinding of the teeth, and stertorous respiration. After taking steps to protect further biting of the tongue, I administered chloroform, and when the patient had relaxed I drew off the urine—half an ounce—which a hasty analysis showed to be loaded to such a degree with albumin that boiling made it of almost cheesy consistency. Meanwhile, the effects of the anesthetic had passed off, and the convulsions again recurred, and with such frequency as to be almost continuous. Twenty grains of chloral, with a fluidram of tincture of opium, were introduced into the rectum, and repeated in 15 minutes, but was ineffectual. As the patient's condition was becoming critical, and medical measures having failed, I determined to bleed her and proceeded to do so by opening the median basilic vein and allowing the blood to flow until the face paled and the stertorous breathing subsided to more natural respiration. Just how much blood was drawn I am not able to state definitely, but I should judge it to have been about one pint. The girl passed into a quiet sleep, which lasted 5 hours, and from which she awakened with labor-pains, and parturition took place one hour later. The fetus was of 7½ months' growth and was still-born. All attempts at resuscitation failed. The puerperium was rapid and uneventful. Medical care was directed, of course, to the kidneys, a strict diet—mainly of milk—and strychnin gr.  $\frac{1}{32}$ , with f.3ij of Basham's mixture of iron and ammonium acetate t. i. d., being advised. The albuminuria rapidly diminished, and when the patient passed from my care, a month later, the urine contained but a trace of albumin.

The special points of interest in this case are the sudden

onset of the attack, without any premonitory renal symptoms, and the undoubted beneficial results of the venesection. There are, of course, cases of eclampsia in which such a measure would not be advisable, but when the physique is good, the arterial circulation full and bounding, and the venous engorgement pronounced, I believe, after observation of a fair number of cases, that the most gratifying results will be obtained by the combined use of an anesthetic—chloroform preferably—to control the convulsions, and the bistoury, to relieve the general circulatory engorgement and in some measure remove the direct excitant—the toxin contained in the blood. I have said nothing relative to the induction of labor, deeming it superfluous to do so, as I am in accord with the consensus of opinion on this subject, viz., that the uterus should be emptied as quickly as possible so as to relieve all pressure on the kidneys and ureters.

Respectfully,

1937 Vine Street, Philada.

J. FRANCIS HAMILTON.

## A GOOD EXAMPLE OF PECILONOMY (TERMINOLOGIC INCONSISTENCY).

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

DR. BURT G. WILDER, the author of the letter under the above heading which appeared in your issue for November 19, 1898, will kindly permit me a few remarks, directed against lexicologic inconsistencies of which many of us are guilty. Pecilonomy is one of those words which some of my Greek friends call *ελληνοφανής*. *Terminologia* should make room for nomenclature or lexicology.

If we only will consult modern Greek works on anatomy and other branches of our science every one of us will have to confess that the Greeks of to-day have the only possible homogeneous and correct scientific medical nomenclature. Why not adopt this, and, whenever new words for new things or new discoveries have to be coined, why not consult real Greeks instead of consulting our college professors, who, however learned they may be in classics, do not possess the Greek *Sprachgefühl*? Allow me to refer to my many writings on this subject, especially to my modest book, "Christian Greece and Living Greek."

From several editorials which appeared recently it can be seen that it commences to dawn, that we commence to observe that our nomenclature, instead of being strictly scientific, is to a great extent illiterate, puerile, silly.

Especially excellent men like Dr. Wilder, who have the matter at heart, and attempt noble work to establish scientific naming where unscientific had been in existence, should never consult our higher or highest schoolmasters of Greek, but the best philologists and medical men of the University of Athens. The latter are the only reliable authority!

As a divertimento allow me to mention an example how grossly neglectful we are in regard to names. All the textbooks on diseases of the stomach of the present time call the cardiac or esophageal orifice of the stomach, "cardia." I hope no book of anatomy will adopt such a designation. In the Greek book of anatomy, *Λοῦκά Παπαϊωάννου' Ανατομική τοῦ Ἀνθρώπου*, which I can highly recommend, it reads: *τὸ αἶμα, ἐν ᾧ περιέχεται τὸ πνεῦμα τὸ ζωτικόν, ἀναβαίνει ἐν τῇ καρδίᾳ*. I quote these words to show how explicit the Greek description in Papaioannos' book is.

In some medical journal I read about a young girl suffering from cardialgia, which pain was referred to as "gastric" pain. It is as if we would say she had headache in the feet.

126 East Twenty-ninth Street, New York.

A. ROSE.

DIRECT MASSAGE IN THE TREATMENT OF  
GLAUCOMA.

To the Editor of THE PHILADELPHIA MEDICAL JOURNAL:—

"In chronic glaucoma, operation confers less certain and less obvious benefit."

PRIESTLEY SMITH.

During the winter of 1897-98, while doing a little special work in glaucoma, it occurred to me to use direct massage to the corneo-scleral junction, hoping thereby to cause absorption of the inflammatory deposits and relieve the passive congestion present, which we know are the causes of certain forms of primary glaucoma. I immediately endeavored to ascertain what had previously been written in regard to the treatment, but could find no reference to it and concluded that it had been tried and found wanting. A few days ago a reprint of an article on the "study of muscae" by Dr. Geo. M. Gould, written in 1895, fell into my hands, and I found therein reference to massage in the treatment of glaucoma. I inferred, however, that the massage was performed through the lids, and by the patient. This method was considered, but the direct method was preferred, as the massage can be made directly and limited to the complete corneo-scleral junction, being a treatment that can be better performed by the physician.

The treatment would be applicable only in cases in which the cause of the glaucoma is an inflammatory deposit, acute congestion, or chronic passive congestion of the ciliary body, causing a closure of the filtration-angle. The results following operation in these cases are not so flattering that we can abandon other methods. Operations can be performed at short notice, so that with careful watching there is little danger to the affected eye.

The following is a report of my first case treated by direct massage.

On April 25, 1898, Mr. T., a colored man, consulted me in regard to his eyes, saying he had become blind in one eye, while in the other the sight was becoming poor. He had been treated, but with no benefit. Examination disclosed a typical case of glaucoma. The left eye was blind and stony hard. In the right the tension was about +1, with vision of  $\frac{2}{30}$  and at times slight neuralgic pains. The right eye had been ailing about two months. I advised an operation, but the patient objected. Treatment by massage was suggested and accepted.

The iris was thoroughly contracted with eserine; a 4% solution of cocaine was instilled; and then, with the back of a hard rubber cataract-scoop, the corneo-scleral junction was gently massaged with a firm, even stroke, from 10 to 20 strokes being made over each place. It is best not to do too much at the first sitting, but to be governed by the behavior of the eye. After instilling a few drops of a 1% solution of eserine and prescribing eserine, gr. j. to f $\frac{3}{4}$  j, t. i. d., the man was told to return on the third day. The treatment was now repeated and again upon the second day following. At the end of the third treatment the tension was normal, vision was normal, and all discomfort was gone. He was told to return in three days, but he remained away ten days. During this time the eserine was continued and hot applications were made, but on the patient's return all the old symptoms were present. This experience demonstrated that the benefit received was not due to the eserine, but to the massage. The treatments were resumed, with the same beneficial results. At present, sight is normal, and the glaucomic symptoms have all disappeared. The blind eye was treated as well, with a return of the normal tension, but no improvement in

sight. Whether the result is a cure remains to be seen, but it is so far exceedingly flattering.

Massage should be repeated as often as a case requires. The eye should be thoroughly washed with a saturated solution of boric acid, and a bland oil, as glymol, used to reduce friction.<sup>1</sup>

Yours etc.,

J. A. PRATT.

232 and 233 Coulter Block, Aurora, Ill.

## THE GARDEN OF CAGLIOSTRO.

O Prince of Liars and of Quacks,  
Come back, poor ghost (if Hell accede  
To quench the flames and loose the racks),  
To view the fruitage of thy seed!

The world is all thy garden still,  
Where halt and blind, and sick and old,  
Exchange for powder, potion, pill  
And panacea, all their gold.

Strange fruits hang drooping from each tree—  
Electric belt and ectropoise,  
Gold-cure and asthma-remedy,  
Pain-killer, cough-drop, germ-decoys,

Specific, slayer of microbe,  
Tonic to brighten up the wits,  
Pink parvule for the pale worn globe,  
And cure-all, warranted for fits.

Strange herbs and roots from every coast,  
Sars'p'rilla, cola and coco',  
And painful celery compost—  
"That tired feeling" has now to go!

From every vine a spigot gapes  
For sickly woman, child and man,  
Flow teas, elixirs, sirups, saps,  
And eke the wine of Mary Ann.

Faith-curists, healers, magnetists,  
Watch lest a victim get away;  
Unchristian pseudo-scientists  
There pray—upon their wretched prey.

Old doctors Brown and Grey and Greene,  
Black, White, and Brindle—every hue—  
Shamble across the sombre scene,  
A fat, sleek, oily, lying crew.

Bleak age they change to rosy youth,  
Lost manhood quicken as of old,  
Make blind to see, turn lie to truth,  
And stones and plants transmute to gold.

And so the wan crowd winds along,  
The blind and sick, the old and lame,  
While ruthless vampires wait the throng,  
To suck their blood and play their game.

By devious paths and serpentine,  
By vitopaths and osteopaths,  
And orificial ways between,  
They go—good crops with aftermaths.

Cagliostro, thou once peerless knave,  
Could'st come to see thy spawn—thou'dst run  
To Hell again and wildly rave  
Because so beaten and outdone!

FREDERICK PETERSON.

<sup>1</sup> We have had experience of four cases in which for several years the tension and vision have been kept normal by firm massage with the finger and by means of the lids.—ED. P. M. J.



## American News and Notes.

### PHILADELPHIA, PENNSYLVANIA, ETC.

**Dr. J. J. Gurney Williams**, a resident physician at the Episcopal Hospital, was recently severely burned by the X-rays while taking a radiograph of a patient's wounded leg.

**The Free Hospital for Poor Tuberculous Patients of Philadelphia** is to be the beneficiary by the annual ball of the Philopatrian Institute to be held February 13, 1899, in the Academy of Music.

**Poisoned by Infected Cheese.**—Four children of a household in Quakertown, Pa., were severely poisoned by eating infected cheese, purchased at a local grocery, December 7th. Prompt and prolonged medical aid was eventually effectual in saving the lives of the children.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending December 24, 1898:

Tuesday, December 20—College of Physicians—Section on Ophthalmology.

Thursday, December 22—Pathological Society.

**Medico-Surgical Society of Camden, N. J.**—At a meeting held December 5th, the following officers were elected for the ensuing year: President, Dr. H. H. Sherck; vice-president, Dr. F. M. Robinson; secretary, Dr. Paul Litchfield; and treasurer, Dr. W. P. Wingender.

**Dr. James A. Irwin**, against whom it was attempted to bring suit for "aiding and abetting" the crime of abortion, has been freed from the unwarrantable charge by the action of the Grand Jury in ignoring the bill. These expensive injustices too frequently fall upon physicians in the discharge of their duty.

**The Tri-State Medical Society of Maryland, West Virginia, and Western Pennsylvania** met at Cumberland, on December 15th. The scientific program was made up of papers by Drs. T. A. Ashby, of Baltimore; E. O. Crossman, of Markleton, Pa.; O. H. Hoffman, of Thomas, W. Va.; T. A. Harris, of Parkersburg, W. Va.; and E. T. Duke, of Cumberland.

**Smallpox.**—According to the report of Dr. Benjamin Lee, secretary of the State Board of Health, there were on December 12th: Borough of Bedford, Bedford County, 13 cases, no deaths; Bedford County, outside of borough, 13 cases, no deaths; Huntingdon, Huntingdon County, 1 case, no deaths; Origin, uncertain. Near McConnellsburg, Fulton County, 1 case, no death.

**Vital Statistics of Philadelphia**, for the week ending December 10, 1898:

Total mortality.....	436		
Children under 5 years of age.....	114		
Diseases.....	Cases.	Deaths.	
Pneumonia.....		68	
Pulmonary tuberculosis.....		60	
Heart-disease 30, neuralgia of the heart 3.....		33	
Paralysis 15, apoplexy 14, inflammation of the brain 8.....		37	
Nephritis 23, uremia 6.....		29	
Inanition 12, marasmus 9, debility 2.....		23	
Diphtheria 17, membranous croup 3.....	100	20	
Senility.....		19	
Gastroenteritis.....		15	
Convulsions.....		12	
Carcinoma.....		11	
Casualties.....		11	
Typhoid fever.....	122	7	
Scarlet fever.....	22	0	

**College of Physicians of Philadelphia.**—At a meeting held December 7th, Dr. George E. de Schweinitz read a memoir of the late Dr. Thomas D. Dunn.

Dr. S. Weir Mitchell presented a folio containing items of expense, lists of patients, etc., of the **Reading (Pa.) Hospital during the Revolutionary War**. It also contained a list of nurses on duty in the hospital at the time. These were all women, and this is of especial interest as showing that the introduction of female nurses into hospitals is not of recent date.

**Christian Science in Philadelphia.**—The following card of invitation has been distributed in Philadelphia: Yourself and friends are cordially invited to attend a lecture on Christian Science, by Carol Norton, C. S. D., of New York City, member of the Board of Lectureship of the Mother Church of Christian Science, in Boston, Mass., on Friday evening, December 16th, at 8 o'clock, in Horticultural Hall, Broad Street, Philadelphia. Subject of lecture, "Christian Science, Its Work and Scope." The lecture will be given under the auspices of First and Philadelphia Churches of Christ, Scientist, of Philadelphia. No admission cards will be required.

**Obituary.**—DR. LAWRENCE B. HOFF, son of the late Rear Admiral H. K. Hoff, U. S. N., and brother of Commander William B. Hoff, U. S. N., died on October 9th in Sydney, N. S. W., but it was only through the return to-day of a letter sent to him by friends in New York that the fact was made known. Dr. Hoff died of heart-trouble in Coast Hospital, Little Bay Ultimo, a suburb of Sydney. He was in his 40th year. Dr. Hoff was born and brought up in Germantown, Pa. He was his father's chief clerk when the Rear Admiral went to Havana in a United States war-ship several years ago. Dr. Hoff was a graduate of the University of Pennsylvania, and practised in Germantown. He went to Australia about five years ago.

**The Cumberland County (N. J.) Medical Society** celebrated its 80th anniversary on December 8th at Bridgeton. The scientific program of the meeting was given in the JOURNAL for December 3d. At the dinner, Dr. H. W. Elmer was toastmaster, and the following toasts were responded to: Landmarks of Cumberland County, by Dr. H. C. Wood, of Philadelphia; Ex-members, by Dr. William Elmer, of Trenton; Internal Secretions, by Dr. David Riesman, of Philadelphia; Our Wives, by W. H. C. Smith, of Millville; Characteristics, by Dr. J. Chalmers DaCosta, of Philadelphia; Our Sister Societies, by Dr. E. L. B. Godfrey, of Camden. The following are the officers of the society: President, Dr. A. R. Judson; vice-president, Dr. J. B. Wise; secretary, Dr. Hamilton Mailly; and treasurer, Dr. Joseph Tomlinson.

**Laboratories for the Medical Department of the University of Pennsylvania.**—Provost Charles C. Harrison and several friends of the University are actively engaged in endeavoring to collect \$300,000 for the erection of pharmacologic, physiologic, and pathologic laboratories for the medical department. The provost has promised to secure \$150,000, provided a committee of the graduates of the medical department collect a like sum. The committee consists of Drs. George Woodward, William C. Posey, F. A. Packard, Alfred Stengel, Richard C. Norris, Charles H. Frazier, B. F. Stahl, Judson Daland, Thomas Clifford Potter, J. Wilkes O'Neill, J. Montgomery Baldy, and Henry Beates. The graduates of the medical department, of whom it is calculated about 6,000 of the total of 11,000 are still living, are to be appealed to for funds.

**Physicians in Pennsylvania.**—The following statistics concerning physicians in Pennsylvania is taken from the *Pennsylvania Medical Journal*:

"Regulars".....	7,102
Homeopathsists.....	1,017
Eclectics.....	157
Electropathsists.....	15
Physio-medicalists.....	10
Botanics.....	5
Magnetic.....	1
Hygeio.....	1
Oculist.....	1
Baunscheidt.....	1
"Failed to report".....	732

Total in the State.....	9,042
Members of County Societies.....	3,334

**College of Physicians of Philadelphia—Section on General Surgery.**—At a meeting held December 9th Dr. JAMES H. MCKEE reported a case of **huge abdominal dermoid cyst successfully removed from a seven-year-old girl.** The tumor had been noticed about one year before the patient came under Dr. McKee's observation. During this time it had steadily increased in size. The child had been examined by a number of physicians who thought the tumor a sarcoma, probably of the left kidney. The operation was performed by Dr. T. S. K. Morton. The incision extended from the pubis to 3 inches above the umbilicus. The cystic portions were tapped, and the tumor was delivered through the abdominal incision. There was a broad pedicle, which was tied off in four sections, and a running suture united the two peritoneal surfaces. The child made a good recovery.

DR. JOSEPH M. SPELLISSY read a paper on **Congenital Lipomas, with the report of a case involving the foot,** and illustrated by a skiagraph and photographs. In the case reported the first tumor had been noticed when the child was about 2 weeks old, and it had grown until it reached the size of an orange. It involved the anterior part of the foot, which was in consequence much deformed. The skiagraph was useful in determining the nature of the growth, which was removed successfully and the foot restored to its natural appearance.

DR. EDWARD MARTIN reported a case of **ununited fracture of the forearm treated by fixation with silver plates.** The case was illustrated by a photograph before the operation and a skiagraph after operation. The result was satisfactory in every way. Dr. Martin prefers the silver plate to wiring in every instance in which it can be used, as it retains the fragments in proper position much more securely. It is necessary, after healing is complete, to remove the plates.

DR. MARTIN also showed **skiagraphs from two cases of renal stones.** In one three calculi were shown, and in the other two. Both cases presented a typical history of renal calculi, but the testimony of the skiagraphs was useful, not only as confirming the diagnosis, but more particularly in showing the number of stones present. But for this the operation would doubtless have been concluded in each case with the removal of the first stone.

DR. MARTIN also described briefly his **treatment for chronic urethritis.** He said the difficulty in curing these cases arose from the fact that the disease affects the urethral follicles, which, being filled with secretion, are not acted upon by an injection-fluid. By introducing a specially-devised urethral dilator and withdrawing it after having expanded it to the proper size, the follicles are emptied and irrigation or

injections made at once are able to reach the now empty follicles, and are therefore particularly efficacious.

DR. THOMAS S. K. MORTON related his experience in the use of **rubber gloves in surgical practice.** He has used such gloves for several years and with an increasing confidence in their usefulness. He thinks it especially desirable that hospital-internes and the assistants should wear the gloves, even if the surgeon feels that he may dispense with them himself. Dr. Morton also showed a **rubber finger-cot** that he has found useful in making vaginal and rectal examinations, and for other similar purposes. The cot is so inexpensive that it may be thrown away after having been used.

**Pathological Society of Philadelphia.**—At a meeting held December 8th, DR. ROBERT N. WILLSON exhibited a specimen of **occlusion of the posterior coronary artery,** specimens of **cystic kidneys,** and an **ox-heart with extensive pericarditis.**

DR. JOSEPH MCFARLAND presented a specimen of **carcinoma of the esophagus,** with rupture into a bronchus, and aspiration into the middle lobe of the right lung, resulting in gangrene of the greater portion of that lobe. The growth itself was an annular fungous mass, the size of a fist, situated in the middle third of the esophagus. Upon microscopic examination it proved to be a squamous epithelioma.

DR. MCFARLAND presented also a specimen of **malignant endocarditis** following pneumonia. One leaflet of the aortic valve had been almost entirely destroyed. Dr. McFarland presented further a specimen of **traumatic injury of the liver.** A man who was injured in a railroad-accident, suffered a fracture of numerous ribs and the sternum, a tear of the pericardium, and contusion and pulpification of the liver. DR. A. E. TAYLOR asked if any liver-infarcts had been found in the lungs. DR. MCFARLAND replied that, although looked for, none had been detected, and as the man died soon after the accident, he thought it likely that none was present.

DR. J. M. SWAN presented a specimen of **tubular osteoma of the femur;** a specimen of **arthritis deformans,** with extensive cavity-formation in the head of the femur; and two specimens of **patulous foramen ovale.** Allusion was made to the frequency of the condition described last, and reference was made to some statistics indicating that the condition was present in about 26% of a large series of cases. DR. SAILER referred also to the frequency of patulous foramen ovale, and mentioned that in a number of necropsies that he had performed, he had found such a condition in about one of every four or five subjects examined. He thought such frequency suggested that this might be a conservative provision of nature intended to assist in equalizing the pressure on both sides of the heart when this became unequal.

DR. JOHN H. MUSSER presented a specimen of **columnar epithelioma of the common bile-duct,** from a woman aged 46 years, who had been ill but seven weeks. The condition had been recognized during life. Dr. Musser presented also the liver, spleen, and kidneys, the seat of **amyloid disease.** A large left lobe of the liver had been a disturbing element in the diagnosis. The amyloid disease of the kidneys was associated with interstitial nephritis. DR. D. L. EDSALL referred to a case presenting clinical features similar to the second case reported. DR. SWAN said he had found in the dissecting room that a large left lobe of the liver was encountered much more frequently than the textbooks would lead one to expect. DR. GEORGE A. MUEHLECK asked as to



an examination of the blood in the second case. DR. W. M. L. COPLIN spoke of the value of staining casts for amyloid reaction in the diagnosis of amyloid disease of the kidney. DR. MCFARLAND referred to the frequent concurrence of amyloid disease of the kidney and interstitial nephritis. DR. MUSSER detailed the results of the blood-examinations in his second case, which had been without aid in the diagnosis.

DR. F. A. PACKARD presented specimens of **ruptured abdominal aorta, fibrous goiter, and ruptured chordæ tendineæ of the tricuspid valve** from an elderly woman. He presented also specimens of **tuberculosis of the bronchial glands, of the pleura and pericardium, and combined button-hole mitral and tricuspid valves.**

DR. ALFRED HAND, Jr., presented a specimen of **strangulation of the intestine** by an appendix, the tip of which had become caught in an opening in the mesentery.

DR. W. S. WADSWORTH presented a skiagraph of a case of **congenital symmetric shortening of the metacarpal bones of both hands.**

DR. WM. E. HUGHES presented a specimen of **diphtheritic endometritis and carcinoma of the uterus.**

**College of Physicians of Philadelphia—Section on General Medicine.**—At a meeting held December 12th, DR. JUDSON DALAND reported a case of **dissecting aneurysm of the thoracic aorta** which had ruptured into the pericardial sac, causing death. The patient, a man aged 38 years, gave, at the time of first observation, a history of excessive indulgence in alcohol, and he presented symptoms of mitral incompetency and edema. During the succeeding five years, there occurred repeated attacks of cardiac insufficiency, with the evidences of left ventricular hypertrophy, arteriocalillary fibrosis, and chronic interstitial nephritis. Finally, the patient died suddenly, and at the necropsy, in addition to the conditions already mentioned, a dissecting aneurysm was found between the coats of the aorta and rupturing into the pericardial sac. There was also a healed laceration in the intima near the aortic leaflets. DR. WM. OSLER recalled the case and mentioned the interest attaching to the healed rent in the intima. He mentioned also a case of dissecting aneurysm of the aorta, in which that vessel was represented by a double tube from the aorta to the iliac arteries.

DRS. JOSEPH SAILER, CAMPBELL, and GRISSINGER reported the results of examination of the blood of 103 patients for the **Widal reaction.** Several interesting cases illustrative of the great diagnostic importance of the reaction were narrated, and various observations cited with regard to the time of the occurrence of the reaction and the length of its persistence. Of the 103 patients whose blood was examined, 89 were cases of typhoid fever and of these the reaction was positive in 88. In the one that yielded a negative result the blood had been examined but once. Of the 14 cases not typhoid, the reaction was negative in all. In a few cases of typhoid, the reaction was negative early, and became positive later. In 6 cases it was positive before the rose-spots appeared. In the examination, the blood of the patient was diluted 1 to 22 by using the white-corpuscle pipet of the Thoma-Zeiss hemocytometer. This represents a dilution of about 1 to 50 of blood-serum. To this a small quantity of the culture of typhoid bacilli was added. The average period of persistence of the reaction was 5½ minutes. The time-limit allowed was 15 minutes. The reaction was considered positive only when immobilization and agglutination of the bacilli occurred. In one case a dilution of 1 to 400 yielded positive results. DR. J.

A. SCOTT mentioned cases in which the results of the Widal test were unreliable, and said that he knew of cases of rheumatism, acute pancreatitis, liver abscess, and healthy resident physicians, in which the results of the test were reported as positive. DR. SAILER held that the wet method and high dilution yielded much more reliable results than the dry method and an unknown or low dilution. DR. OSLER referred to the late development (fifth week) of the reaction in some cases, particularly often in those in which a diagnosis is especially difficult. DR. ALFRED STENGEL mentioned a case of typhoid fever in the fourth week, in which the reaction is still absent. DR. J. DALAND mentioned experiences similar to those of Dr. Scott. DR. A. A. ESHNER referred to a case in which the reaction was absent during the primary attack, but appeared during a relapse, and said that the technic was of paramount importance.

DR. WILLIAM OSLER read a paper on **Recurring Gastro-intestinal Hemorrhages in Chronic Enlargement of the Spleen.** He referred to the literature bearing upon the subject, and to a previous communication of his in which he had reported four cases. Two of these cases were of leukemia and the gastro-intestinal hemorrhage was the first symptom in each. He reported now three additional cases. The first was of a man, who had recurring attacks of hematemesis and melena during a period of 12 years, with marked enlargement of the spleen. During the intervals he enjoyed good health. Many of the hemorrhages were severe and almost fatal, and finally death occurred during an attack. At the necropsy there was found hyperplasia of the spleen; but no cirrhosis of the liver; no ulceration; no varix. The second case also occurred in a man without a history of syphilis or malaria, who had, at intervals of one year, attacks of hematemesis and melena, lasting over a period of 10 years, with marked enlargement of the spleen and chlorotic type of blood. Exploratory celiotomy was performed, and the spleen removed. Since the operation (5 weeks ago) the patient has done well. The third case was also in a man, without a history of syphilis or malaria, who had recurring attacks of hematemesis and melena during a period of 11 years, with great enlargement of the spleen, and chlorotic type of blood. He is at present under observation, and the advisability of having the spleen removed is being considered. Excluding enlargements of the spleen due to malaria, syphilis, leukemia, rachitis, etc., DR. Osler divided primary enlargements of the spleen into two classes: (1) Those that give rise to no symptoms except of a mechanical nature. These are more common than is generally supposed. Four cases were referred to, in 2 of which resort was had to operative measures to retain the spleen in place; (2) those that are associated with anemia, for which the term splenic anemia is to be preferred. DR. Osler believes his cases to belong to this class. The special features of these are their chronic course—the bronzed skin, the chlorotic type of blood, and the hemorrhages. Reference was made to the differentiation from such conditions as leukemia (particularly those cases in which the leukemic type of blood is temporarily absent), Banti's disease, etc. DR. DAVID RIESMAN inquired if the hemorrhages might not have arisen from varices of the esophagus. DR. JOSEPH SAILER narrated a case in which there had been a fatal hemorrhage, but at the necropsy no lesion of the gastro-intestinal tract could be discovered. There was an enlargement of the spleen, and he believed the case to belong to the category referred to by Dr. Osler. DR. OSLER said that there were no esophageal varices in the case that came to necropsy.

DR. J. A. SCOTT reported a case of **rhus-poisoning** in

which the inoculation had taken place by rubbing the face with some olive-oil that had been used to anoint a similar lesion during an attack six months previously. The initial symptoms of the case had been suggestive of typhoid fever. DR. J. K. MITCHELL said that many people, particularly negroes, are immune to rhus-poisoning. The plant is employed in certain parts of England for purposes of ornamentation.

**Philadelphia County Medical Society.**—At a meeting held December 14th, DR. LAWRENCE F. FLICK read a paper entitled **Contagion: Its Meaning and Limitations**, in which he contended for a larger use of this word, in preference to infection. He defined contagion essentially as the transmission of disease by more or less direct contact, while infection was made to cover transmission through the intermediation of air, soil, or water. In each instance the transmissibility is dependent upon the fact that the diseases in question are due to the activity of microorganisms, in the contagious group capable of reproduction only in the body of their hosts, while in the infectious group reproduction may take place outside of the body. DR. A. A. ESHNER contended that the term infection were better used in the more comprehensive sense to designate all diseases at all capable of transmission in whatever manner, and that contagious diseases be considered as a subgroup in which transmission takes place through more or less intimate contact. He pointed out that certain diseases, such as the suppurations, tetanus and malignant edema, might arise without the intervention of human hosts, and that these could certainly not be considered contagious, while they were generally admitted to be infectious. Then there are other diseases, such as the parasitic cutaneous and intestinal affections, for which the designation invasion-diseases has been proposed. It was pointed out that some of the infectious diseases, such as tuberculosis, typhoid fever, required for their transmission the intervention of a human host, because the microorganisms on whose activity they are dependent are obligate parasites, while others, like tetanus and malignant edema, did not require such intervention because the organisms on whose activity they depended are facultative saprophytes. DR. S. SOLIS-COHEN likewise pointed out the utility of recognizing a general group of infectious diseases, of which some are transmissible through mere association of the well with the sick, hence contagious or catching. Thus, tuberculosis and typhoid fever would scarcely be considered contagious, while smallpox, diphtheria and scarlet fever would be considered distinctly so; all, however, are infectious, that is, dependent upon bacterial activity and thus transmissible.

DR. A. FERREE WITMER reported a case of **aphasia from an unusual cause**, and exhibited the patient, a boy of 16, who had had epileptic convulsions from the age of 8. Some 11 months ago, in the course of a status, the boy became paralyzed on the right side of the body and aphasic. The disturbance was believed to be dependent upon some dynamic derangement of the structures related to the third frontal convolution on the left side of the brain. A peculiarity of the case was considered to exist in the flexor contraction of the paretic hand, and which was attributed to the earlier development of the fibers controlling this movement.

DR. A. J. DOWNES described the **Bottini operation for enlargement of the prostate gland**, reporting a case and exhibiting the apparatus. The patient was a man, 71 years old, who had suffered for two years from symptoms of prostatic hypertrophy and who has been relieved by the operation.

## NEW YORK.

**Floating Hospital for Sick Children.**—Mrs. Helen C. Juillard, of Manhattan, has given \$25,000 to the St. John's Guild, for the establishment and maintenance of a new floating hospital for poor sick children. At the recent annual meeting of the Guild the board of trustees formally accepted the gift and tendered a vote of thanks to Mrs. Juillard. The new boat will be named after her. Work will be at once begun on it, in order that it may be ready by next summer.

**Chinese Objection to Postmortem Examination.**—Richard T. Bowe, a Chinaman, who has lived at the Chinese Consulate, doing clerical work to enable him to study civil engineering at the New York University, died in the New York Hospital after an operation for appendicitis. The case was referred to the coroner's office, but the Chinese Consul objected strenuously to an autopsy, the Chinese holding such a mutilation of the dead in abhorrence. The consul is communicating with the dead man's friends, and the autopsy may be omitted if they persist in the objection.

**A Physician under Treatment for the Bite of a Rabid Dog.**—Dr. Maurice Asher, his mother, his brother, and his servant are taking the Pasteur Institute treatment to avert hydrophobia. All four were bitten by the doctor's fox-terrier. The dog had been acting strangely and a veterinary surgeon had said that it was suffering from indigestion. When Dr. Asher attempted to administer some medicine the dog began to struggle. The doctor's mother and brother and servant went to his help and all were bitten on the hand.

The dog has been killed and rabbits and guinea-pigs have been inoculated with his spinal cord.

**Physician Charged with Neglect.**—Dr. Alexander Beck has, in connection with the death of David Goldberg, aged two years, been accused of neglect and unprofessional conduct by the parents of the child. The child was badly scalded and Dr. Beck prescribed a powder containing opium, to be applied to the wounds. The baby became unconscious and died. The parents say Dr. Beck refused to go to the child's aid when they saw it was dying. Dr. Beck said, in refutation, that the powder contained bismuth, borax and opium, and that the parents probably used too much of it, and that perhaps the baby had gotten some of the powder on his fingers and tasted it. He denied all neglect.

**Medical Jurisprudence Society.**—At the 138th regular meeting, held December 12th, Mr. A. B. Livingston was elected president.

Judge John Woodward, of the Appellate Division of the Supreme Court, read a paper on the **Value of Expert Medical Testimony**, in which he defined an expert as "a specialist, the value of whose evidence, given in the form of opinion, is proportioned to his character, to his reputation for honesty in the community, and to his standing in his specialty or profession."

While defending the present procedure in regard to expert witnesses as good in the main, Judge Woodward criticised sternly the abuses that have grown up about it.

**The Sanatory Club of Buffalo, N. Y.**—At a meeting held December 14th, the subject for discussion was Hygienic Camps. The following was the program: The Hygienic Camp, Dr. Henry R. Hopkins, Professor of Hygiene, University of Buffalo; The Camp of Instruction, Lieutenant Peter C. Harris, Quartermaster Thirteenth United States Infantry; Discussion opened by Major Thomas W. Symons, Corps of Engineers, U. S. A.; Sewers, C. E. P. Babcock, C. E., Assistant



City Engineer, late major Sixty-fifth New York Volunteers; Discussion opened by G. H. Norton, C. E., Assistant City Engineer, late captain Sixty-fifth New York Volunteers; Water-Supply, L. H. Knapp, C. E., Assistant Superintendent and Engineer Bureau of Water; Discussion opened by Dr. W. D. Greene, Deputy Health-Commissioner; Garbage and Sewage Disposal, Dr. Edward Clark, late member of the Committee on Disposal of Sewage and Garbage, American Public-Health Association; Discussion opened by Dr. Eugene Smith, late major Sixty-fifth New York Volunteers; Statistics, Lieutenant Paul B. Malone, Thirteenth United States Infantry; Discussion opened by Dr. W. W. Potter, Editor of the *Buffalo Medical Journal*; Walks and Streets, H. C. Gardner, Seventy-fourth Regiment, N. G. S. N. Y.; The Relative Importance of Flies and Water-supply in Spreading Disease, Dr. M. A. Veeder, Lyons, N. Y.; Discussion opened by Dr. A. H. Briggs, late major and surgeon Sixty-fifth New York Volunteers.

**The Six-Day Bicycle Race**, held at Madison Square Garden, under the auspices of the National Cycle Racing Association, was completed last Saturday night, without interference by the police or the health-authorities. Twelve men rode to the finish, the winner covering over 2000 miles during his 144 hours' ride. Throughout this long period of excessive physical exertion the winner has indulged in only 7 hours of sleep, and has been off his wheel 12 hours altogether. The second man has covered 1985 miles, has slept during the week 10 hours 30 minutes, and has been off his wheel altogether 14 hours. The third man has traveled 1906 miles, has slept 10 hours altogether, and has been off his wheel 14½ hours since he started.

Since the third day of the race, the daily newspapers have been unanimous in denouncing the entertainment as a brutal exhibition of cruelty to human animals. They have published sensational accounts of the terrible condition of the riders and have printed alleged photographs of the men to corroborate their written statements.

A correspondent of the *JOURNAL* visited the garden during the last day of the race, and, through the courtesy of the trainers and Board of Health physicians, examined the men carefully. They all suffered more or less from conjunctivitis. Their faces were drawn and wrinkled. Their hands and feet were slightly swollen. Mentally they were dazed and stupid, but none of them became delirious or irrational. They complained of fatigue and sleepiness. Their heart-action was good, breathing shallow, and digestion and appetite fair. The condition of none of the men was as bad as was painted by the press. The Board of Health had physicians in attendance throughout the race, to examine the men and compel them and their trainers to suspend work long enough to sufficiently sleep and eat. Dr. Alonzo Blauvelt, chief inspector of the Division of Contagious Diseases and Special Sanitary Inspection, was in charge of the Health Department squad. He said, on Saturday afternoon:

"The men who are on the track now are all in good condition. Of course, there is a difference in the individual cases, for one man's knees may trouble him, another may be suffering from a cold, and so on. Speaking generally, there is no man on the track who is in condition to do the physical work required of him. It is our business to watch here, and when we see a man wobbling on his wheel, we order his trainer to take the man from the track. Then we subject him to a physical examination, and if we discover that his heart is wrong, or if for any other reason he is physically incapacitated, he is not allowed to continue. Yesterday we ordered five men out of the race—four because their hearts were not working properly, and the fifth one on account of bad knees; but the men who are left in the race are at this minute in good condition."

The president of the Society for the Prevention of Cruelty to Animals said that he was daily in receipt of scores of

letters and visits from people who thought his Society ought to interfere if the Board of Health and the Police Department would not. He said:—

"It has been suggested that the Society should interfere in this matter. This Society cannot interfere with it. The Board of Health and the police are the responsible parties. The bicycle-race comes within the scope of their jurisdiction. It is a matter of public opinion, unnecessary, unjustifiable and not serving any good purpose."

It is interesting to note that all of the men, save the winner, were drugged with strychnin and other stimulants during the last few days of the contest. The only stimulant that this man had was strong coffee. Prof. Atwater, of Wesleyan College, supervised the winner's training, and he stated positively that nothing in the nature of drugs had entered into his diet. The winning man's trainer said:—

"I have given him strong coffee and extremely hot baths when I wanted to keep him awake. It is to these things and to his perfect physical condition that his success may be attributed."

The second man's trainer began to use ammonia and strychnin on the morning of the fifth day. It is now claimed that his bad falls on the last two days were attributable to his "dopy" condition.

**New York Academy of Medicine—Section on Pediatrics.**—DR. L. PIERCE CLARK, of the Craig Colony, read a paper on **phocomelus of the humerus in epilepsy as a stigma of degeneration**, and reported two cases. He said that the humerus was less often the seat of abnormalities than the other long bones. Examination of several thousand soldiers had disclosed the fact that the left humerus was usually the longer one in left-handed persons, whereas in others the reverse obtains. Two cases of phocomelus, or shortening of the extremities, were then described. Both occurred in young girls, confirmed epileptics, and amounted to several inches.

DR. EDWARD S. PECK read a paper on **the advantages of protargol and argonin in the treatment of purulent ophthalmia in infants**. He said that in the cases treated with these newer salts of silver there had been less ulceration of the cornea, with iris-protrusion and imprisonment; the gonococci had disappeared in from two to four weeks, or more quickly than by the older method; there had been an earlier disappearance of the secretion and control of the inflammation; the restoration of the injured cornea and conjunctiva had been more prompt; and the patient had suffered much less. The most effective strength for the argonin solution is 3%, and the solution is best made by placing in a flask ten parts of cold water, adding one part of argonin, and shaking vigorously, after which sufficient boiling water is added to make up the desired strength. It is then strained through gauze. In making the solution of protargol, it is best to mix the salt with a little water and glycerin to a paste, and then add sufficient lukewarm water to make a .25% to 2% solution. The plan of treatment recommended by Dr. Peck is as follows: If only one eye be affected, seal up the healthy one, taking care to inspect it every second day. Ice-pledgets are to be continuously applied to the inflamed eye, night and day, until there is positive evidence of diminution in the secretion—a period varying from a few days to two or three weeks. Meanwhile the eyeball and conjunctival sac are very frequently irrigated with a saturated solution of boric acid. With a large pipette, a .5% or 1% solution of protargol is carried rather forcibly over the whole eye four or more times daily until the secretion diminishes, when a 2% solution may be used at longer intervals. The disease should

be brought under control by such treatment in the course of two or three weeks. The secretion should be examined for gonococci on alternate days, and the eye not considered safe until none of these organisms has been found for a full week. Protargol lends itself readily to the needs of the ophthalmologist, as it is unaffected by being combined with sodium chlorid, cocain, atropin, eserin, etc. It is not decomposed by the albuminous substances found in the secretions from the mucous membranes, and it is the only known silver compound which is not precipitated by dilute hydrochloric acid. Protargol is a silver proteid compound, occurring as a yellowish powder, which is readily soluble in cold or hot water. Both the powder and the solution are stable. Silver nitrate contains 6.35% of silver, and in this respect it holds an intermediate position between argonin and protargol. The last mentioned is the richest in metallic silver. Dr. Peck said he thought protargol might be advantageously substituted for silver nitrate in the Credé method of prophylaxis against ophthalmia neonatorum. He had put a 10% solution of protargol into his own eye, and had found it very much less irritating than a .5% solution of cocain. In the discussion, Dr. FRANCIS VALK said that he had hitherto failed to be convinced of the value of argonin or of protargol as rivals of silver nitrate. Although most of his cases of purulent ophthalmia were seen in a daily dispensary service, he had had excellent results, and this he attributed chiefly to the use of Higginbotham's solution of silver nitrate. This is a 1% solution of silver nitrate containing one-fourth part of sweet spirits of nitre. After thorough cleansing, this solution is applied freely to the eye every day. Since adopting this method he had not lost a single eye, although, of course, some had ulcerated. Dr. F. N. LEWIS was also disposed to adhere to the use of silver nitrate, although he admitted that he had been pleased with the results in the few cases in which he had seen protargol tried, notably a case in which suprarenal extract had been used with disastrous consequences. Dr. E. S. THOMSON said that he had followed the cases in which Dr. David Webster had employed argonin, and in nearly every one the secretion had been augmented, and the symptoms so aggravated that a return had been made in about four days to silver nitrate. Protargol acted somewhat better than argonin, and he believed it was as good a germicide as silver nitrate, and decidedly less irritating. In the few cases of ophthalmia in which it seemed very desirable to avoid irritation, it was quite possible that protargol might be profitably substituted for the silver nitrate. Dr. M. E. TULLY had tried these silver salts in catarrhal conjunctivitis. He did not consider argonin any better than alum, but protargol was superior to argonin.

**New York Neurological Society.**—At the meeting on December 6th, Dr. W. M. LESZYNSKY presented a case of **akromegaly**, which was interesting because of the fact that, at the beginning, there was a history of chronic alcoholism, so that the question arose as to whether the eye-symptoms were the result of the alcoholism or of enlargement of the apophysis. The reaction of the pupils to light was very sluggish; accommodation was normal; vision in both eyes was  $\frac{3}{8}$ ; there was no central color-scotoma. In the right eye the field for form and white was normal, while the field for green was markedly reduced. In the left eye there was almost complete temporal hemianopsia for white and form, while the field for green, blue and red were contracted. Both optic papillæ were pale and atrophic. The sense of smell was entirely lost. In the discussion, Dr. M. ALLEN STARR said that in one case that had been under his

observation for a number of years there had been such slight reduction in the size of the feet and hands while taking the thyroid extract, that he was inclined to attribute the improvement entirely to a decrease in the deposit of adipose.

Dr. B. SACHS exhibited for Dr. FREEDMAN F. WARD, a case of amaurotic tabes exhibiting what he considered to be a **curious phase of locomotor ataxia**. This consisted in the presence of the Romberg symptom in an exaggerated form in spite of the blindness. In the discussion, Dr. H. M. THOMAS, of Baltimore, remarked that he had seen mention of such a condition made several times in the literature, and had included two such cases in the number studied by him in the Johns Hopkins Hospital.

Dr. PHILIP MEIROWITZ presented a case of **lesion of the chiasm** with a view of eliciting opinions regarding the feasibility of obtaining surgical relief. Dr. GRAEME M. HAMMOND said that he looked upon the case as one of gradually progressing lesion affecting the right optic nerve at its exit from the commissure. A surgeon who had experimented on the cadaver asserted that a surgical procedure in such a case was entirely feasible. Dr. LESZYNSKY said that as he could see no trustworthy evidence of tumor, he considered an operation unwarrantable. He had, at one time, observed similar cases in conjunction with the late Dr. Seguin. These patients, although blind, had lived twenty-five or thirty years.

Dr. H. M. THOMAS, of Baltimore, presented **A Statistical Study of the Cases of Tabes examined at the Johns Hopkins Hospital**. Out of 111 cases presenting more or less complete histories, 106 were whites and 5 negroes. While the negroes represented only 6.39% of the total number of males treated there, they formed 27.63% of the whole number of males treated for syphilis. Only about 9% of the cases of tabes occurred among women. His conclusions regarding the relationship of syphilis to tabes were: (1) In a large proportion of cases of tabes there is a history of syphilis; (2) in a not inconsiderable number there is no history of any syphilitic manifestation; (3) in negroes, tabes is relatively uncommon, although this race presents a large number of syphilitics; (4) the partial immunity of women is greater than can be satisfactorily accounted for by the relative infrequency of syphilis among them; and (5) apparently syphilis is not the only factor in the development of tabes. The time between the syphilitic infection and the appearance of the initial symptoms of tabes was noted in 47 of the cases. The shortest time was two years, and the longest, 30, or a doubtful 42 years. Gastric crisis occurred in 9 cases; optic atrophy in 11; eye-paralysis in 33; the Robertson pupil in 70. One patient at first suffered from intense pain extending from the penis to the rectum. In two cases the Romberg symptom was marked in spite of blindness. Out of 75 cases in which the sexual power and desire were noted, both were unaffected in only ten cases. Charcot's joints were observed in five undoubted cases, and in three others there were suspicious enlargements. In 7 cases showing mental derangement, general paresis was suggested. In the discussion Dr. M. ALLEN STARR added 273 cases of tabes, 175 from the Vanderbilt Clinic and 98 from his private practice. The male cases were about ten times more numerous than the females, and the great majority of all the cases developed between the ages of 30 and 40 years. Two developed under the age of 20, and 21 cases after the age of 50. Syphilis was certainly present in 50%, and if the doubtful cases were included, this would be increased to 72%. The most frequent symptom was pain; the next, ataxia; next



the bladder disturbances. The knee-jerks were absent in 246 of the 273 cases; the Robertson pupil was present in 184; the Romberg symptom in 229 cases. DR. C. L. DANA said that in his experience he could not recall having seen more than two women with tabes. Very few of his cases had developed under 30, or over 50 years of age. The percentage of possible, probable, and certain syphilitic cases of tabes had not exceeded 70. Pain had been the most common initial symptom, and rectal crisis had not been at all uncommon among the early symptoms. It was not uncommon for the early pains of this disease to be prolonged over a period of 10 or 15 years without other symptoms. A sense of fatigue was an interesting early symptom. DR. SACHS said that, in his experience, the initial symptom in by far the larger number of cases had been the Robertson pupil. In at least three recent cases that comparatively new symptom, hypertonus, had been noted when the other symptoms had been absent or equivocal. Whenever he found that several of the cardinal factors develop at one time, he gave an unfavorable prognosis; on the other hand, when the symptoms develop asymmetrically the disease progresses least rapidly. DR. EDWARD D. FISHER had found the rheumatoid pains and the ataxia to be the initial symptoms, closely followed, however, by the Argyll-Robertson pupil. Out of 100 consecutive cases that DR. JOSEPH COLLINS had analyzed, there had been 4 negroes, 2 men and 2 women. There were, in all, 7 women out of the 100 cases, and 5 of these were under 30 years of age. A definite syphilitic history was elicited in 63, and an indefinite one in 17, so that in 80% there was a possible relationship between tabes and sexual infectious disorders. A very common symptom had been a giving way of the legs. He was firmly convinced that orthodox and thorough anti-syphilitic treatment had not the slightest effect in postponing the appearance of tabes or in mitigating its severity, and this seemed to him a most potent argument against tabes being a para-syphilitic disease.

DR. LEWELLYS F. BARKER, of Baltimore, then gave a most interesting demonstration of Miss Florence Sabin's model of the medulla, pons and mid-brain, with remarks on the value of wax reconstruction as a method of studying the nervous system. The drawings were obtained from the serial sections by the projection method, and having then been transferred to wax plates, the latter were superimposed so as to give a synthetic view of the structure revealed by the sections.

### NEW ENGLAND.

**The Electric Circular Saw in Performing Amputations.**—According to the *Medical Times*, the Boston Emergency Hospital has adopted the use of an electric circular saw to take the place of the knife in making amputations. DR. GALVIN claims that by its use no anesthetic is necessary, as the operation is painless, and it shortens the time, as it cuts through almost instantly. This he claims lessens the shock. No ligatures are needed, and all the cases so far treated have done better than by the old method.

**Yale Medical Alumni Association Lectures.**—The second annual course of lectures to students of medicine and members of the medical profession under the auspices of the Yale Medical Alumni Association will be given during the present winter. The first lecture was announced for December 15th, by Dr. Lewellys F. Barker, of Johns Hopkins University, on the anatomy of the nervous system. The second lecture will be given early during the coming year,

and will be delivered by Dr. Samuel Alexander, of Cornell Medical College, on disease of the prostate gland.

**Bequests to Hospitals.**—According to the *Boston Medical and Surgical Journal*, in accordance with the provisions of the will of the late Captain J. Putnam Bradlee, of Boston, his sister, Miss Helen C. Bradlee, lately deceased, was empowered to direct the trustees of her brother's estate to pay such amounts as she might specify to charitable institutions. According to Miss Bradlee's directions, the sum of \$225,000 has recently been divided among 17 institutions. The bequests to hospitals were as follows: To the Massachusetts General Hospital, \$25,000; to the Massachusetts Homeopathic Hospital, \$25,000; to the Massachusetts Charitable Eye and Ear Infirmary, \$20,000; to the Free Hospital for Women, \$20,000; to the New England Hospital for Women and Children, \$20,000; to the Hospital Cottages for Children, at Baldwinville, Mass., \$10,000; to Sharon Sanitarium, \$2,000.

**Thurber Medical Association of Milford, Mass.**—At a meeting held December 1st, Dr. E. B. Harvey, president of the Massachusetts Medical Society and secretary of the State Board of Registration in Medicine, delivered an address in which he spoke of the benefits to be derived from membership in the State society, and advocated that the present local society become a branch of the State society. In addition he detailed the operations of the **Medical Registration Law of Massachusetts**. Since January 1, 1895, when the law went into effect, all applicants for registration in the State have been obliged to appear before the Board for examination, which has been conducted without regard to the credentials of the applicants. As a result, over 800 non-graduates have been excluded from practice in the State, and nearly 400 graduates of recognized medical colleges have been rejected for inability to pass the examination. Dr. Harvey believed the present law defective in some particulars and requiring amendment.

**Boston Society for Medical Improvement.**—The meeting held December 5th was devoted to reports of the medical work of the Massachusetts Volunteer Aid Association during the war with Spain. DR. E. G. BRACKETT described the conditions at Santiago and the means taken to overcome the poor hygiene of the troops by the distribution of food and clothing. His report was illustrated by lantern-slides showing the character of the city-streets and the outlying country, and the camp-arrangements. DR. J. B. CLARKSON presented a similar report on the work of the Association at Puerto Rico. He pointed out that a large part of the sickness among the troops there was brought about by disregard of the surgeon's advice. DR. R. C. CABOT reported that from an examination of the blood from 277 cases—2 tests being made in each—typhoid was shown to be present in about 75%, as shown by the Widal reaction. There were several cases of suspected yellow fever, three-quarters of which exhibited the Widal reaction; most of these cases were probably typhoid with complicating jaundice. The first diet-kitchen at Montauk Point was described by DR. W. H. PRESCOTT, under whose direction it had been erected. The first meal served from it consisted of scrambled eggs and milk-toast for 1500 sick men. Other reports were made by DRs. SHEA, STANDISH, J. B. BLAKE BALCH, and BURRELL on the association-work in Chickamauga, Camp Alger, and Boston.

**Suffolk District Medical Society, Surgical Section.**—At a meeting held in Boston, December 7th, DR. C. B.

Porter presented the following patients: (1) A woman, an Iclander, seven years ago noticed pain in the right side. This lasted two years, when, a tumor having developed, a diagnosis of **echinococcus-cyst of the liver** was made. The woman was operated upon and remained well until two months ago when she fell, and since then there has been a return of the symptoms. A second operation was performed and the cyst opened and drained with gauze, later with a tube. There was rapid fall of temperature. (2) **Fractured patella.** Dr. Porter was not willing to state that in all cases wiring should be done, but when it can be done with thorough asepsis it is indicated. He reported 10 successful cases. A skiagraph was shown of a patella that had been wired, the patient coming back to the hospital a year later with the history of a fall on the knee. There was great effusion and the question of a fresh fracture arose. The skiagraph showed the patella in two pieces, separated, yet restrained from further separation by the silver wire, which had partially straightened.

Dr. WATSON presented the case of a negro boy in previous good health, who awoke suddenly in the night with pain across both hips and inability to straighten out his thighs. He improved, but 10 days later he had a second and more severe attack with persistence of the contraction; under ether there was no relaxation in any direction; lordosis was marked. The pain improved somewhat, being present only across the trochanters and the iliac spines. A diagnosis had not been made. There was no tenderness of hip-disease. The only suggestion offered was **inflammation of the sheath of the psoas muscle** of unknown origin. Dr. PRINCE pointed out a marked exaggeration of the knee-jerk as the only nervous phenomenon. He inclined to view the disturbance as one akin to hysteria, though the pain was less than is usual in that affection.

Dr. MONKS showed a case of **paralysis of the left leg after operation for appendicitis.** The condition is rather infrequent and was attributed to an anterior poliomyelitis in an adult. Dr. Monks exhibited also **carcinomatous cecum and appendix and mesenteric glands** removed from a man of 35. The large and small intestines were united by end-to-end suturing. The patient recovered from the operation and gained in weight and strength.

Dr. MUNRO presented three cases:

I.—**Crushing the pelvis by a spear,** with blood and urine in the bladder. After celiotomy, there was persistent hemorrhage from the region of the neck of the bladder. Urinary leakage occurred in the third week. Lithotomy was performed, perineal drainage instituted and the patient recovered.

II.—**Broomstick passed through the rectum into the bladder.** After the performance of left colostomy there was steady progress toward recovery.

III.—**Intussusception of the ileum into the jejunum** and strangulation of the mesentery. The necrotic ileum and jejunum were removed and end-to-end anastomosis established. The stitches sloughed, and feces and gas escaped. Drainage was instituted. On the seventh day, pancreatic fluid and bile escaped. At a second operation end-to-end anastomosis was again effected. On the sixth day there was a repetition of the leakage and a third incision was made. A small opening was sutured, leakage occurred again on the third day. There is still leakage, but the man is getting fat, and will probably recover.

Cases were also shown by Dr. BEACH and Dr. COURTNEY.

## WESTERN STATES.

**Correction.**—The item on page 1158 of the JOURNAL entitled: Medical Affairs in Cleveland, Ohio, should read: Medical Affairs in Columbus, Ohio.

**"The Medical Dial"** is the title of a new monthly published at Minneapolis under the editorial direction of Dr. J. W. Macdonald, supported by a strong corps of collaborators.

**Smallpox in Nebraska.**—It is stated that an epidemic of smallpox is prevailing in Nebraska City, Neb., the Health-officer, Dr. B. F. Crummer, reporting the development of over 200 cases since the beginning of the outbreak.

**"Christian Scientist" Convicted.**—According to the newspapers, Harriet O. Evans, the Christian Scientist under whose treatment Thomas McDowell recently died of typhoid fever at Cincinnati, Ohio, has been convicted of practising medicine without a license.

**Medico-Legal Society of Chicago.**—At a meeting held December 3d, Dr. G. A. Dorsey, of the Field Columbian Museum, read a paper on **The Skeleton in Medico-Legal Anatomy.** The discussion was opened by Dr. W. H. Allport, and continued by Professor Vernon J. Hall, Dr. W. T. Eckley, and Dr. S. C. Plummer.

**Chicago Pathological Society.**—At a meeting held December 12th the following was the scientific program: The fluorescent bacteria, by Dr. E. O. Jordan; A preliminary report on the relation between syncytioma and acute yellow atrophy of the liver, by Dr. Emil Ries; Cirrhosis of the liver of the guinea-pig, produced by a bacillus, by Dr. George H. Weaver.

**St. Louis Medical Society of Missouri.**—At a meeting held December 10th, the following was the scientific program: The treatment of pelvic suppuration, by Dr. R. M. Funkhouser; Large tumor of the brain producing chiefly ocular symptoms, by Dr. James Moore Ball; Fat-metabolism, by Dr. T. C. Witherspoon; Pathologic specimens, by Dr. Given Campbell.

**The College of Physicians and Surgeons of San Francisco** announces the opening of a **Pharmaceutical Department**, with a full corps of instructors. Upward of 30 students have already registered. To give an opportunity for those who are employed as drug-clerks to take a course in pharmacy, a large number of lectures have been arranged to take place in the evening.

**Cook County Hospital, Chicago.**—The following staff has been appointed for the coming year: Physicians: Drs. James B. Herrick, Arthur R. Edwards, Geo. F. Butler, Frank Billings and R. P. Preble; Surgeons: Drs. Francis McNamara, Weller Van Hook, E. L. Moorehead, J. B. Murphy, John Leaming, T. A. Davis, and Chas. Davison; Pathologist, Dr. Ludvig Hektoen; Dermatologist, Dr. L. Blake Baldwin; Ophthalmologist, Dr. Allen T. Haight.

**Investigation of the Insane Asylum at Pueblo, Colorado.**—The Committee appointed by Governor Adams to investigate the affairs of the State Insane Asylum at Pueblo has made its report. The findings of the Committee are that there has been gross neglect on the part of the Superintendent and employes, and that there is no system of record by which an intelligent idea of the financial and physical condition of the institution can be gained. A change in superintendency and management and a more modern lunacy-law are among the recommendations.



**A case of leprosy in the city of San Bernardino, California,** was recently discovered. The peculiar feature of this case, according to the papers is that the patient has been under treatment for the past 6 or 8 years by one or more physicians who failed to recognize the condition. The attention of the Health-Officer having been called to the matter he at once pronounced the case one of leprosy, the diagnosis being fully confirmed when council was called in. There is great uneasiness if not alarm throughout the city of San Bernardino on account of the fear that more cases may develop.

**Physicians' Club of Chicago.**—At a meeting held November 28th, the subject for discussion was **sexual hygiene**. The following are the titles of the papers read: The Awakening of the Sexual Instinct, by Dr. W. S. Christopher; The Effects of Genital Derangements and Malformation on Sexual Appetite, by Dr. C. S. Bacon; Sexual Desire as Influenced by Religious and other Emotion, by Dr. G. F. Butler; The Sexual Act—Frauds in the Conjugal Embrace, by Dr. Franklin H. Martin; The Results of Sexual Excess or Continence, and Sexual Misinformation and Quack Literature, by Dr. W. T. Belfield; The Effect of Coitus during Pregnancy and Lactation, by Dr. A. C. Cotton.

**Chicago Medical Society.**—At a meeting held December 7th, DR. CARL BECK reported a case of **extirpation of the scapula for chondrosarcoma**, in a patient aged 72 years; a case of **congenital hemiatrophy of the face with angioma**; and a case of **osteoplasty of the skull for cerebral hernia**.

DR. FRANK X. WELLS reported a case of **cystic glioma of the cerebellum** and presented the specimen. He reported also a case of **infantile cretinism**.

DR. ALEXANDER H. FERGUSON reported a case of **stenosis of the pylorus** in a boy aged 8½ years. Gastrojejunostomy, by suture, had been performed, and the patient made a good recovery. Dr. Ferguson reported also a case of coexisting but independent **gall-stones and carcinomatous stricture of the ascending colon**, in a man aged 62 years. Cholecystotomy and enterectomy had been performed and the patient made a good recovery.

DR. A. R. EDWARDS reported a case of **cystic degeneration of the kidneys** and presented the specimens.

#### **Western Surgical and Gynecological Association.**

—The following is the program of the annual meeting to be held, at Omaha, Neb., December 28 and 29, 1898:

President's Address, Dr. D. S. Fairchild, Clinton, Ia.; Treatment of Displacement of the Uterus, Dr. Franklin H. Martin, Chicago; An Interesting Case of Complete Prolapsus Uteri, Dr. J. Rudis-Jicinsky, Crete, Neb.; Causes and Radical Treatment of Retrodisplacement of the Uterus, Dr. S. H. Kellogg, Battle Creek, Mich.; A Day With a General Practitioner, Dr. Geo. R. Highsmith, Carrollton, Mo.; The Mutual Relations of Obstetricians and Gynecologists, Dr. Milo B. Ward, Kansas City, Mo.; The Wounded From Santiago, Dr. Lewis Schooler, Des Moines, Ia.; Ankylosis at the Shoulder-Joint, Dr. Wm. Jepson, Sioux City, Ia.; Injuries of the Head, Dr. C. C. Allison, Omaha, Neb.; Report of Anomalous Cases in Abdominal Surgery, Dr. J. N. Warren, Sioux City, Ia.; Surgery of the Biliary Ducts, with Report of Cases, Dr. A. S. Hageboeck, Davenport, Ia.; Gastro-enterostomy—Indications and Technic, Dr. Byron B. Davis, Omaha, Neb.; Anticipations of Obstetric Emergencies, Dr. C. A. Dannaker, Kansas City, Mo.; Interstitial Inguinal Hernia—Report of a Case, Dr. Van Buren Knott, Sioux City, Ia.; Tubal Pregnancy, Dr. A. L. Wright, Carroll, Ia.; Empyema—Its Pathology, Bacteriology and Treatment, Dr. Emory Lanphear, St. Louis; A New Operation for Epithelioma of the Lip, Dr. W. W. Grant, Denver, Col.; Acute Suppurative Arthritis of Children,

Dr. James E. Moore, Minneapolis, Minn.; Gonorrhea as a Factor in the Causation of Diseases of the Uterus and Adnexa, Dr. T. A. Stoddard, Pueblo, Colo.; Rectal-Vesical Fistulae, and a Method Aiding Their Successful Closure, Dr. John P. Lord, Omaha, Neb.; Vesical Calculus—Report of a Case, Dr. H. H. Stoner, Rock Rapids, Ia.; Cystitis in Women, Dr. Thos. B. Eastman, Indianapolis, Ind.; Two Cases of Imperforate Anus, Occurring in One Family, Dr. Frank Lee Frink, Newman Grove, Neb.; Surgical Delirium, Dr. J. J. Cone, Tacoma, Wash.; Tuberculous Pelvic Peritonitis, Dr. M. H. Everett, Lincoln, Neb.; Treatment of Burns, Dr. W. D. Otis, Fort Morgan, Colo.; A Modification in the Operative Method for Talipes Equino-Varus, Dr. A. F. Jonas, Omaha, Neb.; Appendicitis—When to Operate and When Not to Operate, Dr. R. Harvey Reed, Rock Springs, Wyo.; Appendicitis, Dr. J. H. Van Eman, Kansas City, Mo.; The Complete Operation in Appendicitis, Dr. H. D. Niles, Salt Lake City, Utah; Appendicitis, Dr. O. Beverly Campbell, St. Joseph, Mo.; Appendicitis, Dr. Jos. Eastman, Indianapolis, Ind.; Exhibition of a New Trachea-Tampon, Dr. H. P. Hamilton, Omaha, Neb.; Fibroids of the Uterus, Dr. F. B. Dorsey, Keokuk, Ia.; The Diagnosis of Renal Calculus, Dr. J. W. MacDonald, Minneapolis, Minn.; Report of a Case of Abscess of the Liver Presenting Unusual Clinical Phenomena, Dr. J. E. Summers, Jr., Omaha, Neb.

Dr. D. S. Fairchild, of Clinton, Iowa, is president, and Dr. George H. Simmons, of Lincoln, Neb., secretary and treasurer of the Association.

**The Cleveland, Ohio, Medical Society** at a stated meeting held December 9th, nominated officers for the ensuing year, as follows: For president, Dr. Howard S. Straight; for first vice-president, Dr. Charles F. Hoover; for second vice-president, Dr. B. O. Coates; for secretary, Dr. R. J. Wenner; for treasurer, Dr. F. C. Taylor; for censors, Drs. H. L. Spence, F. E. Bunts, J. M. Ingersoll, G. A. Ehret, and William Lincoln.

DR. H. L. SPENCE reported a case of **neurotic vomiting of long standing cured by suggestion**. This treatment is only justifiable of course in cases in which gross organic disease has been carefully excluded by modern methods of investigation.

DR. GEORGE W. CRILE reported in abstract some of the results of his long-extended work in experimental physiology directed to the discovery of the **cause of shock**. (The Senn Prize Essay of the American Medical Association.) In endeavoring to determine the cause of collapse and death from a blow on the epigastrium or precordium, he found that the solar plexus can be taken out of the belly, freely manipulated and even struck, without causing any marked reduction in blood-pressure. In the same way the stomach can be taken out and struck a hard blow without influencing the circulation; but a blow upon the heart itself caused in every case marked fall in blood-pressure and in many instances death from completely arrested circulation. This effect was observed after the pneumogastric nerves were severed, showing clearly that the collapse was not reflex, but from a direct action on the heart-muscle itself. It was found that a serious fall in blood-pressure occurs when the larynx or the adjacent portion of the esophagus is irritated. Respiration was also more or less arrested according to the violence of the manipulations. These phenomena did not occur, however, when the superior laryngeal nerve was severed, showing that the mechanism was a reflex one through the medium of the pneumogastric. This collapse of circulation did not occur, however, when the mucous membrane of the larynx was freely painted with a 4% solution of cocaine, owing, of course, to the cutting off of the efferent impulses from the larynx. The respiratory inhibition could be also prevented by administering a physiologic dose of atropin, which acted presumably by its well-known



direct stimulant action on the respiratory center. The atropin, however, was powerless to prevent the collapse of the circulation. The studies also included the mechanism of death by drowning, the effects of increased air-pressure on the circulation, and several allied points.

DR. H. C. MABLEY reported a case of **puerperal albuminuria**. DR. HUNTER ROBB reported an interesting case of **fecal obstruction** and DR. S. E. LAUDER a case of **sarcoma of the choroid**.

**Chicago Medical Society.**—At a meeting held November 30th, Dr. D. W. EISENDRATH read a paper upon the **Pathology and Treatment of some Surgical Complications of Gonorrhea**. The morphology of the gonococcus was described at some length, attention being called to difference in the appearance of the organism in cultures and in pus, and also to the resemblance between the gonococcus, the pseudo-gonococcus described by Lustgarten and Mannaberg, and the meningococcus of Weichselbaum. The second named of these resembles the gonococcus greatly, but can be distinguished by close observation of the morphology and so forth. The meningococcus resembles the gonococcus in every particular, and can be distinguished by the fact that the gonococcus will grow only on media in which some albumin taken from the human body is present, and will not grow upon ordinary media. The best method of cultivation of the gonococcus is the Wertheim medium (blood-serum agar) or some serum-containing fluid like ovarian, pleuritic, ascitic and hydrocele fluid. The relation of the gonococcus to diseases of the male and female genito-urinary tract was outlined and its relation to the metastases in various parts of the body, especially in the serous membranes, including the meninges, was spoken of. The chain of evidence that the gonococcus can produce a state of pyemia has been proved by finding the organism in thrombi and in the circulating blood. The subject of gonorrheal arthritis, tendovaginitis, and bursitis was then taken up. There are three principal forms of acute gonorrheal arthritis, simple hydrops, hydrops combined with extensive capsular and para-articular involvement, which frequently leads to stiffness, and a third variety resembling a suppurative or pyemic arthritis. The treatment of the first should be rest, with compression, with or without the application of guaiacol carbonate. Internal administration of salicylates is of but little avail. In the second variety, if a cast or splint does not succeed within a short time, an early puncture of the joint, with washing out with some antiseptic solution, for example, mercuric chlorid, 1 to 5,000, or of silver lactate, with injection of iodoform-emulsion, followed by massage, active and passive movements, will yield the best results.

DR. BERTRAM W. SIPPY read a paper on **Gonorrhea from the Standpoint of Internal Medicine**. The following etiologic factors are to be considered in the production of the metastatic inflammations of gonorrhea: (1) The presence in the part of the gonococcus; (2) the action of gonotoxins produced either at the site of the inflammation, or possibly conveyed by the blood to the part from the seat of primary infection; (3) secondary infection with various microorganisms; (4) mixed infection. Arthritis occurs as a metastatic complication of gonorrhea in from 2½ to 3% of all cases. The clinical picture of the disease varies greatly. An arthritis develops and in a few days the acute symptoms subside, while the effusion remains. The sub-acute stage continues a few weeks. True suppuration rarely takes place, and when it does, undoubtedly mixed infection with pus-microbes is nearly always present. In other cases,

phlegmonous inflammation of the synovial membranes, ligaments, and peri-articular tissues may be accompanied by an exudate largely fibrinous in character. Stiffness of the joint is a marked feature from the beginning. Deformity may develop rapidly, and it is in this form that ankylosis is most likely to take place. Another form is characterized by peri-articular inflammation only. At times the disease manifests itself as an acute polyarticular affection, resembling acute articular rheumatism. Chronic hydrops, involving usually one joint, may result from repeated exacerbations of the ordinary form of gonorrheal arthritis, or the process may be subacute or chronic from the beginning. Above all, that which characterizes gonorrheal arthritis is its appearance as a complication of gonorrhea, the fluctuation of the joint-affection with that of the primary gonorrheal disease, and the tendency to ankylosis. Endocarditis complicates gonorrheal processes much more rarely than arthritis. The left heart is more frequently affected. There is nothing characteristic in the symptomatology, aside from the etiology. The prognosis is always doubtful. Complications on the part of the brain, spinal cord, meninges, cranial and peripheral nerves have been reported on good authority. Anatomic disease, however, is rare. A relatively large number of cases of myelomeningitis have recovered. Bacteriologic research has been attempted a few times. Thus far the gonococcus has not been found in the lesions.

DR. T. J. WATKINS read a paper on **Gonorrhea in Women**. He referred to the frequency of the disease, mentioning that it is less common in women than in men. Sanger states that 25% of his hospital-private cases suffer from the disease. According to Wertheim it is the most frequent cause of suppuration encountered in gynecologic practice. Dr. Watkins considered the percentage of the disease larger than authorities admit. Regarding location, he mentioned that it is found in all the mucous membranes in the tract. Of tubal disease, Sanger noted 33% as due to the gonococcus. In about 10% of cases the microorganisms reach the tubes. The disease is much less frequent in the urethra than about the orifice. The following was given as the order of frequency in which the parts are attacked: urethra, cervix, vulva, vagina. The disease seldom extends to the bladder, although it may do so and reach the kidneys. Dr. Watkins observed 5 cases of proctitis due to gonorrhea. He mentioned Burr's investigations regarding the relations of the disease to the puerperium and to puerperal fever. The uterus and adnexa are seldom involved in acute cases. In the diagnosis stress is to be laid upon the detection of the gonococcus. When this is not found in cases otherwise typical, the failure is often due to faulty technic or to lack of thoroughness. The disease, however, may be gonorrheal when microorganisms cannot be found. The disease may remain latent after an indefinite time following spontaneous cure of tubal infection. Sterility is not so frequently due to gonorrhea as is generally supposed. In the acute stages silver nitrate with frequent antiseptic douches is to be employed. Dr. Watkins opens and excises the suppurating glands in chronic cases, establishes drainage, and cauterizes or cures to any extent of chronic endometritis. Tubal adhesions may be removed by massage, etc., upon which treatment especial stress was laid and the necessity of conservative treatment of the tubes was emphasized. The ovaries nearly always remain healthy, and menstruation may be made to return in something like 90% or 95% of all cases.

DR. F. KREISEL read a paper entitled **Why is Gonorrhea Still a Much Dreaded Disease?** He spoke of the



various reasons why the treatment of gonorrhea does not always yield satisfaction and why complications are more frequently observed than should be expected according to our present knowledge of the etiology and pathology of the process. He urged more care in diagnosis with regard to the nature and seat of the disease, and advocated the exclusive use of the silver salts, especially protargol, for the acute infectious urethritis. The question of when may a man who has had gonorrhea marry, was also discussed.

#### SOUTHERN STATES.

**Infectious-Diseases Hospital in Baltimore, Md.**—A resolution recently passed both branches of the city councils of Baltimore, appropriating \$30,000 for an infectious-diseases hospital.

**Orleans Parish (La.) Medical Society.**—At a meeting held December 10th, Dr. Isadore Dyer was elected president, Dr. H. P. Jones, secretary, and Dr. J. H. Storck, treasurer. Drs. Parker, Jones, Gessner and Perkins, members of the society, who had served in the late war, spoke entertainingly of their experiences in the field and camp.

**College of Physicians and Surgeons, Baltimore, Md.**—Plans are being discussed for extensive improvements of the college-building, the present structure being inadequate to accommodate the classes. It is proposed to rebuild portions of the present structure, but nothing definite is contemplated before the close of the present term.

**Regulation of the Sale of Cocain.**—An ordinance was recently passed in Austin, Texas, and another in New Orleans, La., prohibiting the sale or the giving of cocain to any person, except by a duly authorized physician or upon a physician's order; provision is also made for a fine of from \$10 to \$100 for infringement of the law in Austin, and for a similar fine or imprisonment, or both, in New Orleans.

**The Tri-State Medical Society of North Carolina, South Carolina, and Virginia** will meet in first annual session at Charlotte, N. C., January 18, 1899. The society was organized August 31, 1898, at Virginia Beach, with the following officers: President, Dr. W. W. H. Cobbs, of Goldsboro, N. C.; treasurer, Dr. H. H. Dodson, of Milton, N. C.; secretary, Dr. Paulus A. Irving, of Richmond, Va. Dr. E. C. Register, of Charlotte, N. C., is chairman of the committee of arrangements.

**Milk-Combine in Washington, D. C.**—According to the *Maryland Medical Journal*, a milk-combine with a capital of \$1,600,000 has been formed in Washington, D. C. The building and plant is to cost about \$250,000, including the ground, and the operating expenses will be about \$70,000 a year. The milk is to be tested daily, and every herd of cows will be inspected at frequent intervals, and all will be conducted according to sanitary requirements. The milk after being delivered to the plant will be run into porcelain vats, then drawn and bottled automatically, the bottles hermetically sealed and placed in cases ready for delivery.

**Baltimore Medical Journal Club.**—At a meeting held December 10th, Dr. GAITHER reported on **prostatitis and prostaticorrhea**. The etiology, symptomatology, pathology, diagnosis and treatment of those diseases were carefully reviewed. The paper was discussed by Drs. BOND, BARKER, and MITCHELL.

DR. S. FLEXNER gave an interesting report on the subject **Is Tuberculosis an Inheritable Disease?** The re-

port was in part an abstract of Hauser's article "Zur Vererbung der Tuberkulose" in the *Deutsches Archiv für klinische Medizin*, 61 Bd., 3. u. 4. Hefte. The question was definitely answered in the affirmative. An interesting discussion of the subject by Drs. HEMMETER, WARFIELD, BARKER, BOND, GAIRDNER, and THOMAS followed.

**The Southern Medical College Association Adopts the Four Years' Course.**—A meeting of the Southern Medical College Association was held in Memphis, Tenn., December 5th, with delegates present from the University of Nashville, the Birmingham Medical College, the Virginia Medical College, Tulane University, Vanderbilt University, the University of Tennessee, the Tennessee Medical College, the Alabama Medical College of Mobile, the Memphis Medical College, and the University of the South (by proxy). The other members of the association, the Texas Medical College of Galveston, the Southern Medical College of Atlanta, and the Bessemer Medical College, of Bessemer, Ala., were not represented. The last-named institution, however, is defunct. It was unanimously adopted that all students matriculating after January 1, 1899, must attend four full courses of lectures prior to graduation. It was decided, however, that all who have matriculated prior to January 1, 1899, may graduate in three years, providing they do so at or before the annual commencements in 1903. The following officers were elected for the ensuing year: President, Dr. G. A. Ketchum, of the Alabama Medical College at Mobile; vice-president, Dr. Christopher Thompkins, of the Virginia Medical College at Richmond; and secretary and treasurer, Dr. G. C. Savage, of Vanderbilt.

**The New Orleans Board of Health and the Prevention of Yellow Fever.**—According to the *New Orleans Medical and Surgical Journal*, the Board of Health of that city has issued a circular, addressed particularly to physicians, calling attention to the urgent necessity of educating the people to adopt measures to prevent a recurrence of yellow fever next year. The following is from the circular:—

"It is a well-known fact that sunlight and oxygen destroy germs of disease. In the case of yellow fever, cold is a potent factor in such destruction.

"Let us then give nature a chance, during the present winter, to destroy with her own inexpensive agents any possible remaining vestige of infection left over from the summer.

"Let our houses be thrown open on every cold and clear day as much as is practicable, more especially the bedrooms.

"Let the clothes and bedding, curtains and all woolen, linen and cotton materials be frequently aired and sunned. And most particularly let the clothes worn during the past summer be frequently subjected to the disinfecting influences of cold, fresh air and sunlight.

"Trunks, chests, armors, closets and bureau-drawers should be opened and emptied of their contents during cold and clear weather; and fresh, cold air should be permitted to circulate in the remotest corners of the house among articles which can not be moved to the sunlight."

**Johns Hopkins Hospital Medical Society.**—At a meeting held December 5th Dr. ERNEST STOKES exhibited a number of **gynecologic cases** that had shown features of special interest at the time of or subsequent to operation.

DR. R. G. HARRISON gave an interesting talk on **The Value of Drawing and Modelling in the Study of Osteology**. In the teaching of osteology he encourages the students to either draw or model the particular bone that they are studying. In this way a memory for detail is developed and the student is more likely to be able to recall a visual picture of the anatomic structure under study. The



same system is carried out in the study of the muscles, nerves, etc. Models in clay and drawings of various bones, the work of the first-year students of the Hopkins Medical School, were exhibited before the society. Many of these were really works of art.

DR. ROBERT REULING and DR. HERRING read a paper on **Cavity-formations in the Brain due to the Bacillus Aerogenes Capsulatus**. Dr. Herring first gave a brief account of the clinical history of the case, Dr. Reuling reviewed the subject of gas-bacillus infections and then reported on the pathologic findings in this case. A portion of the brain showing numerous cavities varying in size from a few millimeters to one or two centimeters in diameter, was exhibited. Cultures from these cavities yielded a bacillus having all the cultural and morphologic characters of the bacillus aerogenes capsulatus. This is the first authentic case in the literature of cavity-formation in the brain due to the gas-bacillus. Dr. Reuling was of the opinion that the brain-changes were postmortem rather than antemortem.

DR. WELCH discussed the paper at considerable length and agreed with Dr. Reuling that the cavity-formation in the brain was a definite postmortem change.

DR. N. B. GWYN reported a case of **cerebrospinal meningitis** in which the diplococcus meningitidis was found in cultures from the spinal fluid, the blood, and the fluid from the right knee-joint.

**The Southern Surgical and Gynecological Association** met in eleventh annual session at Memphis, Tenn., December 6, 7, and 8. DR. RICHARD DOUGLAS, of Nashville, presided. Prayer was offered by the REV. THOMAS S. GAILOR, Bishop of Tennessee. DR. ALEXANDER ERSKINE delivered an **address of welcome** on behalf of the local profession, to which Dr. Douglas responded on behalf of the Association.

DR. W. E. PARKER, of New Orleans, read a paper on **Gunshot-wounds**, giving his experience in the military hospitals at Santiago and Siboney and on board the *Olivette*. The hospital-facilities on land were entirely inadequate. The wounds inflicted by the Mauser rifles were not sufficient to stop the men in many instances. The wounds were clean, and of themselves easily attended to, and offered a good prognosis. The different cartridges, as well as the first-aid packages were exhibited. DR. H. H. GRANT, of Louisville, expressed his surprise at the low mortality from abdominal wounds during the war, most of these cases not being operated on.

DR. FLOYD W. MCRÆ, of Atlanta, read a paper on **Penetrating Wounds of the Abdomen**, contending that when there is probably a visceral wound celiotomy, exploratory at least, should be done.

DR. H. HORACE GRANT, of Louisville, read a paper on **The Practical Side of the Treatment of Bullet-wounds of the Abdomen**. He said that as soon as possible after the injury the patient is to be transported to a suitable place, the abdomen opened and the entire region inspected. Intestinal wounds may be sutured, or resection may be necessary. Wounds of the solid viscera necessitate suturing or packing. DR. W. E. B. DAVIS, of Birmingham, favored early operation in cases of possible visceral wounds. DR. G. A. BAXTON, of Chattanooga, mentioned a case in which recovery ensued without operation, though the stomach and liver were perforated. DR. W. L. RODMAN, of Philadelphia, mentioned a case in which the patient recovered after operation on the 7th day. DR. W. F. WESTMORELAND, of Atlanta, advocated operation when the intestine

was injured, but thought it was not an operation to be undertaken by other than a competent abdominal surgeon.

DR. L. S. MCMURTRY, of Louisville, read a paper on **The Treatment of Carcinoma of the Uterus**. He has found the disease much more common in whites than negroes, and is inclined to doubt the utility of operation, *i.e.*, removal, getting as good results from curetting and caustics. DR. W. L. RODMAN, of Philadelphia, was surprised to hear the opinion that carcinoma of the uterus was more common in the whites than in negroes. DR. ERNEST LEWIS, of New Orleans, thought the proportion was about the same in the two races and regarded all operations for the condition as palliative. He has seen better results from curetting and packing with pledgets of cotton saturated with zinc chlorid. One patient treated in this way lived 15 years. DR. VIRGIL O. HARDON, of Atlanta, found carcinoma more frequent in negroes than in whites and said that if early diagnosis be made, removal of all infected tissue might be accomplished. DR. HOWARD A. KELLY, of Baltimore, thought early radical operation would cure many cases. He finds the glandular enlargement more often inflammatory than carcinomatous. He is sure he has cured many cases. Curetting removes a pyometra, from which many patients with carcinoma of the uterus develop fatal general sepsis.

DR. HOWARD A. KELLY, of Baltimore, read a paper on **Repair of Cases of Complete Tear of the Perineum**.

DR. J. T. WILSON, of Sherman, Tex., read a paper on **Fractures Involving the Elbow-Joint**. He showed a new plaster-splint, and advised immobilization, infrequent dressing, and late employment of passive motion (5 or 6 weeks). DR. A. M. CARTLEDGE does not use plaster, but sole leather, dresses the arm frequently, and sees many bad results. DR. W. T. WESTMORELAND dresses the joint in plaster under an anesthetic and changes it in a week. DR. L. McL. TIFFANY finds difficulty in making an exact diagnosis, even under an anesthetic, on account of the swelling. In adults the function of the joint is sure to be impaired. He favors active motion. DR. G. A. BAXTER believes in passive motion begun early. DR. W. B. ROGERS dresses the joint frequently and uses passive motion early.

DR. J. WESLEY BOVEE read a paper on **The Use and Abuse of Normal Salt-solution**. He said that normal salt-solution (0.6%) is a powerful stimulant to the cardiac heart-nerves, skin, kidneys, and intestines. It may be administered through an artery (dangerous), subcutaneously (most generally useful), intravenously (often slow on account of the difficulty of finding a vein and introducing a cannula), by intraperitoneal injection, and by enema. It is used in collapse and exhaustion in medicine, but more frequently in surgery, to prevent and to reduce shock in severe hemorrhage, for irrigation and as "lavage of the blood" in sepsis. It is contraindicated in hemophilia, dyscrasias, deficient fibrin, etc., and in certain organic diseases of the lungs, kidneys, liver, and arterial tree. The solution should be sterile and hot, the surface of the part and instrument sterile, and not more than half a liter should be injected into the tissues through one puncture and at the rate of an ounce a minute. DR. L. McL. TIFFANY, of Baltimore, advocated in profound sepsis phlebotomy and intravenous injection of a normal saline solution, preferring this method even when the abdomen is opened. DR. HOWARD A. KELLY, of Baltimore, introduces a quart of the solution into the rectum after abdominal operations. This lessens thirst and promotes the activity of the kidneys. In case of hemorrhage he injects the solution under the breast. He does not use the intra-



venous method. DR. L. S. McMURTRY, of Louisville, spoke of the necessity of the solution, needles and apparatus being sterile and of the difficulty of finding a vein in an exsanguinated patient. In the latter case the larger trunks should be sought for. DR. GEO. A. BAXTER, of Chattanooga, was enabled to complete a hip-joint amputation after a rectal injection of a saline solution; without which it could not have been done. DR. G. A. BROWN, of Birmingham, had used the saline solution subcutaneously in pneumonia and cholera infantum without good results.

DR. JOSEPH TABER JOHNSON, of Washington, read a paper on the **Conservative Treatment of the Diseased Ovary**. A healthy ovary should never be removed. Cysts should be excised and the wound sutured. Even a part of an ovary should be kept. In deep collections of pus it is often best to simply open through the vagina. DR. HOWARD A. KELLY, of Baltimore, leaves every portion of healthy ovary. Removal of the tube on one side and the ovary on the other has been followed by conception. If it is necessary to remove both ovaries it is well to remove the tubes and the uterus even if normal, as the latter will cause trouble by displacements, etc. Dr. Kelly has removed 15 fibroids from a uterus, closed the wounds and seen pregnancy occur subsequently. DR. I. S. STONE, of Washington, did not approve of the vaginal incision for the evacuated pus in the pelvis. He thought Dr. Kelly's conservatism inconsistent when he labored to save a healthy part of a diseased tube or ovary, and removed an entire healthy uterus. DR. ERNEST LEWIS had seen cases recover nicely after evacuation of pelvic abscesses through the vagina. If this does not cure the patient an abdominal operation can be performed later. When necessary to remove the ovaries, it is better to fix the uterus to the abdominal wall than to remove it. DR. J. WESLEY BOVEE, of Washington, thought operative cases should be carefully selected. DR. L. S. McMURTRY, of Louisville, did not understand Dr. Kelly's conservatism, which leads him to so severe an operation as hysterectomy when the uterus is normal. He would prefer to leave this uterus and remove the one with 15 fibroids.

DR. A. A. CARTLEDGE, of Louisville, read a paper entitled, **When Should We Operate for Appendicitis?** and concluded as follows: (1) Probably 98% of the patients who die of acute appendicitis without operation have the fulminating variety of the disease; operation, to be of service, must be done in the first 24 hours—better in the first 12; (2) in view of the fact that there is no means of knowing the probable course of a given attack of appendicitis, operation, should, when possible, be performed within the first 24 hours after the onset of symptoms; (3) patients seen after the third day should not be operated upon until after the attack, or until purulent formations, if such take place, have been walled off and the patient is practically rid of the general sepsis; the exception to this rule is the rupture of an appendicular abscess into the peritoneal cavity (a rare accident) when abdominal section should be performed; (4) Probably as many patients recover from general septic peritonitis with the aid of stimulants and purgatives as recover by operation. In either event, if the case is one of true general septic peritonitis, the mortality will not be far from 95%. Contributions to medical literature would indicate that there is a sad need on the part of the profession of more definite views as to the nature of this disease. If operated upon at all no attempt at general cleaning of the cavity should be practised; nature is to be quickly assisted and the desperate patient taken care of by removing the

source of the fire; to do more is to add the shock of an unbearable operation to an already nearly exhausted vitality. (5) Patients who have suffered an unmistakable attack of the disease should be subjected to operation during the interval. (6) Operation is not to be performed too soon after a severe attack; with many adhesions, the operation will be greatly simplified by waiting a few weeks; in the meantime the patient is to be kept upon light diet and little exercise. Patients usually do not have a recurrence until the adhesions or splints have been removed by absorption. The mortality from internal operations should not be more than 1%. DR. J. W. BOVEE, of Washington, said that Dr. Cartledge's conclusions were as good as any hard-and-fast rules could be. DR. H. H. GRANT, of Louisville, thought that individual experience would always guide the surgeon, and in some points his experience would lead him to adopt a somewhat different course than that advised by Dr. Cartledge. DR. W. E. PARKER, of New Orleans, would like a little latitude in following the conclusions laid down by Dr. Cartledge. DR. W. B. ROGERS, of Memphis, did not believe that any rules would be invariably applicable to cases of appendicitis, but those laid down would come as near as any he knew of.

DR. RICHARD DOUGLAS delivered the President's Address, which was entitled **Acute General Peritonitis**. After noting the failure of attempts to classify peritonitis on a bacteriologic basis, he divided it into (1) traumatic, (2) consecutive, (a) by continuity, (b) by perforation. Traumatic peritonitis, especially the postoperative variety, is essentially a grave condition. Peritonitis by continuity may become general and prove rapidly fatal, but this is not the rule, except in puerperal cases. Visceral perforation, whether traumatic or pathologic, is an ideal condition for germ-culture and the elaboration of toxins, explaining the grave state into which the patient is precipitated. Dr. Douglas suggested the term intestine-peritoneal septicemia (Malcome) instead of general septic peritonitis.

DR. W. D. HAGGARD, JR., of Nashville, read a paper on **Plastic Surgery in Gynecology**. He said that while every effort is being made to perfect the work in abdominal surgery, plastic work is not receiving the attention it deserves. Restoration of the perineum and cervix should be accomplished with care, according to a definite plan, and with due regard to the part they will be called on to play in future.

DR. J. B. MURFREE, of Murfreesboro, read a paper on **Penetrating Wounds of the Chest**, with especial reference to the method of controlling hemorrhage. DR. L. McL. TIFFANY, of Baltimore, suggested drawing the lung-tissue into the wound, when it would act as a tampon.

DR. W. L. ROBINSON, of Danville Va., read a paper on **Antistreptococcic Serum in Puerperal Fever, Erysipelas, and Postoperative Septic Fever**. In puerperal sepsis he has used the serum in connection with other treatment, and has obtained good results, as also in one case of erysipelas. He has had no failures. DR. F. W. PARKAM, of New Orleans, reported a case of extensive erysipelas uninfluenced by the serum. DR. W. F. WESTMORELAND, of Atlanta, is enthusiastic over this agent and suggests that failures may be due to a poor preparation or to a mistake in diagnosis. He mentioned a case of tetanus in which the serum did no good until it was injected into the brain through a trephine-opening.

DR. F. W. PARKAM, of New Orleans, read a paper on **Thoracotomy for Tumors Involving the Ribs, with a Report of Two Cases of Osteosarcomas of the Thora-**

**cic Skeleton.**—The Fell-O'Dwyer apparatus for artificial respiration was used. In both cases the pleura was opened and the lung collapsed. Artificial respiration made it possible to complete the operation. In the first case 5 inches of the 3d, 4th, and 5th ribs were removed. There was great shock. Convalescence was complicated by pneumonia. Thirteen months after the operation there was no recurrence. The tumor was a small spindle-cell sarcoma. In the second case hydrothorax developed after the operation, but recovery ensued, and no recurrence had taken place after 11 months. The tumor was a chondrosarcoma. DR. W. F. WESTMORELAND suggested that the nonrecurrence was due in the first case to the tumor being spindle-celled, and not a highly malignant form. DR. L. McL. TIFFANY suggested in these cases the injection of air into the perineal sac beforehand, in order to accustom the patient to the use of one lung. DR. W. E. PARKER thought the Fell-O'Dwyer apparatus will revolutionize thoracic surgery.

DR. GEO. H. NOBLE, of Atlanta, read a paper on **Ureteral Anastomosis**, and reported a case in which the operation had been successfully performed. DR. HOWARD A. KELLY said that when the ureter is injured it is because it occupies an abnormal position. The most successful implantation is that directly into the bladder, which organ may be dissected loose and brought up to the cut end of the ureter. DR. J. W. BOVEE preferred the oblique anastomosis, as direct implantation allows a reflux for the bladder in the urinal. In experiments he has been able to loosen and lower the kidney, but he has not attempted it on the human subject.

DR. WILLIS F. WESTMORELAND read a paper on **Tumors of the Breast**.

DR. I. S. STONE read a paper on **The Rarity of Ovarian Tumors in Negresses**.

#### CANADA.

**Montreal Medico-Chirurgical Society.**—At a regular meeting, held December 8th, Dr. A. G. NICHOLLS exhibited the following morbid specimens: **Myocarditis, adherent pericardium, tuberculous abscess of the kidney, and degenerative cyst of the kidney.** The specimen of myocarditis was interesting inasmuch as it was due to coronary obstruction. The condition occurred in an old woman of 70, whose only complaint was weakness and shortness of breath. The cardiac dulness was moderately increased. The first sound at the apex was replaced by a loud, blowing, systolic murmur, transmitted into the axilla. The pulmonary second sound was accentuated. At autopsy there was slight cor bovinum, with dilatation of the heart. In the anterior coronary, about 2 cm. from its origin, was a calcareous patch in the wall, extending for 225 cm., with two nodules protruding into the lumen. The posterior coronary was similarly affected, but not to the same degree. The amount of general arterial sclerosis was slight. There was no history of anginal attacks.

The adherent pericardium was obtained from the body of a man, aged 24, who had suffered from many severe attacks of rheumatism. There was also evidence of mitral stenosis and regurgitation and aortic leakage. The heart with contained blood weighed 1930 grams. There was stenosis of the mitral with great calcareous deposit. The aortic valves were thickened and incompetent.

DR. J. A. SPRINGLE reported a case of curious tumors about the hands that microscopically proved to be **multiple fibromyomata**. The condition is rare.

DR. E. W. ARCHIBALD contributed a paper on "**hemor-**

**rhoids in children**, with report of a case." He gave a short resume of the early opinions on this subject. Lanne-longue, then a young man, declared in his clinic that he had observed the condition in a young child. Bouchut, on the other hand, said that "children do not have hemorrhoids any more than they have varicose veins. Up to 12 or 13 years ago I knew of no authentic observation of hemorrhoids, and I believe that cases of this nature are all to be referred to rectal polypi." Gosselin<sup>1</sup> said: "I will believe in hemorrhoids in children when I shall have seen them, or when a serious observer, after a careful examination, shall have affirmed that he has seen them." These opinions are shared probably by no surgeon of the present time, but serve to indicate the comparative rarity of the condition. The literature is scant. Dr. Archibald has been able to find only two other references previous to Bouchut's line. One of these was a sort of clinical note by W. Krimer, of Aachen,<sup>2</sup> who claims to have observed hemorrhoids in children in 5 cases from 1 to 4 years of age. The other was by A. J. de Montègre,<sup>3</sup> who says the condition is not uncommon and cites in confirmation Wenceslas Truka. The latter had reported 39 cases of hemorrhoids in children under the age of 15 years. Neither of these, however, gives any indication of having made local examination, and their cases were probably "errors in diagnosis." In recent literature there is hardly anywhere anything beyond a mere mention of the fact that hemorrhoids do occur in children, but are very rare. Ogston and Vincent<sup>4</sup> report a case in a child, 3 days old. Ogston, in a note, instances another example in a child of 4 months. Keating says that hemorrhoids are "very rare in childhood." Ball has seen "several cases in quite young children." Wharton has observed "one case at 5 or 6 years of age. Holt said that cases might occur in children as young as 3 or 4 years. Starr has seen several in young children. One at 3 years of age required operation. Allingham is said to have had a case. The following case was admitted to the Royal Victoria Hospital, under Dr. Jas. Bell: The patient was a girl, aged 8, who was admitted on December 13, 1897, complaining of bleeding from the bowels. According to the mother the condition dated from 5 years previously. It set in about a week after a fall from a gallery. Blood came away with the stools, but occasionally also in the intervals of defecation. The amount lost was never large. The bleeding was irregular in onset, there being long periods of freedom. Two years before the child had been free for 12 months. For some time before entrance she had been dizzy and faint at times. The girl stated she had been constipated. She had had measles and whooping-cough when a baby, but otherwise had always been in good health. Her family-history was negative. On admission the child was fairly nourished, though small for her age. Blood in variable quantities, usually of a dark, fluid character, sometimes bright red, was seen to come from the rectum after defecation. The quantity on one occasion amounted to half an ounce, but it was usually much less. On digital examination nothing unusual was felt, and on palpation of the abdomen nothing abnormal was made out. Under ether small but distinct venous piles were found inside the anus, encircling the bowel, not inflamed, but bleeding readily when touched. The child was discharged in 7 weeks, during the last 3 of which there had been no bleeding. The hemorrhoids were demonstrated easily on several occasions without an anesthetic. There was no treatment beyond that of securing a soft stool every day.

<sup>1</sup> *Leçons sur les hémorrhoides*, 1866. <sup>2</sup> *Medicinisches Conversationsblatt*, 1830, No. 18, p. 142. <sup>3</sup> *Des hémorrhoides*, Paris, 1819, p. 79. <sup>4</sup> *Lancet*, 1883, i, 819.



This, without doubt, is a case occurring in a child first at the age of 3 years. There was no circulatory disturbance to account for the condition, and the history of chronic constipation was somewhat doubtful. There was finally no hereditary influence.

A three-months' notice of a motion, introduced by Dr. LAPHORN SMITH, to amend the by-law of the Society that "ordinary members of the society shall be medical men in good standing," substituting the word "practitioners" for "men," led to some discussion. Most of the members present were in favor of the principle and the motion carried, the by-law being consequently amended to that effect.

### MISCELLANY.

**The American Physiological Society** will hold its annual meeting in New York City, December 28, 29 and 30, the first day at the College of Physicians, the second (in conjunction with the American Psychological Association) at Schermerhorn Hall, Columbia University, and the third day, at the University and Bellevue Hospital Medical College.

**Growth of Christian Science.**—A few days ago I mentioned the filing of plans for a \$200,000 church for the Christian Scientists in this city. Some idea of the rapid growth of this sect is given by Carol Norton, in an address in Brooklyn. He says that there are 7 Christian Scientist churches in Greater New York City and 13 in the immediate vicinity of New York City, 38 churches and congregations in the State of New York, and about 30,000 adherents of the faith in the State. He claims that there are a million Christian Scientists in this country.—[Correspondence *Public Ledger*.]

**Obituary.**—DR. JOSEPH W. MARSEE, professor of anatomy and surgery at the Medical College of Indiana, Indianapolis, December 3d.—DR. BENJAMIN FEICHT, Leetsdale, Pa., December 12th, of hydrophobia, aged 65 years.—S. G. CUNNINGHAM, December 12th, at Kittanning, aged 53. He was a surgeon in the Union army during the civil war.—DR. JAMES L. TYSON, Penlynn, Pa., December 9th, aged 86 years.—DR. W. W. GRANGER, Fairmount, W. Va., December 5th.—DR. GOUVERNEUR MATHER SMITH, New York, December 8th.—DR. JOHN G. HILLGRASS, Pennsburg, Pa., December 7th.—DR. T. H. HUZZA, Atlanta, Ga., December 9th.

**The Suppression and Prevention of Leprosy**, is the title of a pamphlet issued by Dr. Albert S. Ashmead, of New York. It consists of 94 pages and deals with: (1) The history of the microbe; its dispersion by human currents; (2) the non-curability of leprosy; (3) the conditions, habits, and customs predisposing to leprosy; (4) the horrors of leprosy; (5) the necessity of absolute isolation; (6) the choice of a place of isolation, or national lazaretto; (7) the latest treatments of leprosy; (8) Columbian leprosy and the charity of the church; (9) the leprosy-question; (10) asepsis-prevention better than cure; (11) the conditions of leprosy in Japan; (12) the indispensable rules for the suppression and prevention of leprosy; a resume, and an appendix.

**Medical Notes from Headquarters of the 7th Army Corps.**—From our correspondent at Savannah, Ga., under date of December 11th, we learn that Gen. Fitzhugh Lee sailed that day for Cuba. His Chief Surgeon, Lieut. Col. L. M. Maus, Surgeon U. S. V., is with him. The hospital-ship *Missouri* sails Tuesday for Havana, carrying the Second Division Hospital of 200 beds with 125 hospital-corps men

and 80 trained female nurses; also a fully equipped Field Hospital of 500 beds, and the equipment for a 100-bed operating hospital under charge of Major Fowler, Surgeon U. S. V., of Brooklyn. The First Division Hospital of 200 beds will follow fully equipped in a few days. The Hospital Railway train is here to take to Atlanta the sick who cannot go with the troops. They number about 200.

**The Public Medical Services.**—The President has sent the following nominations to the Senate: To be assistant surgeons, with rank of first lieutenant: Clyde S. Ford, of West Virginia; James R. Church, of District of Columbia; J. H. Ford, of District of Columbia; P. M. Ashburn, of Ohio; E. A. Dean, of Tennessee; Walter Cox, of Maryland; R. B. Westledge, of Ohio; F. M. C. Usher, of Kentucky; S. L. Steer, of Pennsylvania; W. E. Truby, of Pennsylvania; F. F. Russell, of New York; E. P. Wolfe, of New York; Edward Pinkham, of Massachusetts; L. P. Williamson, of Missouri; C. E. Marrow, of Virginia. Second lieutenant of infantry, William Talcott, Jr., of New York.

To be assistant surgeons in the Marine-Hospital service: J. W. Kerr, of Ohio; William C. Billings, of Connecticut; Gustav M. Corpul, of Georgia; Dana E. Robinson, of Ohio.

**Opticians Responsible for Injuries to Health from Glasses they Prescribe.**—Simon Fleischmann, of Buffalo, N. Y., Chairman of the Supervisors' Committee on Laws and Legislation, has won his suit against Alexander Martin, optician, of Philadelphia and Buffalo. Justice Braunlein decided in his favor, and awarded him \$54.44 damages, the full amount asked for. Mr. Fleischmann's case was fought in Municipal Court for three days. In his complaint Mr. Fleischmann alleged he had his eyes examined and a few days later bought a pair of eye-glasses, made according to a special prescription. He paid \$6.75 for the glasses. Soon after wearing them, intense pains began to shoot through his head and he was made sick at his stomach. He took the glasses back to Dr. Martin and was directed to wear them, despite the pain. He asked for his money, but his request was refused. In his decision Justice Braunlein says Mr. Fleischmann should not have been directed to wear the glasses after experiencing the pains.

**Six-day Bicycle Race.**—The six days' agony at Madison Square Garden, New York, ends to-night. Night and day the contestants in the bicycle race have been making their weary rounds, without rest, eating as they ride. They have been doing for a little false and fictitious fame that which has made heroes of men in a good cause. But these men are not heroes. They are foolish wasters of the strength and the manhood of which they were made the trustees. They are deliberately subjecting themselves to a strain which must inevitably shorten life and diminish usefulness. They are constructively as much suicides as though they stepped upon the track and put an end to their own existences on the spot. The drawn faces, the fixed eyes, the evidences of suffering in a hundred ways, which their protracted violation of physiological laws involves, their rasped nerves and frequently wandering minds, testify to an abuse of natural endowments—voluntary, it is true, but one, nevertheless, which law and civilized sentiment have no moral right to recognize.—[*Boston Evening Transcript*.]

**Duties of Medical Inspector of the Army.**—In connection with the recent appointment of Col. Charles R. Greenleaf, as medical inspector of the U. S. Army, the following has been issued by the Surgeon-General's office of the War Department:

COLONEL CHARLES R. GREENLEAF,  
*Assistant Surgeon-General, U. S. Army,*

Medical Inspector,  
Washington, D. C.

SIR:—In the discharge of your duties as Medical Inspector of the Army you are expected to report to me upon the sanitary condition and wants of troops in the field, at military posts, and in general hospitals, and as regards the skill, efficiency and conduct of officers, enlisted men and civilian employes connected with the Medical Department.

You will see that existing orders and regulations relating to the Medical Department are complied with and that all prescribed reports and returns are promptly made and forwarded when due.

You will examine into the quality, quantity and condition of medical and hospital supplies, reporting any failure upon the part of responsible medical officers to make proper requisitions, and any deficiencies found due to failure on the part of supply officers to promptly fill approved requisitions.

You will ascertain what diseases are most prevalent in the camps visited by you and will inquire into the cause of such prevalence and the steps which have been taken for the prevention or arrest of any infectious diseases which may exist, indicating verbally or in writing to the responsible medical officers such additional measures or precautions as may be requisite. When sanitary reforms requiring the sanction and cooperation of military authorities are urgently demanded you will report at once, in writing, to the officer commanding the Military Department, Corps, Division, or Camp, calling his attention to the facts and recommending such measures as you consider necessary for the relief of insanitary conditions existing. A duplicate of such report should be forwarded to the Surgeon-General of the Army.

You will ascertain whether medical supplies are properly used and with a due regard to economy; whether any additional articles not now included in our Supply Tables are necessary for the treatment of the sick; whether the equipment of regimental hospitals is such as is contemplated by recent orders; whether cases of infectious diseases or of soldiers seriously ill are improperly retained in regimental hospitals; whether division-hospitals are fully equipped as regards supplies, medical officers and attendants to properly care for the sick of the command to which they belong; and whether contract-surgeons have been examined as prescribed by recent orders.

You will give special attention to diet-kitchens and see that they are equipped for providing the sick with suitable light diet.

You will ascertain whether a proper use is made of the fund provided for the purchase of suitable articles of diet for the sick, as prescribed in General Orders No. 116, and whether the Commissary Department has on hand for sale such articles as are necessary.

You will also inquire as to the sufficiency of tents, ambulances, and other articles furnished by the Quartermaster's Department.

You will report any abuses or deficiencies existing to the Commanding General of the Department, Corps, Division, Camp or Military Post, sending a duplicate of this report to the Surgeon-General of the Army.

You will also report upon the professional competence, attention to duty, and general qualifications of medical officers, calling the attention of the Surgeon-General to those who deserve especial commendation and also to those who are considered incompetent or for any reason undesirable members of the Medical Department.

You should give special attention to the efficiency of the Hospital-Corps, reporting whether proper discipline is maintained and proper instruction given in all that pertains to the duties of enlisted men of that Corps.

Very respectfully,  
(Signed) GEO. M. STERNBERG,  
*Surgeon-General U. S. Army.*

**Health Reports.**—The following cases of smallpox, cholera, and plague have been reported to the Supervising Surgeon-General of the U. S. Marine-Hospital Service during the week ending December 10, 1898.

#### SMALLPOX—UNITED STATES.

	CASES.	DEATHS.
ALABAMA:		
Mobile . . . . . Nov. 28 . . . . .	1	
COLORADO:		
Denver . . . . . Nov. 26 . . . . .	2	
Fort Collins, Larimer County . . . . . Nov. 26 . . . . .	3	
Trinidad, Las Animas County . . . . . Nov. 26 . . . . .	1	
Origin of the disease in the three localities named, is New Mexico.		
GEORGIA:		
Jasper County . . . . . Jan. 14–Nov. 26 . . . . .	2	
Jones County . . . . . Jan. 14–Nov. 26 . . . . .	300	4
IOWA:		
Hamburg, Fremont County . . . . . Nov. 26 . . . . .	2	
Lacona, Warren County . . . . . Nov. 26 . . . . .	2	
MICHIGAN:		
Detroit . . . . . Dec. 3, Reported present.		
Ecorse Township . . . . . Dec. 3 . . . . .		
OHIO:		
Cincinnati . . . . . Dec. 2 . . . . .	1	

TEXAS:		
Laredo . . . . . Dec. 6 . . . . .	1	
" . . . . . Dec. 7 . . . . .	4	
VIRGINIA:		
Norfolk . . . . . Nov. 30 . . . . .	5	
" . . . . . Dec. 5 . . . . .	4	
" . . . . . Dec. 6 . . . . .	2	
" . . . . . Dec. 7 . . . . .	2	

#### SMALLPOX—FOREIGN.

AFRICA:		
Lorenzo Marques . . . . . Sept. 1–30 . . . . .	3	3
BELGIUM:		
Antwerp . . . . . Nov. 5–12 . . . . .	3	6
BRUSSELS:		
Brussels . . . . . Nov. 12–19 . . . . .	1	
BRAZIL:		
Rio de Janeiro . . . . . Oct. 15–21 . . . . .	13	3
ECUADOR:		
Guayaquil . . . . . Nov. 1–12 . . . . .	1	
ENGLAND:		
Liverpool . . . . . Nov. 12–19 . . . . .	2	
Southampton . . . . . Nov. 5–12 . . . . .	1	
RUSSIA:		
Moscow . . . . . Nov. 5–12 . . . . .	17	5
Odessa . . . . . Nov. 12–19 . . . . .	1	1
St. Petersburg . . . . . Nov. 5–12 . . . . .	4	2
TURKEY:		
Constantinople . . . . . Oct. 17–Nov. 7 . . . . .	55	

Smallpox is reported as raging fiercely in Constantinople. Vaccination does not appear to be a protection. Persons vaccinated July 18th, months previous, are attacked. The authorities are doing their utmost to check the epidemic.

#### YELLOW FEVER.

MEXICO:		
City of Mexico . . . . . Nov. 25 . . . . .	1	

#### CHOLERA.

INDIA:		
Bombay . . . . . Oct. 8–22 . . . . .	5	
Calcutta . . . . . Oct. 22–28 . . . . .	2	5
Madras . . . . . Oct. 22–28 . . . . .	5	
" . . . . . Oct. 28–Nov. 4 . . . . .	14	

#### PLAGUE.

AUSTRIA:		
Vienna . . . . . Oct. 29–Nov. 5 . . . . .	1	
INDIA:		
Bombay . . . . . Nov. 1–8 . . . . .	63	

MADAGASCAR:  
Tamatave . . . . . Nov. 30, Present.  
On November 26th, plague was reported present in San Francisco, Cal., in the Chinese population. The report has been officially denied.

#### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Par. 41, S. O. 278, Nov. 25, this office, relating to Asst. Surgeon-Gen. Col. CHARLES R. GREENLEAF, is revoked.  
Asst. Surgeon-Gen. Col. CHARLES R. GREENLEAF is relieved from duty in charge of the medical-supply depot, San Francisco, Cal., and from duty as chief surgeon of troops in the field, and will repair to Washington, D. C., and report to the surgeon-general of the Army for assignment to duty.  
Asst. Surgeon-Gen. Col. WM. H. FORWOOD is relieved from duty as attending surgeon at the U. S. Soldiers' Home, Washington, D. C., for duty as chief surgeon of the Department of California, to relieve Lieut. Col. JOHNSON V. D. MIDDLETON, D. S. G., upon his retirement from active service.  
Surgeon-Major LOUIS A. LA GARDE is relieved from further duty at Fort Robinson, Neb., and will report to the governor of the U. S. Soldiers' Home, Washington, D. C., for duty as attending surgeon.  
Surgeon-Major JOHN D. HALL is relieved from duty pertaining to the muster-out of the Pennsylvania Volunteers and from the operation of S. O. 239, Oct. 10, this office, and will proceed to San Francisco, Cal., and assume charge of the medical-supply depot at that place, relieving Lieut. Col. JOHNSON V. D. MIDDLETON, D. S. G., U. S. A., from the temporary charge of the same.  
Chief Surgeon Major WM. H. ARTHUR, U. S. Vol. (major and surgeon, U. S. A.), is honorably discharged from the volunteer service, to take effect Nov. 30.  
Brigade-Surgeon Major IRA C. BROWN will take station at Savannah, Ga., and report to the commanding general, 7th Army Corps, for assignment to duty.  
Acting Asst. Surgeon GEORGE B. LAWRASON will proceed to Savannah, Ga., for assignment to duty with the troops going to Pinar del Rio, Cuba.



## Foreign News and Notes.

### GREAT BRITAIN.

**Chiropodists** have been introduced into the British Army.

A bill to regulate cremation has been introduced into the Legislative Council of Victoria, Australia. It provides that trustees of cemeteries may undertake cremation instead of burial, and expend moneys for that purpose and charge fees. No cremation is to take place without the production of two special medical certificates.

**The Notification of Puerperal Fever.**—At a recent meeting of the London County Council, the Public Health Committee presented a communication urging that physicians be required to notify cases of "both peritonitis and metritis, when occurring in connection with parturition, as well as puerperal pyemia, puerperal septicemia, and puerperal sapremia."

**An epidemic of typhus fever** has broken out in Edinburgh, Scotland. The city having been freed from the disease for a long period, many of the earlier cases were not promptly recognized. As many as 14 cases were reported during the week ended November 26th; 30 cases have been admitted to the City Hospital. A "wake" is said to have been the starting-point of the disease.

**A Convalescent Home for London Jews.**—Baroness Hirsch has bought Tudor House, on Hampstead Heath, London, and will make it a convalescents' home for needy Jews, most of whom are prevented from sharing the benefit of Gentile convalescents' homes by the dietary rules enjoined by the Mosaic laws. The house is a spacious structure, overlooking picturesque rural scenery. The Baroness paid \$20,000 for the property, to which she has added \$200,000 as an endowment.

**The Study of Tropical Diseases.**—Mr. Alfred Jones, of Liverpool, has offered \$1,750 annually for the establishment and maintenance in Liverpool of a laboratory for the study of tropical diseases. The scheme is to be carried out under the direction of a committee from the Royal Southern Hospital and University College, and a laboratory will be erected in which patients will be treated. Investigations will also be undertaken in University College under the direction of Professor Boyce.

**The Sanitary Condition of London.**—Dr. Sedgwick Saunders, the Medical Officer of Health for the City of London, has reported that during the month of November the death-rate of the city was 17.9 per 1000 of the population per annum, which is a higher figure than usual, although November is notoriously a fatal month in England. The report shows that strenuous efforts are being made to bring the city into an unimpeachable sanitary condition, although this can hardly be accomplished without extensive demolition of ancient buildings. The sanitary inspectors visited 658 premises and found 57 to require substantial improvement. The report also supports a statement recently made in these columns as to the amount of filth the London poor are offered to eat; for during the month of November no less than 78 tons of meat were seized in London markets by the inspectors and destroyed as unfit for human food.

**The Medical Graduates College and Polyclinic, London.**—According to the *British Medical Journal*, the

Surgeon Major HENRY S. KILBOURNE, having reported to the quartermaster-general of the Army for duty as medical superintendent of transports, will proceed from Washington, D. C., to Philadelphia, Pa., on business pertaining to the transport service, and thence to New York City, where he will take station.

Leave for one month on account of sickness, to date from Dec. 1, is granted Brigade-Surgeon Major WALLACE NEE. Dec. 1. Brigade-Surgeon Major WALLACE NEE is honorably discharged, to take effect Jan. 5.

Surgeon Major EZRA WOODBURN is relieved from duty at Fort Trumbull and will proceed to New York City for duty pertaining to the muster-out of New York Volunteers.

Asst. Surgeon Capt. HENRY R. STILES is relieved from duty at Fort Preble and will proceed to New York City on the hospital-ship "Relief" for duty.

Acting Asst. Surgeon HAROLD W. COWLEY is relieved from duty at the U. S. General Hospital, Fort Myer, and will report at Columbus Barracks for duty.

Acting Asst. Surgeon BENJAMIN J. EDGER, Jr., is relieved from duty at the U. S. General Hospital, Fort Myer, and will report at Washington Barracks for duty.

Acting Asst. Surgeon C. B. MILLHOFF will proceed from Johnstown, Pa., to Washington Barracks for duty.

Asst. Surgeon-Gen. Col. CHARLES R. GREENLEAF will proceed to Savannah, Ga., and to such other places as may be necessary, for the purpose of inspecting the Medical Department at that and other stations. Officers of the Army will render Col. Greenleaf every facility to enable him to effect the object of his inspections.

Acting Asst. Surgeon ISAAC W. BREWER will proceed to Washington Barracks for duty.

Acting Asst. Surgeon WALLACE S. CHAPMAN is relieved from duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, Va., and will proceed to Denver, Col., for annulment of his contract.

Acting Asst. Surgeon F. MEDINA FENNER will proceed from New York City to Savannah, Ga., and report to Brig.-Gen. George W. Davis for assignment to duty with troops under orders for Pinar del Rio, Cuba.

Acting Asst. Surgeon JOHN R. HICKS is relieved from duty at the U. S. General Hospital, Fort Monroe, and will proceed to Fort Crook for duty.

Acting Asst. Surgeon RANDOLPH M. MYERS, now on sick leave, will proceed to New York City and report on U. S. hospital-ship "Bay State," for duty.

Acting Asst. Surgeon LOUIS T. HESS will proceed to Columbus Barracks for duty.

Asst. Surgeon First Lieut. BASIL H. DUTCHER is relieved from duty at Fort Grant, and will proceed to Fort Leavenworth for duty.

Acting Asst. Surgeon C. L. G. ANDERSON is relieved from duty at Fort Myer, and will report to Asst. Surgeon Capt. Henry A. Shaw, in charge of hospital train, for duty.

Acting Asst. Surgeon JOHN E. BACON is relieved from duty at Fort Hancock, and will proceed to Fort Grant, for duty.

Brigade-Surgeon Major RANDALL R. HUNTER, upon the expiration of his present leave, will proceed to Santiago, Cuba, for duty.

Brigade-Surgeon Major HENRY D. THOMSSON will report to the commanding General, 4th Army Corps, for assignment to duty.

Asst. Surgeon Captain CHARLES E. B. FLAGG is relieved from further duty at the U. S. General Hospital, Fort McPherson and will proceed to Macon, Ga., and report to the commanding general, 1st Army Corps, for duty.

Brigade-Surgeon Major WM. J. WAKEMAN upon relinquishment of his present sick leave, is relieved from duty at Fort Huachuca, and from duty as chief surgeon, 1st Brigade, 1st Division, 2d Army Corps, and will proceed to Columbus Barracks for duty.

Surgeon Major BENJAMIN F. POPE will proceed to Savannah, Ga., for duty pertaining to the supervision of the construction of the general hospital at that place, and he is assigned to the command of that hospital upon its completion.

The order which relieves Asst. Surgeon Capt. HENRY R. STILES from duty at Fort Preble, is revoked.

Acting Asst. Surgeon FRANCIS M. MCCALLUM will proceed to Fort Leavenworth for duty.

Acting Asst. Surgeon CHARLES B. MITTELSTAEDT will proceed from New York City to Savannah, Ga., and upon arrival will report to the commanding officer of the U. S. transport "Mobile" for duty.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Asst. Surgeon R. C. HOLCOMBE, appointed assistant surgeon, relative rank of ensign, December 2, 1898.

Passed Asst. Surgeon R. K. SMITH, ordered to the Naval Hospital, New York.

Asst. Surgeon J. R. WHITING, detached from the Naval Hospital, New York, and ordered to the "Chicago."

Surgeon J. C. BYRNES, ordered to the New York Navy Yard and also to temporary duty in connection with the vessels in reserve at that yard.

Asst. Surgeon F. B. HANCOCK, detached from the Norfolk Navy Yard and ordered to the "Eagle."

first meeting of the governors will be held January 26, 1899, at which time, in addition to the adoption of by-laws and regulations and the election of officers, the organization of the following departments will be authorized: (1) An office to afford information as to educational opportunities in the United Kingdom. (2) Clinical demonstrations will be given every afternoon. (3) Clinical lectures will be delivered at stated times. (4) Courses of systematic lectures on physical diagnosis will be given by appointed lecturers, and arrangements will be made for the teaching of bacteriology, as well as for demonstrations on operative surgery, the use of the Röntgen rays, and on surgical and medical instruments. (5) In a clinical and pathologic laboratory, opportunity will be afforded for gaining practical experience in pathologic work. (6) A museum and library, the latter fitted to serve as a reading-room and place of resort; the museum will contain chiefly objects of clinical and practical interest, such as drawings, models, surgical instruments, and apparatus for research.

#### CONTINENTAL EUROPE.

**A new hospital**, under the direction of Dr. Bari, has just been opened in **Tunis, Algiers**.

**Mortality Among French Troops**.—Recently published statistics show that the death-rate of the troops in France amounts to 6.08; in Algiers, 12.27, and in the colonies to 42.95 per cent.

**A sanatorium for tuberculous patients** is to be erected in Havre, France. It will take the form of a villa situated on the shore. A committee, of which M. Sorel is chairman, is inspecting various sanatoria along the banks of the Rhine and elsewhere with a view of incorporating their desirable features in the construction of the new building.

**A society for the study of malarial fever** and the means to be adopted to prevent it or lessen its ravages has been formed in Italy. A prospectus has been issued, in which it is stated that each year in Italy alone over 2,000,000 people are attacked by the disease, and of these 15,000 succumb. The disease is prevalent in 63 provinces, and almost 3,000 communes, and prevents the cultivation of 5,000,000 acres of land.

**The Mortality Among Infants Reduced by Enemas of Artificial Serum**.—The mortality among infants born before term at the Maternité of Marseilles has diminished from 36 in 1896, to 6 during the past year. This reduction is considered dependent upon the employment of rectal enemas of artificial serum, subcutaneous injections having been abandoned. The amount administered is 3 ounces once daily, or one ounce three times daily.

**The Fungus-Parasite of Carcinoma**.—At a recent meeting of the Société de Biologie de Paris, Bramade presented a communication detailing the results of his investigations into the fungus-parasite of carcinoma. During the past four years he has made cultures from 204 cases of carcinoma of the ovary, rectum, cervix and body of the uterus, tongue, parotid gland, and breast, as well as sarcoma of the maxilla. From all of these he has been able to isolate a fungus presenting a marked resemblance to the family of the ascomycetes. It appears in the form of round cells that form spherules, which give rise to cylindroid spores, and these in turn to hyphæ. The spherules are yellow in color, round or ovoid in shape, possess a hyaline membrane, and a pore through which the spore escapes.

**The International Congress for Gynecology and Obstetrics**.—At the meeting to be held in Amsterdam, from August 8th to 12th, the following subjects have been arranged for discussion: (1) The surgical treatment of fibromyomas; (2) the influence of antisepsis, or the improvement in technic, upon modern operative gynecology; (3) the influence of position upon the form and size of the pelvis; (4) a comparison of the indications for Cesarean section, symphyseotomy, craniotomy, and induced premature labor.

**Medical Appliances in French Railway-trains**.—A recent accident near the Gare du Nord, in Paris, has directed the attention of the French officials to the advisability of having on railway-trains appliances and medicinal agents to be employed in case of accident. Because of the want of these, the injured in the recent accident were in distress for a considerable time. The French Minister of Public Works has given orders that henceforth the necessary appliances and medicines shall be on all trains and in all railway-stations.

**Foreign Bodies in the Nose**.—At a recent meeting of the Société de Chirurgie de Paris, Félizet reported upon his method of extracting foreign bodies from the nose. Of this condition he has observed 60 cases in children during the past 10 years. For some years he had been in the habit of extracting the bodies by the direct method, but latterly he has abandoned this form of procedure in favor of the indirect force exerted by an injection forced into the other nostril. He has treated in this manner 31 cases, in 26 of which the foreign body was successfully delivered.

**Deaf and Dumb in Norway**.—According to the *Journal of the American Medical Association*, quoting the *Centralblatt für Chirurgie*, v. Uchermann has recently compiled the statistics of all the deaf and dumb persons in Norway, with objective data in most cases. Half are congenital defects. Of the cases of acquired deafness, one-fourth were consecutive to scarlet fever, the rest mainly to cerebral and middle-ear affections. The influence of heredity is marked, especially the heredity of consanguineous marriages, although the inheritance of deafness and dumbness frequently alternates with other abnormalities, idiocy, epilepsy, malformations, retinitis pigmentosa, etc. The preponderance of deaf and dumb children after consanguineous marriages is attributed to the accumulation of family peculiarities.

**"Christian Scientists"**.—An interesting side-light is thrown upon the unchristian motives of the "Christian Scientists" by the circumstances attending the death recently of Countess Milewska, of Warsaw, a few years ago one of the most popular social leaders of Poland. Three years ago the Countess withdrew from the social circle and became an enthusiastic follower of spiritualism. As she was wealthy and generous a large number of hypnotists gathered about her, and soon chose her as their leader. Some time ago the Countess became affected with carcinoma. Then, renouncing her physicians, and placing herself under the ministrations of a Madame Selkovitch, she put her trust in the "power," and although she is said to have suffered untold agonies for six months she appeared satisfied that the souls of her dear departed ones were bearing the burden of her miseries. Finally she died, and when her will was read, it transpired that Madame Selkovitch was to receive \$100,000 and that a like sum was devised to the Society for Spiritual Research, of which the Countess had been president. At this juncture, the police interfered, becoming convinced that



the Countess had been the victim of an alleged band of sharpers.

**Delirium Following the Administration of Sodium Salicylate.**—At a recent meeting of the Société Médicale des Hôpitaux de Paris, Rendu reported the case of a woman, suffering from rheumatic fever, who was given during the day 90 gr. of sodium salicylate in divided doses. This caused relief from pain and reduction of the fever. On the following evening the patient was suddenly seized with rigors, followed by violent delirium, and visual and auditory hallucinations. On the following morning the woman was in a state of acute mania, the temperature being 100.4° F., the pupils unequal and contracted, the urine scanty, albuminous, and containing indican. Cerebral rheumatism being excluded, because of the absence of high temperature and the tendency to mycosis, the diagnosis wavered between uremia and salicylic delirium. Although the patient had taken but 3 drams of the salicylate, it was, nevertheless, stopped, upon which the delirium subsided, the urine became normal, and the articular pains reappeared.

#### MISCELLANY.

**The Duration of Life.**—*La Riforma Medica*, No. 178, 1897, states that an animal lives five times as long as it requires to complete the development of its skeleton. The camel completes the development of its skeleton at the age of 8 years, the horse at 5 years, the ox at 4 years, the lion at 4 years, the dog at 2 years, the cat at 1½ years, and the rabbit at 1 year of age; while the average duration of life in these animals is as follows: The camel 40 years, the horse 25 years, the ox 20 years, the lion 20 years, the dog 10 years, the cat 7½ years, and the rabbit 5 years. The duration of life of the elephant is not known. The older authorities asserted that the elephant lives from 400 to 500 years; Aristotle and Buffon stated 200 years; but to ascertain this accurately statistics for long periods of time must be kept. As the development of the human skeleton is complete at about the twentieth year, the natural duration of life for man should be about 100 years.

**Obituary.**—WILLIAM FREDERICK CLEVELAND, M.D., St. And., at one time president of the Harveian Society, president of the Metropolitan Counties Branch of the British Medical Association, and on two occasions vice-president of the Obstetrical Section of the same Association, London, November 24th, aged 75 years.—GEORGE JAMES ALLMAN, M.D., F.R.S., formerly Regius professor of natural science at the University of Edinburgh, aged 85 years.—SIR WILLIAM JENNER, the distinguished physician-in-ordinary to Queen Victoria, in London, December 12th, aged 84 years. He was well and favorably known to the public at large, not only as a distinguished pathologist and physician, but also as president of the Royal College of Physicians of London, from 1881–1889, and as the author of numerous valuable contributions to medical literature. DR. TUREL, professor of pathology in the Medical School of Grenoble.—DR. LIENHART, professor of medical botany in Lille, France.—DR. JUNGE, formerly professor of ophthalmology in the Military Academy of Medicine at St. Petersburg.—DR. CARPINSKY, formerly professor of minor surgery in the Military Academy of Medicine at St. Petersburg.—DR. TERRILLON, professor of surgery in the University of Paris.

**Anesthetics in Scandinavian Countries.**—According to the *Journal of the American Medical Association*, the report presented at the Northern Surgical Congress held at

Helsingfors in August, embraced 25,305 anesthetics with chloroform, resulting in 15 deaths, asphyxia in 303 cases, and vomiting in 1,789. With ether, 2,926; no death; asphyxia in 25; vomiting in 309. With chloroform and ether in 3,616 anesthetics there were no deaths, but asphyxia in 82, and vomiting in 464. With 794 with ethyl bromid, there was no death; asphyxia in 3 and vomiting in 39. The secondary effects noted were: with chloroform 18 cases of death, 54 of heart-failure, 46 of pulmonary troubles, 153 of albuminuria, 49 of somnolency, 20 of icterus, and 4,338 of vomiting. With ether: 3 deaths, 4 cases of heart-failure; 28, pulmonary troubles; 46, albuminuria; no icterus; 585, vomiting. With chloroform-ether, 8 deaths; 13 cases of heart-failure; 13, pulmonary troubles; 17, albuminuria; 10, somnolency; 1, icterus; 731, vomiting. No secondary effects were observed with ethyl bromid, except vomiting in 7 cases. The total number of all kinds of anesthesia reported was for the last three years, 32,641. The mortality was therefore: with chloroform, one death in 1,687 anesthetics, and one death in 1,406 from the after-effects. No death from the other narcotics directly, but indirectly one in 975 with ether; one in 452 with chloroform-ether, and none directly or indirectly from the 794 anesthetics with ethyl bromid.

**The Feet of Chinese Women.**—It is well known that the Chinese adopt a method of distortion of the feet of their women whereby they produce forced flexion of the foot in the anteroposterior direction, with twisting of the toes around the first metacarpal bone. The whole weight of the body thus rests upon the calcaneum, which forms an inadequate basis of support. The *British Medical Journal* gives an interesting account of the anatomic appearances of the foot of a Chinese girl, aged 20 years, who died of tuberculosis, and whose foot was dissected and described by Dr. Matignon, physician to the French Embassy at Peking. As the girl belonged to the lower social strata, her feet were not so small as those of the typical Chinese lady; they measured 17 cm. in length, whilst those of a fashionable lady do not exceed 13 or 14 cm. The outer surface of the foot had the form of a right-angled triangle, the upper border, slightly convex at the level of the scaphoid, being the hypotenuse. The internal surface was of much the same form, but the lower border was less sharply defined, and it had something of the shape of a wide circumflex accent, on the anterior part of which were seen the dorsa of the toes, folded upon themselves. The plantar surface, ellipsoid in shape, was broader at the back than in front; a groove 1½ in. in depth divided the sole into two distinct regions—that of the heel, shaped like a horseshoe, that of the toes, more or less triangular. The last four toes were bent completely under the sole, and touched the ground by their dorsal surfaces. The toes, besides being flexed, were rotated on their own axes, being bent from without inward, and from behind forward. The great toe was flattened and on perpendicular section appeared triangular. The nails were changed in appearance and atrophied. The toes themselves were small and thin, and had lost all independent mobility. The skin on the dorsum and the sides was normal, but abundantly wrinkled on the sole; it was covered with callosities over the heel and the great toe. The whole foot was greatly arched, the external malleolus being 7, the internal 8 cm. from the ground. On dissection the plantar muscles were found extremely atrophied. The bones were in general of remarkable tenuity. The metatarsals were not deformed, but only small; the scaphoid was normal, the cuboid and cuneiform bones were atrophied and flattened from side to side. The calcaneum was the most deformed of all, though of normal size; it was bent on itself, and twisted into the shape of a comma.



## The Latest Literature.

## British Medical Journal.

November 26, 1898. [No. 1978.]

1. Coxa Vara. THORNLEY STOKER.
2. The Excision of Some Carbuncles. RUSHTON PARKER.
3. Suppurative Pericarditis Treated by Cartilage-Resection, Incision, and Drainage; Broncho-Pneumonia; Death. HENRY BETHAM ROBINSON.
4. Excision of the Larynx and Part of the Esophagus. THOMAS WALLACE.
5. Cerebral Tumors Successfully Removed by Operation. THOMAS OLIVER and GEORGE E. WILLIAMSON.
6. An Operation for Hemorrhoids. W. THELWALL THOMAS.
7. Antistreptococcus-Serum in the Treatment of Primary Venereal Sores and Their Complications. JAMES MOORE.
8. A Case of Septicemia Treated with Antistreptococcus Serum; Death. E. A. LERMITTE.
9. Note on the Treatment of Arthritis by Means of Hot-Air Baths. T. SYDNEY SHORT.
10. Note on Multiple Family Cancer. W. ROGER WILLIAMS.
11. Extrauterine Pregnancy: Five Months' Fetus; Placenta Implanted on Anterior Abdominal Wall; Operation; Recovery. JAMES OLIVER.
12. The Treatment of Eczema. L. D. L. ELLIS.
13. Cyst of the Maxillary Antrum. WILLIAM R. H. STEWART.
14. The Treatment of Leukocythemia by Carbolic-Acid Gas. WILLIAM EWART.
15. Three Cases of Double Empyema. MARTIN RANDALL.

1.—Stoker treats of **coxa vara** in an elementary way, and calls attention to 8 cases that came under his observation. [C.H.F.]

2.—The **treatment of carbuncles by excision** is no less formidable an operation, than excision of tuberculous glands, or curettement of patches of lupus, and quite as justifiable. Parker has carried out this mode of treatment in a number of cases, and has found it superior to the ordinary treatment by incision. The almost absolute relief of pain following excision is noteworthy. [C.H.F.]

3.—In a case of **suppurative pericarditis**, in a child 4 years old, Robinson opened and **drained the pericardiac sac** after excision of an inch of the fifth left costal cartilage. The patient, who was moderately cyanotic, and suffering evidently from cardiac embarrassment before the operation, enjoyed a temporary improvement. Death ensued, however, on the third day, not as a result of the operation, but probably from a broncho-pneumonia, and a rapidly developing meningitis. The pus from the pericardium yielded an almost pure growth of Friedländer's pneumococcus. [C.H.F.]

5.—Oliver and Williamson report a case in which a tumor of considerable size, which turned out to be a round-celled sarcoma, was removed from the region of Rolando. The absence of any serious effects following such a grave operation is worthy of note. On the following day the patient expressed himself as feeling quite well, and shortly after recovery from the effects of the anesthetic, power of motion returned to the arm and leg, both of which were paralyzed before operation. In less than a year there was evidence of local recurrence, although the patient's general condition remained quite good. In a second case a tumor, which was removed from the same region, proved to be an angioma, a rare form of cerebral growth. In this case too, there was no apparent ill-effect as a result of the operation. The patient suffered for a time from loss of speech, but this was gradually recovered from. [C.H.F.]

6.—Thomas, in his **operation for hemorrhoids**, after excising the veins, unites the edges of the resulting stump by a continuous suture of catgut, thereby insuring union by first intention, and at the same time preventing either reactionary or secondary hemorrhage. A piece of catgut, about a foot in length, is introduced through the stump until about one-half the length of the suture lies on each side. A reef-knot is tied on the stump, and the suture on the right side is drawn over to the left and passed through the stump lower down, and back again to the right. The suture on the left is introduced in a reverse order, a reef-knot is again tied, and the suture

is continued to the end of the stump, making 5 or 6 crossings to the inch. [C.H.F.]

7.—After a series of experiments in the **treatment of chancroid and chancroidal buboes with antistreptococci-serum**, Moore has arrived at the following conclusions: If 5 cu. cm. of serum are injected subcutaneously into the inguinal region in cases in which the inflammatory bubo is likely to develop, it may prove a prophylactic measure, and assist in healing the chancroid. If a bubo has already developed, and the symptoms have not been present for more than 48 hours, an injection of 10 cu. cm. into the inguinal region will cause resolution in the majority of cases. If pus has already formed, the serum may possibly limit extension of the suppuration, but in this class of cases the results have been anything but satisfactory. If phagedenic ulceration complicates venereal sores, the serum seems not only to neutralize the toxins in the blood, but also to hasten the healing of the ulcer. [C.H.F.]

9.—In the **treatment of arthritis by means of hot-air baths**, Short has employed the apparatus commonly used in hospitals for the administration of hot-air baths for the purpose of producing diaphoresis. In order to prevent the saturation of the air by moisture the top of the tent is so arranged that a small opening admits of the escape of the hot air. The patient is placed inside the tent without any covering. The temperature is recorded by means of a long thermometer introduced through a hole in the blanket at the side of the tent, midway between the head and the feet, placing the bulb as near the patient's body as possible without touching it. By allowing the hot air to escape after the patient has broken out into a good perspiration or complains of feeling too hot, the temperature can be elevated to 200° F. This temperature should be reached by degrees, however, the first bath not going above 130°. By this method Short has treated 3 cases of chronic rheumatism, 2 of chronic gout, 2 of subacute rheumatism, 1 of chronic arthritis, probably due to injury, and arthritis associated with osteitis. The last-mentioned case was not relieved; 1 case was slightly relieved, 2 distinctly relieved, and the remaining 5 greatly relieved. The 4 classes of cases to which this method is especially applicable are: (1) subacute attacks of rheumatic arthritis; (2) subacute arthritis following an acute attack of either rheumatism or gout or consequent on a pyemic condition, such as gonorrheal arthritis; (3) cases of chronic thickening remaining as a consequence of acute rheumatism or rheumatoid arthritis associated with pain and stiffness on movement, with continual aching pains in the neighborhood of the joints; (4) cases of impaired mobility following injuries to joints or to muscles in their neighborhood, and cases of joint-trouble from trophic causes or disuse. [S.M.H.]

10.—Williams publishes the following record on the **prevalence of carcinoma in one family**. The patient in question, aged 53, had a uterine carcinoma; and her maternal grandmother, mother, mother's sister, and the patient's 2 sisters had all died of carcinoma of the uterus. Of her brothers and sisters, 3 had died in infancy, and 5 are still living and well. [C.H.F.]

11.—Oliver reports a case of **extra-uterine pregnancy** occurring in a woman aged 28 years. At the operation the placenta was found adherent to the anterior abdominal wall and extended some inches to the right and left of the abdominal incision, greatly complicating the operation. The fetus, 5 months old, had probably been dead 6 or 7 weeks. It was lodged in the substance of the broad ligament and had separated the bladder from the uterus. The cavity in the broad ligament was plugged with cyanid-gauze, which was removed 24 hours after the operation. Convalescence proceeded uninterrupted. [W.K.]

12.—Ellis believes that the combinations of remedies for the treatment of **eczema** should be frequently changed. Antisepsis and exclusion of air from the part are the two most important factors in the cure of the disease. [S.M.H.]

14.—Ewart believes that in some cases of **leukocythemia systematic inhalation of carbonic-acid gas**, while failing to reduce the spleen to its normal size, leads to considerable diminution, and to some improvement in the patient's general condition. This treatment does not arrest the disease nor efficiently counteract its fatal tendency; nor does it permanently check the excess of leukocytes in the blood. Ewart offers no explanation for the different behavior of different cases under this treatment, but he advises



the use of the gas, as it seems to produce decided temporary improvement. [S.M.H.]

15.—Randall reports **three cases of bilateral emphysema**, in one of which both sides were operated upon at one sitting, although in this instance the patient was not quite two years of age. Recovery ensued. Ordinarily it is not considered justifiable to open both pleural cavities at the same operation. If, however, the patient is not shocked after the first pleural cavity has been incised, and the lung seems to expand satisfactorily, there is no reason why the pleural cavity on the opposite side should not be attacked at the same time. [C.H.F.]

### Lancet.

November 26, 1898. [No. 3926.]

1. The Development of London Hospitals during the Nineteenth Century. CLINTON T. DENT.
2. The Treatment of Neuralgia and Rheumatism by Currents of Hot Air, with some Account of the Apparatus Employed. WM. TAYLOR.
3. A Case of Fracture of the Inner Table of the Skull without Injury to the Outer Table. R. F. STANDAGE.
4. Cure of Left Carotid Aneurysm by Manipulation. RICHARD SLOCOCK.
5. Injection of Saline Solution in Shock. W. THELWALL THOMAS.
6. A Case of Emphysema, a Sequel of Malignant Disease of the Sigmoid Flexure. H. KERR.
7. Tetany and Tetanoid Spasms associated with Gastric Dilatation treated Surgically. A. W. MAYO ROBSON.
8. The Use of morphin in Cardiac Disease. F. S. TOOGOOD.
9. A Case of Death from Diabetes Mellitus in which that Disease gave no Premonitory Symptoms. T. WILSON PARRY.
10. A Case of Cerebral Tumor; Rapid Onset of Characteristic Symptoms; Operation; Death; Remarks. EDWARD ARMITAGE.
11. Vesico-vaginal Septum Torn during Labor; Sloughing Vaginitis; Subsequent Closure of the Vulva. THOMAS WILSON.
12. A Visit to the Sanatorium for Consumptives at Nordrach. THOMAS GLOVER LYON and CHARLES LAMPIOUGH.
13. A Case of Acute Pemphigus; Recovery. (Under the care of BUXTON SHILLITOE)
14. Two Cases of Omental Umbilical Hernia attended by Sloughing. (Under the care of RUSHTON PARKER)

2.—Taylor describes an **electro-thermogen** that he has successfully employed in the **treatment of neuralgia and rheumatism**, and he relates a number of intractable cases that have readily yielded under currents of hot air applied by means of this instrument. [S.M.H.]

4.—Slocock reports a case of **carotid aneurysm** that was **cured** in an unintentional and unexpected way by **manipulation**. The attending physician, wishing to illustrate to the patient the effects of ligation, the treatment that was advised, pressed firmly over the sac and artery. Within two days a clot formed, pulsation had ceased altogether, and in a short time there was not the least vestige of the aneurysm, and the patient was able to return to his occupation. [C.H.F.]

5.—Thomas reports a few cases illustrative of the marked beneficial effects of **intravenous injections of saline solutions in shock**. The most remarkable of the three cases was one of cut-throat in which the external and internal jugular veins were entirely divided and the common carotid artery wounded. The patient, when first seen, was *in extremis*, but reaction set in almost immediately upon the injection of 20 fluid-ounces of saline solution. [C.H.F.]

6.—Kerr reports the case of a woman 66 years old, who suddenly developed **subcutaneous emphysema** involving the whole of the left side and back, extending from the axilla to the left iliac region, death taking place on the 7th day, and the cause of the condition not having been discovered. The autopsy disclosed in the abdominal wall of the left iliac region a cavity of some size containing liquid fecal matter and gas and communicating by a small opening with the sigmoid flexure. In this organ there was found a new-growth involving the whole circumference of the bowel and causing decided narrowing of the lumen of the gut. The in-

testine was ulcerated at the site of the tumor and communicated with the sac through one of the ulcerated points. The flexure above the tumor was much dilated and contained some liquid feces. The points of interest are the probable long duration of the malignant disease, with stricture of the bowel, without urgent symptoms, the supervention of the subcutaneous emphysema through communication between the tissues of the abdominal wall and the bowel, and the difficulties in the way of reaching a diagnosis in the absence of more subjective and objective symptoms. [S.M.H.]

7.—In the treatment of **tetany or tetanoid spasms, associated with dilatation of the stomach**, the possibilities of surgical intervention should not be ignored, especially as the prognosis attending other modes of treatment is so high (75%). From his experience in the operative treatment of this condition, Robson is prone to take a more hopeful view. In three instances he performed gastropasty upon patients in whom gastric dilatation was attended with tetanoid symptoms, which in one case were so pronounced and so widespread as to suggest strychnin-poisoning. The symptoms were entirely relieved by the operation in each case. The immediate cause of tetany is probably a reflex effect produced by painful contraction of the pylorus, supplemented by the absorption of some poison from the dilated stomach, which increases the excitability of the nervous system. It is worthy of note that Robson has never seen these tetanoid symptoms associated other than with dilatation from simple causes, such as adhesions to the pylorus, gall-bladder or liver, or with stricture following cicatrization of ulcers. They have never been associated with obstructive dilatation or with dilatation due to carcinoma of the pylorus. [C.H.F.]

8.—Toogood makes a report upon the use of **morphin in cardiac disease**. He has administered the drug chiefly in the distressing cases of heart-disease in which digitalis, strophanthus, and convallaria were without beneficial effect upon the heart, and acted as irritants upon the stomach. In cases in which there was extreme irritability and irregularity in rhythm and in pulse-volume, with extreme dyspnea and sleeplessness, and with the urine scanty in amount and albuminous, a hypodermic injection of  $\frac{1}{4}$  grain of morphin or from 10 to 15 minims of the liquor morphine had the most gratifying effect, causing the pulse to become strong and regular, the edema and dyspnea to disappear, the urine to become normal in amount and character, the albumin to become decidedly lessened or to disappear. No accident occurred in a large number of cases. The beneficial results are attributed to the action of the morphin upon the nervous apparatus of the cardio-vascular system, both central and local, bringing rest to the overstrained organ and allowing it a chance of developing recuperative power. [S.M.H.]

9.—Parry reports the case of a woman, 68 years of age, previously in apparently perfect health, who suddenly fell over while dressing, without evidence of any warning, immediately becoming comatose. The pupils were contracted, but reacted but slightly to light, and the conjunctival reflex was abolished. The limbs were flaccid and the knee-jerks absent. The heart was normal; urine and feces were passed involuntarily. Several hours after the onset of the illness some urine was obtained by means of a catheter, and found to be acid in reaction, with a specific gravity of 1023, containing a slight trace of albumin, and a large quantity of grape-sugar. The patient died 26 hours after the onset of the illness. Parry concludes that death was due to diabetic coma. He excludes the possibility of apoplexy by the normal size of the heart, the absence of murmurs, and accentuation of the aortic sound, together with the presence of normal tension and an absence of atheroma. There was no evidence of syphilis, and epilepsy was excluded on the ground of absence of tonic or chronic spasms and frothing at the mouth. [S.M.H.]

11. Wilson reports a case in which the vesico-vaginal septum was torn during labor. On examination, 9 days after labor, the floor of the bladder and urethra was found wanting, the bladder and vagina forming one large cavity. The operation of colpocleisis was successfully performed. Menstruation was restored later, and there was total absence of any irritation of the new urine-reservoir, of phosphatic deposit, and of subjective discomfort, either from the urinary secretion or from the menstrual function carried on under the new conditions. Some troublesome symptoms relating



to these functions might be expected, and as a matter of experience in some of the cases in which the vagina has been thrown into the bladder, vesical catarrh, metritis, pyelonephritis, or phosphatic calculi have been observed, but in the majority of subjects, as in the present instance, the different functions are continued in comfort. [W.K.]

13.—Shillitoe reports a case of **acute pemphigus** occurring in a girl, aged 19 years. The rash appeared in the form of clear blebs on a slightly reddened base, first on the hips and arms, later on the legs, thighs, back, neck, forearms, and slightly on the chest and chin. The bullæ varied in size from that of a pea to that of a walnut. They at first contained clear fluid, which later became purulent and in some cases hemorrhagic. They finally coalesced and formed large areas of sodden epithelium with muco-purulent discharge. At no time was there any constitutional disturbance. In one month the patient was almost entirely well, but she experienced several relapses and did not entirely recover until the end of six months. The internal treatment, which seemed of no effect, consisted in the administration of arsenic. Locally decided relief attended the administration of iodine baths (1 to 1000) and the use of liquor carbonis detergens. Bacteriologic examination of the clear fluid from the bullæ showed the presence of the diplococcus described by Demme. Shillitoe considers the recovery and the absence of constitutional symptoms quite remarkable. A month before the appearance of the rash superficial whitlows formed on several of the fingers, a fact to be emphasized, since Pernet has described several cases occurring in butchers in whom whitlows preceded the rash, and suggesting the possibility of the poison being contained in the meat. The patient was a cook and may have thus been brought in contact with uncooked meats. [S.M.H.]

#### New York Medical Journal.

December 10, 1898. [Vol. lxviii, No. 24.]

1. The Cultivation of the Plasmodium Malariae and the Rational Treatment of Malarial Disease. L. H. WARNER.
2. Is Appendicitis a Surgical Disease? CARL BECK. (Concluded.)
3. The Electrotherapeutic Control of Currents from Central Stations. GEORGE W. JACOBY. (Concluded.)
4. Continuous Application of Icebags in the Management of Pyrexia. L. B. LOCKARD.
5. Hæmatocele of Extraordinary Size following Labor; with Recovery. M. J. SHIELDS.
6. Adenoma of the Soft Palate. W. L. BULLARD.
7. Membranous Enteritis. D. ALBERT ROSE.
8. A Modification of Laborde's Method for Resuscitation in Deep Asphyxia. W. FREUDENTHAL.

1.—In the hope of eliciting some additional facts relating to the transmission of the malarial parasite by the mosquito, Warner procured specimens of marshy water from various malarial districts and subjected them to bacteriologic analysis. In each of the 8 different samples he found one or more of the different spirilla, the spiromonas volubilis, the spiromonas cohnii and the spirulum volutans. None of these species produced any growth when introduced into blood-serum culture-tubes and kept in an incubator from 24 to 48 hours. In addition human-blood, was collected by means of a sterilized hollow needle connected with the bulb of a sterilized syringe, from a number of individuals, and quickly transferred to a blood-serum culture-tube, placed in a thermostat and kept at a temperature of 100°. Next a number of mosquitos were collected in a sterilized bottle and from these was abstracted by means of a platinum needle, some of the albuminous poison with which mosquitos are charged, and some of it inserted into each of the blood-serum cultures. Examination after 24 hours revealed a parasite resembling in every respect the malarial parasite, from which facts it is believed that malarial infection is to a certain extent attributable to the mosquito. A series of examinations of the blood obtained from patients suffering with malarial and typhoid fevers at Camp Wikoff was made. All of the men examined had been thoroughly exposed to malaria, and most of them had received large doses of quinin. About 100 cases were examined on different days and the plasmodium was demonstrated in 47. Clinical

evidence of malaria was evident in the negative cases. The treatment in most of the cases consisted in quinin, strychnin and Warburg's tincture. The temperature was remittent in type, and the improvement under treatment was slow. Realizing that quinin was poisonous only to the plasmodium and useless against the toxin of the plasmodium, and as it is well-known that the malarial parasite feeds on the hemoglobin of the red corpuscles he administered, in conjunction with quinin, a preparation said to contain nucleo-albumins, bone-marrow extract and beef-peptones, endeavoring with the latter remedy to increase the amount of hemoglobin, and the number of red corpuscles and to obtain its germicidal effect. In 7 cases in which this treatment was adopted, after quinin had been given for 6 days without effect, the temperature fell rapidly to or near to the normal. The destruction of the hemoglobin in the red cells by the malarial parasite aids in hemolysis and it is believed that this defect can be compensated for by the administration of such remedies as tend to increase the amount of hemoglobin in the blood, employing at the same time, of course, such antiperiodics as quinin. [S.M.H.]

2.—In his technic on operations upon the vermiform appendix, Beck favors, in the preparation of the patient's skin, the use of the soap-poultice applied for a period of 24 hours. Alcohol is regarded as more important than any antiseptic drug, as it dissolves the fat of the skin, in which the bacteria are imbedded. Beck and his assistants wear sterilized linen gloves. The incision, a modification of McBurney's, begins about three-fingers' breadth above the symphysis, and ends the same distance from the anterior end of the eleventh rib. The line of the incision is in the direction of the fibers of the external oblique muscle, and is so directed that its center falls to the middle of a line drawn from the symphysis to the anterior end of the eleventh rib. The fibers of the external oblique muscle are separated by blunt dissection, and those of the anterior oblique are divided in a like manner, in a line parallel to their axis. The appendix itself is removed after a ligature has been thrown around its base, and the edges of the resulting stump are united by Lembert sutures. For ligature-material and suture-material formalin-catgut, thoroughly sterilized by boiling, is preferred. When there is a mass of exudate surrounding the appendix, with or without the formation of an abscess, the incision must be made to correspond with the location of the exudate. When the appendix is gangrenous, or when it is tightly adherent to a wall of protecting adhesions, it is preferable to leave it there, provided it cannot be removed without destroying the protecting wall. [C.H.F.]

4.—Lockard recommends the use of ice-bags applied over the arteries at their most superficial points for the purpose of reducing and regulating pyrexia. For the first hour or two their application gives rise to some discomfort, but this is soon succeeded by a period in which their presence is barely noted. In many of the conditions in which their use is indicated they are rather agreeable than otherwise, notably in inflammatory rheumatism and pneumonia. The number of bags to be applied and the mode of use necessarily differ according to the individual type of disease and the degree of pyrexia. The method possesses an advantage that does not apply to other methods of reducing temperature, namely, the non-necessity of disturbing the patient. They further have the great advantage of making it possible to regulate perfectly the amount of cold in accordance with the degree of the fever present. In moderate degree, with a temperature of say 102°, 4 bags are ordinarily applied, one in each axilla and one in each popliteal space. If the fever is still higher these are reinforced by one at the nape of the neck and one at each wrist, and in exceptional cases it becomes necessary to place one also at each ankle. In the presence of pneumonia, pericarditis, inflamed joints, etc., they may also be applied to the affected areas. [S.M.H.]

5.—Shields reports the occurrence of a large hæmatocele following labor in a multipara, who had been delivered by a midwife. The interesting features of the case were the size of the tumor, the total paralysis of the sphincter ani that later disappeared, the subsequent rupture of the tumor through the vagina, and the complete recovery of the patient. [W.K.]

7.—Rose relates a case of membranous enteritis in a woman, aged 42 years, who had been constipated for several months and one day noticed large stringy masses in her



stools. This condition recurred off and on for some weeks. When first observed the patient had just passed two pieces of mucus which were perfect casts of the bowel, one about 8 and the other 10 inches long. She had paroxysmal pains in the abdomen following the course of the colon, gnawing and moving in character; constipation was present, followed by diarrhea, which usually gave some relief. There was considerable loss of weight and nervous irritability. The treatment consisted in careful regulation of the diet, with restriction to milk alone for some time, followed by its gradual increase and especially avoiding articles yielding much residue. Locally large enemas of warm boric acid were used daily, flushing out the colon as much as possible. Internally arsenic was administered with small doses of mercuric chlorid. The casts continued to pass for several months, later they decreased greatly in frequency, and finally disappeared entirely. [S.M.H.]

8.—Freudenthal has modified Laborde's method for resuscitation from deep asphyxia by introducing the index-finger into the mouth and moving it to and fro over the epiglottis. He applied this method to the treatment of a patient, aged 38 years, for whom he was opening an abscess that had formed on the outside of the throat at a point corresponding to the location of the arytenoid cartilages. Deep narcosis ensued immediately after the incision had been made and almost simultaneously the heart and respiration stopped. The older methods of resuscitation were first employed, but without effect. The method described was then resorted to, with the result that almost at once there was an effort to swallow, which was immediately followed by a return of respiration. The effect of this method is the same as that of Laborde's, but it is more powerful, because it more energetically irritates the glosso-pharyngeal and superior laryngeal nerves. It further obviates the necessity of severe traction upon the tongue, a measure that is not without danger, as it is possible that muscle-bundles may be torn by such manipulations. A trial of this method is recommended in all asphyctic conditions. [S.M.H.]

### Medical Record.

December 10, 1898. [Vol. liv, No. 24.]

1. The Pretuberculous Stage of Pnthisis, or the Condition which Antedates Tuberculous Development, and some Aids to its Diagnosis. HENRY P. LOOMIS.
2. A Preliminary Report from Clinical Observations of the Successful Reduction of Sugar in the Urine and an Aboeyance of the Pathological Symptoms in Diabetes Mellitus. ABRAHAM MAYER.
3. New Method of Creating a Vagina in a Case of Congenital Absence. ROBERT ABBE.
4. A Few Spanish Wounds. ELON O. HUNTINGTON.
5. Eye-Lesions in Some Diseases of the Kidney. HENRY S. OPPENHEIMER.

1.—Loomis emphasizes the importance of chloranemia as a sign of the pretuberculous state, particularly when this condition of the blood is associated with poor chest-development or decreased respiratory capacity. Abnormally low weight, chest-development, and respiratory capacity have no great value in themselves but they are of distinct importance when compared with the height of the individual. In a normal man the product obtained by dividing the weight expressed in pounds by the height expressed in feet should be 26, in a normal woman 23. The average measurement of the chest, one measurement being taken at full inspiration and the other at full expiration and the mean used as the average should equal at least half of the height; and the amount of air (in terms of cubic inches) that a man can exhale after a full inspiration should have a ratio to the height of the man (in inches) of 3 to 1, in case of a woman of 2 to 1. Reduction in any or all of these normal ratios should lead to a suspicion of predisposition to tuberculosis, as should persistent digestive disturbance that otherwise seems causeless. The pulse in the pretuberculous stage is characteristic, in that it is not influenced in its rapidity by change of position and is of feeble tension. [D.L.E.]

2.—Mayer believes diabetes is due to ptomain-poisoning or to bacterial invasion of the organism. He has, therefore, used mercuric chlorid in beginning doses of  $\frac{1}{12}$  gr. three times daily, increasing within a week to  $\frac{1}{2}$  gr. He states that three

weeks of this treatment are sufficient to cause a marked reduction in the amount of sugar and improvement in the general health. After this time the dose is decreased to  $\frac{1}{4}$  gr. in the day. Eleven cases so treated are reported, and the belief is expressed that the resulting improvement was due to a "specific" action of the mercury. [It is not stated whether this specific action is thought to be exerted upon the bacterium or the ptomain; or whether it is such as to correct abnormal metabolism. Ptomains and bacterial invasions as causes of diabetes mellitus are pure assumptions. D.L.E.]

3.—Abbe reports two cases of congenital absence of the vagina, and describes a new method for creating a vagina under such conditions. A crescentic incision is made across the interlabial space, with its concavity upward, thus getting a little shelf of mucous membrane below the urethra to divert the escaping urine. By blunt dissection a free cellular space is readily created between the bladder and the rectum, to the depth of 5 inches. This is temporarily packed with sterile gauze, to check oozing. Thiersch skin-grafts are cut from the thigh sufficient to cover well an ample plug made thus: A thin French rubber pouch is sterilized by boiling and is stuffed with long strips of iodoform-gauze to its full-capacity. Upon this the skin-grafts were spread, with their wet sides outward and their edges freely overlapping. Numerous small punctures have been made in the rubber after stuffing, so that the gauze-contents will receive any discharge lurking about. A piece of rubber tubing the size of one's little finger, wrapped loosely about with iodoform-gauze, is now inserted into the rectum, with the view of permitting free exit of gas during the subsequent days of enforced constipation. Finally the graft-covered form is carefully passed into the new vaginal space, the walls of which are held apart by three deep retractors, which on removal allow the fresh surfaces to come into closest contact with the wet surface of the grafts. To prevent the plug from being in the slightest displaced, two silkworm-gut stitches are passed across the vulva, transfixing the gauze-packed tampon, and are tied over iodoform-plugs at either side. For 4 weeks the patient is kept recumbent, the vagina being packed with gauze liberally smeared with lanolin, and afterward, when the new skin is quite tough, being dilated daily with large vaginal plugs and bougies, which are worn for a few hours at a time. Inevitable stenosis by cicatricial contraction reduces the original canal to smaller proportions, but, as it was made more than ample in the original design, it remains a practical and competent canal, fulfilling at least one of its functions, and giving gratification to the mated couple. [W.K.]

5.—Oppenheimer describes the ocular affections that may attend nephritis. Weakness of accommodation is noted as a frequent early sign, especially in old patients. Iritis occurs, but is rare. Amaurosis is not infrequent and comes on as an attack of sudden blindness. Non-traumatic paresis of the eye-muscles should always reduce suspicion of nephritis. Albuminuric retinitis, conjunctivitis, conjunctival hemorrhages and edema are common. [D.L.E.]

### Medical News.

December 10, 1898. [Vol. lxxiii, No. 24.]

1. The Non-medicinal Treatment of Constipation. GEORGE ROE LOCKWOOD.
2. A Contribution to the Subject of the Serum-test in the Diagnosis of Typhoid Fever. GEORGE H. WEAVER.
3. The Pathology and Treatment of Acute Gonorrhea in the Male. ROBERT W. TAYLOR.
4. Favus, a Clinical Study, with Special Reference to Treatment. A. D. MAYER.
5. An External Urethrotomy, followed by Two Suprapubic Lithotomies on the Same Patient within a Period of Nine Years. L. E. NEWMAN.

1.—In a discussion of the non-medical treatment of constipation, Lockwood classifies diet, strengthening the abdominal walls, hydrotherapy, sedative remedies, and oil-irrigations. Cathartics are contra-indicated in nearly all cases, and even laxatives are inadvisable, especially in young children. The diet may consist in coarse vegetables, bread, and cereals; or sugars, such as milk-sugar, honey, fruits, etc., which serve to excite secretion, or cider, buttermilk, fat, and organic acids, which serve to excite peristalsis. Measures that strengthen the abdominal wall include massage, gym-



nastics, electricity, and abdominal supporters. Massage is frequently disappointing. Abdominal gymnastics, either in the form of bicycling or golf, or in special movements, such as raising the leg slowly to a vertical position while lying on the back, and letting it fall slowly, are often extremely valuable. Electricity seems to be of little use. Abdominal supporters may be used when there is downward displacement of the stomach or colon, or separation of the recti muscles. Hydrotherapy, in the form of the cold spinal douche, administered while the patient is in a hot bath, or the alternate application of hot and cold water, is often extremely valuable. Sedative remedies are used when there is spasm. The best form consists of two thicknesses of flannel wrung out of hot water, applied to the abdomen at night, and covered with oiled silk. Bromids and belladonna may also be employed. Oil-irrigations are extremely valuable, and perhaps the most efficient mode of treatment. From 6 to 8 oz. are injected while the patient is lying on the left side, with the hips elevated; then he lies upon his back, and finally on the right side. There is rarely an immediate result, but the influence persists for from 3 to 5 days. Lockwood reports the case of an unmarried woman, 48 years of age, who had been obstinately constipated for 32 years, only obtaining relief with the aid of large doses of laxatives or huge enemas. There was gastroptosis and coloptosis. Digestion was normal. Irrigations with oil at intervals of 5 days brought about a perfect cure. Of the methods of diagnosis, the most important consists in the introduction of water into the colon, note being taken whether this is difficult, whether the normal quantity can be introduced, and whether it is expelled with normal force. If the expelled fluid contains mucus, and a catarrhal condition is thus indicated, bulky foods should not be employed. The colon should be inflated with air in order to detect abnormalities of position. [J.S.]

2.—Weaver has studied the **Widal reaction**, and calls attention to the fact that few observers record their methods or the peculiarities of the cultures employed. He has used four cultures of different degrees of virulence, and has employed both the wet and the dry method. In the former, the corpuscles were separated from the serum by centrifugation. In 9 healthy individuals a typical reaction was obtained with a proportion of 1 part of serum to 1 of culture. In one case, a partial reaction was obtained with a dilution of 1 to 10. No reaction was obtained with higher dilutions. In all instances, the least virulent cultures reacted best. The preparations were examined at an interval of from 20 minutes to 16 hours. After the latter period, clumping was not observed in any cases. Thirty cases of disease other than typhoid fever were examined. A positive result was considered as having been obtained when motion of the bacilli ceased in the course of the first twenty hours, even if no clumping had occurred. The slides were kept at 37° C. In no instance did a positive reaction occur in any of the 30 cases, nearly all of the diseases being febrile in character. Thirty-two cases of typhoid fever were tested. In 30, the fresh serum was used, with 27 positive and 3 doubtful results. All of the doubtful cases proved fatal, 2 of the patients exhibiting only the lesions of typhoid fever, and the third tuberculous lesions as well. In each of these cases, only a single specimen of blood was examined. In 2 of them, the dried-blood method was also employed, and it yielded negative results, in the third it was doubtful. In 29 cases, the tests were made with dried blood; in 19 the results were positive, in 8 doubtful, and in 2 negative. In one positive case, the result was obtained only at a second examination. In one of the cases yielding a positive result with the dried serum and ending fatally, tuberculous lesions were found, as well as those typical of typhoid fever. Typhoid bacilli were obtained from the spleen and the gall-bladder. In conclusion, Weaver states that complete loss of motion after a preparation made with strong serum has been kept for from 16 to 20 hours, providing the culture is old and non-virulent, indicates the existence of typhoid fever. The absence of the reaction however, does not exclude the disease. A number of reactions must always be considered as doubtful. When made with dried blood the test is less accurate than with fresh serum. [J.S.]

3.—Those familiar with the pathology of **gonorrhea** in the male ureter can appreciate the absurdity of the claims of those who boast of rapid cures in the majority of cases under their care. The treatment employed by this class of enthusiasts consists almost wholly in hydrostatic irrigation chiefly

with potassium permanganate. In the majority of instances the patients subjected to this treatment are not only not cured, for they have no doubt been rapidly pushed into the terminal stage, but the treatment has caused a greater exudative inflammation into the submucous connective tissue, and thereby aggravated, rather than alleviated, the condition. Only occasionally can gonorrhea be aborted, and then only before the submucous layer has become invaded. Taylor believes it proper and justifiable to employ the abortive treatment in all cases that are seen sufficiently early, but success in this line will be the exception rather than the rule. The routine treatment, that should be adopted in the average case includes careful regulation of the diet, with the exclusion of those articles that render the urine irritating, the enforcement of a light diet, and the administration of alkalies, with hyoscyamus. In the acute stages of cases of aggravated type hot embrocations of concentrated boric acid should be employed for the first few days, associated perhaps with gentle injections of small quantities of this solution. Upon the subsidence of the distressing symptoms of the earliest stage, the treatment should consist in the use of mild antiseptic injections, beginning with boric acid and continuing with potassium permanganate. For this purpose a reflex catheter is to be used, if the anterior urethra alone be involved, and an ordinary velvet-eyed catheter (No. 10-12, French) for the posterior urethra. When acute suppuration begins to subside, the patient may use, with an ordinary penis-syringe, injections of zinc, lead, alum, tannic acid, or hydrastin, as a basis. This line of treatment in conjunction with the administration of antibleorrhagics, serves to calm and reduce the acute inflammatory process, thereby rendering the tissues less susceptible to the invasion of the micro-organisms. The decline of the inflammation, which may be looked for from the tenth to the twentieth day, may be recognized by an examination of the discharge, which at this stage should contain, in addition to pus-cells, some gonococci and immature epithelium. The indications for treatment, based upon the pathologic findings of this stage, are to cause absorption of the infiltration in the submucous layer, and to restore the tonicity of the vessels and the epithelial layer of the urethra. No preparation meets all these indications so well as argentic nitrate; as for argonin, argentamin, and protargol, it is yet too early to speak definitely of their specific value. If the treatment be carried out on these lines, relapses are not to be feared and strictures may be prevented, but at best the duration of treatment will be from 4 to 6 weeks. The strength of silver-solution and the frequency of injection must be governed by the character of the secretion. As long as there is much free pus and no epithelium in the specimen, the solutions should be of the weaker grades; but as soon as epithelial cells begin to appear, the time is ripe for progressive increase in the strength of these solutions. [C.H.F.]

4.—In discussing the **treatment of favus**, Mayer states that the first important procedure is to clip the hair short. This should be done in the dispensary with clippers kept in a lysol-solution, and serves the double purpose of exposing the diseased area and keeping the patients from the general barber-shops. After this, the scalp is oiled, in order to soften the crusts, which are removed with tincture of green soap. Epilation is then commenced and carried out by a member of the patient's family. When the hair has been well removed from the reddened area, crysarobin, dissolved in a 10% collodion-solution, is applied with a stiff brush. If there is much inflammatory reaction, the crysarobin should be discontinued, and a 10% ointment of mercury ammoniate substituted. The diagnosis of the disease should be made with the microscope. A portion of the sulphur-yellow crust and a few hairs are placed on a glass slide, a few drops of liquor potassæ added and allowed to act for 5 minutes. The specimen is then dried with blotting paper, and a few drops of glycerin are placed upon it, and examination is made with a power of from 450 to 900 diameters. The crust will be found composed of a network of mycelial threads, segmented at short intervals. The conidia are small, round bodies from 2.5 to 5 $\mu$  in diameter. Tricophyton megalosporon contains spores from 4 to 6 $\mu$  in diameter. T. microsporon is found in the interior of the hair. In ringworm the yellowish crust is made up of pus-corpuscles, disintegrated epithelial cells, and a few fungi. Mayer suggests that a special public school be organized, which children suffering from favus can attend. [J.S.]



**Boston Medical and Surgical Journal.**

December 8, 1898. [Vol. cxxxix, No. 23.]

1. Experiences at the Various Hospitals in the Diagnosis and Treatment of the Diseases Prevalent in the Army. H. F. VICKERY, HENRY JACKSON, J. J. MINOT, H. F. HEWES.
2. Animal vs. Vegetable Ferments. A. E. AUSTIN.
3. Osseous Cysts of the Middle Turbinate, with Report of a Case. TIMOTHY J. REARDON.
4. A Case of Calculus of the Uvula. J. L. GOODALE.
5. A Case of Cephalic Tetanus. GARRY DE N. HOUGH.

1.—In a discussion concerning the peculiarities of the diseases presented by the soldiers at various hospitals, Vickery considers some 90 cases at the Massachusetts General Hospital. Of these, 1 died from malaria and dysentery, 1 from typhoid, and 1 from typhoid fever complicated by pneumonia. The soldiers were in general greatly emaciated and often distinctly pigmented, the pigment sometimes being found in the nails. In some cases the nails were thickened and yellow, excepting a small portion near the root, which was normal. Nearly all the cases had malaria, and in those without symptoms to whom no quinin was given the disease usually developed before leaving the hospital. Dysentery seemed to be improved by a nitrogenous diet. Jackson had under observation 126 soldiers in the Boston City Hospital; 65 suffered from malaria, with 2 deaths; 22 from typhoid fever, with 3 deaths. There were 5 cases of malaria and dysentery, 3 cases of malaria and typhoid fever, and 7 cases of dysentery; 15 cases were classed as debility. There were 2 convalescents from yellow fever. The cases of malaria are divided into four types: those with a temperature of 101° upon admission; those of remittent type, with a subtype of remittent fever in which the temperature was long continued; those of intermittent type, although none of the cases showed the typical temperature-charts found in ordinary malaria; and, finally, those of pernicious type, one case of which at least was complicated by pneumonia. The organisms usually found were the fine intracorpuseular hyaline bodies and crescents; occasionally a few intracorpuseular pigmented organisms. Quinin was the most efficient drug. In 4 cases of dysentery treatment with large doses of ipecac was highly successful. Quinin appeared to be efficient in a case of amebic dysentery. Jackson notes that the cases of typhoid fever contracted in Cuba were milder than those developed in Chickamauga. Two cases of collapse were interesting, 1 probably being due to cholera nostras, both patients recovered. In conclusion, Jackson draws attention to the magnificent morale of the men. In spite of their extreme emaciation and exhaustion, they did not complain, nor did they boast of their heroism or their sufferings. In no case were vermin found. Minot noticed at the Long Island Hospital the same types of malaria that Jackson had described. Quinin did not seem to have had much influence upon the temperature, no matter by what method it was given. Some of the cases yielded the Widal reaction in the absence of symptoms of typhoid fever. In one case, neither the Widal reaction was present nor were plasmodia found, in spite of repeated examination, but the temperature resembled that of remittent malaria. Hewes treated 88 cases at the Carney Hospital. Of these, 80 had malaria, 7 complicated with typhoid. In all, plasmodia were found. Of the 80 cases, 60 were estivo autumnal, 6 were tertian, and 6 mixed. A great variety of the forms of the parasite were found. A comparison of the temperature-charts indicates that the only satisfactory method of making the differential diagnosis is with the microscope. In one case, malaria was associated with acute jaundice, in another with acute nephritis; both patients recovered under vigorous dosing with quinine. [J.S.]

2.—Austin has performed a number of experiments for the purpose of estimating the relative starch-digesting efficiency of taka-diastase, pancreatin, and saliva. One gram of starch was mixed with 100 cu. cm. of water, and boiled. The mixture was allowed to cool, and 0.1 gm. of pancreatin or taka-diastase was added or  $\frac{1}{2}$  cu. cm. of saliva. Each mixture was then placed in an incubator at 40° C. for 22 hours, and the amount of sugar determined by Fehling's method. The results showed that taka-diastase converted about 60% of the starch, and no starch was

left. The other two substances appeared much less efficient. In the next series of observations increased quantities of starch were employed, and the mixtures were kept for varying lengths of time; 21 hours seemed to be the most suitable period. Taka-diastase still seemed two or three times as active as either of the other substances. The addition of HCl in the proportion of 2½ parts to 1,000 inhibited starch-digestion. When such an acid solution was neutralized and again placed in the incubator, a certain amount of maltose and dextrose was found, showing that the action of these ferments is not destroyed in an acid medium. In order to determine whether maltose or dextrose was formed, the different solutions were tested with the polariscope, and it was found that taka-diastase had the power of splitting up maltose into dextrose. [J.S.]

3.—Osseous cysts of the middle turbinate have been described both by anatomists and clinicians; of 40 reported cases, 11 were seen by anatomists, and 29 by clinicians, but the authenticity of the latter series is to be questioned. As to the etiology of the cysts, they are either due to ectasia of the ethmoid, or are aberrated ethmoidal cells, which develop in the turbinate. The leading symptoms are those usually resulting from obstruction of the passage of air through the nose. The differential diagnosis must distinguish these cysts from dilated ethmoidal cells, hypertrophy of the anterior ends of the middle turbinate, polypi containing bone, and an inverted turbinate. Reardon reports a case that came under his observation, in which he found on microscopic examination, that the bone presented the changes observed by Steida, Lubarsch, Knight, and others. [C.H.F.]

5.—Hough reports the case of a man who received a severe blow on the nose, causing a small external wound. Seven days later the patient had stiffness of the joints, and on the following day he developed cephalic tetanus; the symptoms being inability to articulate or swallow, trismus, tetanic contractions of the muscles of the neck, a few convulsions, collapse, and death. When the body was examined, a recent scar was found on the left forearm, and an ulcer on the left great toe. Tetanus-bacilli were not found. The man who struck the blow on the nose was indicted for manslaughter, but the physician testified that, in view of the existence of other wounds than that on the nose, the prisoner could not be held responsible for the infection. [J.S.]

**Journal of the American Medical Association.**

December 10, 1898. [Vol. xxxi, No. 24.]

1. Chairman's Address. RANDELL HUNT.
2. The Milk Supply of Large Cities: Can it be Improved? HENRY O. MARCY.
3. Importance of Regulating Dietetics. N. S. DAVIS.
4. Functional Nervous Disturbances in Pulmonary Invalids. S. G. BONNEY.
5. A Fascicle of Cases in Suggestive (Hypnotic) Therapeutics. H. S. DRAYTON.
6. Report of a Case of Raynaud's Disease, with Pathologic Findings. C. EUGENE RIGGS.
7. The Stress of Modern Civilization as a Factor in the Causation of Insanity. FREDERIC S. THOMAS.
8. Uterine Hyperesthesia. EPHRAIM CUTTER.
9. The Surgery of Camp Wikoff. N. SENN. (Concluded.)
10. The Krag-Jørgensen Bullet-Wound. VALERY HAVARD.

1.—See this JOURNAL Vol. ii, p. 14.

3.—See this JOURNAL, Vol. ii, p. 15.

4.—“ “ “ “ i, p. 1182.

5.—Brayton reports cases in which he used hypnotism successfully in lessening the frequency of the convulsions of a chronic epileptic; to relieve sleeplessness; to relax hysterical contractions, etc. [M.B.T.]

6.—See this JOURNAL, Vol. I, p. 1183.

7.—“ “ “ “ “ 11-1.

9.—Rectal affections were common among the troops returning from Cuba. This is attributed to intestinal affections contracted in the camps and in Cuba; to improper food; to the relaxing effect of a tropical climate, and to frequent exposure. Five cases of pararectal abscess occurring at Camp Wikoff are reported. The formation of fistulæ was avoided, and prompt healing was obtained by early incision and



drainage. Two cases of fistula are reported, and the injection into the cavity under pressure of hydrogen dioxide is suggested in place of the probe in differentiating between external and internal fistulae. If the fistula is external the abscess-cavity becomes tense, if complete the dioxide foam enters the rectum and will escape from the anus. The probe is used only after the test has made the diagnosis and then only as an aid in performing the necessary operation. A large number of cases of hemorrhoids came into the hospital, but many of them refused operative treatment probably because a cure would put a claim for pension beyond their reach. Seventeen operations are reported, however, the clamp-and-cautery method being preferred. Three patients were sent to the hospital with a diagnosis of appendicitis, but this proved correct in only one, and that was so mild as to make operation seem unjustifiable. The small number of cases of appendicitis is thought remarkable in consideration of the thousands of soldiers who landed at Montauk, and almost all of whom had been subject to such conditions as regards climate, diet and intestinal affections as would have seemed to predispose to the affection. The few cases of gonorrhea, syphilis and stricture observed in Camp Wikoff speak well for the morality of the army. [M.B.T.]

10.—Havard formulates the following conclusions with regard to the wounds inflicted by modern weapons in the late war: (1) The rapid-firing, long-range modern rifle, with small, steel-jacketed bullet, does not produce a larger percentage of casualties than the weapons used in the Civil War or the Franco-Prussian War. (2) The proportion of killed to the wounded is less than before. (3) Wounds heal with astonishing rapidity, even a majority of those penetrating the abdomen and chest, so that fewer deaths occur in field-hospitals. (4) Few, if any, primary operations are now performed, and amputations (except as a result of artillery-fire) are hardly ever required. [M.B.T.]

#### Glasgow Medical Journal.

October, 1898. [Vol. 1, No. 4.]

1. The Last Will and Testament, with the Inventory of the Estate, of Maister Peter Lowe, Founder of the Faculty of Physicians and Surgeons, Glasgow. JAMES FINLAYSON.
2. A Case of Congenital Absence of the Left Radius and of the Left Thumb, Malformation of the Left Ulna, Spinal Curvature, and Complete Displacement of the Heart to the Right. GEORGE S. MIDDLETON.
3. Complete Excision of the Pylorus, with Notes of a Second Case. JAMES A. ADAMS.
4. A Case of Ruptured Ectopic Gestation About the Fifth Week: A Contribution to the Etiology and Pathological Anatomy of Early Tubal Pregnancy. G. BALFOUR MARSHALL.
5. Case of Myxedema with Dulness of Hearing and Tinnitus in a Man. JAMES GALBRAITH CONNALL.
6. A Statistical Investigation of the Difficulties in the Diagnosis of Enteric Fever from Clinical Symptoms Alone. ERNEST L. MARSH.
7. A Case of Intracranial Suppuration Complicated by Cerebral Hemorrhage in a Child of Eleven Years. D. LYON STEVENSON.

2.—Middleton reports the case of a man, 38 years of age, who came under observation for an attack of bronchitis which rapidly improved. The patient was much deformed; his height was 4 feet 7½ inches; he had a well-marked spinal curvature involving the dorsal region. The vertebrae were twisted on themselves, so that the left side of the chest was compressed from before backward and flattened, while the right side was rounded and expanded. The heart was completely displaced to the right side, the dulness on light percussion being entirely to the right of the midsternum, extending upward to about the second interspace, to the right to about the midclavicular line, and fading into the liver-dulness below. The point of greatest impulse, and probably the apex-beat, was in the third right intercostal space within the midclavicular line. The heart-sounds were best heard at this point. The systolic was accompanied by a blowing murmur, which was heard also along the right border of the sternum. This murmur disappeared later. The percussion-note was clear over the entire left chest, and

the respiratory murmur was distinctly heard. There was no history of pleurisy or other disease to account for the shifting of the heart, and it was therefore attributed to the marked thoracic deformity. In addition there was marked atrophy of all the muscles of the left shoulder and arm, with shortening of the arm and hand. The forearm was even more shortened, being scarcely six inches in its greatest length. The thumb was absent; no radius could be felt; the fingers were claw-like in appearance. There was considerable power of flexion at the wrist and elbow. A skiagraph showed the radius and thumb to be absent and the ulna markedly curved and shortened. [C.H.F.]

3.—The high mortality attending pyrorectomy would seem to justify its abandonment in favor of the less radical measure, gastro-enterostomy. Adams, however, considers pyrorectomy justifiable if undertaken at an early stage, and he believes the mortality may be considerably lowered by such modifications of technic as will diminish the time of operation. It is the shock of prolonged exposure and manipulations of the stomach that is responsible, in a large measure, for the high mortality. Adams prefers his assistants' hands to clamps, as the former do not injure, or lessen the vitality of bowel-walls, and the chances of subsequent hemorrhage are appreciably diminished. Considerable time may be saved by using a continuous instead of an interrupted suture. Adams uses catgut for his suture, and ties a knot every 8 or 10 stitches, in order to lessen the strain. In the two cases subjected by him to this operation, union was perfect. [C.H.F.]

4.—Marshall reports a case of ectopic gestation in which rupture occurred after coitus. The patient had not menstruated for 6 weeks, and death from internal hemorrhage ensued before an operation could be performed. At the postmortem examination the abdomen contained a large quantity of blood in which no trace of a fetus could be found, the fetal sac being in the left oviduct close to the uterus. Nine hundred serial sections of the gestation-sac were made and stained with Ehrlich's hematoxylin and eosin, and a careful microscopic study was made. Ectopic pregnancy is frequently observed in women who have been for a long time sterile and then become pregnant. The most common causes are peritonic adhesions, causing excessive convolution of the tube, or narrowing of its lumen from constriction, or displacement; and salpingitis, destroying the cilia of the columnar cells, or the cells themselves, or thickening the tube-wall. [W.K.]

5.—Connal reports a case of myxedema in a man aged 36 years, who was first observed at the time that the thyroid-extract treatment of this condition was introduced. He was ordered to take one-third of a sheep's gland every second or third day. Instead, he was given through error, three glands, with the result of causing a slight elevation of temperature, marked rapidity of pulse, nausea, vomiting, severe diarrhea, and well-marked jaundice. He was quite ill for several days and off duty for two months. When he recovered, however, the symptoms had improved, but he declined to continue the treatment after this experience. Five years later the man applied for treatment on account of dulness of hearing and tinnitus in both ears, worse in the left. The myxedematous condition had increased markedly. Without his knowledge he was given tabloids of thyroid gland. The improvement in his general condition, and especially in his hearing and the disappearance of the tinnitus, was remarkable and complete. The mucous membranes of the nose and throat were greatly swollen, and it was this swelling doubtless that caused the difficulty of hearing. Under thyroid treatment the swollen mucous membranes subsided completely, and hence the improvement in the condition of hearing. Connal calls attention to the fact that the patient attributed all of his symptoms to the administration of some potassium iodid, of which he was given 10 grains just prior to the development of the myxedema in order to relieve some sacral pain. On the following morning the man was comatose. The lymphatic glands of the neck were swollen, the eyelids were edematous, and the patient complained of a sensation of impending dissolution. The symptoms subsided in two days. The man was later given a mixture containing two grains of potassium iodid per dose. This quantity caused severe headache, extreme pain in the throat and eyes, and a watery discharge from the eyes and nose. The patient stated that the swelling of his eyelids never disappeared after this



experience; his hair came out freely and he developed stiffness in his limbs; he became irritable, easily worried, and rapidly grew stout. It is suggested that potassium iodid might possibly have accelerated the progress of an incipient myxedema. [S.M.H.]

6.—Marsh points out the difficulties attending the **diagnosis of enteric fever** from the clinical symptoms alone, contending that a large percentage of cases so diagnosed are really not cases of typhoid fever, but febrile conditions that, on account either of their association with typhoid-fever epidemics or of hearsay-evidence, have been considered cases of enteric fever. On clinical evidence alone it is a matter of utmost difficulty to definitely classify those cases of enteric fever in which the infection is of a mild type or those cases first coming under observation near the end of the attack. Statistics show that there is a much larger percentage of equivocal cases among women and children than among men. Many cases of certain diseases that simulate the action of the enteric-fever poison are shown to be classified as cases of typhoid fever. [S.M.H.]

### Centralblatt für Gynäkologie.

October 15, 1898. [22. Jahrg., No. 41.]

1. A Case of Error in the Diagnosis of Abdominal Tumors. H. SCHRÖDER.
2. Dry Sterilization of Obstetric Instruments in Hermetically Sealed Boxes. J. KRUG.
3. A Case of Ectopic Gestation with a Living Fetus Free in the Abdominal Cavity. WALTER WILKE.

1.—Schröder reports the case of a woman, aged 44, who had noticed a tumor in her abdomen for 7 years. The resulting distention was so enormous as to interfere with respiration. Her appetite was poor, and the woman was much constipated. The tumor was elastic and tense on palpation, and irregular nodules could be made out. A diagnosis of multilocular ovarian cysts was made. On opening the abdomen by an incision from the umbilicus to the symphysis the cavity was found filled with cysts from the size of a cherry to a child's head, transparent, and from light yellow to dark blue in color. The cysts were removed, adhesions were broken up, tied and divided, and the tumor was found to be a **multiple cystic tumor of the liver**. Severe hemorrhage was arrested, and during manipulation a rather large superficial vein was torn and doubly ligated. The patient was much collapsed after the operation, and received free stimulation, enemas, and subcutaneous injections of salt-solution. Death followed three-quarters of an hour later, however. At the necropsy it was discovered that the large vessel which had been doubly ligated was the vena cava. On microscopic examination the cysts were found to arise from the biliary passages. In a second case, occurring in a woman, 42 years old, a tumor in the lower part of the abdomen had been noticed for 5 years. The swelling was hard and painful, and had grown gradually. In the right ileocecal region was felt a sausage-shaped mass, with an irregular surface, which was slightly adherent to the abdominal wall. The diagnosis of a malignant ovarian tumor was made. On opening the abdomen the growth was found bound by numerous adhesions to the abdominal wall and the intestines. It had no connection with the uterus, but took its origin from the gall-bladder. Adhesions were ligated and separated, and the growth, which had invaded the anterior border of the liver, was separated by means of the cautery. Hemorrhage was slight, and after its control the abdomen was closed. Microscopic examination showed the tumor to be a **scirrhous carcinoma of the gall-bladder**, which took its origin from the mucous glands.

2.—Krug describes a series of **metal cylinders** of different sizes that he has devised for the reception of **instruments** for various gynecologic and obstetric operations. Instruments may be sterilized in these boxes at the heat of an ordinary oven in 20 minutes. The boxes remain sealed and the instruments are ready for use at any time.

3.—Wilke reports the case of a septipara, 40 years of age, who had given birth to five living children spontaneously and had had 2 abortions. Five or six weeks after her last menstruation she was suddenly seized with severe abdominal pain, which increased in severity. Improvement alternated with recurring attacks of pain for four months, when the

patient had a particularly severe attack. The pain disappeared, but the abdominal enlargement continued until after eight months it had reached the size of a melon and a diagnosis of **ectopic gestation** was easily reached. Celiotomy was performed and a living girl-baby was removed without difficulty. No trace of the membranes was to be found. The placenta was attached to the bladder and there was no hemorrhage. The abdominal cavity was packed with a Mikulicz tampon. The child lived four hours. The gauze-dressing was renewed daily, without hemorrhage for two weeks, the temperature and pulse then began to rise and an attempt was made to loosen the placenta with forceps; profuse hemorrhage immediately followed, requiring tamponade. This was left in place for three days when another attempt was made with a similar result. Nothing then seemed to remain but to wait patiently, and after six weeks necrotic pieces began to come away and within a week the entire placenta had been removed. The further progress of the case was uneventful.

October 22, 1898. [22. Jahrg., No. 42.]

1. A New Method of Clamping in Abdominal Total Extirpation of the Uterus. DESIDER STAPLER.
2. Massage in Postoperative Ileus. H. HÄBERLIN.

1.—Stapler describes a **clamp** that he believes to be new for use in abdominal **extirpation of the uterus**. It is similar to certain clamps that have been devised for vaginal extirpation of the uterus, being composed of two blades which are introduced separately and locked at the distal ends. He believes that this device has all the advantages usually assigned to clamps by those in favor of this method of operation.

2.—Häberlin reports a case of **ileus** following an operation for ventrofixation of the uterus which was **relieved by massage**. He believes the clinical history in this case was such as to make it certainly one of ileus and he advocates the use of massage as a possible curative measure in similar cases. This should be undertaken before cathartics, enemas or inflation of the bowel by gas is tried, and before intestinal peristalsis has had time to produce a harmful effect. If properly carried out massage cannot do the slightest harm and in case it fails it does not reduce the chance of recovery by operation, provided this is not delayed until too late.

### Berliner klinische Wochenschrift.

November 7, 1898. [35. Jahrg., No. 45.]

1. A Case of Latent Tetany, with Dilatation of the Stomach, in Consequence of Carcinomatous Stenosis of the Pylorus. R. KUCKEIN.
2. Therapeutic Researches with Heroin. GEORG STRUBE.
3. Severe Toxic Symptoms Following an Injection of Mercurial Oil. R. LEDERMANN.
4. Hypertrophic Cirrhosis of the Liver, with Chronic Icterus and Enlargement of the Spleen in 3 Children of the Same Family. HASENCLEVER.

1.—Kuckein reports the case of a man 48 years old, who came under observation in an unconscious condition. His previous history included a record of severe disturbance of the stomach, with attacks of vomiting and pain, without hemorrhage, followed by diarrhea and other digestive disturbances, and an apparent history of excessive peristalsis of the stomach relieved by vomiting. In addition to almost complete unconsciousness, which was broken by occasional singing or speaking, the extremities were entirely flaccid and without suggestion of tonic contractures. The man seemed able to open the left eye but imperfectly. The stomach was greatly dilated; no tumor could be felt, but free HCl was absent from the gastric contents, while a considerable quantity of lactic acid was present, and the long bacilli of Oppler was found in large numbers. The patellar reflexes were absent and the pupils were normal, as were the eye-grounds. The plantar reflex was absent, Trousseau's phenomenon was absent, and Chvostek's was not positively present. The faradic current caused the muscles to go into persistent tetanic contraction. The blood showed slight anemia, with a leukocytosis of 24,000. The specific gravity of the blood was 10.61; of the serum 10.33, and the serum contained 88.9% water, and 11.1% solids. The diagnosis was **carcinoma of**



the stomach, with dilatation, and with latent tetany. Death resulting, postmortem examination confirmed the correctness of the diagnosis in part, there being a pyloric carcinoma, with metastasis, the new growth having probably arisen upon the basis of an old ulcer. As to the diagnosis of tetany, tonic contractures were absent, and the unconsciousness was the chief notable symptom in the case, but the Trousseau phenomenon was present, and electric excitability was marked. Kuckein states that he has seen cases of undoubted tetany that for considerable periods were entirely latent, that is, they presented the Chvostek and Trousseau symptoms without going into spontaneous contraction; and one case described, these phenomena persisted for 8 weeks. As to the theories of the causation of tetany, Kuckein dismisses the reflex theory as insufficient. The belief that thickening of the blood causes the affection in the gastric cases is to a slight degree supported by the discovery in the case reported of a somewhat excessive amount of solids in the blood-serum, but the increase was only slight and scarcely sufficient to explain the condition. In favor of the toxic theory of the affection was the discovery in his case of albuminuria; this has been noted in most of the other cases also. There was no microscopic change in the kidneys, but microscopically there was some cloudy swelling, and the nuclei stained badly. The theory of Bouveret and Devic, that for tetany to develop, free HCl and alcohol must be present in the gastric contents, has been disproved by Siebert, and this case is further proof against it, as HCl was entirely absent. This is one of the few cases in which tetany has been noted in connection with carcinomatous stricture of the pylorus. [D.L.E.]

2.—**Heroin** is a substitute for morphin. Experiments upon animals show that its physical effects are very much the same as those of morphin, and when given to patients in a dose of  $\frac{1}{15}$  grain, it was found useful in cases, particularly of pulmonary tuberculosis, in which there was irritable cough, the respirations were too rapid, or sleep much disturbed. It was also found that morphin-habitués could take heroin instead, without disturbing their health, and thus become cured of the morphin habit. [It is not stated positively whether or not the patients then become heroin-habitués. D.L.E.]

3.—**Ledermann** reports a case of syphilis that had been treated with inunctions, but was exceedingly susceptible to mercury. After using about 75 gm., the patient showed marked toxic symptoms, and later, after three injections of mercury salicylate, this treatment had to be stopped because each injection caused fever. Then injections of gray-coil were given at intervals of from 5 days to 2 weeks; 6 injections being given in all. These were followed by marked induration, then by severe symptoms of pytalism. The patient became profoundly cachectic, had severe diarrhea, constantly lost flesh, and in spite of all treatment finally died, chiefly from exhaustion. The fatal result seems to have been due to the cumulative effect of the mercury, which was not absorbed at once, but caused induration of the muscles, was more or less encapsulated, but finally seemed after several weeks to be absorbed with some suddenness. This, in Ledermann's view would contra-indicate the use of mercury in this form. (The paper will be continued.) [D.L.E.]

4.—**Hasenclever** gives an account of 2 girls and 1 boy, aged respectively, 24, 22, and 18 years, of a family of 10 children, of whom 3 had died in early childhood or infancy. The mother had had one miscarriage, and the father an apoplectic attack when 32 years of age. In the histories there was a distinct suspicion of congenital syphilis. The disease appeared first in the girl of 22, and her case was typical of the others. Her sclerotics became yellow, the urine dark in color, and feces pale. She had pain in the stomach, in the head, and consequently in the joints of the feet, and in the hips. The liver swelled, was hard, readily palpable, and the icterus was constant and intense. The spleen became large early in the disease. There was no ascites, and the disease advanced with distinct exacerbations. There were no signs of stone or of tumors pressing upon the bile-ducts. The fact that all three patients showed imperfect physical development, and that one of them had had a marked inflammation of the eyes in childhood, pointed further toward syphilis as the cause of the disease. But one other matter of etiologic moment could be thought of, and this was exposure to the constant dampness of the dwelling.

Malaria did not seem to be at all probable. One girl died from severe gastro-intestinal hemorrhage about 4 years after the beginning of the disease. Post mortem there was found enlargement of the liver, without any tumor causing pressure, and without gall-stones. The spleen was greatly enlarged, its capsule very much thickened, and its pulp soft. The liver showed marked thickening of the capsule, and upon section, the fibrous tissue appeared much increased, particularly in focal areas. [D.L.E.]

#### Obstruction of the Common Bile-duct Treated by Incision and Removal of the Calculi.

—**James Bell** (*Montreal Medical Journal*, October, 1898) reports six cases of this kind. In the first, a man of 52, there had been attacks of biliary colic for 4 years, with intervals of good health. About one year before the operation he had a severe attack, followed at frequent intervals by others. There was increasing jaundice, drowsiness, anorexia, and loss of 80 pounds weight. At the operation there was adhesion of the colon, duodenum and omentum to the liver; the gall-bladder was contracted and empty. A stone the size of a marble was impacted in the ampulla within the duodenum. It was removed through an incision, the wound was closed by fine sutures, and rubber drainage and gauze packing was inserted; there was no escape of bile or intestinal contents. An excellent recovery followed and the man remained in perfect health two years after operation. In a second case, occurring in a woman 56 years old, there had been attacks of pain in the epigastrium for 20 years, increasing gradually in severity. At the time of operation there was great prostration, attributed to cholemia. On opening the abdomen the omentum was found adherent to the liver. The gall-bladder contained 12 small stones, and 2 small stones were found in the hepatic duct. The stones were removed and the incision in the common duct treated as before, but it was impossible to close the wound in the gall-bladder or bring it up to the parietal peritoneum. Iodoform-gauze was packed around, and the patient did fairly well for 4 days, when she developed right-sided pneumonia and died 6 days after operation. The other case occurred in a woman aged 47, who had had attacks of biliary colic for 6 years. She had lost much flesh, jaundice had steadily increased and operation was decided upon. No adhesions were found, a large stone was detected in the common duct about a half inch above the duodenum. This was removed and the wound treated as in the previous cases. There was no escape of bile, good recovery followed, and the patient has remained perfectly well. The fourth case was that of a woman of 64 years of age. Her symptoms began 3 years previously, and after a recent attack gradually increased in severity. On operation the liver was found enlarged, the gall-bladder contained 5 calculi, and the cystic duct contained a large stone in its middle third. This was removed, the incision sutured and packing and drainage inserted. An uneventful recovery followed. In the fifth case, that of a woman of 49 years, there was a history of only two months' illness, with severe pain in the epigastrium, jaundice, and loss of flesh. On opening the abdomen the duodenum was adherent to the gall-bladder and was wounded in separating them. The wound was closed with silk sutures, a large stone was removed from the common duct and the incision treated as in the previous cases. There was escape of bile for 4 or 5 weeks, but jaundice disappeared. The urine became normal and the wound almost completely closed. About 3 months later some jaundice returned with symptoms of obstruction in the common duct. The abdomen was reopened and a movable stone removed from the common duct. The after-treatment was as in previous cases, and the patient made excellent progress toward recovery. The sixth case occurred in a woman aged 33. Two years previously she had the first attack of biliary colic, and her condition had gradually become worse. On opening the abdomen the colon and stomach were found adherent to the liver, an impacted stone was removed from the ampulla of the common duct and the incision was treated in the usual manner. Stones were also removed from the gall-bladder and from the cystic duct. The gall-bladder was sutured to the peritoneum and a drainage-tube inserted. The further progress of the case was uneventful and the patient was discharged quite well. [M.B.T.]



## Original Articles.

### MEDICINE IN THE NINETEENTH CENTURY.<sup>1</sup>

By T. CLIFFORD ALBUTT, M.D.,

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WERE we asked to describe in a phrase the tendency which distinguishes our age it might be replied that it is the study of origins. In the latter thirteenth and early fourteenth centuries, for example, men's minds were fixed for the most part on the validity of dialectic, were more bent upon securing mental surefootedness and sharp and true weapons of thought than upon the verification of premises. For instance, Albertus Magnus, with the utmost fairness, marshalled from the writings of his adversaries thirty arguments in favor of the doctrine of the oneness of the soul; so that on the death of the individual his share is merged again in the whole, and loses whatsoever personality it may seem for a time to have assumed; on the other hand, for the doctrine of the persistence of individual souls after death he found thirty-six valid reasons; thus the essential multiplicity of the soul was proved. Again Raymond Martini found eighteen reasons for the eternity of the world, and eighteen against it; the doctrine hung anxiously in the balance until he discovered seven other reasons which fortified it; he scrupulously admitted indeed that the last seven were not altogether apodeictic, but "with the reinforcement of faith" they sufficed to sustain it. Thus again for these disputants Aristotle and Galen were not so much chosen as received as guides, and their scriptures accepted as bibles. Now although it is not fair to press this character as a conspicuous feature of the greatest minds of the latter half of the thirteenth century, for Thomas of Aquino, for example, regarded Aristotle as a pagan sage to be treated with no more than respect, and it is still less true of Roger Bacon, the greatest of them all; still it was the fashion of that time to look rather to agility and sureness of logical fence than to genesis and verification. To one of our own time who turns to their pages, or of John Henry Newman in our own time, the quickness and subtlety of their arguments, the keenness and variety of the language which they elaborated by incessant exercise in such dialectic, make a most interesting study. Therein indeed the reader may find cause to regret that in modern times we have too often allowed these instruments of close and strong logic to fall into rust and neglect, though in our own time again we shall not thus speak of our greatest minds; to confine ourselves to our own race, argument more sure and penetrating than that of Newton, of Faraday, or of Darwin, for example, is not to be found in any century. Still the common mind of our time is set rather towards the investigation of premises—of origins; we look less to the closeness of our web of arguments, and take less heed to every logical stitch than our forerunners, who took their causes for granted and thought only how to fight for them. Yet, although we may escape too cheaply in respect of logical processes, on one way we must travel at least as warily, namely, on the method of experiment. Generally speaking, facts are now preferred to arguments, and as facts so far from being the fixed and flinty things they are supposed to be, are shifty and protean, we require from those prospectors who proclaim the discovery of facts a minute demonstration of their methods, and we do not allow any agility in verbal fence to put us off this prime demand. Show us your clues, take us over the tracks you say you have

surveyed, bring us into the ambush of nature which you think you have discovered; for howsoever finely you may talk about them we shall not believe you until we in our turn have followed you on the path. This at any rate is the attitude of those who pursue the exact sciences, and it is with the sciences, whether of experiment or observation, that not we only but also our fathers of the thirteenth and fourteenth centuries were concerned.

It may be urged that surely these sciences are the labor of our times, not of earlier times when sages spent their time in sophistry! Yet such an assertion is scarcely justified. Such is the essential kinship of man in all ages that by whatsoever names he calls them, or by whatsoever method he pursues them, his search is after the ends of science; I mean his argumentative search, for I am not at present speaking of artistic creation. When we turn to the speculations whether of the Greek or, after them, of Western nations, we find that they concerned themselves with the same subjects as those of the modern thinker; they argued of cosmogonies, of the elements of nature, of ethics, of law, of the virtues latent in natural objects, and so forth. The antagonism between the conceptions of creation and of development is not, as too often we think, a division of our own time only; in cruder forms, but still in full distinction, these opposing theories were familiar to philosophers of the fourth century before Christ as well as of the thirteenth century after Christ. The explanations given in such days as those differed widely from ours, but they were explanations, and were discredited only because they turned out to explain too little. Even to-day the experimental method can only be applied to the exact sciences; to the moral sciences and to medicine, for example, dialectic must still be largely applicable. In the study of medicine the experimental method has but a narrow field; observation takes a higher place in its pursuit, but dialectic has also no inconsiderable part, and we shall do wrong if we allow instruments fashioned under other conceptions of method to fall from our hands under the attraction of the richer results of the modern methods of the exact sciences. While ethics and politics must largely depend on dialectic and mechanics, let us say but little on it—though mathematics is indeed in itself a sublimated dialectic; medicine occupying a middle position, must keep both weapons furbished. For instance, a true conception of causation is largely a matter of dialectic, and however ingenious our experiment or observation we cannot afford to be ignorant of the laws of causation and of thought, and of the language in which these abstract ideas are to be expressed. For this language, I repeat, we are indebted to our forefathers of the thirteenth and fourteenth centuries as well as to Hume and to Mill. I have hinted that we are too prone to think, indeed to vociferate, that a fact is a fact, forgetting that inference is of the essence of every proposition; inference sticks to fact as closely as shadow to substance. A statement of the plainest facts implies a cement of inference, and he who has learned to handle ideas will thus far have a great advantage in every research. Looseness in words and lack of lucid and orderly expression of ideas in the records of modern medicine is lamented by Dr. DaCosta in his address to the Association of American Physicians and Surgeons, May 4, 1897, and in a recent leading article the *London Times* laments the same defects in English lawyers of the day and urges the need of a more formal education in this great accomplishment. Those who decry dialectic decry also what they are pleased to call "theory." That such and such a teacher is too "theoretical" is a stone thrown in many a class room, and often no doubt it hits the mark. It is true that to pursue philosophy as a study in itself

<sup>1</sup> Lecture delivered before the Johns Hopkins University, October 17, 1898.

has been a source of mischief or of bewilderment in many schools, as in Germany and in Scotland. Nevertheless we are now beginning to find that long practice in theoretical, that is in abstract, thought has given both Germans and Scotchmen a strength in dealing with modern and more fertile problems which Englishmen at any rate somewhat jealously and somewhat impotently admire. In England we are apt to retort that we are saved by our adhesion to the inductive method. If such an one—and now I may pass beyond my own land—be asked what he means by induction it turns out that he means, or thinks he means, a mosaic of concrete observations. Not only does he fail to realize that even these are bound together, as I have said, by a cement of inference, but perceiving, as he unconsciously must, that such short links do not carry him far in explaining things, he takes refuge in assertions which indeed are broad enough, but have taken on appearance of solidity from their established currency. Mrs. Grundy is not unknown even in the sphere of abstract propositions; use and convention may make the hollowest surmises respectable and their acceptance comfortable. It is by no means true that the ordinary man hates abstract propositions; he loves many of them, as for instance that the weather depends on the phases of the moon; that most bodily discomforts arise from disorders of the liver, and so forth. There is no proposition, however wide and abstract, which he will not swallow with avidity if it be brought from the pages of an old almanac; nay, easy as knowledge outgrows such outworn opinions he will yet strive to extract some truth from their arid sources—to prove that there is “something in them after all.” What the ordinary man hates is not the abstract proposition, but the making of abstract propositions. He inherits any ready-made theory gladly, but he resents being called upon to make one himself, or even to adapt his mind to such novelties; he has never been practised in this gymnastic and it jades him. He dislikes it as we dislike any unaccustomed exercise, as we love an old coat or an old pair of shoes.

I need not occupy your time, gentlemen, by pointing out that the inductive method consists of two processes at least—in observation and imagination; in imagining again and again from a short series of facts the probable course of a longer series; and then in testing the truth of all or any such notions until the right one is hit off. Such surmising requires an alert imaginative or theorizing faculty. To pursue the study of philosophy for itself alone has only a gymnastic value, and leads, as I have said, to routine and sterility; but I repeat also that past exercise in this faculty, barren as it seemed for awhile, turns out, when carried into more fertile fields of research, to have given to such students a suppleness and sureness of argument which we may well envy. The Anglo-Saxon brain contains, as its literature has shown, the sanest and strongest imagination of any in the world; but thus far in the world's history it has been rather a pioneering brain, a fighting brain, whether with man or Nature; and immediate material results have been prized to the disadvantage of the more prophetic powers. The Anglo-Saxon has fought rather for bread to-day than for cake to-morrow; nevertheless, the future will be for those who can combine the practical spirit with a mind exercised in the arms of theoretical and dialectical precision.

What we have learned then, is that speculation in former times has been valuable as exercise rather than as achievement; that, although the deductive side of our method of thought is better adapted to exposition, the inductive bias is for most men the safer way in research. In the words of Klebs (*Allgem. Pathologie*, vol. i, p. 4), we must learn not that

the construction of hypothesis is bad, but that “Diese Hypothesenbildung nicht das Spielzeug einer weitschweifenden Phantasie sein soll, sondern das Werkzeug ernster wissenschaftlicher Arbeit.”

Among the lessons of this kind which we have painfully learned during the last two thousand years to stand out perhaps as the chief; these are, first, the barrenness of all conceptions based upon causal entities; secondly, the constraining need of verification. First, concerning causal entities, there has been a tendency of late to bring back into physiology the notion of “vitalism” or “vital force,” and to scoff at those who would apply the word “mechanical” to the processes of life. It may well be that the connotations of the word mechanical embarrass us in the use of it to signify the complex phenomena of life; on the other hand, we are on safe ground so long as we endeavor from the simpler phenomena of physics to rise continuously to conceptions of the more complex phenomena of life; at any rate we must not desert this track so far as it goes, and within these limits there is plenty to discover. But, under whatsoever name, to import an occult principle as a cause is to return to the most sterile rhetoric of the middle ages. Unable to shake themselves wholly free from the personification of natural objects, a personification which had gradually been removed from the objects themselves to their supposed causes, the ancients assumed such a principle to govern the movements of the celestial bodies; and even to this day we are apt to speak of force as something or entity acting on matter. That physical forces acting as simple molecules can account for the complex phenomena of life no one wishes to assert; no one will assert that they can account for the phenomena of chemistry in which the molecules, though less complex than the living, are far more complex than those studied in physics. But if we are to assume a vital principle in the animal cell assimilating food, then what need is there of a study of any other forces? The fact is, we are too impatient to await the unraveling of the manifold composition of forces in a highly compound molecule, an investigation which is only possible by long and unwearied series of experiment. No one attributes the virtues of chemical molecules to “chemism”; nor the vastly more complex functions of societies to a principle of socialism. Products differ from factors as sugar differs from a mixture of carbon, hydrogen and oxygen, and as an organism differs from the unrelated activities of an aggregate of nucleated cells. The phenomena of life are wholly conditioned by the peculiar complexity of its molecule, and with the size and complexity of the molecule the synthesis of forces increases in a multiple ratio.

We may speak, then, of a molecule as a highly elaborate construction of matter, or we may regard it as a highly elaborate system of forces, and this view of life, which brings its phenomena into line with the subject-matter of other sciences, is one, at least, of the achievements of our own time which we shall do well to preserve.

Another conception which now rules our thoughts far more profoundly than ever before in the history of mankind is that of law in the course of Nature. Far indeed from a new idea—for that Nature works by fixed laws, first conceived by the sages of Ionia, had penetrated the minds of thinkers of the fifth century before Christ, and molded the thoughts of Hippocrates. This great conception, by means of which alone a knowledge of Nature and an empire over her became possible, was afterwards obscured for many centuries; it was left, indeed, for our own day to grasp the idea in its full meaning. The Ionians were not free from a tendency to personify these laws, and even to-day we may hear the Laws



of Nature spoken of as agencies by which Nature is compelled, rather than as our formulas for invariable sequences. Yet it is no exaggeration to say that, even in its ontological form, a true conception of natural law was a greater achievement of the mind and more important in the advance of knowledge than the doctrine of the conservation of energy or the conception of evolution—ideas which we are wont to regard, and rightly to regard, as consummate achievements of modern philosophic theory. Again, the perception that activity of thought can only be true and just in the best sense when it is in vital and incessant connection with the activities of the phenomena on which it is engaged, is an invaluable quality of modern thought.

An accomplished Oxford tutor, lately taken from us, said of another department of knowledge: "One always comes back to the feeling that the truth in the ultimate problems is not got by thinking (in the ordinary sense), but by living." What Nettleship experienced in the study of ultimate problems is no less true of proximate problems.

It was for lack of this touch of nature that the older universities of Europe fell out of line with life. Whether for the analysis or for the harmony of knowledge, we cannot keep before us the quality, depth, complexity and manifold interaction of natural process without incessant converse with them in their flow. We cannot retain a conception, nay, not even an apprehension, of the infinite vastness and variety of the work of the eternal loom by taking thought alone, by discussing them as if we were gods. Our minds can only be edified with Nature's bricks: beside her work the worlds we build out of our own heads are but dolls' houses. Philosophy, as a mere literature, ends, as I have said, in conjectural systematizing, in speculation upon speculation, in a visionary gymnastic. Oxford scorned the "base and mechanical pursuits" of Boyle, and the wisacres who so spoke of that great man are dead and forgotten. Medicine in Germany was almost grotesque until the day of Rokitansky and Müller. Moreover, ideas thus engendered are not only hollow and arid, but they have all the rigidity and inertia of inanimate things; they become as shells which happily may be sloughed off, but never have part in new development, and meanwhile are strangling the very germs of it. Ardent enquirers in touch with nature are thwarted or extinguished, and Nature, indifferent as ever to man's self-sufficient conceits, goes her own way like a wild dam eating up her own offspring. Not only are notions engendered without the seed of Nature contrary to the truth; they are also antagonistic to the discovery of the truth. As Dr. Daremberg says, "*Des idées sont plus entêtées que les faits.*" Is it not one of the marks of our own age that man is not only now freed from the bondage of authority; not only is he now free of the kingdom of pure thought, but he is also brought into touch with Nature; now Nature is to be his inspiration, not his destruction.

Even in my young days the first chapter of Genesis was generally held in its literal meaning as a string of affirmative propositions; and for many previous generations the advance of true conceptions of biology had been continually thwarted thereby. In medicine as well as in natural history we are dependent on true biological conceptions, for without them we are apt to lie content with empiricism.

Again, with evolution has arisen a living conception of progress; mankind no longer dreaming about a golden age in the past is set with its face to the future; the golden age is in the future, not in the past, and the happiness of the human race is to be won by reading the secrets of natural law, and by strenuous effort. Yet this dream of a lapsed golden age, like

all such myths, held some truth in it; a truth which, in the revolution of the standpoint from past to present and future, fell into neglect. The study of the past is now returning in a new spirit, in that *study of origins* which, as I have said, is a feature of our generation; and the neglected lesson that we cannot afford to forget the travail of any age is seen in a new light. Tradition is recognized as the mold into which our activities have run as an embodiment of human experience; and we are learning the humble lesson that modern man is perhaps no greater in faculty than his forefathers; that if we have entered into new and more fertile fields it is by means of our inheritance rather than by means of greater faculties. If the average modern man be as highly endowed as the greater ancients, some few of them, such as Archimedes or Aristotle for example, were perhaps richer in mental gifts than the greatest of modern men. If this be so it will appear that *tradition* is a larger part of progress than we are disposed to admit. If the transmission of acquired faculties by inheritance be not altogether disproved, it is proved at any rate that such inheritance is a much smaller factor in progress than we had assumed. It seems certain indeed that its sphere is at best a very small one; and that we stand at the apex of the pyramid not by virtue of better building but because we were born with the pyramid below us. To condemn or to subvert the ideas of our fathers is then to cut the ground from below our own feet; to destroy that accumulation of the results of former labors which in commerce we call capital, and which in things of the mind we call tradition. There is no evidence that we are greater even by virtue of a more highly organized brain; there is no evidence that we are a new and more gifted variety of man; we are greater because we are born richer in circumstance, richer in the gifts and endowments whether handed down to us in material shapes or as learning from past ages. If in certain ages of the world tradition has held too large a place in the admiration of men, and has laid too heavy a hand on freedom and originality of thought, we may yet appreciate the due value of tradition in our own advance, and our duty to our descendants in preserving for them all that seems good in our own time, while our minds play freely nevertheless, and are not smothered by its weight. For as Plato says in the *Ion*, "There is a stone which Euripides calls a magnet, but which is commonly known as the stone of Heraclea. This stone not only attracts iron rings, but also imparts to them a similar power of attracting other rings; and sometimes you may see a number of pieces of iron and rings suspended from one another so as to form a long chain, and all of them derive their power of suspension from the original stone. In like manner the Muse first of all inspires men herself; and from these inspired persons a chain of other persons is suspended, who take the inspiration." May we not accept this beautiful figure which Plato imagines of poetry to signify all tradition by which man is enriched and advanced? "Through all these," he says, "the God sways the souls of men in any direction which he pleases, and makes one man hang down from another." It is in our great seats of learning, such as this in which I am now speaking, that men forge and hand down to their children the cosmos of inherited experience in which we dwell and about which we breathe an atmosphere which forms and inspires without our being conscious of its presence. If we may counsel that our minds shall come to Nature "disencumbered, clear and plastic," this counsel has regard to the accidents of mental occupation, not to the edification which began in the cradle and ends only as the faculties of assimilation in each of us are outworn. You will thus be prepared to know that our great

ancestors among the ancients, however vast their mental endowments, could not have built up true doctrines. The empirical method is the necessary porch of entrance into science; and there can be no true generalizations till facts have accumulated in quantity sufficient for the foundation of them.

To Hippocrates little was possible beyond superficial clinical observation; anatomy and pathology were slowly to be built up by harassed and painful men in many a broken century to come. But Hippocrates, thus confined to clinical observation, could describe such general movements as fever, and calculate the phases of disease in time—as acute and chronic, as subject to crises, and so on; and again, on this chemical basis he formed the great conception of diathetic diseases, so that thenceforth many diseases were no longer regarded as isolated events, but as terms in series. While we admire the breadth of these conceptions we admire also the genius which all attain to them when no other kind of enquiry was then open; for it was not until the time of the school of Alexandria that anatomy and pathology could be said even to begin. Nosological detail, as we daily study it, was out of his reach. The method of experiment was not even formulated, though Litré has reminded us that Hippocrates made the profound observation that no study of the brain could have led us to foresee that wine would produce so peculiar a disturbance of its functions. It was left to Galen to bring empiricism, clinical observation, normal and morbid anatomy, and even experimental methods together in one coordinate study, soon, however, to be eclipsed in the darkness of the middle ages. Even to this day physicians have not assimilated the lesson that disease is not an entity but a particular state of the body and has no more of a separate or objective existence than, let us say, the constellations of the Great Bear or Charles's Wain.

I need not at this day remind you that progress in any one science depends on what may be called the accident of progress in ancillary sciences and arts. I have always thought it a remarkable instance in this sense that the stupendous advance of modern surgery waited upon two main conditions, namely, on the discovery of anesthetics and on those researches of Pasteur which laid the foundation of modern bacteriology. When I was a boy surgeons operating upon the quick were pitted one against the other like runners on time. He was the best surgeon, both for patient and onlooker, who broke the three-minutes' record in an amputation or a lithotomy. What place could there be in record-breaking operations for the fiddle-faddle of antiseptic precautions? The obvious boon of immunity from pain, precious as it was, when we look beyond the individual, was less than the boon of time. With anesthetics ended slapdash surgery; anesthesia gave time for the theories of Pasteur and Lister to be adopted to practice. It is within the memories of some of us how the great performing surgeons scoffed at Lister's first essays—happily this great man has lived himself to see his own splendid vindication. How the improvement of the microscope lifted physiology and pathology into new realms of discovery is a familiar story, but one perhaps not fully comprehended by those who have not learned how the want of this instrument arrested the work of Harvey in his labors on the problem of generation, as well as on the circulation of the blood; or, on the other hand, how its use by forwarding the work of Bichat founded modern physiology afresh; how by the microscopic discovery of the human egg the mystery of generation was unveiled by v. Baer in 1827; how by forwarding the work of Schleiden and Schwann the realm of the cellular pathology was opened out, afterwards to be cultivated so successfully by Virchow.

Illuminated by such cross-lights, new fields of clinical medicine, which on the old method of Hippocratic observation Sydenham had carried perhaps to its extreme limits, stood revealed by the labors of the great French school of Laennec and Magendie, of Louis, Andral, Cruveilhier, Trousseau and Charcot. Laennec gives me the impression of being one of the greatest physicians in history; one who deserves to stand by the side of Hippocrates and Galen, Harvey and Sydenham. But without the advances of pathology Laennec's work could not have been done; it was a revelation of the morbid anatomy of the internal organs during the life of the patient.

It were too long a task for us now to turn to other fields to note how the discoveries of the great chemists of the last two generations threw light upon pathogeny; how those of the biologists gave a new meaning to the study of human morphology. You know already how natural knowledge advancing from many quarters was extended, especially in the realm of medicine which we are now contemplating. Each great branch of natural knowledge has its own *Hinterland* which its surveys for the common good. Nor shall we forget that a like activity in other departments of human intellectual enterprise has enlarged the conceptions of physicians even where the facts stood aloof from their ordinary conversation. As Locke and Hume told for medicine in the eighteenth century, if indirectly yet none the less enormously, so in our own century Lyell, Darwin, Spencer and others, by profoundly modifying the whole attitude of our minds towards Nature, have given to physicians a new standpoint from which to survey their particular world.

It would now seem that even in medicine the experimental method, which seemed forbidden to her, is making its way after all. If pathology never can become a science of direct experiment in the sense that physiology is so, it makes use of it as a second line of advance. If we cannot produce a pneumonia we can study the results of cutting a nerve. In physiology the number of variables is embarrassing, yet in medicine it is far greater. No two cases of a disease are alike—temperament, race, season, circumstances, all variables, conspire to modify cases and inferences. It will always, indeed, be impossible in any branch of the biological sciences to isolate conditions and to repeat them as in chemistry and physics. Yet, as I have said, an approximation to such means is manifested in the bacteriological laboratory where pure cultures are separated, their toxins tested in proportion to body-weight, antitoxins calculated, and immunities predicted.

It would seem to be, in the study of immunities, that the physician will first attain the reward of scientific research in prediction. A science which cannot predict quantitatively is in an inchoate stage. Multiplication of corpuscles, like the increase of cell-growths in hypertrophied heart or kidney, is but a case of compensation—a measure of resistance to disturbance.

Whether we regard it from the static or the dynamic point of view, the conception of the *vis medicatrix naturæ* gains newer force every day. Our blood and other corpuscles are microbes, their serums are factors in natural processes, and are regarded as healthy or unhealthy as they happen to be convenient or inconvenient at the moment of observation. Glands, such as the liver and kidney, are aggregations of microbes specialized for particular functions, and generate juices which are factors of nutrition, and not only of negative, but, as we have learned so well in respect of the thyroid, of positive influence in the balance of its manifold processes.

From experiment and observation we find that this reserve



energy of the body in its various parts is enormous. How large is the view of the province of therapeutics thus presented to us we may see in the rapid advance of what I may call physiologic remedies. As hygiene is to the state of health, so is physiologic medicine to that of disease. By physiologic medicine I mean the use of the ordinary functions of the body in counteraction of contingent or inherent perils.

It is a common, but I think a shallow, reproach to modern medicine, that, with all the advance of our knowledge of pathology, therapeutics stands where it did in the time of our fathers, or has even fallen back, in so far as a certain sceptical distrust of empirical remedies has discouraged the continued use of remedies which the wisdom of our fathers had discovered by practice and observation. It is said that we will not use the most respectable of traditional remedies unless we have some notion of its mode of operation. It is possible that the invaluable work which a scientific scepticism has done for us, not in therapeutics only, has been attended by some destructive effects which are to be regretted. I think, however, it would be difficult to bring forward many instances of the kind in our own case; while, on the other hand, the pruning and clarifying which our practice has undergone, far outweigh any such temporary disablements. The truth is that the cry itself is a shallow one. I will not stay to assert that modern surgery, the brilliant progress of which is in all our mouths, is progress in therapeutics, the division between surgery and medicine being a division of convenience, a division to which a mere practical and temporary usefulness only is to be attributed. Are we to forget, for instance, how the prognosis of peritonitis, of obstruction of the bowels, of pleuritic effusions, of encephalic tumors, of perityphlitis, of pelvic diseases, of ovarian ascites, and so forth—a prognosis in troops of cases turned from sadness to hope—is not to be called progress in therapeutics because not infrequently the method is carried out by the skill of another hand? It might as well be asserted that the modern scheme of feeding in fevers, because it is carried out by trained nurses, is no therapeutic progress. Nor will I admit, even in the sphere of drug-therapeutics, that our progress is contemptible.

When we regard the additions made to our hypnotics, the discovery of the value of the nitrites, of the bromids, of arsenic in pernicious anemia, of the salicylates, of the antipyretic, hypnotic and antalgic group, of the antiseptic treatment of diseases of the skin, of the antitoxic treatment of diphtheria, of the thyroid treatment of myxedema; when, again, we realize the greater precision of our use of the older empirical remedies, as of digitalis, in the preciser administration of remedies in syphilis, in the injection of alcohol and ether, of apomorphin, of ergotin, of strychnin, of hyoscin, of cyanid of mercury; when, once again, we think how much more accurately we discriminate our means in the treatment of phthisis, of dyspepsia, of fevers, of palsies, central or peripheral, we may confidently take encouragement and meet those adversaries in the gate who say that therapeutics has made no considerable progress. At the same time, we may well take to heart the lesson which such criticism may teach us. While we have learned that empirical knowledge, although a power against ignorance, is of less avail against the more ordered and living knowledge of a maturer science, on the other hand, for this very reason, we are now, perhaps, apt to despise unduly the traditional remedies which rest their claims to usefulness more on empirical than on reasonable grounds. For in the use and practice of all methods we must remember that medicine is an art, that it is something more than an applied science.

Our art has always been, and probably long must be, in advance of scientific direction and explanation. Moreover, as in all arts, more than knowledge is needed, namely, common sense, rapid and firm decision, and resourcefulness—faculties by no means resting upon intellectual conceptions, but on a certain virility of character not to be got from books. It is no uncommon experience to see physicians of high intellectual subtlety, of great learning and of a pretty wit, lose themselves in the practice and even in the exposition of their profession because in them the critical faculty exceeds the practical. Indiscriminate doubt, however valuable an attitude of mind in the laboratory, is mischievous in the field of action, where a keen determination to make the best of imperfect instruments, to use any accredited means rather than none should be the dominating impulses—impulses which enlist also on the side of the physician the hope and animal spirits of the patient; for, after all, the practice of medicine contains no small element of "suggestion." Furthermore, the fastidious spirit, which I have endeavored to indicate, is, on the whole, opposed to progress, as, even in thought, it lends itself too readily to irresolution, and irresolution is the quick way to indolence. On the other hand, I need not warn you that practice without continual scientific reedification soon degenerates into stereotyped and sterile routine.

Once more, when we are twitted with the discovery of manifold new diseases, without the discovery of any means of dealing with them, we may reply that not only are we discovering the course and ends of these destructions, not only are we discriminating between this series of symptoms of dissolution and that, but we are engaged, as I will remind you again, in the study of origins. We are no longer satisfied to contemplate the wreckage of disease, but we are earnestly hunting out the processes in which such and such deviations from health took their being.

The study of origins, then, is not only the new method of modern criticism, of modern history, of modern anthropology, of our reading of the evolution of the universe itself from elements which even themselves are falling under the same analytic inquiry, but the study of origins is leading to a revolution in our conception of therapeutics, as of all these other studies; a revolution which as yet we have not fully understood. This revolutionary conception is that death is not to be driven away by the apothecary, not by any cunning compilation of drugs, but is to be prevented by the subtle strategy which consists in knowing all the moves of the game. Few and simple are the diseases which can be expelled by leechcraft, as we expel a worm. The medicine of the future will consist in setting our wits to nature, in recognizing that when evils have befallen us there is no counsel, and that in the simple beginnings of things are the time and place to detect where stealthy nature, atom by atom, builds and unbuilds, feeds us or poisons us. To disentangle the clue we shall not pull at it anyhow; we shall anxiously seek the beginning of it, thence to unravel its windings.

There is an old saw that nature takes as much trouble to make a beggar as a king. She does not make diseases to sit so loosely that they can be expelled by violence or bound by a charm. Much of curative medicine, in the vulgar sense, will thus be swallowed up in preventive medicine. We shall not wait till we are half dead before we take in hand our disorders; abnormal processes, not their result only, will be our fruitful study.

Another feature of modern therapeutics is the use of Nature against herself. We learn, as I have said, to play the game; we are not content to sleep at our posts till we must fight

desperately against a checkmate, but we keep in touch with the enemy all through, and use the same means. Thus, by the side of preventive medicine, we learn that hygiene, in its largest sense, is also to be our guide. Instead of trusting to prescriptions for alleged specifics, which have no little kinship with magic and antidotes, we ally ourselves with Nature's own forces. For example, if we cannot prevent infantile palsy, which soon, perhaps, we may do, we shall attempt its cure, not by idle drugs, but by strengthening the physiologic factors of life; by the use of massage, electricity, warmth, and so forth. As we further discover the physiologic factors of life, we learn to supplement the failing juices of a gland from other sources in the economy; by learning the distribution of heat in the body, we find that fever can be controlled by conductions of heat by the cold baths and otherwise; by a better knowledge of the mechanics of the circulation, we arm ourselves with means for regulating its currents by baths and gymnastics and the like. Even in the sphere of drugs themselves we are, year by year, deposing this drug and that from the place of specifics, as in the case of quinin, and putting them in the ranks of preventive agents, and, with respect to others, we are carrying our study of origins into their qualities, as well as into the healthy or morbid processes over which they have power. The relation of atomic weight to physiologic effect, the experiments by which, on slight substitution of one molecule for another, we convert compounds from one kind into another and widely diverse kind, from convulsants, for example, into narcotic or paralyzing agents, we throw light not only on their own properties but also on the secret processes of the animal body itself. I will not stay to illustrate in the same way the parallels between the members of different series, nor the advances, of late the least active, by the way, of physiologic chemistry, and of chemotaxis, and of the study of the behavior of serums and the like within the more comprehensible range of the test-tube. Such considerations impress us again and again with the importance of the union of practical and laboratory or theoretical work in the same person and in the schools. No scientific observer who has not made medicine more or less a practical study can be as well equipped as otherwise he would be to investigate such subjects as these.

The modern hospital must be the modern laboratory of medicine. As in the sixteenth century the great laboratories of anatomy sprang into existence, in the seventeenth the laboratories of physics, in the nineteenth the chemical (Liebig), the physiological (Ludwig), the chemico-physiologic (Hoppe-Seyler), the pathological (Virchow), the hygienic (Pettenkofer), so the clinical laboratories initiated but the other day in Germany by v. Ziemssen, Curschmann, and in the United States by Pepper, are the factories out of which the new medicine is to come—the medicine which, penetrating into the intimate processes of Nature, learns to turn Nature to her own correction. The clinical laboratory is to be the scene of the study of the origins of disease.

What are the aids and dangers of "specialism" in these advances? Against this tendency in modern studies and practice an outcry has been raised, which, if a little unintelligent in its way of expression, has not been without justification. In advancing civilization the applications of thought, as well as those of labor, must be divided and subdivided. The activities of the mind are at least as multiform as those of the traveler in the world, and it is impossible for all explorers to follow each other over all ways. As pioneers increase in number and in adventure the more are they divided from each other, the more difficult is it for each to make himself master, even by report, of the work of all.

This general law is as true for medical inquiry and for medical practice as for electricians or naval engineers. Not only so, but we may say that, in the sciences, men are not traveling over one world only, but over many. If within each world of mathematics, physics, chemistry, and so forth, explorers separate and travel out of sight of each other, what shall be said of the remoteness of explorers in these several worlds? Yet these several worlds of the sciences are not as Mars to us, but as the various kingdoms of the earth. What goes on in each is of the utmost importance to all, and as civilization advances becomes not of less importance, but of more and more. Herein lies the justification of what I have called the outcry against specialism. The protestants have perceived this interrelation of all knowledge, and they have foreseen both the narrowness of spirit and the lameness of practice which must come of such a disintegration of parts of such an isolation of efforts. Nay, they may not improperly conceive that a less amount of knowledge, duly systematized, may be of more value in affairs and in philosophy than more knowledge in scattered parcels. If the outcry has been somewhat unintelligent, this has been not in the perception of the kind of injury to learning. This is to be credited to them as a virtue. But in the want of perception that some division of labor is inevitable, the protestants have seemed to care less for the advance than for the system of learning, and, indeed, to have set practice in some antagonism to learning.

We shall henceforth perceive, I trust, that this new movement comes from the depths; that it is not by withstanding the very conditions of modern progress that we shall secure its balance, its concert, and its sanity. Happily, evolution will be found still to consist not in differentiation only, but also in integration. As labor is divided, an organization of knowledge must proceed step by step with the division. Specialism will have its disadvantages, as all exclusive aspects of things have them. In practice, specialism will have its charlatanism, as omniscience has had it. It is only by the increase of discernment and education in society at large that the genuine and humble children of Nature will be known, and it is by progress in its best sense that such discernment and education are to be extended. I do not hesitate to say that even within my own lifetime these qualities in the relation of society towards our profession have not only increased, but have waxed abundantly, and thus is a medium formed in which the remoteness and alienation of specialized workers finds a corrective. The worker in all subjects, even in the larger operations of ordinary trade, learns that he, too, must think of the whole as well as of parts and details. Even money cannot everywhere be broken up into small change; commerce can no longer be a piecemeal affair. In the tradesman, indeed, is engendered a mind in favor of breadth of view, and even in the man in the street is begotten a hazy notion that there cannot be, as in ancient Egypt, a physician for every part of the body. There is no mean in Nature but Nature makes that mean; if these qualities of intellectual concert, of scientific formation of mind, of breadth and sagacity are needed, they will be found, and the way to them will be found also. Indeed, such conceptions of education are gaining apace on the general mind, though their full bearing is not yet understood. It is this very breadth of mind which is aimed at by educational reformers, by those who prize education before mere acquisition, who assert that, with the greater complexity and definiteness of knowledge, associations of workers and certain harmonies in their results must be brought about.

Those, then, who resent the specialization of science, as of



other fields of human work, although they are wrong in their way of opposition, have hold, nevertheless, of an important truth, and they agree with the Thracian King Zamolxis, who was also a god. Zamolxis observed that "as you ought not to attempt to cure the body without the head, or the head without the body, so neither ought you to attempt to cure the body without the soul, and this," he said, "is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also, for the part can never be well unless the whole be well." (Charmides.) Although then we cannot hope that every physician shall be a man of science, we may secure that he shall have the scientific habit of mind, for thus, as we have seen, he will be habituated to lay out his knowledge systematically, to trace phenomena to their sources, and to see his own facts in their due relation to other facts. This is the philosophic temper which cannot be learned from books, and rarely without tradition and converse with gifted men.

Some disciples are more apt to receive this grace than others; some men, many learned specialists, are incapable of wise scientific judgment; no examination can test it; no memory can secure it; it is in part a product of time, which accepts what is good and rejects that which is transitory. It is to be assimilated from organs of knowledge, such as universities, and not from mere polytechnic institutions. It is the highest reward of the teaching from a living source, for, as Professor Butcher says, "the test of life is to impart life."

Too many students pass through their schools without an awakening of their minds. They believe their superficial knowledge to be exhaustive, and they become the mouth-pieces of ready-made opinions.

I should be an ill bird were I to say anything to-day in depreciation of the value of lectures, of my own wares. In bygone times I have said much in depreciation of them, urging that they are survivals of a time when books were scarce and dear, and when knowledge was looked upon as spoon-meat. I have helped forward the cry that the laboratory must be the future living source of knowledge and of inspiration. While men were blind to this new truth it was necessary to urge it to the hindrance of other needs which men were not likely to forget. Now that the battle is won, and the laboratory is everywhere with us, we may turn again to consider what there is in older methods which we would not willingly lose. In lectures we may still find the virtues which flow from living converse with thoughtful men who have been over the field of our studies before us, who can show us how their minds worked, how they systematized their knowledge, how they came to see it in the light of other researches, how they inspired it with human interest. For such ends as this we must have no mere retail dealer in knowledge for our lecturer. In all universities it is now recognized that, except for tutorial work, the lecturer to beginners must be the leader in his faculty. He it is who can give the true first set to the thoughts of young men who are entering into the subject of their lives; older men and advanced work may well be undertaken by demonstrators.

Thus far I have considered specialism and breadth in respect of the education in our profession, but a larger problem lies before us, namely, that wider culture which lies beyond the confines of all professions. One of the difficult conditions of our own generation is the urgent pressure on young men and boys by reformers and anxious parents who desire, not unreasonably, to mold their sons into money-making machines at as early a date as possible. When I took my degree at Cambridge our course was, in the first place, to take

an arts' degree, at that time only to be had in the arts. Thereafter came the natural-science studies, with their tripos, and after that again the clinical studies proper to our professional life. This course occupied us up to the age of twenty-five, at least, and in some respects it was a far better education than we now bestow. Now, from the first hour of the medical student's arrival in Cambridge he is too often turned at once into the narrower channel of his special calling, and he even tries to pick up a precarious instruction in clinical work while he is ostensibly at work on the preliminary sciences. Nay, such is the pressure of the times, parents and teachers are getting impatient even with this rate of speed, and are insisting that even at school time is wasted in classical and other broader studies which might be utilized for science, and that men should come up to the university ready to "specialize" farther still. Among other strong arguments in favor of this reform is this: That whoso means to practise surgery should acquire manual dexterity, and that this advantage cannot be acquired by the ordinary man unless he begin to educate his plastic fingers in early youth. This argument I will dismiss in a word by saying that, in my opinion, every man should be educated in a handicraft or mechanical art of some kind during his early youth. The importance of this element of education is curiously forgotten even by such a mechanical race as the English and American. So much for surgery; the boy who has learned to use a lathe or to make a chest of drawers will have fingers apt enough for surgery.

There is, moreover, another means of education most useful in early life, namely, that of measurement. At every national school youths of both sexes should learn to measure accurately to thousandths of an inch and to hundredths of a grain; thus the eye is taught with the hand, and, what is of more importance, the mind is trained to know what accuracy means. These occupations, invaluable in training of character and skill as they are, would add nothing to the burden on a growing brain.

Of the sciences, those of memory and observation only should have a place. The mind of youth is in a stage when the imagination, rather than abstract thought, should be cultivated. To collect natural objects, and thus to be drawn into the haunts of animals, into the habitations of plants, and to see the structure of the earth, excites and enlarges the imagination and strengthens the memory at a time when these faculties are ripe for culture. I have never happened to meet a young man, educated in abstract science at school, who seemed to me to have used his time to the best advantage. If, for the present, it has led to success in the narrowest sense, I think we are entering even now into a generation when success must be based on a larger education than this—on an education in letters and in the humanities, as well as in the laws of the material universe. Rousseau well said we should not teach children the sciences, but give them the taste for science.

We are apt to forget that even in these days of science, advancing by leaps and bounds, that still the greater part of man's life is spent in the expression of his thoughts and in converse with mankind. He should, therefore, have learned to handle the ideas which concern himself and his fellows, not only in their material conflict with Nature, but also in those higher spheres of history, ethics, politics, and social aspiration for which alone man can be said properly to live. If we regard the mastery of modern man over Nature in any other light than as clearing for us a larger base for a reconstruction of societies which shall be more wise, more humane, more beautiful in spirit than in the past, there

would be nothing but sadness in the contemplation of modern life, with its "gay afflictions, golden toil." No doubt we must rebuild our material home, but we ourselves also must be born again. (Newman.)

The uses of learning Latin and Greek lie in this—that in these studies, more than in any others, the ideas which concern man in his highest endowments of mental, spiritual and social life are manifest, and not only so, but are manifested in languages the most virile and beautiful the world has known. Latin and Greek are called dead languages. If so, the Hermes of Praxiteles and the Venus of Milo are corpses. Latin and Greek contain in perfection of form not modern science, but that for which modern science exists—the best that man has lived and thought. It would be a narrow pedagogy which should assert that strong and penetrating thought, and noble and chastened imagination are to be found only in Latin and Greek; we may be thankful, indeed, that the English language is or has been as noble an instrument, and enshrines at least as fine a literature. Yet it has been said long before our time that to know one literature only is to wander in the sphere of letters without a scale of relative dimensions—to lose the faculty of comparison for lack of standards of comparison. To learn to speak a language like a parrot is but to train a mechanical memory. Latin and Greek, however, although they contain the finest records of human thought and action, are, as I have said, not the only shrines of letters, and the noble literatures of France, Germany, or Italy may take the place of either of them, and carry the additional advantage of common usefulness.

But do not let us forget that our calling derives its honor not from its power of repairing the carnal body: were this its only title to respect it would take a low place in the hierarchy of professions. Those professions which deal with the ends which alone make life worth preserving—such as that of the law of religion, philosophy, and of the fine arts—would in such case regard our occupation but as a higher kind of farriery. The glory of our profession, from the hour when Hippocrates, in that oath wherewith like a trumpet, the notes of which reverberate still through the ages, summoned us to take our place in the forefront of the fight, has been that we are concerned not only for mankind, but for men. The ideal side of a physician's life is that he brings healing or solace to his human fellow. The Greek philosopher, like the modern socialist, would sacrifice man to the State; the priest would sacrifice man to the Church; the scientific evolutionist would sacrifice man to the race. Yet, while all these elements of co-operation and of aspiration work together for good, we thankfully see that, after all, the tendency of civil evolution, as of Christian ethics, is to use society as a means for man himself, as a means to purify and to elevate the individual soul. The physician, then, is more than a naturalist; he is the minister not only of humanity at large, but of man himself. Thus it is that the humblest of us, and he who labors in the darkest and most thankless parts of our cities, is never a drudge; in the sight of the angels he is illustrious by the light of his service to men and women. The man of science can tell us delightful things about birds, flowers and wild life, for all life is various and touching; he can tell us queer and uncomfortable things about our insides, amazingly useful things about steam and electricity, but at bottom, when the marvel is over, or the material gain is won, all this grows stale. Ideas concerning the harmony of the spheres, concerning cosmic evolution, concerning the inhabitants of Mars, are prodigious; they may uplift us sometimes with a sense of

the greatness of man's inheritance, but alone they are cold and unsatisfying. The child of his age feels that a sonnet of Wordsworth, a flash of Browning's lamp into man's heart, an idyll of Tennyson give us thoughts worth more than all the billions of whirling stones in the universe. In strengthening and cherishing this inner life of his brother and sister, happily, the physician has many fellows, but the physician alone among them all holds sacred the lamp of the personal life for its own individual sake; he alone forgets Church, State, nay, even the human race itself, in his tender care for the suffering man and for the suffering woman who come to him for help.

### SOME PREVENTIVES.<sup>1</sup>

By A. JACOBI, M.D., LL.D.,  
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Central Professor of Diseases of Children in Columbia University

(Continued from p. 1248.)

EARLY infancy and advanced age are equally endangered by a high morbidity and mortality. Among the working-class of France, as represented in trades-unions, Villermé found that between the 20th and 30th years a man would be sick 4 days annually, about the 40th year  $5\frac{1}{2}$ , at 50 years  $9\frac{1}{3}$ , at 60 years 16, at 70 years 75 days. Can this disproportion be prevented; or if not, can it be modified?

"Senectus ipsa morbus." In advancing age, between the 50th and 70th years, even earlier in many, the symptoms of old age become apparent. The blood diminishes in quantity; so do its solid constituents; it is mainly the red corpuscles and the fluid albumin that decrease. The big bloodvessels become first enlarged by the loss of elasticity in their media; in many there are atheromatous deposits, and blood-pressure decreases from both causes. Part of the capillaries disappear altogether; that is how general nutrition is impaired. The latter suffers besides, on account of general atheromatous degeneration. The heart, unless locally diseased by valvular endocarditis, is flabby and its muscle feeble, and thus no longer able to propel the former amount of blood with its previous vigor. This condition, however, is not always detrimental, for a strong current would overdistend and perhaps burst the bloodvessels that have lost their elasticity and contractility.

The adipose tissue, the skin and most mucous membranes and the muscular tissues (voluntary, intestinal, and vascular) undergo atrophy. The nervous system loses much of its excitability and energy.

The loss of teeth, and changes in the respiratory, digestive, and glandular systems interfere with assimilation, respiration, and sanguinification; the bones become fragile; finally even the brain, though the very last to do so, participates in the general atrophy. Cold temperatures, exertions, and acute infections, also emotional depressions, undermine the power of resistance,

<sup>1</sup> Read before the Section on Medicine of the College of Physicians of Philadelphia, October 11, 1898.



which may be impaired, and bad results may then be prevented by warm clothing, external heat, a cautious mode of living and a greatly stimulating occupation.

At every period of life a vigorous but adequate metabolism is required.

Exercise takes its first effect on the muscles; through them on the blood-circulation and the lymph-circulation and on the respiration. A man at rest breathes 12 or 16 times a minute, and consumes 8 liters of air; when marching from 30 to 36 liters; muscle, when active, consumes and produces 20 times as much gas as when relaxed. In that condition it generates large quantities of carbonic acid, more sometimes than corresponds with the oxygen received. The carbonic acid is accumulated, and consequently respiration is increased to remove both carbonic acid and residual air. The heart's action is intensified, and blood-pressure is increased. When this condition is kept up, or exaggerated, cardiac dilatation, or hypertrophy, or both, may be the result; mainly so when the heart-muscle is physiologically feeble, or diseased. No man in advanced age should forget that the one organ of his body that never is permitted absolute rest is the heart. That is why it requires unusual care. Old men should use the bicycle, if at all, with discretion, for the ascent of a single hill may dilate their hearts by an inch or more; and exertions after meals should be strictly avoided.

Digestion suffers, in advanced age, with the rest of the functions. Meals should be eaten slowly, be less copious, and fewer, particularly when no or little labor is performed. Good artificial teeth add, however, to life and its enjoyment. But meals should be small in advancing years. If there be anything that convinces me of the fact that all of us eat too much, it is the small quantity of food some old people, mainly women, live and thrive on. Old people should not eat unless they have a desire for food; the occasional omission of a meal will do good. Whatever is not required for the equilibrium of a healthy metabolism swells the chances of atheromatous degeneration, of rheumatism and gout, of cholelithiasis and nephrolithiasis, and of diabetes. The principal evil is done by the prevalence of too much black meat in the food; an exclusive meat-diet is not counteracted by means of hot water, though a cunning quack says so, with great success to himself. If George Keith quotes St. Paul as saying that "strong meat belongs to them of full age," I hope he meant the vigorous age of those who do hard work. The same writer is my authority for the statement that in Buenos Ayres, where the people consume a great deal of meat, anemia, rheumatism and neuralgia are frequent. Neurotic and neurasthenic people bear but little meat, and different temperaments, as Schöpf Merei knew 60 years ago, require a conscientious adaptation of their foods. Nor should the belief in the innocuousness of certain foods, although they be taken in large quantities, be encouraged. Not what is swal-

lowed, but what is digested and assimilated, is beneficial. Milk is not always tolerated in large quantities, and plain milk without some change, either by mixing with cereal decoctions, or with dilute hydrochloric acid, is seldom digested for any length of time. The old mixture of Dr. Rudisch, which I have used extensively these 25 years and eulogized ever so often, consists of dilute hydrochloric acid, water, and raw milk in proportions of 1 : 250 : 500, brought once to the boiling point.

I am so convinced of the good effect of a spare diet in old people, that I have often insisted that the change be made. In consequence, I have frequently seen aged men and women with sour temperaments, flatulency and muscular and mental incompetency, become cheery and active—nor old people only. According to Keith's East Indian experience, it is the unanimous verdict that spare frames and spare eaters bear tropical climates best. Three-hundred pounders do not prove satisfactory. The teacher who initiated me into the mysteries of the alphabet was very frail and was considered tuberculous. Being so lucky as to have to live on the equivalent of \$30 a year, and not striking oil at any time, he lived on healthy but spare diet up to his present age of 87, which he spends with books and painting. Thus it happens that the feeble should not be despaired of; they may reach an old age, while the very vigorous, who do not suffer at once from their transgressions, are tempted by this apparent immunity to repeat them and succumb to their consequences. Nor do I think that the old Egyptians would, altogether, protect themselves against the results of their indiscretions by their custom of taking a purgative and an emetic three times a month.

As a rule, alcoholic beverages and tobacco are not well tolerated by aged people. Alcohol, when used regularly, though in small quantities, favors adiposity. I think I have observed a great many times that with increasing arteriosclerosis both become less acceptable, and sometimes distasteful. There are exceptions, as there are even in regard to the greatest danger to old men, viz., sexual excesses. If a stimulant be demanded, a small quantity of an alcoholic beverage, with plenty of hot water, provided it is not the habitual, though moderate, drink; or, better still, an ammonium, or a camphor-preparation, will be borne best. Drinks and clothing should be warm and a warmer climate selected; that does not exclude, however, that the cutaneous nerves and the circulation should be strengthened by the cautious use of cold water and short sessions of massage.

Water is not required in the same quantities that are demanded by the activity of all functions in early and middle life. Nitrogenous food requires more, to do away with its refuse. The liver and kidneys of the old, however, may become exposed to the same danger from the lack of water as those of the newly born. If much is required, or is wanted, it should be taken in small

and frequent doses, to save the shaky heart and the arteries from sudden overexertion and overdistention.

Should elderly and old people sleep long? That depends, provided they be of equal health and vigor, in part on their occupation, or labor. Physical labor requires much sleep, mental less.<sup>2</sup> Physicians who labor both physically and mentally require more sleep than most of them can, or think they can, afford. As a general rule, old people who sleep long and eat much, provoke senile degeneration. Long sleep and big meals should be in inverse relation to one another.

By attention to the suggestions contained in these remarks, premature symptoms belonging to old age—otherwise the most incurable condition—may be prevented or postponed. Some of them are merely physical and referable to the organs of circulation. Myocardial changes are mostly responsible for congested liver, for dyspnea and for alleged nervous palpitation; and cardiac and arterial degenerations cause angina pectoris, and fainting spells. But the brain does not only suffer in its physical sphere, and from mental incompetency; the emotional life is affected also. Calcification of arteries goes hand in hand with that of ideas and of sentiments. The crotchetyness, distrust, and vehemence of old age is of arteriosclerotic origin. I knew an erudite, lovable and famous man, known all his long life for his gentleness and restful ways. Quite suddenly his temperament changed, without visible alterations of his physical life, to such an extent as to cause general surprise and regret. My prediction that he would soon die was verified by his speedy death from apoplexy. Such occurrences may be prevented, or postponed; but is it worth while? If the foolish question has been raised: Is life worth living? the other question may be justified: Is a long life worth attaining? A conduct according to sensible hygienic rules does not only prolong life with the outlook of merely procrastinating the undesirable symptoms, but age may be made to advance uniformly and without a disturbance of equilibrium. Then the capability to work may be less, but wisdom will take the place of activity, and serenity that of pushing restlessness. Nor will work be impossible. Those to whom it was an enjoyment will always be able to perform it under the influence of its mental stimulus. That is why so many who never looked for enjoyment as such, and as the principal aim to be reached, remain young, though they have lived long, and may mingle with and learn from those young in years.

Still, there are those who do not judge life by the number of sunsets they have seen, but by the amount of labor performed in their own interest or in that of

mankind. There was your townsman, who died of old age while still young, but forced more beneficent work into a single year than many gifted men into a decade. He knew it was overwork, and also knew his personal danger. If he preferred to live in the memory of the present and coming generations to staying here in the body long and comfortably, that was his right, and, as he saw it, his duty. As medical advisers, however, we do not deal with exceptional cases, but with the average individuals of the race; it is for them that our rules are made, and to whom our advice is given. Those with ways and aims and horizons of their own, select their own paths.

The actual treatment is not unpromising. It is true, however, that arteriosclerosis is more or less universal and progressive. To control it, the avoidance of injuries is of more importance than medicines. The slow, gradual, indeed physiologic variety is not attended with much danger, unless it be complicated by bronchitis or kindred disorders, which are often fatal. When it is preeminently renal the prognosis is worse, though not so bad as in the advanced cardiac form. The cerebral variety may prove fatal at any time, but, on the other hand, it may pursue a slow course, and even bear apoplexies with ease for shorter or longer periods.

The objects of preventive and curative treatment should be to make arteriosclerosis as slowly progressive and as uniformly physiologic as possible. Thus the harmony of well-developed and strong manhood will gently evolve into that of equable enjoyment and gradual decline.

The methods employed for the reduction of adiposity, which is a frequent prodrome or complication of senile changes, are attended with certain dangers. When emaciation takes place rather suddenly, cardiac weakness and neurasthenia are common occurrences, and even moderate exertion causes dilatation of the heart. Arteriosclerosis depending on syphilis requires great caution, for it is as little improved by mercury as many other manifestations of "metasyphilis."

The main treatment of progressive senile changes should be directed against uncommon arterial pressure, which means, mostly, an impediment in the peripheral circulation; perhaps also against sclerosis as such. There are more means to combat the former than there are to benefit the latter. Moderate gymnastics, manual and mechanical massage, horseback-exercise, walking, also skating and cycling without overexertion, and a very moderate amount of climbing, are useful muscular exercises, but they should never overstrain the heart. Massage in the warm bath acts beautifully; still better the carbonic acid of mineral baths, such as those of Nauheim. Massage and missage are, however, different things. It requires anatomic knowledge to alternately compress and release the bloodvessels and lymph-ducts between the muscles, and few but medical men will ever be good masseurs.

<sup>2</sup> Tissues and organs do not suffer equally from exhaustion, or waste. Atrophy leading to death consumes 30% of all the fat, but only 30% of all the albuminates contained in the body. The liver loses 70% of its fat, the brain none at all. The albumin disappears mostly from the muscles and from the skin, but less from the muscle of the heart than from those of the rest of the body. Evidently heart and brain can stand a great deal of wear and tear, and have to.



Amongst the drugs, the nitrites act favorably by their power to dilate peripheral arteries, and the iodids by lowering blood-pressure and regulating the peripheral circulation. Cardiac insufficiency, which is brought about either by peripheral resistance, or by myocardial changes, or by both, requires, besides massage and rest, an occasional purgative and frequent diuretics; the use of milk in renal arteriosclerosis whose first uremic symptoms are dyspnea, headache, vertigo and tremor, and, I think, in gout also; when there is much venous obstruction with mild cyanosis, an occasional venesection; or when much cardiac dropsy, calomel. Diuretin, or better, theobromin—now and then morphin—acts much more safely than digitalis, amongst the preparations of which it is principally digitoxin that in the usual daily doses of from two to three milligrams is too likely to contract peripheral arteries, and thus to increase blood-pressure.

[To be concluded.]

## X-RAYS IN THE ARMY.

By H. LYMAN SAYEN, U. S. A.

Expert in charge of the work at Fort McPherson, Georgia

WHEN the operations of the army near Santiago indicated the necessity of providing for the wounded in the United States, where better care, more healthful surroundings, and better food could be obtained than was possible in Cuba, the Government selected Fort McPherson, Georgia, as one of the receiving-points. Situated four miles southwest of Atlanta, on a table-land 1,000 feet above the sea-level, its pure air and water, excellent sanitary arrangements and central position in the South, made it an excellent site for a general hospital for the army in the field.

Early in July I was ordered by Surgeon-General Sternberg to report for duty at the Post in connection with X-ray work. Upon my arrival there I found that the finely-equipped post-hospital was used partly as an executive building and partly for sick and wounded officers. Immediately adjoining the hospital-building is the laboratory-building, one portion of which is the surgical operating-room, well equipped with modern surgical appliances, while another part of the building was devoted to the biologic laboratory, and it was here that the X-ray work was done. The room was well suited to the work, and, as the water supplied to it was from an artesian well over 2,000 feet deep, it offered exceptional facilities for the developing and printing. I had the shutters covered with an opaque, black oil-cloth in order that the room might be made absolutely dark, even when the brightest daylight prevailed outside. It was found essential to do this, not only for photographic purposes, but for the fact that it seemed impossible to do satisfactory X-ray work in daylight. It is a matter of ten minutes or so for the eyes to ac-

commodate themselves to the fluoroscope after being exposed to daylight, and it is impossible to keep them glued in a fluoroscope, and, at the same time, manipulate the X-ray apparatus in a light room.

The original equipment of the X-ray laboratory contained, as a generator, an eight-plate static machine with plates 28 inches in diameter, running in ball-bearings. The plates were in a moisture-proof case, which contained also a double plate Wimshurst as an exciter. The main plates were driven by a large handwheel, which made one turn to four or five of the plates.

The apparatus was of excellent workmanship, and, under conditions less exacting than in this instance, might have performed the work required of it. While my experience in the use of the static machine in connection with the generation of X-rays has been somewhat limited, a previous study of the conditions existing in this form of machine, together with the actual working of the apparatus at the Post, leads to the conclusion that the static machine is theoretically and practically an inefficient current-generator, aside from the fact that the highly humid southern climate rarely permitted its use in this particular instance.

A static machine depends for its excitation on the potential induced at its terminals, and, as a consequence, when running at a low potential, as on a tube of low vacuum, it does not generate a sufficient quantity of current. The addition of a spark-gap in series with the tube improves the output of the machine, but there is more energy lost in the spark-gap than is used in the tube. That is to say, if the machine is not running at a potential equivalent to a long spark, it will not generate enough current to properly illuminate the tube. A tube with a vacuum corresponding to a parallel spark-gap of about 3 inches gives the most satisfactory results as regards the penetrative character of the X-rays produced. When connected with a static machine, it is necessary, in order to get enough current through the tube, to add a spark-gap in series with it about 6 inches long. It will be seen from this that the machine, in order to give the proper current, generates three times the current necessary; or, in other words, a 4-inch spark from an induction-coil would do the same work, while the apparatus required would occupy but about one-twentieth of the space.

In view of the exigencies of the work, Messrs. Queen & Co., of Philadelphia, kindly loaned me a 14-inch induction-coil, together with a number of their self-regulating tubes, while Dr. T. P. Hinman, of Atlanta, volunteered the use of his laboratory for the purpose of charging the batteries to run the coil, as no electric plant existed at the Post.

The wounded sent to the Post included those who were in the fight at El Caney, and in practically every case the X-rays were employed for diagnostic purposes. The difficulty of obtaining suitable photographic plates early in the work compelled reliance upon the findings

of the fluoroscope, the locating of bullets being marked by ink-spots on the flesh. In the case of fractures, the surgeon in charge of the patient was enabled to verify the position of the bones.

The number of wounded during the war that required the X-rays was by no means large, but the cases of injured received at Fort McPherson were of such a varied character as to fully emphasize the value of the new form of radiant energy, in all field and hospital work during the war. While it is not within my province to comment on the surgical aspect of the subject, I believe it to be the opinion of surgeons of experience that the older method of probing for bullets, with the consequent danger of carrying infection to the wounded parts, should be abandoned in favor of the X-rays. There is also the important factor of accuracy in the X-ray determinations, enabling the surgeon to remove the bullet through a small opening in the tissues.

All of the operations of the surgeons at the Post were

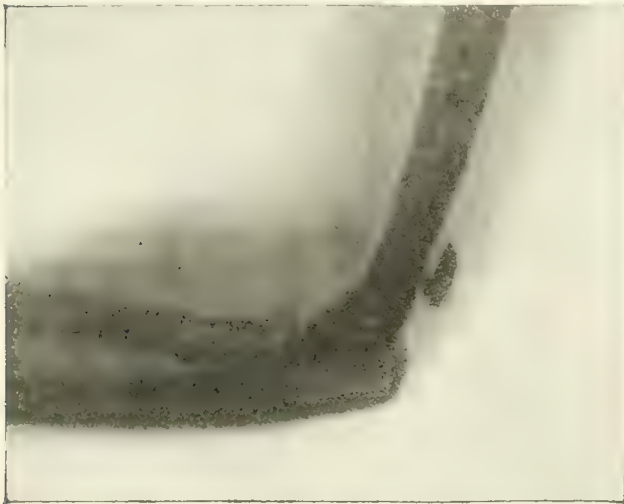


FIG. 1.—Piece of lead in arm.

successful in removing the bullets from the exact location, as indicated by the radiographs, and in many cases it was impossible to determine the nature of the injury except by means of the plates. The presence of some of the bullets was even unsuspected, as is shown by the case of J. R., a private of Company C, Second Infantry, who was wounded at Santiago, and arrived at Fort McPherson with two pieces of lead in his arm. The presence of the larger piece, as shown in the radiograph, Fig. 1, was unsuspected, the smaller piece being so near the surface that recourse to the X-rays was considered unnecessary. Subsequent stiffness and soreness in the arm, however, gave rise to an X-ray examination, which resulted in the radiograph shown, and the successful removal of the bullet.

It is well known that, in addition to the steel-covered Mauser bullet, the Spaniards also fired a brass-jacketed missile. In Figs. 2 and 3 are shown respectively a brass-jacketed bullet and a Mauser—sketched full size



FIG. 2.—Brass-jacketed bullet; weight, 25.5 grams.  
*a*, end view; *b*, side view.



FIG. 3.—Mauser bullet; weight, 11.5 grams.  
*a*, side view; *b*, end view.

after their location and removal. The brass-covered bullet was of soft lead and easily “mushroomed,” as shown in Fig. 4, from another patient. From the shape of the bullet after removal, and from the nature of the injury, the bullet undoubtedly struck the humerus a glancing blow, fracturing it, and becoming flattened as shown.

The effect of the small-caliber bullet upon the bones

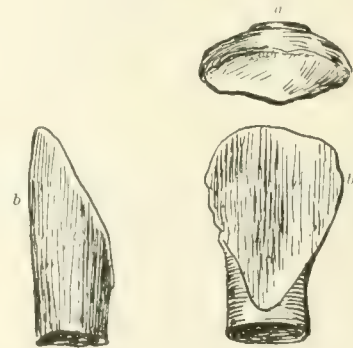


FIG. 4.—Brass-jacketed bullet, “mushroomed;” weight, 28.5 grams;  
no jacket found. *a*, end view; *b*, side views.

is still a matter of discussion, although it is recognized that the character of the injury is measurably affected by the distance the bullet has traveled before striking. Fig. 5 is a reproduction of a radiograph of a fracture resulting from a gunshot-injury. The bullet passed through the arm and left no record showing whether it was a brass-jacketed bullet or a Mauser. Presumably



FIG. 5.—Fracture resulting from a gunshot-wound.



it was the latter, for if it had been of soft lead it would likely have "mushroomed" after striking the bone, or else have made a considerably larger wound of exit. At the time of the injury the man was on the firing-line and believed that he was about 800 yards from the enemy. It is interesting to note the shattered condition of the bones.

Although out of my professional territory, I was particularly impressed by the fact that the Mauser wounds were aseptic, while those made by the brass-jacketed bullet in most cases gave rise to suppuration.<sup>1</sup> This was probably due to the verdigris on the latter, resulting from the combination of the tallow and the brass jacket.

The present war is the first occasion that our Army Medical Department has had occasion to use X-ray apparatus to any practical extent. Apart from the novelty of the new force, there is not the opportunity in the Army in time of peace to determine the value of improvements of this nature that is afforded by general hospitals. The X-rays in the Army are essentially an equipment for war, and in those times when the Medical Department is taxed to the utmost, it is of the highest importance that it should have every facility to help in the successful treatment of the wounded.

Not only are the rays valuable from the standpoint of their immediate usefulness, but too much importance cannot be placed on the fact that, for purposes of records, there is nothing more accurate or better than a radiograph. For instance, is there any way in which the gunshot-wounds referred to in this article could be more graphically described or illustrated than in the radiograph? In the case of J. R., should he try to obtain a pension, could there be any better evidence of the fact that his bones were uninjured, and that the possibilities of a permanent injury resulting are exceedingly small. If, together with the radiographs, there is kept an accurate history of the different cases, we have an indisputable account of the effect of gunshot-injuries.

It certainly seems that the recent developments in the design of X-ray apparatus have advanced it to such a state that there are great possibilities for the adaptation of it to work in the field. A covered wagon, drawn by two mules, would furnish the dark room, as well as the means of conveyance. It would have to be in charge of two men, who should be so trained in the work that they could, between them, take care of everything, from the secondary of the induction-coil to the hoofs of the mules. In the wagon might be placed a 12-inch induction-coil, so made that every part could be immediately removed and replaced by a duplicate, of which the wagon should contain a complete set. It should also contain, besides a complete supply of tubes, and photographic apparatus, a little dynamo and a windlass, so that the mules could put in their spare time in charging the storage-batteries (although this

seldom has to be done, as my experience at Fort McPherson demonstrated). A thousand pounds would cover the weight of the apparatus, and with such an equipment the wagon would be as independent as a company of infantry. The operators could bunk in their ambulance, besides carrying a plentiful supply of rations.

## A CASE OF NOMA IN AN ADULT, COMPLICATING AMEBIC DYSENTERY.<sup>1</sup>

By E. R. LECOUNT, M.D.,

OF CHICAGO.

Assistant Professor of Pathology in Rush Medical College.

Although that form of gangrenous stomatitis to which the name noma refers is known to appear in connection with wasting and cachectic diseases, its combination with amebic dysentery, and in an adult, has not been previously noted, so far as I have been able to determine. The following is a brief report of such an occurrence:<sup>2</sup>

H. B., a barber, 35 years old, was taken ill in the early part of January, 1896. He was of somewhat dissolute habits, but had never been seriously ill. This illness began with a severe diarrhea, which persisted so that in the latter week of January he was having two, three, and four or more bowel-movements a day. The stools were made up of a thin, dark-greenish fluid, which was occasionally slimy or bloody. At this time the man was confined to bed, very weak, delirious at night, with a temperature of 101° or 102° F., and a pulse-rate that ranged between 120 and 140. He grew rapidly worse; delirium was replaced by periods of stupor; bowel-movements and urination became involuntary; and death took place February 2d. Three days before death a discoloration of the lower lip was noticed, which gradually increased in size. It was of a dark-bluish color, sunk slightly below the surface and in marked contrast to the remainder of the face, which was pallid.

At the autopsy, the body was found to be that of a well-nourished, small man. Muscular development was poor, the surface of the body pale, the pupils equal, the hair and the beard black. There was marked rigor mortis. On the lip and chin were two gangrenous spots, which together equalled an area about 4 cm. in diameter. On cutting through that on the lower lip, the dark necrotic appearance was seen to extend entirely through the lip—the mucous membrane being also black. The cheeks were swollen, and the upper part of the neck was edematous and of a cyanotic hue. The abdominal wall contained a layer of fat 3 or 4 cm. thick near the navel. The diaphragm extended to the fourth rib on the right side, and to the fourth interspace on the left side. In the upper part of the abdominal cavity there were adhesions uniting the transverse colon to the abdominal wall, and the omentum to the anterior wall of the stomach; otherwise the peritoneum was smooth and its cavity empty. These adhesions were fibrinous and easily broken.

The pericardial cavity was full of a clear fluid, its surface smooth. The heart was of normal size, presented a rounded apex, a smooth endocardium, normal orifices, and it contained goose-fat clots. The anterior mitral leaflet was slightly thickened. The myocardium showed no changes. The beginning of the aorta was smooth. Adherent thrombi were found in both appendages. The pleural cavities were empty and the serous layers showed no adhesions, except at the right apex, and here the adhesions were firm, but few in number. Both lungs floated in water and crepitated; the posterior parts were edematous and congested.

The liver had a smooth external surface, and distinct lob-

<sup>1</sup>Read at the meeting of the Chicago Pathological Society, January 16, 1898.

<sup>2</sup>For the opportunity to make the autopsy in this case and for the abstract of the clinical history, I am indebted to Dr. Boucsein, of Chicago.

ular markings. It was of a light reddish-brown color and showed no abscesses or areas of necrosis, although many cuts were made in the organ. The gall-bladder and the biliary passages were normal. The kidneys showed some cloudy swelling.

The upper surface of the tongue was black, except around the edges. The lining of the soft walls of the entire buccal cavity was of a dirty black as far back as the rami of the jaw. The discoloration of the tongue stopped at the circumvallate papillae. The tonsils showed no gross changes. The mucous lining of the larynx, esophagus and trachea were covered with a delicate, removable fibrinous exudate, but there was no erosion.

In the colon, beginning at the cecum with a few isolated ulcers, there was practically entire absence of the mucous lining. What remained showed as multiple polypoid tufts, a mass here, one there and between them smooth ulcers, with the muscular coats clearly exposed. In places where the ulcers were still discrete and separated by narrow bands of mucosa, they nevertheless communicated by submucous passages. The colon contained a considerable amount of bluish-black, semisolid, putty-like, foul-smelling feces.

Examination of the brain was not allowed.

The anatomical diagnosis was: Ulcerative colitis; fibrinous peritonitis; gangrenous stomatitis; fibrinous laryngitis, tracheitis, and esophagitis; cloudy swelling of the liver and kidneys; edema of the lungs (hypostasis).

Through an accident to the plates made from the heart's blood, liver, and lower lip, complete bacteriologic examination was not possible.

On histologic examination heart, spleen, pancreas, and lungs showed no important changes. In the liver a slight passive hyperemia of the lobules was present, with a considerable fatty deposit at the periphery. The liver-cells themselves seemed swollen, but the nuclear staining was uniform and good. The narrowed capillaries showed many polymorphonuclear leukocytes. In places marked round-cell infiltration had taken place around the smaller bile-ducts, the accumulation of cells being most marked just external to the basement-membrane. There was no increase in the connective tissue, nor any large foci of round cells to mark minute areas of necrosis of liver-cells.

In the kidneys the glomeruli filled the capsule of Bowman with capillary loops engorged with blood. The convoluted tubes were lined with swollen epithelium; in many places the lumen appeared filled by the cells. There were also slight endarteritis and venous hyperemia, the veins of the cortex in particular appearing dilated.

In the colon the undermining ulcers were found to possess edges devoid of tubular glands, and made up of a mass of granulation-tissue that had in it numerous large thin-walled blood-channels. In these the blood was in places coagulated, distinct masses of fibrin marking the clotting. The ulcers extended in many places down to the circular muscular coat, which also contained dilated vessels and numerous areas of round cells. Amebæ were easily demonstrated by thionin and methylene-blue staining, both in the granulation-tissue of the edges and in the blood-channels.

The trachea and esophagus showed loss of the epithelium, slight superficial necrosis in places, and hyperemia of the vessels of the submucous coats. The tongue, which was black, exhibited no change other than a desquamation of the superficial epithelium and a thick deposit on its surface of a brownish debris made up doubtless of necrotic material.

A section of the lower lip through the gangrenous area was found to consist of tissue that was entirely necrotic, all the structures being uniformly affected. The structural outlines of muscle, glands, and other elements were preserved, but all alike were wanting in nuclei that stained. In this necrotic tissue were swarms of short, slender bacilli, two and three times as long as thick, and very numerous at the edges of the necrotic tissue. Here there was slight reaction, the line between necrotic tissue and healthy tissue being quite sharp. The bacilli stained by Gram's method.

There can be no doubt, from the anatomic appearance of the necrosis of the lip and chin, that the lesions

in this case belong to those described as gangrenous stomatitis; further, Babes and Zambilovici,<sup>3</sup> Grawitz,<sup>4</sup> Foote,<sup>5</sup> and Bishop and Ryan,<sup>6</sup> as well as others, have called attention to the peculiarity that in noma the necrotic tissue literally swarms with bacilli.

The rarity of noma in an adult is apparent from the statistics of Krauss.<sup>7</sup> Collectively considered, among 165 cases, 68% occurred before the fifth year of age, and 30% between the ages of 5 and 15.

Great confusion has prevailed concerning the specific bacteriologic agent in noma. Bearing upon this feature the researches of Babes and Zambilovici are most important. Noma is not an infrequent disease in Bucharest, as these observers report seeing 7 cases in five months. In the two cases that they were permitted to investigate, they found a slender bacillus that caused gangrene in the cheeks of rabbits. In other animals, septicemia or abscesses were produced. The bacillus grows well on most media, liquefies gelatin, and decolorizes by Gram's method. In most cases there was marked anemia, and both cases were preceded by measles. Histologically, the observers named found that the bacilli at the edges of the necrotic tissue stain better than those in the central portions; also, that there occurs a dense accumulation of leukocytes in advance of the necrosis, and they are inclined to believe that the crowding of the vessels by these favors necrosis. Guzzetti<sup>8</sup> studied 4 cases of noma, and in 3 of them found a bacillus that he considered as identical with that described by Babes and Zambilovici. It is of exceeding interest to note in this connection that Freymuth and Petruschky<sup>9</sup> have recorded a case of noma genitalium, in which the diphtheria-bacillus was found, and recovery followed the use of antitoxin. The same observers<sup>10</sup> report a case of noma of the face in a child, 8 years old, following typhoid fever. In this case the diphtheria-bacillus was present in conjunction with the pseudodiphtheria-bacillus and the staphylococcus aureus. These observations seem to indicate that, although noma may, in the majority of cases (at least that form occurring on the face), be due to a specific bacteriologic agent, some cases of gangrene or necrosis occur that, for the present, at least, must be included under the term noma and that are due to other bacteria. From the domain of comparative pathology<sup>11</sup> we have a confirmation of this possibility in

<sup>3</sup> v. Babes and A. Zambilovici: Recherches sur le noma. Annales de l'Institut de Pathologie et de Bacteriologie de Bucharest, vol. v, 1892-3, p. 227. <sup>4</sup> Grawitz: Demonstration eines Falles von Noma. Deutsche med. Wochenschrift, xvi, 318. <sup>5</sup> Foote: Report of a Case of Gangrenous Stomatitis, with a Bacteriologic Examination. Am. Jour. of Med. Sc., n. s. cvi, pp. 198-207, 1893. <sup>6</sup> Bishop and Ryan: Noma and Allied Diseases of the Mouth, Report of Three Cases with Pathologic Examination. Transactions of the Chicago Pathological Society, vol. i, p. 252. <sup>7</sup> Krauss: Specielle Pathologie und Therapie, Nothnagel, Bd. xvi, Th. 1, Abth. 1, p. 202. <sup>8</sup> Guzzetti, P.: Recherche bacteriologique e istologica sul Noma. Policlinico, vol. iii, No. 18. <sup>9</sup> Freymuth and Petruschky: Ein Fall von Vulvitis gangrenosa (Noma genitalium) mit Diphtheriebacillenbefund. Behandlung mit Heilserum; Heilung. Deutsche med. Wochenschrift, 1898, No. 15. <sup>10</sup> Idem: Zweiter Fall von Diphtherie-Noma (Noma faciei). Behandlung mit Heilserum; Herstellung. Deutsche med. Wochenschrift, 1898, No. 38, p. 600. <sup>11</sup> O. Lubarsch and R. Ostertag: Ergebnisse der allgemeinen Pathologie und pathologischen Anatomie des Menschen und der Thiere. ii, 1895, p. 122.



the work that has been done with the necrosis-bacillus (*Bacillus necrosis*, Salomonsen; *Streptothrix cuniculi*, Schmorl; *Bacillus necrophorus*, Flügge), which has been found in various forms of gangrene and necrosis in cattle, horses, swine, deer, the kangaroo, antelope, the house-mouse, and rabbits. The study of the microscopic changes produced in the tissues shows that this organism also is found in profusion in the zone between dead and living tissue; that it evidently produces a strong and virulent poison, and that it does not thrive in the tissue that becomes necrotic. Further, in the necrotic tissue, great numbers of various bacteria are present, but few necrosis-bacilli. The necrosis-bacillus, however, is an anærobe.

### LEPROSY IN MINNESOTA.<sup>1</sup>

By H. M. BRACKEN, M.D.,

of Minneapolis, Minn.

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In Allbutt's *System of Medicine* (Vol. III, p. 46), referring to the Norwegian lepers of Minnesota, Wisconsin and Dakota, it is stated that these have diminished from 160 known cases to about a dozen. This statement is undoubtedly taken from the report of Dr. G. A. Hansen, of Bergen, Norway (1888), who says, "Of about 160 lepers who have immigrated into three States (Wisconsin, Iowa, Minnesota) 13 are alive, whom I have seen myself, and, perhaps, 3 or 4 more. All the others are dead."<sup>2</sup>

This statement refers to the *known* lepers that left Norway and settled in the Northwestern States. In another place Dr. Hansen says: "The number of immigrated lepers from Norway is much greater than I had any idea of from the knowledge I could gather at home. My friends, Dr. Hoegh and Dr. Gronvold, have given me the names of many lepers here in America whom we did not know to be lepers when they left Norway." The figures quoted from Allbutt's *System* refer therefore to those only who were known to be leprosy when they left Norway, and are hence misleading, as well as incorrect. In 1886, the Minnesota State Board of Health first reported upon the lepers of the State. An attempt has been made since that date, and I think with fair success, to keep a record of all the lepers in the State.

The table on the next page will serve as an interesting text.

We have knowledge of 51 lepers having resided in Minnesota. Of these, 17 had died before 1890. Of the 34 added to the records since 1890, 18 were first reported upon in 1891, 2 in 1892, 3 in 1893, 2 in 1894, 2 in 1897, and 7 in 1898 up to September 15. Little is known of the nationality of the 17 that died before 1890, but from various reports it is safe to assume they

were all from Norway. Of the later 34, 29 were probably from Norway and 5 from Sweden. Of the 5 from Sweden, one was reported first in 1894; the other 4 in 1898.

Of those who might have belonged to the 160 *known* lepers that immigrated from Norway previously to 1888 this list cannot include more than 17. There is a possible total of 29 cases in which the disease first appeared in the old country, but it is not all probable that more than 22 of these were included in Dr. Hansen's list of 160.

Undoubtedly, some of those who have reported the disease as first appearing after they had landed in this country, have not told the truth. It would be fair, probably, to say that 25 of the 51 Minnesota lepers had the disease before leaving Europe.

Twenty-one is probably the highest number of lepers known to have been living in Minnesota in any one year (1893). At present 13 are known to be living in the State. There may possibly be 3 more living, from whom we can secure no reports at present, and, in addition, a few unrecorded cases.

Of these 51 known cases, but 9 were in females. Of the latest record (34 cases) 21 are known to have been married (15 men and 6 women), and 20 of these married lepers had children. It is quite possible that the other one (a woman) had children also. These 21 married lepers had from 1 to 8 children each. We have knowledge of at least 78 children born to these lepers. It is not known how many children were born after the parents were recognized as leprosy, but it is safe to say a large proportion of the 78. Not one of these 78 children has become leprosy, and in no case has the leper transmitted the disease to the companion in wedlock. Twenty of the 51 lepers are said to have the anesthetic form of the disease; 23 the tubercular form; while for 8, the type of disease is not given.

Of the 13 lepers known to be living, I can give an outline of the present condition of but 6, as follows:

No. 43.—Mrs. D. was born in Nysaiken Varmlandslän, Sweden. There is no history of leprosy in her family. Her husband, a Norwegian, states that the newspapers have reported a case, or cases, of leprosy near her home in Sweden since she left there. She landed in America (Philadelphia) in 1887, and was married in the fall of the same year at Warren, Minn. The first symptoms of leprosy appeared soon after the birth of her second child, in 1891. There was then swelling of the hands, feet and face. On March 24, 1898, inspection showed the following conditions: The hands and feet were blue, nodular and swollen, the face "leonine," the hair falling out rapidly, the eyebrows gone. There was sore throat and anæsthetic spots were present on the extremities and the face. There were sores on her legs and arms from blows and burns, due to the anæsthetic condition of those parts. She had 4 children, 2 born before the first symptoms of leprosy and 2 since. These were all healthy and were aged respectively 9, 6, 4, and 2 years. The patient was careful and cleanly in her habits. She burned all bandages used and had her own special towels, bedding, etc. She slept alone. The disease seemed to be rapidly progressing.

No. 45.—Mr. B., 55 years old, was born in Romsdal, Norway. He gives no history of leprosy in his family, but states that there were lepers near his native home. He landed in America (New York) in 1872. The first symptoms of leprosy

<sup>1</sup> Read before the American Public Health Association at Ottawa, Sept. 24, 1898.

<sup>2</sup> Ch. Gronvold, M.D., Report of July 1, 1894, to Minnesota State Board of Health.

appeared in 1874. These were anesthesia in both hands preceded by severe pains. The ears are slightly nodular. The disease is not progressing rapidly. There is mutilation of the fingers. The patient is not married. His habits are good.

No. 46.—Mr. E., 37 years old, was born in Vermland, Sweden. When 20 years of age (1861) he worked on a log-drive in Sweden with Norwegians. There is no history of leprosy in his family. He came to America in 1884, married in 1885 and has 2 children, aged respectively 11 and 8 years, both in good health. In 1892, nodules first appeared on the forehead and back. In 1893, the face became involved. The disease is progressing, but the patient is still able to follow his occupation as a tailor. He is careful in his habits.

No. 47.—Mr. L., 40 years old, was born in Helsingland, Sweden. He knows of no leprosy relations. He landed in America (Boston) in 1881. About 1888 anesthesia appeared in the feet. The patient is married and has 5 children (girls), ranging from 16 to 8 years of age, all healthy.

No. 49.—Mrs. P., 53 years old, was born in Vermland, Sweden (25 miles from Stockholm). She knows of no leprosy relatives or neighbors. About 25 years ago she landed in America (Montreal). About 12 years ago she first noticed severe pains in the lower limbs. At present, 1898, her hands, feet and face show marked evidence of the disease. She has had 6 children, 4 of whom are dead. The 2 living are aged about 16 and 12 (both girls), and are healthy and rugged-looking. The patient is not cleanly in her habits and if the family escapes infection it will not be due to any precautions taken by her. Her husband fears the disease and this fear may lead him and his children to protect themselves so far as possible.

No. 51.—Mr. J., 55 years old, was born in Norway. He has a brother in the leper-hospital in Bergen, Norway. He came to America about 20 years ago and first noticed symp-

toms of the disease about 7 years ago. He is married and has 8 children, all healthy.

The history of these six cases gives some idea of the type of leprosy found in Minnesota. It is undoubtedly possible to find such cases wherever people from the Scandinavian Peninsula have settled in the States or Canada. It is difficult to secure a clear history of the course of the disease.

Let me draw attention to a few facts emphasized by this table and these records:

(1) The impression that leprosy immigrants from the Scandinavian Peninsula are all from Norway is a wrong one. Five of 11 lepers placed on file by our Board during 1897 and 1898 are from Sweden.

(2) The feeling that we can quarantine against lepers by watching immigrants is an unsafe one. The family-history of all immigrants from a country where leprosy prevails should be secured before they are allowed to embark for America, and no member of a leprosy family should be permitted to land upon our shores.

(3) It would appear that the conditions antagonistic to the spread of leprosy in Minnesota are also opposed to sterility, as borne out by the families of several of our lepers. (Some of these have children as shown by the following figures: 5, 5, 6, 6, 4, 6, 4, 5, 8.)

NO.	NATIONALITY.	DISEASE APPEARED IN EUROPE.	DISEASE APPEARED AFTER COMING TO AMERICA.												DATE OF		AGE.	SEX.	SOCIAL STATE.	NO. OF CHILDREN.
			1 yr.	2 yrs.	3 yrs.	4 yrs.	5 yrs.	6 yrs.	7 yrs.	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.	13 yrs.	over 13 yrs.	BIRTH.	D'TH.		
1		yes															1831	1880	m	
2												yes					1822	1878	m	
3			yes														1843	1878	m	
4													yes				1846	1876	m	
5					yes												1848	1878	m	
6		yes															1815	1877	m	
7		yes															1848	1868	m	
8											yes						1825	1885	m	
9										yes							1854	1885	f	
10						yes											1839	1884	m	
11									yes								1853	1886	m	
12																	bet. 1818-28	1888	m	married
13																	bet. 1848-58	1888	m	
14																	bet. 1829-39	1889	m	married
15																	bet. 1858-68	1889	m	single
16		yes															1849	1890	m	married
17		yes															1842	1890	m	married
18	Norwegian								yes								1816	1895	m	married 5
19	Norwegian														yes		1854	1892	m	single
20		yes															1830		68	m
21		yes															1840	1896	m	single
22		yes															1848	1896	m	married 5
23		yes															1820		78	m
24																20	1834		64	m
25	Norwegian										yes						1857	1894	m	married 3
26		yes															1838	1899	m	married 2
27		yes															1840		58	f
28	Norwegian	yes															1843	1897	m	married 3
29					yes												1864		34	m
30	Norwegian	yes															1850	1899	m	married some
31					yes												1850	1892	f	married
32																19	1826		72	m
33																17		1899		f
34		yes															1871	1899	f	married 4
35	Norwegian																1851	1899	m	single 1
36	Norwegian				yes												1867		31	m
37	Norwegian	yes															1852		46	m
38	Norwegian									yes							1860		38	m
39	Norwegian	yes															1853	1897	m	married 3
40																	1845	1894	f	single 6
41	Swede																1845	1897	m	married 2
42									yes								1860		38	m
43	Swede					yes											1865		33	f
44	Norwegian									yes							1867	1897	m	married 4
45	Norwegian				yes												1843		55	m
46	Swede										yes						1861		37	m
47	Swede								yes								1858		40	m
48	Norwegian	yes															1862	1890	f	single 5
49	Swede														yes		1845		53	f
50	Norwegian	yes															1863	1898	m	married 4
51	Norwegian													yes			1843		55	m



(4) It is quite possible for leprosy to die out in certain favored sections of the country, such as Minnesota, without segregation, *provided* the importation of lepers be discontinued.

(5) Even in Minnesota, one has but to visit some of these lepers to feel that segregation *should* be insisted upon in all cases. One cannot but feel, on entering a filthy home and seeing a leprous mother careless in her habits, that the children are not safe.

(6) Segregation in single States is not practical. It would tend simply to drive lepers from States enforcing such practice to those that were not carrying out the system.

(7) A federal home should be provided for these unfortunates. They could thus be cared for more economically and more satisfactorily than through any State provision.

(8) In spite of all precautions that we may take, there will be some leprous individuals in this part of the world for many years to come.

(9) The Scandinavian Peninsula does not furnish all leprous individuals found in the United States.

Finally: Great care must be exercised in dealing with lepers in the future. That we have been constantly importing leprosy is a recognized fact. That the chances of importing it will probably be increased, rather than decreased, unless great care is taken in dealing with infected countries, no one can doubt. All the lepers that come to America do not settle in the Northwestern States, and all sections of the country may not be so fortunate in affording such poor soil for the spread of the disease as does Minnesota.

It is altogether probable that there are some lepers in Minnesota that are not registered by the State Board of Health. Assuming that there may be a total of 20 lepers in Minnesota,<sup>3</sup> it is a safe estimate, based on the United States census for 1890, of the Scandinavian foreign-born population, that there are at least 20 lepers in the four States, Wisconsin, Iowa, South Dakota, and North Dakota, and probably 120 Scandinavian lepers in other parts of the United States, making a probable total of 160 Scandinavian lepers in the United States. Basing our estimate on what is positively known to exist in Minnesota, the figures for the three divisions given would be approximately, 13, 13, 78, or a total for the United States of 104 Scandinavian lepers. If we base our estimates on the Norwegian foreign-born population in the United States, we should then have for the three districts, a total of probably 91 Norwegian lepers.

<sup>3</sup> These figures are conservative. Norwegian physicians who should have knowledge of such matters place the estimate for lepers in Minnesota at 25. If this ratio is a correct one for Minnesota it should be used for the Scandinavian population in all parts of the United States.—H. M. B., December 6, 1898.

**Professor Röntgen**, of Würzburg, has been offered the chair of physics at the University of Leipsic, which will become vacant by the retirement of Professor Wiedemann, at the end of the present semester.

## A CASE OF CYSTIC DEGENERATION OF THE KIDNEYS.<sup>1</sup>

By ARTHUR R. EDWARDS, A.M., M.D.,

of Chicago.

Professor of the Practice of Medicine and of Clinical Medicine in the Northwestern University Medical School. Assistant Physician to Cook County and St. Luke's Hospitals.

The patient was a married American, 47 years old, who entered St. Luke's Hospital, October 12, 1898.

His father had died of asthma, other relatives very living and well. The patient admitted the consumption of excess of beer and whisky. About 5 years ago he experienced acute pain in the left side, which was situated downward into the groin and was followed by the passage of gravel with the urine. Fifteen years before this attack he had had similar seizures. Several months later came a severe attack of vomiting, he became paralyzed on the left side, with difficulty of speech. Sensation returned in 3 weeks and motion to a limited extent in 6 months, although motility remained impaired. He had received injuries in two railroad accidents. Venereal history was denied.

About a year ago, the patient could not work more than half a day at a time, becoming easily exhausted. At this time he had a desire to urinate frequently, averaging 7 times during the night. The total amount of urine, however, was not large. The urine was checked by a patent preparation recently taken, and for 3 weeks prior to entrance into the hospital, the man had to wait some time for the urine to come. The patient became worse last May, since when he has lost 60 pounds in weight. For 3 months nausea has been constant and vomiting frequent. The vomitus consisted principally of mucus; there was complaint of a bitter taste in the mouth; the appetite had been poor; and there had been dyspnea on exertion.

The patient appeared older than his actual age, and presented marked pallor of the skin and mucous membranes. The pupils reacted to light and in accommodation. The tongue was not coated, but was dry, red and fissured. The skin was lax and harsh. The arteries were distinctly sclerotic to touch and tortuous on inspection. The heart presented no bruit; the apex extended just to the nipple-line; the second pulmonary sound was somewhat accentuated, while the aortic diastolic tone was metallic and loud. A distinctly emphysematous note was elicited on percussion over both lungs, but there was fair respiratory excursion.

The walls of the abdomen were relaxed. A slight prominence was observed in the left plane, which moved somewhat with the diaphragmatic excursion. The liver was slightly enlarged and the edge was distinctly palpable over both lobes. In the left renal region palpation disclosed a distinct tumor, which moved downward in deep inspiration. Beneath the left costal arch an irregularity was detected, which closely resembled a splenic notch, but careful bimanual manipulation determined the existence of small firm nodules, yielding the impression made by holding the ends of several fingers closely together beneath a towel. The right kidney could be detected, but seemed smoother, although indistinct irregularities, suggested by the findings in the left kidney, were felt. Inflation of the colon demonstrated the retroperitoneal character of the mass on the left side. The urine, examined from a single specimen the day after admission, was neutral in reaction, of straw color, with a sp. gr. of 1010, free from sugar, with a trace of albumin, the urea equalling 0.9%, with no casts, blood or leukocytes. The analysis of the last 24-hour specimen was as follows: straw color, alkaline reaction, sp. gr. 1010, no albumin, no sugar, no casts, a few blood-cells and pus-cells, urea 0.9%, total quantity 1,300 cu. cm.

The temperature was 98.6° on admission, but gradually declined, registering 95° or 96° in the rectum. The pulse-rate was at first from 80 to 90, but it increased to 130 as the patient's strength lessened. The breathing-rate was from 16 to 22, till an agonal rise to between 36 and 40 occurred. During the 12 days of observation, the patient was restless, sleepless and anxious. Nausea was frequent, with daily vomiting. Free catharsis relieved the symptoms, but only for a time, while no effect was observed from profuse sweat-

ing. Saline and nutrient enemata kept up the supply of food and fluid, but nausea persisted, with some slight sopor, and dyspnea, thoracic oppression and hemorrhage from the gums. Finally the patient died amid symptoms of pulmonary edema and circulatory failure.

Certain groups of symptoms in the case were clear, as the uremic manifestations and the cardiovascular alterations. The local abdominal findings, however, were not equally unambiguous. The swelling was bilateral, thus essentially aiding in the determination of renal enlargement. The tumor suggested neoplasm; still the bilateral involvement argued rather against adenoma, sarcoma, or carcinoma, as did the cardiac, vascular, and urinary findings. A carefully repeated blood-count showed no leukocytosis, there being constantly 8,000 white cells and 4,000,000 red discs in the cubic millimeter, with 60% of hemoglobin. The leukocytes were counted with the possibility of a neoplasm in view.

The firmness of the kidneys did not operate against a diagnosis of cystic kidneys, as Leube has expressly emphasized in connection with the diagnosis of liver-tumors, and the fact that cysts and abscesses may feel hard, while cystically degenerated carcinomas may feel soft. No fluctuation could be detected on repeated examination. This is seldom observed with cystic kidney. A notable point is the clinical detection of the individual cysts in both kidneys, but particularly in the upper pole of the left one. Very few similar instances are recorded. The kidneys are not frequently even palpable, a review of the statistics showing palpable kidneys in 29% of cases of cystic degeneration. The attacks of pain, colic, ischuria, tenesmus, passage of gravel were difficult of interpretation, and were regarded as quite subordinate to the local and urinary findings. Exploration by aspiration yielded negative results, although a few drops of thin, bloody fluid were withdrawn.

A review of the urinary findings, with the low specific gravity, the light color, the low urea, the trace of albumin, suggested chronic interstitial nephritis, but no casts were discovered. The few blood-cells and pus-cells were not incompatible with a diagnosis of cystic kidney.

The liver was perfectly smooth. Lelars' statistics give cysts in the liver in 27% of cases of cystic kidneys.

The analysis of the symptoms and signs enumerated justified the diagnosis of diffuse cystic degeneration of the kidneys, always a most difficult diagnosis, and one only possible when bilateral renal enlargement is present, together with irregular protuberance from the tumors, with fluctuation, or the detection of fluid by aspiration, and either hematuric, or urinary and heart-findings suggestive of contracted kidney. The kidneys and the other viscera revealed no essential change, except arteriosclerosis, with left-ventricle hypertrophy and dilatation. The liver contained no cysts.

## Selected formulas.

### For Headache :

Magnesium sulphate.....	1 ounce.
Sodium sulphate.....	1 ounce.
Dilute sulphuric acid.....	2 fluidrams.
Compound tincture of cardamom...	1½ fluidounces.
Sirup of orange-peel.....	1 fluidounce.
Cinnamon-water.....	2 fluidounces.

Mix.—Two fluidrams to be given twice daily. (Plethoric headache of pregnancy.)

Iron sulphate.....	32 grains.
Magnesium sulphate.....	12 drams.
Dilute sulphuric acid.....	2½ fluidrams.
Compound tincture of cardamom...	2 fluidounces.
Allspice-water.....	2 fluidounces.

Mix.—Two fluidrams to be given twice daily. (Congestive headache.)

Potassium carbonate.....	1½ drams.
Ammonium carbonate.....	1 dram.
Tincture of serpentaria.....	½ fluidounce.
Camphor-water.....	3½ fluidounces.

Mix.—One ounce to be added to half an ounce each of water and lemon-juice and to be taken effervescing twice or thrice daily. (Gouty headache.)

—Louisville Medical Monthly.

### Hunyadi Janos Water :

The following formula is said to closely approximate the natural water :

Potassium sulphate.....	0.5 grain.
Sodium chlorid.....	14 grains.
Sodium bicarbonate.....	52 grains.
Sodium sulphate, dry.....	180 grains.
Calcium sulphate.....	15 grains.
Magnesium sulphate, dry.....	24.5 grains.
Terron's sulphate, dry.....	0.2 grain.

Mix one half ounce to a pint of water.

—Texas Cour., Rec. of Med.

### For Eczema of the Palms of the Hands :

Sodium sozoiodol.....	2 drams.
Zinc oxid.....	5 drams.
Vaselin.....	10 drams.

Mix—To be applied twice daily. —S. E. HALE.

### For Chronic Rheumatism :

Sodium iodid.....	4 drams.
Wine of colchicum.....	4 fluidrams.
Ammoniated tincture of guaiac.....	7 fluidrams.
Fluid extract of erythroxylon.....	7 fluidrams.
Fluid extract of cimicifuga.....	6 fluidrams.

Mix.—One teaspoonful to be given three times daily. —A. A. ESHNER (*Phil. Polyclinic*).

### For Migraine :

Antipyrin.....	8 grains.
Potassium bromid.....	8 grains.
Cocain hydrochlorate.....	½ grain.
Caffein.....	½ grain.
Powdered paullinia sorbilis.....	1½ grains.

Mix.—To be taken as indicated.

—A. ROBIN (*Progrès Médical*).

### For Pruritus of the Scrotum :

Phenic acid.....	5 drams.
Glycerin.....	3½ fluidounces.
Proof spirit.....	6 fluidrams.
Water.....	10 fluidounces.

Mix.—From one to four tablespoonfuls to be added to a glass of hot water and applied locally three or four times daily. In addition quinin sulphate with sodium bicarbonate may be administered internally. —BROCC.



# The Philadelphia Medical Journal

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The power of resisting shock and infection varies widely, as is well known, among different races and among different people of the same race. The Irish are thought by some to be abnormally susceptible to shock, infection or injury, whilst Oriental races are almost absolutely impassive under like conditions. An instance of unusual vitality is reported by Bidie, of the Indian Medical Service, in the *Indian Lancet* of November 1st: A native boy, aged 15, was gored by a bull in the abdomen, making a wound through which the intestines protruded and tearing the gut in several places. The coils of intestine were smeared by the natives with *cow-dung*, covered with a piece of cocoanut and some leaves, and the boy was carried 5 miles in a country cart over rough roads, reaching the hospital about 6 hours after the time of injury. The parts were cleansed, the intestines sutured, the abdomen was closed and the wound dressed antiseptically. Shock was entirely absent, and the patient made an uneventful recovery, with rise of temperature only on 3 occasions after the operation.

Unfortunately for both patient and surgeon, constitutions of such staying power are unusual, but this makes all the more imperative the cultivation of such surgical judgment as will enable one to predict with a fair amount of accuracy a patient's capacity to withstand surgical shock before undertaking operations of expediency. There is some justification for the much-abused saying, that such a doctor "knows the constitution of the family;" long acquaintance does help us to understand the personal equation. It is probable that more earnest, conscientious effort on the part of the surgeon, exercised every day in every case, to try to estimate the physical peculiarities of patients, would succeed in training the faculties so that the limits of intervention might, in certain cases, be extended, and in other cases sad accidents might be avoided.

## The Teaching of Hygiene in the Public Schools.

—Dr. John S. Fulton, of Baltimore, Secretary of the Maryland Board of Health, is quoted as saying that hygiene as taught to school-children seems to be fairly open to criticism as much for what it unnecessarily includes as for what it unwisely excludes. The textbooks give a great deal of space to the sort of anatomy that no one but a surgeon needs to know, much physiology of which about one half is superfluous and at least one

fourth false, while so much as treats of hygiene proper is concerned exclusively with personal health. The teachers themselves, it is said, regard the teaching of the subject as a farce, and comply with it in a merely perfunctory way. In some States, we believe, it is obligatory that the textbooks on physiology, made to order for the public schools, shall inculcate certain doctrines as to the use of alcohol and tobacco that represent merely the views of the minority on these subjects. The older children themselves, it is said, resent the expression of views found in these books as reflecting on the opinions and customs of their parents in their own homes.

If a little learning is ever a dangerous thing it is so certainly in the case of medical and physiological science. The teaching of physiology to public-school children by teachers who themselves are profoundly ignorant of the subject must be superficial in the extreme. One of the faults of our public-school systems is the tendency to do too much, and to do it in a merely routine and mechanical manner. When, however, this teaching is made the means of propagating the individual views of faddists and theorists, the evils are two-fold. First, the knowledge inculcated is likely to be false or misleading. Second, the doctrines are likely to repel intelligent scholars and drive them to the other extreme than the one aimed at. We think it goes without saying that all partisan questions, whether in politics, theology, or hygiene, have no place in the curriculums of our public schools.

**Franklin and the Doctors.**—In his entertaining sketch of the many-sided Franklin, now being published in the *Century Magazine*, the author, Paul Leicester Ford, devotes a whole chapter to the Philadelphia sage's illnesses and medical theories. For a man and a philosopher who claimed as among his best friends some of the most eminent physicians of his day, both in America and in France and England, Franklin indulged himself freely in jokes and quirks at the healing profession. These make diverting reading nowadays, and point a few morals. We learn anew that the fashion is an old one to jibe at the doctors even while flying to their protecting arms. Thus the founder of the Pennsylvania Hospital tells us that "there are more old drunkards than old doctors;" and the friend of Bond, Rush, and Cadwalader, in Philadelphia, and of Fother-

gill and Sir John Pringle, in London, and of Guillotin, in Paris, says pointedly that "He's the best physician that knows the worthlessness of the most medicines." This latter sentiment is certainly a model in conciseness and meaning, and can put to shame the most rampant therapeutic nihilism of the present Teutonic school.

It must be said of Franklin's satire that it was all humorous and without malice. There was always a little grain of shrewd common sense in it (as in everything that he said and did), and it was not unmixed with a certain appreciation of true medical science and skill that was both complimentary and helpful to the profession. He never failed, himself, to call upon his physician when he needed his care; and claimed that he was a good patient and always followed advice—which was not always so!

Franklin suffered grievous ills from the gout, but turned his misfortune to good account by writing his quaint little "Dialogue with the Gout," which deserves to rank as a real little classic. Such was this admirable philosopher, who could even philosophize and joke while his big toe was being wrung with pain, and who, when he recovered, had sense enough to declare that "God heals, and the doctor takes the fee."

**Holiday Kleptomania.**—Four ministers' wives have been arrested within a week for shoplifting in one Sixth Avenue department store in New York City. How many have been arrested in other department stores report does not say, but if the proportion is the same, the clergymen of New York need a Parkhurst to reform their domestic morals. It is well that this scandal happened in the "metropolis," for nothing short of a metropolis could stand such a reproach to its clergy; and it is little wonder that the newspapers of New York see the need for consultation on the subject with some eminent alienist, and hence that one of them has published an interview with Dr. Spitzka.

This well-known expert has expressed a decided opinion that these ladies are not "kleptomaniacs," but real, genuine thieves; and that, if the mania for stealing which breaks out every year just before Christmas (in New York) is to be admitted into the realms of medical science, a new pathology will have to be invented and an "unprecedented periodicity" have to be assumed. It would also be necessary, we suggest, to coin a new term for such a distinctly metropolitan craze.

Dr. Spitzka thinks the police, rather than the physicians, should be consulted in such cases. He attributes the moral lapse entirely to the weakness of human nature, and sees a reason for its periodical outbreak in the simple fact that the stores at this season vie with one another to make a tempting and prodigal display of their wares. With weak women the temptation proves too strong. With slim pocketbooks and the

innumerable incentives to extravagance, which the holiday season unfortunately supplies more and more every year, some poor clergymen's wives and others (in fact, a good many in New York) yield to temptation, commit the sin, and are caught. When the dreadful disclosure comes they and their friends fall back upon the time-honored, high-sounding, consolatory term "kleptomania." It is this poor prop which Dr. Spitzka ruthlessly knocks from under them, with a side-thrust at the now fashionable form of degeneration which he calls a "Lombroso-Nordau humbug."

We can only say that our morals will be cleaner, our science wiser, and our criminal jurisprudence more even-handed for both high and low, when crime is accurately differentiated from disease, and "kleptomania" is relegated to the limbo of dead and forgotten words.

**A Quarantine against Education.**—The Board of Health of this city probably felt itself well-advised when it declined to open the Municipal Hospital to medical students for the clinical study of smallpox and other contagious diseases. The Board no doubt feels the onerous responsibility put upon it to protect the community from the spread of such diseases, and may have felt, not without a show of plausibility, that such a measure would be attended with risks which it had no right to assume. But while we most willingly ascribe the best motives to the Board of Health in this matter, we think it has displayed an error of judgment. In its zeal it prefers a greater but more distant risk to a less and more immediate one. The greater and further-reaching risk (which cannot be measured) lies in the ignorance of the general practitioner as to the more rare and more dangerous contagious diseases.

This risk is not a slight one. Epidemics, both of smallpox and yellow fever, gain headway occasionally in this country because these diseases are not promptly diagnosed. The epidemic of smallpox now prevailing in Bedford County is an example of this, which the Board might have regarded as an object-lesson. If medical students are to learn the appearances of smallpox they must see the disease and not merely read about it in books. As the case stands now, students graduate and go forth to practise without ever having seen an instance of smallpox, and many practitioners are at their work for years before they are suddenly confronted with their first case. We know of an instance in this city in which a case of smallpox was admitted to the general ward of a large hospital, and allowed to remain there for two nights and two days because the resident physician did not recognize the disease. Does not such ignorance entail a greater risk than any that might attend the admission of students to the wards of the Municipal Hospital under proper precautions?

The *Philadelphia Press*, commenting upon the action of the Board, very properly implies that the good repu-



tation of this city as a center of medical education is involved in this matter. It is our authority for the statement that New York and Boston have seen the necessity for the clinical study of smallpox by medical students, and have opened the wards of their municipal hospitals to them. Such action is certainly in the line of sound medical education. Practitioners of medicine are guardians of the public health in a far wider and more important sense than are any boards of health in existence. These latter, in fact, must rely in their work almost exclusively upon data furnished them by medical science. They are the servants, not the masters, of hygiene, and it does not befit them to oppose the dissemination of medical education. We do not believe for a moment that the Philadelphia Board of Health has opposed this measure from any mere captious spirit, but we think it may yet do well to devise some way of bringing about the desired result.

**Trauma of the Cervical Region of the Spinal Cord, Simulating Syringomyelia.**—The etiology of syringomyelia is still so obscure, notwithstanding the extensive studies devoted to it in the last few years by Hoffmann, Schlesinger, and others, that all contributions to the subject, so far as they extend our knowledge, are most welcome. We must bear in mind that syringomyelia is a condition that, on the one hand, represents a symptom-complex and, on the other, a pathologic picture. In the Spring number of *Brain*, Dr. Jas. Hendrie Lloyd contributes a paper that deals with an instance of traumatic injury of the spinal cord, the symptoms of which simulated syringomyelia, and which is of especial value on account of the careful microscopic studies made of the cord. For the minute details of the study, both clinical and pathologic, the original article must be consulted. The most prominent features only can be given in this review. The seat of the lesion in the cord, which was located especially about the central canal and central gray matter, was practically identical with that seen in many cases of syringomyelia, although no cavity had been formed. The fact that a portion of the pathologic new-growth of tissue was already necrotic makes it seem probable that a step further only was needed to have brought about, after absorption of the dead material, the production of a cavity. Had such a cavity developed, it would doubtless have been located in the region of the gray commissure, the site at which the lesion occurs in well-marked cases of syringomyelia. Of course, trauma as a cause of syringomyelia has been brought forward before, and the present case derives much interest from the support that it gives to this view. We can now recognize in syringomyelia two kinds of cavities: (1) primary ones, in which an epithelial lining exists similar to the epithelium lining the central canal of the cord (ependymal cells); and (2) secondary ones, which result from softening of

gliotic or gliomatic areas and the removal of the necrotic contents. There are cases in which both forms of cavities coexist; in others only one or the other may come to be present.

For the discussion of the question of sensory conduction in the spinal cord, the original paper must be referred to; but it is pointed out that the preservation of the tactile sense is explained by the escape of the posterior columns from all serious injury, so that the long fibers may be regarded as having been intact. Painful and thermic impressions, as indicated by the case under consideration, "pass into the gray matter and through the cell-bodies of a second order of neurons, whose axis-cylinders, in large majority at least, pass across to the opposite side of the cord and up the lateral columns, especially in Gowers' tract."

The main points noted in the physical examination were as follows: Marked deformity of the spinal column; motor paralysis of the left arm and leg, with contraction of the arm and forearm; marked clonus in the fingers, wrist and ankle of each side; analgesia over the whole right side of the body; thermanesthesia over the surface of the right leg and over a limited area of the right thorax; and tactile anesthesia confined to the right leg below the knee. At autopsy an angular deformity was found projecting into the spinal canal at the junction of the fourth and fifth cervical vertebrae. The spinal cord was seen to be much flattened dorso-ventrally at the levels of the fifth, sixth, and seventh cervical roots.

Microscopic examination showed that the cord was most injured in the neighborhood of the seventh cervical segment. Here the left ventro-lateral funiculus, the ventral and dorsal horns, the ventral portions of the dorsal funiculi, and the gray and white commissures, were found to be almost completely sclerosed. The right side showed merely some diffuse degeneration in the ventro-lateral funiculus and a slight degeneration of the ventral and dorsal horns. Above the seat of the main lesion the direct cerebellar tract and Gowers' tract on the left side, and to a much less extent on the right side, were found degenerated. An ascending degeneration could likewise be followed for a short distance in the left pyramidal tract and in a peculiar W-shaped region in the dorsal funiculi. Below the seat of the lesion the left pyramidal tract was found completely degenerated. In the dorsal funiculi Schultze's comma-zones were degenerated through a few segments, and in addition there was some diffuse degeneration.

**The didactic lecture** is a survival of preprinting days, when knowledge was necessarily transmitted by the spoken word. But, surely, induction must now govern our knowledge, the clinic teach diagnosis, the laboratory determine all theories, and the postmortem end controversy. The summarization of knowledge exists in a thousand textbooks, making the old-time

didactic lecture a relic of an outlived age. In recent years medical education has been greatly improved by lengthening the course and requiring a greater or less degree of preliminary education. In the methods of medical instruction (with exceptions so rare as almost to be unique) there has been but little advance even in the better schools—schools which hold themselves up as models, and whose professors would be greatly shocked if accused of obtaining money under false pretenses. From the lower class trade-schools, from the schools whose professors are confessedly such for direct and indirect revenue and a certain modicum of vulgar notoriety, nothing is to be expected and nothing will be obtained. But from the better schools, with honorable boards of trustees and learned faculties with well-filled stomachs and at least with supposedly well-filled brains, the student has the right to demand far more than he most frequently receives.

When the writer was a student, and it was not so many years ago but that he can still put himself at the student's view-point, and in a school of the better class, the question was often thrust upon him, Is Professor X, or Y, or Z paid to teach, or to show me what a great man he is, or does he hold his position simply because he is the favorite of some one in authority? The thing that led to this cynical question on the part of a rather ingenuous and certainly not dyspeptic youth, was the following: The lectures of one professor consisted of voluminous quotations, *verbatim et literatim*, from the English translation of a not very expensive German textbook sold in all the stores. There was no original thought in the lectures, and probably that was a good thing, but there was not even the personality of the man. He did not have any personality. We got truth not as it filtered through, or was refracted by our professor, but the mere phonographic echo of another man's thought, and without his tone, his spirit, his emphasis. It would have been a paper and just as useful for the trustees to have paid the professor to talk the book into a phonograph and then hired a laborer to grind it out again. The professor received for his work several thousand dollars yearly, and the innocence of the man was so great and his faith in his own fitness so gigantic (this is said sincerely, not ironically) that he thought he earned it. This doler-out of fractional bits of second-hand truth and pedler of another's knowledge doubtless made more than did the author. Another professor read to us quotations from a book of his own composition, interspersed, however, one should hasten to say, with stories which may or may not have been original, but which were more or less witty, and more or less dirty. There was this difference in the two men: the latter had some few glimmering sparks of genius; he was a personality, and we got from him the intellectual stimulation that a certain type of oratory gives; but it was expensive—a hired declaimer, a play actor, could have done it better

and this would have cost less. We were young then, and governed by the delusion that professors make a mental note of what students are present, and put a black mark in their memories against those frequently absent, and so we sat hour after hour in the stinking atmosphere of unventilated lecture-rooms, breathing and rebreathing prebreathed air, and we listened to the uninteresting droning of uninterested lecturers; we lost much time, and we learned little; we then went home and studied hard in the books, and went to the recitations of the quiz-masters; and there we learned much. The greater bulk of the real instruction in those days was given not by the professors, but by quiz-masters who had no official recognition from the school—brilliant and ambitious youngsters, with the hungry look and not too clean linen which is so often the accompaniment of young genius before it has made its mark and earned its pudding, working hard and dreaming of the time when they too would reach the proud height of a professorship and have someone else do the work while, to somewhat adapt the political slang of to-day, they "shook the plum-tree."

This farce of didactic lectures on practical subjects was carried on through the entire course. In anatomy several hundred students sat in a large amphitheater, the majority too far away to see at all, and none near enough to see well, and listened or did not listen to descriptions of muscles and nerves and bones. The lecturer was in truth a great man and at least taught us by his manner and by the example of his life that anatomy was a fundamental subject, one that must be learned, but he did not and could not teach anatomy by lectures. He did, at great expense of time, make us familiar with anatomic terms. Anatomy we learned in the dissecting-room, and could we there have had the aid of his learning and skill as a teacher, our progress would have been vastly more rapid, but that would have meant for him not two hours work each week, but twenty, and still more important, a total loss of professorial dignity as it was then understood. Absurdest of all was the method of teaching obstetrics. We who were to watch over the birth of the world's geniuses and tramps never heard the par-turient cry, never saw a birth, did not know what a newborn baby looks like. There has been some improvement in this matter, but—in how many schools, and how much? Are there half a dozen schools in the country to-day with any real amount of practical instruction in this subject? Instruction in practical surgery was, as it is called, clinical, that is to say, we sat in a huge amphitheater and the operator surrounded by his assistants worked in the ring. The assistants learned much and we little. We were near enough to realize the brilliancy of the surgeon; we were not near enough to learn to imitate that brilliancy. We saw many great operations, few small ones; many that we probably never would be



called on to do, few that every young practitioner must do.

That things are better to-day than they were is of course true, but are they what they should be, what they could be? Is it not an anachronism for us to hold on with almost superstitious awe to the didactic lecture? Have we not, with the conservatism of our profession—for we are conservative, let us prate otherwise as we may—made it a fetich? In the old days, when there were no printed books, and when manuscripts were expensive, lectures were the only means of instruction save the little practical teaching by the bedside and on the cadaver, that the spirit of the time allowed. But those days had one redeeming quality; there were no medical schools with a thousand students. To-day is not the printing press a better purveyor of knowledge than the tongue? There is not a subject in medicine taught by didactic lectures that could not be better taught by lessons from a book. The trained student (and the better class of schools should refuse all others) can learn as much by reading an hour as by listening, nay more, for if he misses a point in reading he can go back and review it, and what he learns he learns; whereas, from the lecture he can carry away only a few points or some general idea. He must be a monster in memory who can retain all he hears in a lecture. By the recitation the teacher finds out what the student does not understand or misunderstands and can make crooked places straight and dark places clear.

We have seen much of several schools and we are glad to say that in a few the secret of teaching has been learned. We recently accompanied one of these modern teachers as he went through his wards with his class. He gave no didactic lectures. He held recitations on the diseases that were not likely to be seen in the wards. Two hours daily he was in the hospital with his students and talked to them and showed them how to examine and what to look for, and they examined for themselves and took daily notes of the cases and at the postmortem table saw what really was. He has learned the great lesson that the function of a teacher is to teach method, teach how to learn, and to give opportunity to learn, and not merely from the professorial chair say with the infallibility of a lay pope, This is so because I say it, and forget it at your peril, and never mind why it is so, and do not try to use your own eyes and ears and hands to find if verily it is true, but accept my authority. The secret of instruction is to teach methods, not results, to teach by demonstration, not by dictum.

**Suggestions to Writers: No. 17. As to Eponymic Designations.**—It can scarcely be said with truth that the sense of tradition is wanting among medical men, and that the profession is not generous in tribute to

the memory of distinguished members of its guild. With this admission there seems to be no reason for embarrassing our nomenclature with the innumerable eponymic designations that have crept into our literature. Exceptionally it may seem unavoidable to use the discoverer's name for a disease whose nature is not known, but we are convinced that such a course is, as a rule, quite unnecessary and to be avoided when possible as obstructive of true scientific progress. Names should, so far as selection permits, be descriptive, and, when given to diseases, should be based upon some characteristic or peculiarity, clinical or pathologic, so that they may have practical significance and be clearly fixed in mind and readily recalled to memory. These conditions are not fulfilled by eponymic designations, which conduce rather to confusion and uncertainty. To refer to a few concrete instances, one may at times be left in doubt as to which of the 5 affections described by Pott is meant when his name is used, or which of the 3 with which the names of Charcot, Cooper, Duchenne, Hebra, Paget, St. Anthony, and St. John respectively are associated. In the matter of operations and tests the conditions are somewhat different. Here it is often difficult to find a single word or two that will convey as much as the name of the deviser; and in instances in which one man has devised more than one operation ambiguity can be avoided by specifying the part or parts to which the procedure in question is applicable. Whenever possible, however, without sacrifice of directness and brevity, eponymic designations should be abjured and the employment preferred of those that convey in and of themselves an idea of the condition that they are intended to describe. He uses language best who makes the fewest words express clearly the fullest meaning. Let us, therefore, prefer nephritis to Bright's disease, hereditary to Friedreich's ataxia, paramyoclonus to Friedreich's disease, paralysis agitans to Parkinson's disease, adrenal to Addison's disease, exophthalmic goiter to Parry's or Basedow's or Graves' disease, vertebral for Pott's disease, disseminated cerebro-spinal sclerosis or amyotrophic lateral sclerosis respectively to Charcot's disease; osteitis deformans or psorospermiasis respectively to Paget's disease; and so on, and so on.

**Corrections.**—Through inadvertence the descriptions beneath Fig. 2, p. 1195, and Fig. 3, p. 1196, of the JOURNAL for December 3d, were made to refer to the left instead of the right forearm.

By a typographical error JOURNAL, page 1295, Professor Allbutt was given the title of *Regius Professor of Physics*, instead of *Regius Professor of Physic*.

**Every Subscriber to this Journal** is requested to send us the names and addresses of at least two physician-friends who are not subscribers. This is one practical way to aid us. In addition we trust you will write these friends a personal request to examine the sample copies we shall send.

## Reviews.

**The Physician's Visiting List (Lindsay and Blakiston's) for 1899.** Forty-eighth year of its publication. Philadelphia: P. Blakiston's Son & Co.

It suffices to mention the publication of this visiting-list for the coming year. The fact of its yearly publication for a period of almost two generations is the best index of the favor with which it has been received by the profession. Various editions are published, intended respectively for 25, 50, or 100 patients daily or weekly, and to each edition is added a well selected collection of reference-tables and blanks for various memorandums.

**The Phonendoscope and Its Practical Application.**

With 37 illustrations. Translations of lectures by Aurelio Bianchi, M.D., and of special articles by Felix Regnault, M.D., and M. Anastasiades, M.D. By A. GEO. BAKER, A.M., M.D., Physician-in-chief of the Chinese Medical Dispensary, Philadelphia, etc. Pp. 77. Philadelphia: George P. Pilling & Son, 1898. Price, 50 cents.

This booklet is devoted to a description of the phonendoscope and its mechanism, as well as to an exploitation of the uses to which the instrument has been put. It is doubtful if the phonendoscope has taken the position in clinical diagnosis that its inventor fondly hoped, although it must be admitted that it is a distinctly useful aid in physical exploration. Skill in its use can only be acquired by exercise and this publication will prove helpful in pointing out the mode of properly employing the instrument and the channels in which its utility may be directed. The illustrations are most demonstrative. Some improvement in literary style and in form of publication would enhance the attractiveness of the book.

**A Compend of Obstetrics.** Adapted to the Use of Medical Students and Physicians. By HENRY G. LANDIS, A. M., M.D. Revised and edited by William H. Wells, M.D. 8vo, pp. 188. Philadelphia: P. Blakiston's Son & Co. 1898. Price, 80 cents.

We take pleasure in reviewing the sixth edition of this book, which so admirably serves the purpose for which it is intended, a useful compend and quiz-book, designed by a system of questions and answers to bring out the more important facts in obstetrics. Modern spelling has been employed; and a good index and numerous and excellent illustrations add to the value of the work. This edition shows evidence of the hand of a careful editor, who has revised and improved many sections. The following subjects have been amplified: The diagnosis of the various positions and presentations by external methods; the mechanism of labor; the differential diagnosis between pregnancy and abdominal tumors and obstetric operations. The subject of puerperal infection is discussed at greater length and modern ideas are put forth. We are glad to observe clear-cut teaching in regard to the management of incomplete abortions and the dangers of retention of the placenta, etc. This edition is destined to retain the favorable opinion acquired by previous ones.

**Textbook of Histology, Including the Microscopic Technic.** By PHILIPP STÖHR, Professor of Anatomy at the University of Würzburg. Second American from Eighth German Edition. Translated by DR. EMMA L. BILLSTEIN, Director of the Laboratories of Histology and Embryology, Woman's Medical College, of Philadelphia. Edited, with additions, by DR. ALFRED SCHAPER, Demonstrator of Histology and Embryology, Harvard Medical School, etc. With 292 illustrations. 8vo, pp. 424. Philadelphia: P. Blakiston's Son & Co., 1898. Price, \$3.00.

Translator and editor have rendered a distinct service in presenting Stöhr's admirable *Histology* to English readers, and both are to be warmly commended for their efforts in a most worthy enterprise and congratulated on their success.

The translation is smooth and accurate and the value of the work is much enhanced by the additions of the editor in text and illustration. The original has passed through eight editions and this is the second American edition. The popularity of the book is shown further by its translation also into Italian, French and Russian. The work is divided into two parts, the first of which deals with general technic and the second with microscopic anatomy. The latter is discussed under two headings: histology (cells and tissues) and microscopic anatomy of the various organs. In an appendix microtome-technic is considered, and the last 12 pages are given to the index. The work is an eminently practical one, special consideration being given to the description of manipulations in the study of the various structures and organs. The illustrations are of an unusually high order, being clear and realistic; and this result is in no small degree due to the fine quality of paper upon which the book is printed. The type is sharp and of good size and the spacing appropriate. The publishers are to be congratulated on the fine appearance of the volume.

**Atlas of External Diseases of the Eye.** By A. MAITLAND RAMSEY, M.D., with 30 full-page colored plates, and 18 full-page photogravures. Glasgow: James MacLehose & Sons. New York: The Macmillan Company, 1898. Quarto. Price, \$20.00.

Author and publishers are to be thanked for what on the whole is a most commendable book. About 50 years have passed since there has been any earnest attempt to picture the appearance of the chief external diseases of the eye. There are several reasons why publishers hesitate to undertake the job, among which the chief are the expensiveness, the delicacy of the art-work, and in the present state of artistic color-reproduction, the approximate impossibility of an entirely satisfactory success. There have been three works of the kind published,—that of Demours (65 plates) in 1818; that of Von Ammon (55 plates and 956 figures) in 1847; and that of Sichel (80 plates) in 1859. The work of Dr. Ramsey is much less expensive than those of his predecessors, and besides frequently being of superior artistic excellence, it possesses the merit of giving the full-face in many illustrations. We have alluded to the great and almost insuperable difficulty of a perfect color-reproduction of many pathologic conditions of the external parts of the eye. When color-photography becomes as cheap and exact as at present is the monochromatic process we shall have the ideal atlas. This observation is emphasized by the fact that the remarkable perfection of the ordinary photographs in Dr. Ramsey's book makes us almost wish that all the chromatic pictures had been replaced by the methods of uncolored photography; certainly the examples of the latter art are superlatively good, leaving nothing to be desired. (We should have omitted the illustration of lagophthalmos.) We wish we could say as much for the chromos. Our will is good, but, excellent as these pictures are, many indeed being as fine as they can be, we are compelled to acknowledge that a number are not what we would like them to be. The most objectionable ones to our eye are those of mucopurulent conjunctivitis and ophthalmia of the newborn. The almost invariable swelling of the lids in a typical case of the latter disease, and especially emphasized in the text, is not well brought out; indeed, but for the age of the child the plates would appear to be misplaced and the names interchanged. A few others seem to us likewise misleading, but we hesitate to extend the list lest we seem to be too ungrateful for the book as a whole and too inappreciative of its many excellencies. As to the text, it is most praiseworthy (note especially the remarkably fine chapter on Exophthalmic Goiter), and make us wish Dr. Ramsey would give us the complete text-book he could write. Should he ever do so we would suggest that he look after his spelling and watch his proof-reader. *Lachrymation* is wrong; the word should be spelled, *lacrimation*. Why is the hyphen needed in *hypersecretion* more than in *hypertrophy*? In *microorganism* more than in *microscopy*? *Head-pain* is correctly hyphenized, but not *operation-wound*, etc. Eye-strain is noted as one of the causes of mucopurulent conjunctivitis, and of eczema, but not as it should be, of conjunctivitis and of marginal blepharitis. The method of printing the legends upon the tissue-paper sheet is a capital one.



## Correspondence.

## BATH-PRURITUS.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:*

SINCE reading Dr. Stelwagon's article on this subject in the JOURNAL for October 22d, p. 863, and especially as he admits that treatment is unsatisfactory, I have felt that I would be justified in intruding on your space enough to announce that I have discovered the specific treatment for this condition, which attracted my attention some years ago and for which I inquired far and wide for remedies, without finding the subject even alluded to by authorities. I have observed four cases of bath-pruritus, some mild, some as aggravated as any mentioned in the article referred to, and I have found that each person could not only endure but actually enjoy the Turkish bath, even including the cold sprays and a cold pool-plunge. I would like to have this preventive treatment thoroughly tested by those who have opportunities for more extended observation.

Yours truly

ARTHUR J. HALL, M.D.

Washington, D.C.

811 13th St., N.W.

## THE ITINERANT OPTICIAN.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:*

AN optician calling himself a doctor and claiming to treat diseases of the eye and to "restore cataract" and representing the Chicago Optical Company, of Buffalo, N. Y., was arrested here at the instance of the County Medical Society's Board of Censors for practising medicine without being duly registered. On his promise to leave the county and pay the costs and never to return the man was allowed to go.

Other counties in the State have no doubt been afflicted with his presence and hand-bills, and should be advised to pursue similar tactics to get rid of him. As he did not call himself a doctor of medicine, the question arises, What is the legal meaning of the terms oculist, eye-specialist, and doctor of refraction?

The man denied that he treated diseases of the eye, but contended that he merely fitted glasses, and as several other men come here periodically calling themselves doctors and professors, it would be well to know just what could be done to prevent them carrying on their trade. In the case mentioned it was easy to obtain a conviction, because the fellow advertised that he treated diseases of the eye, but the opticians do not so announce, and while the treatment of strabismus and ametropia is undoubtedly the treatment of disease, will the Pennsylvania law interpret it so, inasmuch as the fitting of trusses and the application of orthopedic apparatus are not considered practising medicine?

Respectfully,

M. V. BALL, M.D.

Warren, Pa.

## INTESTINAL OCCLUSION CAUSED BY AN OVARIAN FIBROID.

*To the Editor of the PHILADELPHIA MEDICAL JOURNAL:*

A WOMAN, 35 years old, called at my office on November 1st, for the treatment of a "fresh cold." I found, upon examina-

tion, that the patient was suffering from an acute bronchitis, which was prescribed for. I observed that her abdomen was much enlarged, and being informed that she was not pregnant, I made further inquiry and examination. The woman told me that she had been growing gradually larger about the abdomen for the past 5 years. By palpation and percussion I was able to outline a fibroid about 4½ inches in diameter, attached to the upper posterior border of the left ovary, curling forward over the oviduct near the ampulla. It was firm and nodular and easily outlined. I advised an operation, but this was refused. I did not see the patient again until November 28th, when I was called to attend her for what she supposed to be cramps in the lower part of the abdomen. I found her in a highly excited condition, suffering from severe pain in the left iliac region, extending up across the hypogastric and into the umbilical region. The facial expression was pinched and drawn. The familar decubitus was present—the lower leg of the affected side flexed upon the thigh and the thigh partially upon the abdomen. The pulse was 120; the temperature 103° F. There was vomiting of glairy mucus. Respiration was labored and attended with a sense of oppression. I ascertained that there had not been a movement of the bowels for three days. Examination of the lower abdomen and the pelvis showed that the tumor previously recognized had settled down into the pelvis, blocking completely the pelvic outlet and pressing upon the sigmoid flexure and upper third of the rectum in such a manner as to occlude completely their canal. With digits, through rectum and vagina, an effort was made to raise the tumor out of the lower pelvis and release the imprisoned gut, but this could not be accomplished. The patient assumed the knee-chest position and an attempt was made to push the tumor upward and anteriorly, but without success. I then used a dram and a half each of a solution of sodium bicarbonate and tartaric acid as an injection into the rectum, closing the anus securely afterward with a damp cloth, and hoped that the gas generated would inflate the gut to the degree of modifying or breaking up the occlusion. This too, however, failed. An enema of warm soapsuds was given, but it was found that the solution did not go beyond the point of occlusion. I advised an immediate operation as a last resort, but this both the patient and her friends declined. In the meantime morphin had been given hypodermically at regular intervals, beginning first with gr. ½ and increasing to gr. ¾ until the patient was quieted. Lime-water with milk also was given and checked the vomiting. I then ordered 20 drops of deodorated tincture of opium to be given every hour and a half, increasing each dose 10 drops until the patient would receive 50 drops. The woman was resting quietly; so I left, with the understanding that I would call again about 8.30 P.M. of the same day. At the appointed time, I found the patient quiet, but in a profuse cold sweat. The pulse was rapid and thready; respiration shallow and hardly perceptible; the temperature subnormal. Stercoraceous matter streaked with blood was being vomited. The patient claimed to be feeling better, but she gradually sank into collapse and soon died.

The chief points of interest in this case are the importance of an early recognition of neoplasms of the pelvic organs; a differential diagnosis as to consistency—whether soft or hard; and their immediate removal.

Respectfully,

J. W. McDOWELL, M.D.

St. Louis, Mo.

## American News and Notes.

### PHILADELPHIA, PENNSYLVANIA, ETC.

**Calendar of Meetings of Philadelphia Medical Societies** for the week ending December 31, 1898 :

Wednesday, December 28—County Medical Society.

**Diphtheria Closes a School.**—St. Stephen's Parochial School, in Philadelphia, has been closed by order of the Board of Health, because of the prevalence of diphtheria among the pupils.

**Dr. John G. Campbell**, a well known physician of Elmer, was arrested December 19th, charged with forgery, and while waiting in the Mayor's office prior to being taken to prison, fired two bullets into his breast, dying a few hours later.

**The Study of Infectious Diseases in the Municipal Hospital.**—At a meeting of the Board of Health of Philadelphia, held December 20th, the question of the admission of medical students to the wards of the Municipal Hospital for instruction in infectious diseases was considered, and after protracted debate the motion to permit such instruction was lost by a tie vote.

**The Pittsburg Academy of Medicine** held its eleventh annual meeting December 2d. Following the custom to invite some distinguished member of the profession to address the Academy on these occasions, Prof. Nicholas Senn, of Chicago, was this year the guest of honor, and delivered an address upon "Empyema at Camp Thomas." A banquet was served and toasts were responded to by Dr. T. D. Davis, Mr. Clarence Burleigh, Dr. J. C. Dunn and Mr. C. P. Krauth.

**Vital Statistics of Philadelphia**, for the week ending December 17, 1898 :

Total mortality.....		481
Children under 5 years of age.....		118
Diseases.....	Cases.	Deaths.
Pneumonia 76, congestion of the lungs 4.....		80
Pulmonary tuberculosis.....		57
Heart-disease 28, inflammation of the heart 3.....		31
Diphtheria 28, membranous croup 2.....	111	30
Nephritis 20, uremia 7.....		27
Apoplexy 14, paralysis 12.....		26
Marasmus 14, inanition 8, debility 2.....		24
Inflammation of the brain 15, congestion of the brain 4.....		19
Gastroenteritis.....		18
Senility.....		18
Bronchitis.....		17
Typhoid fever.....	178	16
Carcinoma.....		14
Scarlet fever.....	32	1

**The Smallpox Epidemic.**—Dr. Lee reports that since December 12, 1898, smallpox has been reported in the Borough of Bedford, Bedford County, nine cases, no deaths; Hustontown, near McConnellsburg, Fulton County, one case. The disease is also reported near Robertsedale, Huntingdon County, and Enid, Wells Township, Fulton County. As these places are contiguous this is probably one and the same outbreak. A State Board of Health Medical Inspector is making a thorough investigation of all of these counties. Dr. Lee has received a telegram stating that seven new cases of smallpox have been discovered and placed in quarantine at New

Granada. One case of typhus fever is also reported in the city of Philadelphia. This has been removed to the Municipal Hospital and the premises have been disinfected.

**Two Deaths from Hydrophobia.**—On November 8th a dog, said to have rabies, bit Dr. Benjamin Feucht, of Leetsdale, and Mr. W. L. Mitchell, station-agent at Shields station, P., Ft. W. & C. R. R., as well as several other persons and some animals. Dr. Feucht died on December 12th (as stated in last week's JOURNAL) at his home. Mr. Mitchell died at Mercy Hospital on December 14th. There seems to be no question as to the diagnosis in these two cases, both of which were seen by a large number of physicians. Dr. Leonard Pearson, state veterinarian, communicated the facts to Gov. Hastings, and on December 16th the following proclamation was issued :

WHEREAS, There is reason to believe that the disease known as rabies or hydrophobia exists in part of Allegheny and Beaver counties, and that two men, bitten by rabid dogs, have died of this disease; and

WHEREAS, The nature of rabies is such that for the present all dogs within certain limits must be suspected of being capable of spreading it; and

WHEREAS, It is the duty of the State Live Stock Sanitary Board, under the act of May 21, 1895, to employ measures to prevent, suppress or control dangerous, contagious or infectious diseases of domestic animals, and the said Board is authorized and empowered to establish, maintain and enforce such quarantine and other measure relating to the movement and care of animals as may be necessary to prevent the spread of such disease; be it

Resolved, That all dogs in that part of Allegheny County situate north and west of the Ohio River and included within the townships of Ross, Kilbuck, Aleppo, Leet, Sewickley and Ohio, and all dogs in that part of Beaver County, situate west of the Ohio river, and included in the townships of Harmony and Economy, are hereby declared to be in a state of quarantine and must be strictly confined or firmly secured on the premises of their owners and not allowed to run at large or enter public highways, excepting when led or when muzzled with a well-fitted muzzle which will effectually prevent biting. This quarantine shall remain in force for 30 days from the date hereof, or until removed by the State Live Stock Sanitary Board.

Inoculation-experiments with the brains and spinal cords of the rabid animals are being made.

**The Semicentennial Anniversary of the Philadelphia County Medical Society** will be held on January 14, 15 and 16, 1899. The exercises will consist of a commemorative oration, a sermon in which a plea will be made for the charitable fund of the Mutual Aid Association of the Society, and a formal dinner. The oration will be delivered by Dr. J. Chalmers DaCosta on Saturday evening, January 14, 1899. On Sunday evening (the following day) Rev. Kerr Boyce Tupper, D.D., will preach a sermon appropriate to the occasion in the First Baptist Church, northwest corner Broad and Spruce Streets, at which all the members of the Society are urged to be present. After the sermon a collection will be taken up for the benefit of the Mutual Aid Association of the Philadelphia County Medical Society. On the date of the anniversary, January 16, 1899, the committee has decided to arrange for a dinner, to be held at Horticultural Hall, and it is hoped that every member of the Society will be present. At this dinner it is expected that speeches will be made by various members of the Society, by a few prominent physicians of other cities, and by representative men of the other learned professions who may be present as invited guests. With the object of securing as large an attendance as possible at the dinner, the subscription has been fixed at \$3 per plate. To enable the committee to



make timely arrangements, it is important that all contributions be in hand as soon as possible, and not later than January 1st. These may be sent to Dr. James Tyson, chairman of the Subcommittee on Finance, 1506 Spruce street, or to any other member of the committee: Dr. William M. Welch, chairman; Dr. W. W. Keen, Dr. W. B. Atkinson, Dr. George M. Gould, Dr. A. H. Cleveland, Dr. John B. Roberts, secretary. Members of the county medical societies of Pennsylvania who desire to take part in these exercises are cordially invited to attend the meetings, and participate in the anniversary dinner in the same manner and at the same subscription-price as members of the Philadelphia County Medical Society itself.

**College of Physicians of Philadelphia—Section on Otology and Laryngology.**—At a meeting held December 6, Dr. CHAS. H. BURNETT read a communication entitled: **Ear-Vertigo, Following Mumps, Cured After a Year's Duration by Surgical Removal of the Incus.** In the discussion Dr. E. B. GLEASON said the fact that aural vertigo can, in a great proportion of cases, be cured by the removal of the incus and mobilization of the stapes, is one of great practical importance. The theory that had been advanced by Dr. Burnett as to the causation of aural vertigo is apparently new and original. As regards the removal of the incus for the relief of vertigo, the performance of an intratympanic operation is always a serious matter and personally Dr. Gleason has never undertaken it for this symptom alone, but, when deafness or tinnitus was present he has done either this operation or simple section of the joint, the stapedius muscle and the displacement of the incus, with sometimes satisfactory results. Moreover, the operation should be done in catarrhal intratympanic conditions only when the disease is incurable by all other means. Dr. Gleason inquired what explanation could be given of those cases in which after the operation relief is not immediate, but is experienced only after several months have elapsed. Is it that in these cases the stapes is not movable at the time, but for some reason it becomes mobile later. Dr. BURNETT said that he had thought that the greatest relief was noted in those cases in which the stapes was movable and the pressure upon the labyrinth is at once relieved; in other cases in which the stapes is less movable, the relief may be obtained later by the restoration of its mobility. The stapes is small and weak, and it can be easily impressed by the malleus and incus, which are relatively much larger, Dr. Burnett has always thought that in those cases in which relief from tinnitus had been obtained, it was due to the fact that the stapes had become movable; not sufficiently movable to affect the hearing-power, but movable enough to relieve the pressure. The incus is the keystone of the arch and its removal relieves the pressure and reduces tension in the labyrinth. Deafness is not always due to immobility of the stapes. In many cases of deafness the stapes is perfectly movable. In the case of a physician from a neighboring city, who requested an operation, Dr. Burnett had been surprised to find an unusual degree of mobility, and at first he thought that the stapes had slipped out of the oval window; but it had not done so. The patient was exceedingly deaf, in consequence of disease of the auditory nerve and not of pressure. In the case of a woman who, after an attack of diphtheria, and treatment with antitoxin, became suddenly deaf, the condition could not be ascribed to the antitoxin, but to extension of inflammation from the throat to the labyrinth; the resulting exudation had compressed the nerve structures and caused the deafness and vertigo. There

was also chemosis, which disappeared after a time, but deafness and distressing tinnitus remained. These were probably caused by exudation into the lymph-sacs of the labyrinth sufficient to crush the delicate nerves that are spread out upon the shelf of the spinal lamina. Hasse, a number of years ago, demonstrated the connection between the labyrinth and the cavity of the arachnoid, so that the increase of fluid in the labyrinth can be easily explained by increase in the arachnoid fluid. Dr. WOODBURY referred to a case of intense tinnitus and vertigo, caused by the administration of 5 grains of quinin, and inquired if ear-vertigo might not be due to other disturbances of circulation than increased tension? Dr. BURNETT said that large doses of quinin will cause hyperemia of the labyrinth and will entirely destroy the nerve. Some years ago, Charcot suggested the use of large doses of quinin in order to cause destruction of the nerve in certain cases in which relief was sought from distressing tinnitus. In cats, a dose of 16 grains will destroy the nerve in the ear, as pointed out by Schwabach some 10 or 12 years ago. The principal point to be impressed was the fact that in cases like the one reported, the cause of the vertigo is mechanical, and it can be relieved only by mechanical means—the removal of the cause. Unfortunately, these cases are often mistaken for gastric vertigo and treated for a long time medicinally without benefit. Dr. Burnett referred to one patient, who had been regarded as a case of petit mal, but in whom he had discovered the true character of the malady. Neurasthenia is also often mistakenly supposed to cause the vertigo, but no amount of treatment of the general condition will relieve the ear-vertigo, although, of course, there may be attendant neurasthenia, which may certainly be benefited by the usual methods. Ear-vertigo is distinguished from epilepsy by the fact that there is no loss of consciousness; and also that it may be entirely relieved by the operation described. Dr. Burnett has done the intratympanic operation for liberation of the stapes now in 27 cases altogether. In many cases the relief has been immediate while in all the others it has been obtained after several weeks or months.

Dr. FRANK WOODBURY exhibited specimens of **Oderless Iodoform and Iodoformogen.** Dr. CHAS. H. BURNETT mentioned the fact that recently he had observed some disagreeable results from application of ichthyol—in one case blisters had resulted. He ascribed this result to the presence of some impurity resulting from carelessness in preparation. Dr. E. L. VANSANT said that in several cases he had been obliged to discontinue the use of iodoform on account of its producing irritation of the skin.

## NEW YORK.

**New York State Medical Society.**—The business committee announce that the program is already overflowing with contributions and that no more can be received.

**The University of Buffalo** has just had installed in its handsome building an electric lighting and ventilating plant, the electric power being generated within its own walls.

**Physician Attempts Suicide.**—Dr. Barr, of Brooklyn Borough, attempted to commit suicide because the State law prevented him from practising medicine without a license, which he would have had to obtain through an examination. He was a graduate of an Irish medical college and had practised in Ireland before he came to this country. Latterly he was employed by a life insurance society as a solicitor. It is supposed he took at least 4 grains of morphin.

**Dr. Reginald Sayre** has been elected president of the Columbia University Track Association, for the ensuing year. He is also a delegate from Columbia to the University Athletic Union.

The **Ward's Island Hospital Physicians** have been hied to court on the charge of extorting money from the wife of Joseph Freyman when she came to visit her husband, who was a patient in the hospital. The physicians made a general denial of the plaintiff's charges.

**Dr. S. S. Adams**, of Washington, D. C., lectured by invitation of the faculty before the senior class of the University and Bellevue Hospital Medical College, December 20th, at the hour of the usual pediatric lecture. His subject was fevers in children, their significance, general diagnostic value, and antipyretic treatment.

**A Case of Death in the Upright Posture** is reported as occurring recently in New York City. A man, 67 years old, was sitting fully dressed at a table in the library of his house when a servant entered the room to make a fire in the grate. When the servant returned from a trip downstairs for coal, he found his master dead in his chair.

**A death attributed to rope-jumping** is reported. A girl, 11 years old, was said to be so passionately fond of jumping rope that she frequently fell exhausted from it. Bleeding at the nose would usually follow such over-indulgence. The physician who reported the case said that death was caused by heart-failure due to over-exertion.

**Buffalo, N. Y., German Hospital.**—The corner stone of the building was laid recently with appropriate ceremonies. There is a field of usefulness in Buffalo for this institution and the personnel of its founders assures a successful career for the institution. The officers of the Hospital Association are: President, Dr. Max Breuer; vice-president, Dr. Charles Weil; secretary, Dr. Henry G. Bentz; house committee, Dr. S. Goldberg, Dr. W. Meisburger, and Dr. M. Hartwig.

**An Improvised Incubator.** DR. NICHOLS, of Brooklyn Borough, reports a case of premature birth in which he improvised an incubator out of an entire room. The infant was a 7-months' fetus weighing 22 ounces when born, and artificial respiration had to be practised to keep it alive. In the absence of anything out of which an incubator might be made, a range was put in a small room, and the temperature has been kept at 90°. The child wrapped in gauze simply lies on a pillow and is nourished with modified cow's milk.

**New York Academy of Medicine.**—The election of officers on December 15th resulted as follows: President, Dr. William H. Thomson; vice-president, Dr. Herrmann Knapp; trustee, Dr. E. G. Janeway; treasurer for the trustees, Dr. W. F. Cushman; member of the committee on admissions, Dr. Reginald H. Sayre; member of the committee on library, Dr. August Caillé; delegates to the N. Y. State Medical Society, Drs. J. H. Huddleston, E. Le Fevre, Louis Faugères Bishop, J. Arthur Booth and James Ewing.

**Students' Strike at the University of Buffalo.**—A strike of students occurred recently in the Dental Department of the University of Buffalo. It lasted the better part of three days and was brought about by the faculty refusing to announce the time-schedule for the midwinter senior examinations until they should actually occur. By so doing the students claimed the faculty were using them so unjustly that they refused to do any practical work in the infirmary;

the faculty contended that in consequence of making the announcement the students neglected the important practical work in the infirmary. A few hours' thought showed the students their folly and the strike was called off. The faculty has agreed to give fair notice of the time when the examinations will occur.

**Buffalo Academy of Medicine—Surgical Section.**—At a recent meeting Dr. N. Jacobson, of the University of Syracuse, presented a paper upon the **curability of carcinoma**. He expressed his belief in the infectious nature of carcinoma, its local cause being various but as yet unknown, and his conviction that early recognition with radical extraction is the only sure cure.

Dr. E. M. Dooley read a paper on **Colles' Fracture**, which brought out a sharp discussion as to the proper method of treatment.

**Proceedings Against the New York Hospital.**—The State Board of Charities has requested the Attorney-General to institute proceedings against the "Society of the New York Hospital," in New York city, to require the managers thereof to permit of an inspection by the board's representatives of the hospital maintained by the society, and to make annual report of its financial and other operations on the blanks provided by the board. President Stewart, of the board, has designated Secretary Hibbard to exercise the authority appertaining to the position of Superintendent of State Alien Poor in the board's service, recently made vacant by the death of Dr. Charles G. Hoyt.

**A Rare Anatomic Work.**—An honorary fellow of the New York Academy of Medicine, and a life-time collector of books, Dr. Lothar Voss, has just presented to the library of the Academy a book on **The Lymph-Vessels** by Gaspar Asellii. It is from the original edition, issued in 1627, only one other copy of which is known to be still in existence. This work also enjoys the distinction of being the first to contain colored anatomic plates. Asellii, who was born in 1581, discovered the lymph-vessels in 1623, and noted the direction of their valves. The only other library in this country containing a copy of this old book is that of the Surgeon General of the Army in Washington, but that one belongs to the third edition, which was published in 1640, and is said to be decidedly inferior to the first edition.

**Buffalo Academy of Medicine.**—At a recent meeting of the Medical Section, DR. DELANCEY ROCHESTER read a paper on the **Treatment of Cases of Pulmonary Tuberculosis that Cannot Leave Home**. Emphasis was placed upon minute and careful instructions to the patient, controlling his diet and daily life; especial attention being given to the skin by the use of cold and hot baths and brisk towel-rubs, to the bowels, to the catarrhal condition of the stomach by the proper use of water, and by constant life in the open air and sunshine with carefully regulated exercise; to these are to be added as indicated local and general medication. Dr. Rochester reported several cases in which a bad prognosis was given, but the patients recovered and have been well for periods of from 6 months in the latest to 2 years in the earlier cases cited. DR. GEORGE N. JACK, of Depew, N. Y., reported three cases of **asthma**. In the first the attacks were precipitated when the blood fell below an unknown standard and continued so long as the blood so remained, but were absent and remained absent so long as the blood showed itself to be at or above the usual average for normal blood. In the second case the asthmatic attacks accompanied the onset of a leukemic state of the blood. As



soon as the blood regained its normal condition the asthma disappeared. The third case was due to a lithemic state of the blood. Correction of the alkalinity of the blood cured the attacks.

**New York Academy of Medicine.**—Dr. Samuel Alexander gave an illustrated lecture entitled, **Observations upon the Pathological Anatomy of Chronic Enlargement of the Prostate, with Special Reference to the Causes of Muscular Insufficiency of the Bladder.** A large number of photographs of the specimens that he had studied were projected on the screen, and from them the following deductions were made: He said that the cause of the post-trigonal pouch, often erroneously termed the post-prostatic pouch, is to be found in the fact that when, as occurs in urinary obstruction, pressure is brought to bear behind the trigone, this portion yields and sinks downward. Obstructive disease of the prostate, when the result of enlargement of the lateral lobes, is, at first, purely mechanical. When the anatomic median lobe enlarges, it causes obstruction, and, in the effort to overcome this by elevating the lower end of the internal urethral orifice, the muscle overlying the trigone becomes hypertrophied. Another cause of obstruction on the floor of the canal is the growth into the urethra of the accessory glands lying along this canal. This is usually associated with enlargement of the anatomic median lobe. Still another cause of such obstruction is hypertrophy of the accessory glands at the internal urethral orifice, with the formation, at first, of a separate tumor. As the disease advances it becomes merged into the third lobe. In these three classes of cases the cause of the loss of power is the destruction of the insertion of the vesical muscle into the prostate, and the consequent inability of the bladder to empty its posterior portion.

**Chautauqua County Medical Society.**—The semi-annual meeting was held at the Hotel Columbia, Fredonia, N. Y., December 13, 1898, Dr. M. N. Bemus, president, presiding. The business session was held before dinner, at which time the following were admitted to membership: Dr. C. H. Richards, Dunkirk, N. Y.; Dr. A. Austin Becker and Fred C. Hunt, Jamestown, N. Y. The following resolution was unanimously passed: Resolved, That contract medical service is beneath the recognition of members of this Society. The scientific session was held at 2 P.M. and the program carried out in full. Dr. H. A. Eastman read upon Appendicitis in the absence of Dr. Mahoney. The evening session was very interesting and a large number of those present during the day remained. The program was as follows: Duodenitis, Dr. V. M. Griswold, vice-president, Fredonia; discussed by Dr. N. E. Beardsley, Dunkirk; MacDonald Moore, Fredonia. Appendicitis, Dr. J. J. Mahoney, Jamestown; discussed by Dr. T. E. Soules, Westfield; Dr. George F. Smith, Sinclairville. Some Reminiscences of Early Practice, Dr. L. H. Snow, Jamestown. Paper: Compound Fractures, Dr. A. Wilson Dods, Fredonia; discussed by Dr. R. T. Rolph, Dunkirk; Dr. E. M. Scofield, Jamestown. Presentation or Report of Interesting Cases. Evening Session (illustrated with lantern slides): Importance of Middle Ear Inflammation and Its Treatment, Dr. G. E. Blackham, Dunkirk. Those present were: Drs. M. N. Bemus, V. M. Griswold, N. G. Richmond, MacDonald Moore, A. W. Dods, J. W. Morris, W. D. Wellman, L. H. Snow, W. Stuart, H. A. Eastman, A. Borden, G. E. Blackham, C. H. Richards, N. E. Beardsley, J. J. Drake, C. A. Ellis, T. D. Strong. The annual meeting is to be at Chautauqua, N. Y., in July.

**New York Academy of Medicine—Section on Surgery.**—At the meeting held December 12th, Dr. V. P. GIBNEY presented a case of **progressive muscular atrophy showing an almost complete excursion of the scapula as a result of paralysis of the trapezius.** The subject was an Italian male, 23 years of age, a patient of Dr. C. Tranchida. No others in his family were similarly affected, and it was supposed that the predisposing cause was to be found in his severe muscular work in a macaroni-works while a mere lad. His scapulæ project like "angel wings," and, owing to the paralysis of the trapezius, the range of motion of both scapulæ is quite remarkable. There is also a peculiar falling forward of the shoulders produced by the extensive atrophy of the pectoral muscles. According to the history, the young man first noticed weakness of the right hand a few months ago, which was soon followed by a change in gait. The history showed plainly the progressive nature of the malady.

Dr. JOHN F. ERDMANN presented a physician who exhibited **multiple exostoses.** Both his family and personal history were good, but on recovering from an attack of typhoid fever about 14 years ago he noticed the first exostosis, situated on the right femur. There is also an exostosis in each vastus externus muscle, on the right radius, on the outer aspect of the right femur and on the right internal malleolus. The special interest of the case centered in the fact that there is an exostosis on the outer aspect of the limb; such formations are sufficiently common on the internal condyle. In the discussion of the foregoing cases, Dr. B. FARQUHAR CURTIS remarked that he had seen a case some years ago in which the scapulæ had projected to a marked degree, but they had been abnormally small. The condition was apparently a congenital one. Dr. REGINALD H. SAYRE had seen two such cases, one unilateral and the other bilateral. He was of the opinion that in these, as well as in the one under discussion, the tipping out of the scapulæ resulted from the paralysis of the subscapularis. Dr. GIBNEY, referring to the case presenting exostoses, said that some years ago he had had under observation a family, five or more members of which had these exostoses. Dr. JOHN B. WALKER said that he had seen three cases in the last 18 months.

Dr. W. DUFF BULLARD read a paper on **Elephantiasis of the Vulva**, and reported a case. He said that the frequent association of elephantiasis and the presence of the filaria sanguinis hominis in the blood had led many to assume that some necessary and causal relation existed, but Osler asserts that the majority of cases of elephantiasis in this country are non-parasitic. It seemed reasonable to believe, after weighing all the clinical evidence, that the affection may arise from any obstruction of the lymphatics. The only hope of cure lies in the removal of the growth with the knife or the galvanocautery, or by ligation, and the risk depends upon the size of the tumor and the general health of the patient. These patients are often in a feeble or septic state. Dr. Bullard's patient was a woman, 39 years old, who had always lived in New York City. There was nothing in her family or personal history bearing on the case, and her general health had been excellent up to 3 years ago. Shortly after being at one of the public baths she first noticed enlargement of one labium. After a few months the other labium also hypertrophied and finally the clitoris shared in the growth. The woman did not seek medical advice until the tumor had become so large that it had, by friction and consequent ulceration, caused much discomfort.



Examination then revealed the presence of an immense vascular tumor extending from the pubes to the knees. The superior surface was ulcerated and nodular, and was covered with foul, ichorous secretion. The central tumor, or hypertrophied clitoris, was about the size of a banana. The urine presented no abnormality. The patient's general health was poor at this time, so that operation was postponed until she had been built up somewhat and the parts had been well disinfected. At the time of operating it was necessary to suspend the tumor from a bar placed above the patient. Hemorrhage was satisfactorily controlled by the use of Wyeth's transfixion hip-pins with an elastic figure-of-eight ligature. The patient lost little blood during the operation, which occupied 55 minutes, and she left the table with a pulse of 100, and apparently in excellent condition. However, after 5 hours, the pulse suddenly became rapid and responded but poorly to stimulation. It was then noted that the respirations had been reduced in frequency, and this slowing continued until the woman breathed only 6 times per minute. She had received no morphin. Death occurred 12 hours after the operation and was apparently due to low vitality and sepsis. DR. H. T. BROOKS reported that the histologic features of the tumor were those of lymphangioma. In the course of the discussion, DR. W. B. COLEY remarked that the fact that the affection developed after bathing would lead to the suspicion that the cause was still to be found in an infection with filariæ. DR. B. F. CURTIS said that elephantiasis in this country had often been found as a result of chronic inflammatory states, and that in cases occurring in this country in which the presence of the filaria had been demonstrated, the patient had at some previous time lived in the tropics. DR. C. E. FRISTER recalled having seen in India an English soldier with elephantiasis of the penis that had developed after the extirpation of some infected inguinal glands.

#### NEW ENGLAND.

**The will of Miss Mary A. Barnard** of Amesbury, Mass., bequeaths \$10,000 to the Amesbury Public Library and \$4,000 to the Anna Jacques Hospital in Newburyport.

#### WESTERN STATES.

**Rush Medical College.**—Dr. Sanger Brown has resigned and Dr. Henry B. Fairee is lecturing on Hygiene in his place.

**St. Louis Medical Society of Missouri.**—At a meeting held December 17th Dr. Adolph Alt read a paper on the cure of cataract without operation, and Dr. T. C. Wither- spoon, a paper on fat-metabolism.

**Another Victim of "Christian Science."**—Marjorie Campbell, aged 9 years, of Tacoma, Wash., is the latest victim of "Christian Science." Her parents, being devotees of the "occult science," employed no physician for their daughter, who eventually died of heart-disease.

**Chicago Ophthalmological and Otological Society.**—A regular meeting was held December 13, 1898. Dr. Woodruff reported "A Case of Binocular Simulated Blindness;" Dr. Fulton discussed "Operative Treatment of Blepharitis;" Dr. Snyder discussed the "Bacteria of Trachoma."

**Chicago Gynecological Society.**—At a meeting held December 16th the subject of movable kidney was discussed, as follows: The etiology, by Dr. C. S. Bacon; the

symptoms and diagnosis, by Drs. G. Futterer and H. B. Stehman; the non-surgical treatment, by Dr. A. R. Edwards; the surgical treatment, by Dr. L. L. McArthur.

**Medical Society of City Hospital Alumni, St. Louis.**—At the annual meeting on December 15th the scientific program was: Irritability of the Urinary Bladder, with Report of a Case, by Dr. M. George Gorin; Report of Two Cases of Urinary Calculi, by Dr. H. Wheeler Bond; Fatty Heart, with Report of Two Cases, by Dr. G. H. Lane.

**Notification of Contagious Diseases.**—The Milwaukee Board of Health is on the alert for unreported cases of contagious disease. One physician was arrested last week and escaped with a warning from the judge. A number of physicians are under suspicion of practising this deception, but future offenders, if discovered, are not likely to get off so easily.

**University of California.**—Dr. T. W. Huntington, for 13 years chief surgeon of the Sacramento Hospital, has recently been elected assistant to the chair of surgery in the medical department of the University of California. Owing to the continued ill health of Dr. Robert McLean, professor of surgery, the major portion of the work in the chair of surgery will undoubtedly devolve upon Dr. Huntington.

**Southern Pacific Hospital Association.**—Many changes are impending in the Southern Pacific Company's Hospital-department. Perhaps the most important is the building of a modern hospital in San Francisco, and the discontinuance of the old hospital in Sacramento, which has been for over 30 years the central hospital for their whole system. When built, this hospital was the greatest institution of the kind in the State of California. The Central Pacific division commences at Sacramento, and when the hospital was built in that city it was the most convenient point for railroad patients. The past 20 years have witnessed enormous developments in the Southern Pacific system as well as the Market Street Railway system in San Francisco. It has now been found advisable, for economic reasons, to abandon the old and antiquated Sacramento hospital for the one in San Francisco. The hospital-building that is now in process of construction will, when completed, be one of the finest railroad-hospitals in the country. In heating, lighting, ventilation, furniture and equipment it will follow the latest and most approved methods. Dr. Matthew Gardner, the accomplished chief surgeon of the hospital-association, is taking personal interest in the work. Through long experience in such matters he has been of great assistance to the architect in developing the plans.

**Denver Clinical and Pathological Society.**—At a meeting held December 9th DR. MELVILLE BLACK exhibited a piece of steel that he had removed from the vitreous with the magnet, doing a cataract operation.

DR. A. S. LOBINGIER reported the case of a boy who developed well-marked vaccinia without vaccination. In playing with his brother, who had recently been vaccinated, he received a blow, but there was no discoverable abrasion and no known contact with the vaccination-sore. In due time he developed vaccinia of severe type, resembling variola.

DR. H. G. WETHERILL exhibited a fibroid involving the entire uterus. The patient had also three or four lymphoid polyps protruding from the cervix. Preceding the hysterectomy as thorough a curetment as possible was done; yet the specimen showed the incompleteness of the operation. Dr.



Wetherill called attention to the inefficiency of the curet in the removal of polyps and the necessity of polyps-forceps.

DR. F. H. McNAUGHT reported a case in which, in attempting to remove a dead fetus, he was unable to dilate the internal os. The fetus was removed piecemeal and during its removal the instrument sometimes seemed to grasp the uterus. Subsequent examination showed a **complete longitudinal uterine septum** which prevented dilatation of the os. The patient had had a fetus removed a year previously without the condition being discovered.

DR. E. P. HERSHEY reported a case of **appendicitis with rupture of the abscess and complete anuria** lasting for 54 hours. Death occurred from uremia 12 days later.

DR. J. N. HALL reported a personal experience with the **use of chloroform** in an unventilated room with artificial light. Sudden severe bronchial irritation occurred affecting all the attendants and quickly relieved on ventilation.

DR. H. T. PERSHING reported 3 cases of **brain-tumor**, one of which had at one time exhibited the signs of an aneurysm and was diagnosed as such.

DR. W. J. RAYNOR exhibited the chart of a soldier who developed **typhoid fever following malaria**, the temperature curve showing the influence of the malaria. He also reported a case of **pernicious comatose malaria**, with recovery. Both cases of malaria were imported.

**Chicago Medical Society.**—At a meeting held December 14th, DR. ARCHIBALD CHURCH presented X-ray photographs and the history of a case of **Brain-tumor**, and DR. FRANK X. WALLS presented the specimens: J. H., 15 years old, was admitted to St. Luke's Hospital in March, 1898, with a history of having been sick for 2 years. His family-history was entirely negative, as was also his personal history previous to the onset of his last malady. About two years before admission to the hospital his sickness began with attacks of vomiting attended with severe frontal and occipital headache. After emptying the stomach of a thick, yellowish material, he would experience some relief. The attacks of cephalalgia and emesis continued at irregular intervals. More than one year later the patient had some difficulty in walking, at first slight, but it had progressively increased up to the time of entrance. Three months before entering the hospital he had a convulsion that lasted half an hour; a week later a second seizure; and a third 5 weeks subsequently. The convulsions, as described by the mother and later witnessed in the hospital, involved the entire body. No prodromes were noted. The convulsions were tonic in character, with brief interruptions of flaccidity, succeeded by an enduring spasm, the body being usually bowed as in opisthotonos. The fits were of long duration, from half an hour to as long as 55 minutes, and for two or three days after the convulsion the boy would be sleepy. He also complained of extreme nervousness and became easily tired. On entrance to the hospital examination showed the boy to be of average physical and mental development. The heart, lungs, and abdomen exhibited no abnormality. Tactile, thermal, and painful sense were normal. Voluntary motor power was fair. The pupils were widely dilated and responded to light and in accommodation. There was no nystagmus. The patellar reflexes were slightly exaggerated, but diminished by reinforcement, and symmetrical. The Cremasteric reflex was present. The superficial abdominal reflexes were absent. When standing the boy swayed a little. The gait was somewhat reeling, with a tendency to fall toward the right side. With closed eyes, when walking or turning quickly, there was marked ataxia. Examination of the fundus of the right

eye showed a choked disc with secondary optic degeneration. The boy remained in the hospital about 9 months, during which time he had a convulsion about once a month. His general condition remained about the same as at entrance. Temperature, pulse, and respiration were practically normal. Examination of the urine, both as to quantity and constituents, disclosed no abnormality. On November 28th the patient was found dead in bed, having been the day previously in his usual health and walking around the ward. On post-mortem examination the bones of the cranium were thin, averaging perhaps 4 cu. cm., and being in places unusually translucent, and only 1 cu. cm. thick. The meninges and the venous sinuses presented nothing abnormal. In the posterior fossa of the skull was found a tumor of the right cerebellar hemisphere, about the size of a lemon, occupying the superior and anterior portion of the right hemisphere, bulging tensely in all directions, especially forward and upward. The anterior part of the tumor was free from cerebellar substance and was covered by a thin layer of plastic lymph, which exudate extended toward the median line, matting together the tissues at the base of the 4th ventricle. The major portion of the tumor was embedded in the cerebellum. On section of the tumor its center was found filled with about an ounce of a light fluid that was a trifle blood-stained. Lining this cavity was a deep red area, evidently a recent hemorrhage. The rest of the tumor was of solid consistency and had a homogeneous, gelatinous appearance suggestive of glioma, and especially characteristic was the neoplastic infiltration into the cerebellar substance at the periphery of the growth, so that a distinct line of demarcation between the morbid and normal tissue could not be made out in the fresh specimen. The lateral ventricles were enormously distended with over a liter of fluid, the hydrocephalus being readily explained from a consideration of the size and position of the tumor. The other organs of the body exhibited subserous ecchymoses and vesical congestions, as would occur in death during a convulsion.

The histologic study of the tumor has not been completed, but from the examination of a teased specimen in which the branched neuroglial character of the cells could be seen the neoplasm is believed to be a glioma. A specimen stained with hematoxylin and eosin shows that the tumor is extremely cellular, especially at its periphery, while toward the center the amount of intercellular substance is increased in strand-like masses, and lining the central cystic cavity it forms a thick limiting wall. The blood-vessels through the periphery of the tumor are infrequent, and have slightly thickened walls; in the interior of the tumor the blood-vessels are numerous, much dilated with blood and have thin coats, presenting in places the appearance of a cavernous hemangioma. Some extravasation of blood into the tumor is to be seen at its center, and also areas where there are dense masses of old blood-pigment. The previous convulsions and the terminal convulsion could well be ascribed to the ancient and recent evidences of blood-extravasation respectively.

DR. HENRY W. GRADLE read an article upon **The Operation for Adenoids** and presented a new instrument, speaking especially of operation without anesthesia.

DR. R. B. PREBLE reported two cases of **amebic dysentery**, drawing attention to the fact that so far no cases of this disease had been reported as acquired in Chicago. Both of the cases reported were acquired in the city. The first patient was a man, 31 years old, with a negative personal

and family history, who had complained for 14 months of diarrhea, with blood and mucus in the stools. He had lived in Chicago for 9 years and had never been out of the city in that time. He used city-water. Physical examination disclosed no abnormality, except for the large number of amœba coli found in the stools. The second patient was a woman, 50 years old, who had diarrhea, with blood, mucus, and pus in the stools, for over a year. She had lived in the city for 30 years and had never been outside even for a single day. Physical examination yielded negative results except for the amœba coli in the stools.

#### SOUTHERN STATES.

**Washington (D. C.) Academy of Science.**—The sixth annual meeting was held December 14th, Dr. Samuel C. Busey delivered the presidential address, his subject being: The History and Progress of Sanitation of the City of Washington, and the efforts of the Medical Profession in Relation Thereto.

**Antitoxin and the Homeopaths.**—According to the *Maryland Medical Journal*, at a recent meeting of the Homeopathic Medical Society of Washington, D. C., Dr. J. B. C. Custis criticised Dr. C. L. Bliss for reading a paper on antistreptococcus-serum before the society. He insisted that such subjects were out of place at a meeting of the Homeopathic Society.

**New Municipal Hospital in Washington, D. C.**—Senator McMillan has introduced into the Senate a bill appropriating \$200,000 for the purchase of a site, and \$50,000, for the commencement of the erection of buildings that may ultimately cost \$200,000 for a new Municipal Hospital. It is proposed that the patients now treated in the Columbia, Freedman, and Almshouse Hospitals shall be treated in the new hospital.

**Kentucky School of Medicine.**—Judge Miller, on December 17th, handed down a lengthy opinion in the case of Dr. Samuel Woody and Dr. Clinton W. Kelly against Dr. W. H. Wathen, Dr. Boyd and Dr. Samuel Cochran, which has grown out of dissensions in the Kentucky School of Medicine. Judge Miller dissolved the temporary injunction granted and dismissed the suit. The action was brought by Drs. Woody and Kelly to restrain Drs. Cochran and Boyd from claiming title to professorships in the school, and to restrain Dr. Wathen from claiming the right to act as dean of the school. Judge Miller held that Dr. Wathen's election to the deanship, and Drs. Cochran's and Boyd's election to the professorships were legal and valid, and that they are entitled to these positions. The case will probably be taken to the Court of Appeals.

**Johns Hopkins Hospital Medical Society.**—At a meeting, held December 19, Dr. W. G. MACCALLUM presented specimens from a case of **mixed-cell sarcoma apparently primary in the pelvic cellular tissue**, with numerous secondary metastatic growths. The patient was a Pole, aged 21, who, on admission to the hospital, gave a history of definite intestinal obstruction. Rectal examination revealed a large tumor almost filling the pelvis, but not completely obstructing the rectum. The mass was to be felt in both iliac regions of the abdomen, but most distinctly on the left side. Death occurred about 4 weeks after admission. At autopsy a large tumor was found, apparently originating in the cellular tissue between the rectum and the bladder, and involving the greater part of the posterior vesical wall and the pros-

tate. Secondary metastatic growths were found in the following situations: On the parietal and visceral pleura, as well as in the deep portion of the lung, where they were situated about the blood-vessels for the most part; in the anterior and posterior mediastinal glands; in the subpericardial tissue; in the liver; in the retro-peritoneal glands; in the skin over the abdomen and thorax, and in the testicles. The method of the spreading of metastases in sarcoma was discussed at considerable length. Distribution through the blood-current would explain the origin of most of the metastases in this case. The metastases in the testicles resulted most probably from direct recurrent extension along the lymphatics. Andréé (*Arch. f. Path.-Anat.*, Bd. 61) had reported a case almost identical with the present one. The histologic examination of Dr. MacCallum's case showed that the tumor was a large, round-cell sarcoma, with numerous giant-cells, some of which were vacuolated. Dr. N. MacL. HARRIS reported on the **bacteriologic findings** in this case. He isolated the streptococcus pyogenes from the blood and from some of the organs. The proteus vulgaris was also obtained in cultures from the lungs. The bacterial infection was considered a terminal one. Two of those assisting at the autopsy received finger-infections. In one case there was lymphangitis and lymphadenitis, and the seat of infection was early excised. In both cases the streptococcus was obtained in cultures made from the seat of infection. The streptococcus from this case was most virulent. Contrary to the general rule, it killed mice readily even after it had been passed through two or three animals. The toxin extracted from the organism was also fatal to mice, although death was not so rapid as with the pure culture of the organism. The lesions in the organs of the mice killed by pure culture and by the toxin were identical. Dr. SIMON FLEXNER thought that the cells from the primary growth could reach the general circulation by way of the venous capillaries, or they could enter by way of the thoracic duct. The metastases in the testicles were undoubtedly the result of recurrent extensions along the lymphatics. The streptococcus isolated in this case was extremely virulent. Rarely does one meet with a streptococcus that will kill mice.

Dr. John Clark presented a most interesting communication on the **study of the ovarian circulation, in relation to the essential functions of the ovary, from its first appearance in the embryo until its disorganization in the aged woman**. Dr. Clark had attempted to work out the ovarian circulation first in adult females and later in lower animals, but was not successful owing to the complicated character of the blood-supply. By reverting to the study of embryonic ovaries he met with success and was afterwards enabled to follow the process in ovaries of the adult human female. The development of the ovary in the embryo was carefully described and it was shown that even quite early in embryonic life it could be determined macroscopically in infected specimens, whether the future sex was to be male or female, simply from the manner of distribution of the vessels to the body that later developed into the testicle or the ovary. In the course of his study Dr. Clark was able to demonstrate that the tunica albuginea was distinctly vascular, a view previously not accepted. The development of the ovisac up to the time of its rupture was carefully studied. The ruptured sacs and corpora lutea were shown to undergo healing by the formation of typical granulation-tissue. Loops of vessels pass out from the walls of the cavity and connective tissue cells fill in the spaces between the loops. The part played by the increased vascu-



larity of the ovary during the menstrual period in causing the rupture of the ovisac was emphasized. The many interesting points that Dr. Clark has added to the knowledge concerning the circulation in the ovary were clearly brought out by means of sections thrown on a screen with the aid of a projection-apparatus recently presented to the hospital by Dr. Kelly.

Dr. Theobald reported a cure of **bilateral optic neuritis following hemorrhages from the stomach.** The case occurred in a man, about 50 years of age, who had given a history of gastric ulcer lasting over a period of 20 years. In May of this year, the patient had had two or three severe gastric hemorrhages, so severe that his life was despaired of. Two days after the first hemorrhage his eyesight became seriously affected. He was almost completely blind for about 2 weeks, after which his eyesight began to improve until June or July, when he was able to walk about the street. Sight began to fail again about the middle of November. There was no history of syphilis. The patient had been a heavy smoker and a moderate drinker. Ophthalmoscopic examination showed marked cupping of the optic discs. The optic nerve was markedly atrophied as a result of the optic neuritis. Dr. Theobald quoted from the literature many instances in which optic neuritis had followed severe loss of blood. The majority of the cases followed hematemesis and metrorrhagia. The condition is attributed to an ischemia resulting from the loss of blood. Dr. Thayer stated that the patient had consulted him for his gastric symptoms. He gave a history of vomiting large quantities of fluid and undigested food. There was distinct evidence of gastric dilatation, due, no doubt, to pyloric obstruction by a tumor the size of a hen's egg now palpable in the epigastrium. The test-breakfast shows that free hydrochloric acid is present in normal quantity, and that there is no lactic acid present. Dr. Thayer thought it quite probable that a carcinomatous ulcer had developed at the seat of the old gastric ulcer.

#### MISCELLANY.

**The American Gastro-enterological Association** will hold its next annual session in Washington, D. C., in May, 1899. The secretary is Dr. Charles D. Aaron, 32 Adams Street, Detroit, Mich., to whom all communications should be addressed.

**Obituary.**—JOHN STILLWELL SCHANCK, M.D., LL.D., emeritus professor of chemistry and hygiene at Princeton University, Princeton, N. J., December 16th, aged 81 years.—DR. DAVID, a graduate of the University of Pennsylvania, class of '47, Oak Cliff, Tex., November 22d, aged 77 years.—DR. T. O. BARNWILL, Adams Run, S. C., December 7th, aged 60 years.—DR. EDWARDS HALL, New York, December 10th, aged 81 years.—DR. NATHAN SHERWOOD KING, Yonkers, N. Y., December 11th, aged 74 years.—DR. HENRY H. OSTROM, of Alton, N. Y., in Sodus, N. Y., December 9th, aged 75 years.—DR. GEORGE Z. HIGGINS, Strong, Me., December 19th, aged 66 years.—DR. HENRY CAMPBELL DOUGLITY, AUGUSTA, Ga., December 11th, aged 26 years.—DR. STEWART REESER, Scranton, Pa., December 16, aged 36 years.—DR. J. G. CAMPBELL, Elmer, Salem county, N. J. December 20th.

**Increase in the Medical Corps of the United States Army.**—Surgeon-General Sternberg appeared recently before the House Committee on Military Affairs in reference to the proposed increase in the army, and said that the medical branch of the army at no time had been adequate, and now that it was proposed to expand the army

fourfold, the medical branch should be expanded at least threefold. He urged that the most essential need of the medical corps was to have experienced men quickly available for emergencies, the want of experienced medical officers having been its main trouble in the recent war. General Sternberg expressed the opinion that the surgeon-general should have the rank of major-general as a matter of organization, though he hardly expected it, and was ready to go on until retirement on the present basis.

#### Contract-Surgeon in the United States Army.—

The following requirements are exacted by the board of examiners of those seeking appointment as contract-surgeons in the United States Army: Evidence of graduation at a regular reputable medical college—diploma to be submitted to the Board. Proof of hospital or other professional experience will be of benefit to the candidate. Candidates must be in good health, of reasonably sound physique, and citizens of the United States. The examination is of a practical nature, embracing hygiene, practice of medicine, pathology and surgery. In addition a thesis on some professional topic will be prepared by the candidate. The following questions submitted to former candidates are published as a guide to applicants. 1. What chemic and physical qualities of water would lead you to suspect its potability? 2. What are the varieties and pathology of felon? 3. What is Widal's test? 4. What are the modern methods of treating diphtheria? The pay of Acting Assistant Surgeons is \$150 monthly. The applicant must be free from physical defects that would incapacitate him from the military service. For further information address the President of the Board of Examiners, Major H. S. Kilbourne, Surgeon, U. S. Army, Army Building, 39 Whitehall Street, New York City.

#### Western Ophthalmologic and Otolaryngologic Association.

—The following is the preliminary program of the next annual meeting to be held in New Orleans, February 10 and 11, 1899. Address before the section on Ophthalmology, by Dr. George T. Stevens, of New York: Fifty mastoid operations, including four brain abscesses and one perforation of the sigmoid sinus, by D. Milton Greene, Grand Rapids, Mich.; Indications for operative interference in chronic suppurative otitis, by N. H. Pierce, Chicago; The etiology and importance of iritis, by H. H. Brown, Chicago; Congenital nasal atresia, by Hal Foster, Kansas City; Some experiences with Dr. Gould's method of prismatic exercises, by Cassius D. Wescott, Chicago; A report on operative treatment of high myopia, by H. V. Würdemann, Milwaukee; Treatment of diseases of the lacrimal duct by catoporesis, with exhibition of cupped sounds, by George F. Keiper, Lafayette, Ind.; Retinoscopy, by W. H. Baker, Lynchburg, Va.; The pathology of cataract, by A. Alt, St. Louis; Refraction of trachomatous eyes, by E. E. Hamilton, Wichita, Kans.; Keratitis herpetica, by S. S. Ledbetter, Birmingham, Ala.; An ophthalmologist's experience with the army, by J. J. Kyle, Marion, Ind.; Series of cases of malarial keratitis, with reports of blood-examinations, by E. C. Ellett, Memphis, Tenn.; Retinal detachment, loss of vision, recovery, by G. A. Wall, Albuquerque, N. M.; Glioma of the medulla, with report of autopsy and microscopic examinations, by Casey Wood, Chicago; Large tumor of the brain encroaching on the motor area and causing few symptoms save optic neuritis, with remarks on the value of double neuritis as a sign of brain-tumor, by James M. Ball, St. Louis; Case of Bell's palsy and epilepsy cured by correction of ametropia and heterophoria, by L. R. Culbertson, Zanesville, O.; Injuries

of the eyeball, with report of cases, by Ellet O. Sisson, Keokuk, Ia.; Tuberculosis of tonsils, pharynx and larynx, by W. T. Groves, Eureka, Kan.; Best vision after cataract-extraction, by W. E. Driver, Norfolk, Va. Papers have been promised also by Dr. J. Ellis Jennings, St. Louis; Dr. W. L. Ballenger, Chicago; Dr. J. R. Robinson, Colorado Springs, and Dr. W. A. Fisher, Chicago.

**Legacies to Charities.**—According to the will of the late Eliza W. S. P. Field, who recently died at East Grinstead, Eng., the following legacies are devised: To the Philadelphia Home for Incurables, \$10,000; House of Shelter, Albany, \$500; City Orphanage of Albany, \$500; Home for Aged and Infirm Colored Persons, \$5,000; Germantown Hospital and Dispensary, \$500; Children's Hospital of Philadelphia, \$1,000; House of Mercy, Washington, D. C., \$5,042.

**The Association of American Anatomists** will hold its eleventh session in conjunction with affiliated societies, in the rooms of the Department of Anatomy, College of Physicians and Surgeons (Medical Department, Columbia University), New York City, No. 437 West Fifty-ninth Street, from Wednesday to Friday, December 28 to 30, 1898. The following is the provisional program:

December 28:—Address of the president, Dr. Wilder; report of the committee on the anatomical peculiarities of the negro; Dr. Lamb, chairman; report of the Smithsonian committee on a table of Naples; Dr. Huntington, chairman; discussion. "The Teaching of Anatomy in our Medical Schools." The following divisions of the general subject have been indicated: 1. Preparatory education; 2. The value and place of general biology and comparative anatomy; 3. Histology and embryology in the medical course; 4. The relative value of didactic methods; 5. Practical anatomy and how to teach it; 6. The order of topics; 7. The correlation of structure and function in teaching; 8. The use of charts and blackboards; 9. The qualifications requisite for a teacher of anatomy; 10. The desirability of terminologic consistency. The subject will be opened by 1. Dr. Holmes with a paper on "The defects in our present methods; 2. Dr. Gerrish will consider divisions 4, 6 and 8; Dr. Huntington 3, divisions 2, 3, 5 and 6; division 10 will be presented by Dr. Wilder 4; 5. "The origin of numerical variations of the vertebrae," by Dr. Dwight; 6. "The living model showing the platysma in contraction," by Dr. Dwight; 7. "Morphology and phylogeny of the vertebrate ileo-colic junction," by Dr. Huntington; 8. "Examination of the cecum and appendix in 100 subjects," by Dr. Martin; 9. "An explanation of a new method of cutting gross sections of the cadaver, with demonstration of the technic," by Dr. Haynes. 8 P.M. address of welcome by President Morris K. Jessup, at The American Museum of Natural History, Central Park, followed by lecture by Professor Osborn on "Collections of fossil mammals and their care."

December 29:—10. "Note on the staining of isolated nerve-cells," by Dr. Stroud; 11. "Preliminary account of the degenerations in the central nervous system of frogs deprived of the cerebrum," by Dr. Stroud; 12. "Specimens showing by a new dissection the internal structure of the hippocampus," by Dr. Shepherd; 13. "Roof and lateral recesses of the fourth ventricle considered morphologically and embryologically," by Dr. Blake; 14. "Further tabulation and interpretation of the paroccipital fissure (occipital division of the 'intraparietal complex')," by Dr. Wilder; 15. "Correction of some current misapprehensions as to the objects of his collection of brains," by Dr. Wilder; 16. "Cerebral

fissures and visceral anatomy of the Eskimo from Smith's Sound," by Dr. Huntington. 3 P.M. Meeting of the affiliated societies at Schermerhorn Hall, 116th Street West, about 20 minutes' ride from the Medical Department. Address of welcome to the University by President Seth Low. The subject for discussion at this meeting is "Advances in methods of teaching," in which Dr. Huntington will represent this Association.

December 30:—17. "Visceral and vascular variations in human anatomy," by Dr. Huntington; 18. "Further notes on the relation of the ureters and great veins," by Prof. Gage; 19. "Morphology of the digestive tract of the cat," by Dr. Dexter; 20. "Contribution to the anatomy of the reptilian vascular system," by Dr. Huntington; 21. "Demonstration of preparations from the Museum of Human and Comparative Anatomy," by Dr. Huntington; 22. "An X-ray study of the normal movements of the carpal bones and wrist," by Dr. Corson; 23. "The normal human tibia," by Dr. Hrdlicka; 24. "Preliminary report on the surgical relations of the duodenal orifice of the common bile duct," by Dr. Brewer; 25. "The genito-urinary system of the American pit-viper," by Dr. Huntington; report of the committee on anatomical nomenclature, Dr. Wilder, secretary; discussion of the report of the President's address and of the general subject. To facilitate the discussion, members are requested to bring with them their copies of the "reports" of last year or of the entire *Proceedings*.

**Health Reports.**—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Supervising Surgeon-General of the U. S. Marine-Hospital Service during the week ending December 17, 1898.

## SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
ALABAMA:			
Mobile . . . . .	Nov. 10-Dec. 6 . . .	16	3
COLORADO:			
Pueblo . . . . .	Nov. 27-Dec. 4 . . .	8	1
IOWA:			
Hamburg . . . . .	Dec. 10. Reported pr't. Traced to Nebraska City.		
Lacona . . . . .	"	"	"
Percival . . . . .	"	"	"
Milo . . . . .	"	"	"
OKLAHOMA:			
Stigard . . . . .	Dec. 8 . . . . .	1	
VIRGINIA:			
Norfolk . . . . .	Dec. 9 . . . . .	1	
" . . . . .	" 10 . . . . .	3	

## SMALLPOX—FOREIGN.

BELGIUM:			
Antwerp . . . . .	Nov. 19-26 . . . . .	10	3
BRAZIL:			
Bahia . . . . .	Oct. 22-Nov. 19 . . .	164	27
FRANCE:			
Paris . . . . .	Nov. 18-26 . . . . .	1	
RUSSIA:			
Moscow . . . . .	Nov. 6-13 . . . . .	8	1
Odessa . . . . .	Nov. 19-26 . . . . .	1	
St. Petersburg . . . . .	Nov. 12-19 . . . . .	2	3
Warsaw . . . . .	Nov. 12-19 . . . . .		11
URUGUAY:			
Montevideo . . . . .	Nov. 5-12 . . . . .	1	

## YELLOW FEVER—FOREIGN.

CUBA:			
Habana . . . . .	Nov. 27-Dec. 1 . . .		1
MEXICO:			
Vera Cruz . . . . .	Nov. 26-Dec. 2 . . .		7

## PLAGUE.

INDIA:			
Bombay . . . . .	Nov. 1-8 . . . . .		63
" . . . . .	Nov. 1-15 . . . . .		59
TIKKISTAN:			
Anzob, from outbreak of epidemic to . . . . .	Nov. 2 . . . . .		233

## CHOLERA.

INDIA:			
Bombay . . . . .	Nov. 8-15 . . . . .		2



### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Army.

Acting Asst. Surgeon E. L. GRIFFITH, Surgeon, Third U. S. General Hospital, San Juan, Porto Rico, and will report at the General Hospital, San Juan, Porto Rico, for duty.

Acting Asst. Surgeon M. F. S. HAMMOND, Surgeon, Third U. S. General Hospital in San Juan, Porto Rico, and will report at the hospital at Anaco for duty.

Major GEORGE G. GROFF, brigade-surgeon, will report on transport "Michigan" as medical officer for the troops about to embark for Savannah, Ga. Upon the completion of this duty Major Groff will report to the chief surgeon at these headquarters, Department of Porto Rico.

Acting Asst. Surgeon JOHN N. GOLTRA will proceed to the United States on hospital-ship "Relief," thence to Washington, D. C., for annulment of contract.

Acting Asst. Surgeon W. R. GEORGE is relieved from duty at Coamo, Porto Rico, and will proceed to Barceloneta for duty.

Acting Asst. Surgeon W. T. TANNER is relieved from duty at Camuy, P. R., and will proceed to Ciales for duty.

Acting Asst. Surgeon A. D. WILLIAMS is relieved from duty at Ponce, P. R., and will proceed to San Juan for duty at the General Hospital.

Acting Asst. Surgeon CHARLES E. CAMP, now at Ponce, P. R., will report at Mayaguez, P. R., for duty.

Acting Asst. Surgeons H. E. SEARS and H. E. ZAR, U. S. Army, now at Ponce, P. R., will proceed to San Juan, P. R., for duty at General Hospital.

Asst. Asst. Surgeon LUGIO VENA, now at the Lazaretto, will report at the General Hospital at San Juan, P. R., for duty.

Upon arrival at the U. S. Military Hospital at Honolulu, H. I., of Major MARSHALL W. WOOD, Surgeon, U. S. A., Major CHARLES E. DAVIS, surgeon, First New York Volunteer Infantry, will stand relieved from duty in that hospital and will rejoin his regiment.

Major MARSHALL W. WOOD, surgeon, will proceed to Honolulu, H. I., and take charge of the U. S. Military Hospital.

Acting Asst. Surgeon JAMES B. CUTTER, now at the post-hospital, Presidio of San Francisco will render medical attendance to the sick at the U. S. Artillery camp near Fort Winfield Scott.

Acting Asst. Surgeon EDWARD C. WEBB is relieved from duty at the U. S. Artillery camp near Fort Winfield Scott.

In addition to other duties Major MARSHALL W. WOOD, surgeon, will assume the duties of surgeon of the post of troops in Honolulu, H. I.

Acting Asst. Surgeon ROBERT E. WILLIAMS is relieved from duty at Fort Baker and assigned to duty at Angel Island.

Leave for 14 days granted Acting Asst. Surgeon EDWARD W. MEIXELL is extended 14 days on account of sickness. Dec. 2.

Acting Asst. Surgeon LUKE B. PECK has been ordered to Fort Bliss for duty.

Major LOUIS BRECHEMIN, surgeon, is relieved from further duty at Vancouver Barracks.

Major R. EMMET GIFFIN, chief surgeon, is honorably discharged, to take effect Dec. 31.

Extension of leave on surgeon's certificate granted Major PHILIP G. WALES, brigade-surgeon, is still further extended one month on surgeon's certificate of disability.

So much of S. O. 285, Dec. 3, this office, as relieves Major EZRA WOODRUFF, surgeon, from duty at Fort Trumbull, is revoked.

Acting Asst. Surgeon F. A. E. DISNEY will proceed to Fort Riley for duty.

The extension of leave granted Acting Asst. Surgeon WILLIAM E. WEST is still further extended one month on account of sickness.

Acting Asst. Surgeon CHARLES B. MITTELSTAEDT, now at Fort Slocum, will proceed to New York City for instructions, and Acting Asst. Surgeon HENRY H. PELTON, now at Fort Wadsworth, will proceed to Fort Slocum for duty.

The retirement from active service this date of Lieutenant-Colonel WM. H. GARDNER, D. S. G., under Sec. 1243 R. S., and upon his own application, after 30 years' service is announced.

Leave granted Acting Asst. Surgeon AZEL AMES is extended 10 days.

Acting Asst. Surgeon J. HERBERT FORD will proceed to Fort McPherson for duty.

Acting Asst. Surgeon MATTHEW LEEPERE, now on duty at the John Blair Gibbs Hospital, Lexington, Ky., will report to Captain James M. Burns, Seventeenth Infantry, chief mustering officer at that place, for duty.

The order assigning Acting Asst. Surgeon RANDOLPH M. MYERS, to duty on the U. S. hospital-ship "Bay State," is revoked.

Leave for one month is granted Captain BENJAMIN L. TEN EYCK.

Major JAMES H. HYSSELL, chief surgeon, First Division, First Army-Corps, will proceed to Knoxville, Tenn., and inspect the troops and camps there.

Major CHARLES L. HEIZMANN, surgeon, is relieved from duty at Fort Adams and will proceed to Fort Sam Houston for duty.

Captain JEFFERSON D. POINDEXTER, A. S., will proceed from Fort Hamilton to Columbus Barracks for duty.

First Lieutenant LEIGH A. FULLER, A. S., is relieved from further duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, and will proceed to Savannah, Ga., and report to the commanding officer, Second Artillery, for duty.

Leave on surgeon's certificate granted Acting Asst. Surgeon HENRY R. CARTER, is extended two months on surgeon's certificate.

Acting Asst. Surgeon W. H. SPILLER will proceed from New York City to Bath, Me., and report on the U. S. transport "Mohawk" for duty.

Acting Asst. Surgeon LLEWELLYN P. WILLIAMSON will proceed from St. Louis to Jefferson Barracks for duty.

Acting Asst. Surgeon A. M. FERNANDEZ DE YBARRA, will proceed to Tampa, Fla., and report to the commanding officer of the Battalion, Third U. S. Volunteer Engineers, on Dec. 16, for duty.

Leave for 14 days granted Major D. S. G., is extended 14 days.

Hospital Steward THOMAS GRIFFITH, now at Columbus Barracks, will be sent to Allegheny Arsenal, Pittsburg, Pa., for duty.

Major ALFRED E. BRADLEY, brigade-surgeon, commanding the U. S. hospital-ship "Relief," will proceed from New York City to Washington, D. C., on business pertaining to the Medical Department.

First Lieutenant IRVING W. RAND, A. S., is relieved from duty at Fort Du Chesne, and will proceed to San Francisco, Cal., for duty with troops going to Manila.

Acting Asst. Surgeons ELMER ANDERSON DEAN and ARTHUR W. SMITH are relieved from duty at the U. S. General Hospital, Fort Thomas, and will proceed to Fort Snelling for duty with the Third Infantry.

Lieutenant-Colonel HENRY LIPPINCOTT, D. S. G., now on duty as chief surgeon at Manila, P. I., is relieved from further station at Fort Sheridan.

Major VALERY HAVARD, surgeon, being under orders to return to duty at Santiago, Cuba, is relieved from further station at Fort Slocum.

Major FITZHUGH CARTER, surgeon, now on duty as chief surgeon, First Division, Fourth Army-Corps, at Huntsville, Ala., is relieved from further station at Fort Assiniboin.

Major SAMUEL Q. ROBINSON, surgeon, now on duty at Santiago, Cuba, is relieved from further station at Fort Reno.

Major WILLIAM O. OWEN, brigade-surgeon, now on duty at Manila, P. I., is relieved from further station at Fort Bayard.

Major WILLIAM STEPHENSON, brigade-surgeon, now on duty at Santiago, Cuba, is relieved from further station at Fort Sheridan.

Major HENRY S. T. HARRIS, brigade-surgeon, now on duty with the Fourth Army-Corps at Huntsville, Ala., is relieved from further station at Fort Washakie.

Major EDWARD A. MEARNS, brigade-surgeon, now on duty at Lexington, Ky., and under orders for duty as chief surgeon, Third Division, Second Army-Corps, is relieved from further station at Fort Clark.

Major WILLIAM D. CROSBY, brigade-surgeon, now on duty at Manila, P. I., is relieved from further station at Fort Sam Houston.

Major EDWARD R. MORRIS, brigade-surgeon, now on duty at Manila, P. I., is relieved from further station at Fort Spokane.

Captain BENJAMIN L. TEN EYCK, A. S., now on duty at Fort Riley, is relieved from further station at the Army and Navy General Hospital, Hot Springs, Ark.

Captain HARLAN E. MC VAY, A. S., now on duty at Manila, P. I., is relieved from further station at Alcatraz Island.

Captain WM. F. LEWIS, A. S., now on duty with troops in Cuba, is relieved from further station at Sullivan's Island.

Captain ASHTON B. HEYL, A. S., now on duty at the U. S. General Hospital, Fort Thomas, is relieved from further station at Fort Riley.

First Lieutenant LEIGH A. FULLER, A. S., now on duty at the Josiah Simpson U. S. General Hospital, Fort Monroe, is relieved from further station at Fort Assiniboin.

First Lieutenant WM. W. QUINTON, A. S., now on duty at Santiago, Cuba, is relieved from further station at San Carlos.

First Lieutenant JERE B. CLAYTON, A. S., now on duty at Manila, P. I., is relieved from further station at Fort Clark.

First Lieutenant HENRY A. WEBBER, A. S., now on duty at Camp A. S. Forse, Huntsville, Ala., is relieved from further station at Fort Reno.

First Lieutenant BAILEY K. ASHFORD, A. S., now on duty at Mayaguez, P. R., is relieved from further station at Fort St. Philip.

First Lieutenant HENRY PAGE, A. S., now on duty at Manila, P. I., is relieved from further station at the Presidio.

Captain THOMAS U. RAYMOND, A. S., in addition to his other duties, is detailed as medical superintendent of Army transport service at San Francisco, Cal.

Acting Asst. Surgeon DONALD MACLEAN, JR., will proceed from Augusta, Ga., to Detroit, Mich., for annulment of his contract.

### Official List of the Changes of Station and Duties of Commissioned Officers of the U. S. Marine-Hospital Service for the 14 Days Ended December 15, 1898.

Surgeon PRESTON H. BAILHACHE, to proceed to Philadelphia, Pa., to inspect the barge "Protector." December 2, 1898.

Surgeon C. E. BANKS, to proceed to the ports of Booth Bay Harbor, Portland, Me., Fall River and Boston, Mass., as inspector, December 2, 1898.

Surgeon A. H. GLENNAN, to proceed to San Juan, Porto Rico, for special temporary duty as quarantine-officer. December 9, 1898.

Passed Asst. Surgeon J. B. STONER, detailed to inspect stations of the 1st Class. December 5, 1898.  
 Passed Asst. Surgeon J. A. NYDEGGER, to proceed to New Orleans, La., for duty and assignment to quarters. December 15, 1898.  
 Asst. Surgeon TALIAFERO CLARK, to proceed to South Atlantic Quarantine Station, and assume temporary command. December 15, 1898.  
 Asst. Surgeon C. H. LAVINDER, to proceed to Cape Charles Quarantine as inspector of unserviceable property, and then to proceed to Washington, D. C., for further orders. December 7, 1898. To proceed to Philadelphia, Pa., for temporary duty. December 10, 1898.  
 Asst. Surgeon JOHN McMULLIN, to report at Bureau for special temporary duty. December 10, 1898.  
 Asst. Surgeon M. H. FOSTER, granted 30 days extension of leave of absence on account of sickness. November 27, 1898.  
 Board convened to meet at Washington, D. C., at 11 A.M., December 14, 1898, for the physical examination of an officer of the Revenue Cutter Service.  
 Detail for the Board: Surgeon CHARLES E. BANKS, chairman; Passed Asst. Surgeon G. T. VAUGHAN; Passed Asst. Surgeon E. K. Sprague, recorder.

### Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department of the U. S. Navy.

Passed Asst. Surgeon S. O. HEISKELL, honorably discharged, December 9.  
 Surgeon J. D. GATEWOOD detached from the Bureau of Hygiene, Washington, D. C., and ordered to the naval station, Havana, Cuba, by steamer of December 17.  
 Surgeon P. LEACH, ordered to the "Yosemite."  
 Surgeon O. D. NORTON, detached from the naval laboratory and department of instruction and ordered to the "Badger."  
 Surgeon W. H. RUSH, ordered to temporary duty on the "Richmond."  
 Asst. Surgeon R. C. HOLCOMB, ordered to the naval hospital, New York, immediately.

## Foreign News and Notes.

### GREAT BRITAIN.

**Royal College of Physicians of Edinburgh.**—Dr. James Andrew has been elected president for the ensuing year in succession to Sir John Batty Tuke.

**The Victoria Cross.**—This much coveted distinction for valor in battle has been bestowed upon Surgeon William Job Maillard, of the Naval Medical Service, for a gallant attempt to save a sailor's life during the recent *émeute* at Candia, in Crete.

**Lesions of the Pineal Body** formed the subject of an interesting debate at the Pathological Society of London on December 6th. Ten specimens were shown, 1 of glioma, 2 of sarcoma, one of which was deeply pigmented; 3 of cyst, 2 of dilatation of the central canal, 1 of calcareous degeneration, and one of syphilitic hypertrophy: and the symptoms exhibited during life were stated to be very varied. The president of the Society, Dr. T. F. Payne, physician to St. Thomas' Hospital, summed up the debate by remarking that the pathologic significance of the pineal gland was evidently small, and that cyst-formation was characteristic of rudimentary bodies. Dr. Payne agreed with the view that far back in the scale the pineal gland had been a central eye, which made the occurrence of pigment in one of the sarcomatous specimens interesting, as pigment would have been normally present in the early days of the organ.

**A War Against Tuberculosis.**—The Prince of Wales presided at a private meeting at Marlborough House December 20th, convened by him to promote a war against tuberculosis. The Marquis of Salisbury, the Earl of Rosebery and a number of noted scientists and physicians spoke of the urgent necessity of educating the people in the means of preventing consumption, and of checking the

spread of tuberculous disease among cattle. Special stress was laid upon the importance of erecting open-air sanatoria. The Prince of Wales, who promised his heartiest support to the movement, said Great Britain ought to follow the good example set before her in the United States, Germany and elsewhere, in the effort to stamp out the disease. He mentioned the fact that the Queen had ordered the destruction of 36 of her dairy cows, which had been found tuberculous. It was an example, he urged, such as the farmers ought to follow.

**The Advertisement of Abortifacients.**—Many of the English papers, especially Sunday and small provincial weekly journals, have been disgracing themselves for the last three or four years by the insertion of advertisements from persons who have pills or potions to sell "curing female irregularities of every kind." The advertisements were frequently disgusting, always misleading, and sometimes were the outward sign of the more serious crimes of procuring abortion or of blackmailing. Several cases heard in the criminal courts have drawn lurid attention to these advertisements as pernicious and as invitations to immorality. Our contemporary, the *Lancet*, has now taken the matter up warmly and has started a series of articles in its columns under the heading "Quacks and Abortion: A Critical and Analytical Inquiry," which promises to be interesting reading for the medical profession as well as to shame editors and proprietors of newspapers out of earning much dirty money.

**The Treatment of Tuberculosis in Liverpool.**—The Liverpool Medical Institution, quite one of the most important and go-ahead medical societies in England, has recently appointed a committee of its members "to consider what further steps can be taken for the prevention of tuberculosis in the city of Liverpool and for the treatment of the disease in the human subject." The committee elected consists of, among others, Dr. W. M. Campbell, the president of the Institution; Dr. E. W. Hope, the Medical Officer of Health of the city; Dr. Thomas Clarke, the chairman of the Hospitals Committee; Dr. Nathan Raw, the Resident Medical Officer of the largest infirmary in the district; and Dr. T. R. Bradshaw, who proposed the inquiry, and who will act as secretary. The committee propose, as the scope of their work, to consider (1) the nature of pulmonary tuberculosis, its communicability and preventability; (2) the provision of sanatoria; (3) the more effectual methods of controlling spread of infection; and (4) the desirability of adopting some form of notification—which strikes us as a fairly comprehensive program.

**The British Pharmacopeia.**—The Committee of the General Medical Council appointed to look after the issue of the British Pharmacopeia have announced that it is their intention to work continuously compiling information for that important volume. Hitherto a new issue of the British Pharmacopeia has been the result of outside pressure, *i. e.*, when the medical men and chemists who used the volume for reference complained that it required bringing up to date—and not until then—republication would take place. But now the requirements of the medical profession are to be kept steadily in view by the committee, who have appointed Dr. Nester Tirard as their "reporter" to post them in all advances in pharmacology and therapeutics, so that the initiative for new editions will now come from the committee themselves—as it should—and not from the readers of the Pharmacopeia. Dr. Tirard, whose useful appointment has



just been announced, is physician to King's College Hospital, an acknowledged authority in pharmacology, and rendered efficient services to the committee when they were engaged in publishing the present edition of the British Pharmacopeia.

**The Queen of England at Netley Hospital.**—Her Majesty, the Queen of England, with her accustomed solicitude as to the condition of her sick and wounded soldiers, recently paid her third visit this year to the Netley Hospital. She was accompanied by the Princess Beatrice, whose husband, Prince Henry of Battenberg, lost his life during an African military campaign, and the Sirdar of the Egyptian army, now Lord Kitchener of Khartoum. Her Majesty made a thorough inspection of the hospital personally, seeing over 600 of the 800 in-patients now housed there. In one of the corridors, all the convalescent patients entitled to receive medals in commemoration of the battles of Atbara, Omdurman, or both, were drawn up in order of regiments, when the Queen distributed the honors. The Sirdar, who followed her, completed the distribution by decorating 180 men with a medal struck by the Khedive in honor of the campaign. The number of men now at Netley Hospital, in Egyptian hospitals, and in Station hospitals elsewhere, who served in the Egyptian campaign, shows that the strain has been largely felt by the soldiers afterwards, although the sick-lists were so agreeably short during the actual war; but we are glad to learn that quick recoveries are the order of the day.

**A Tropical School of Medicine in London.**—It is very unfortunate that a scheme for the foundation of a school where the British medical man can study tropical diseases before starting to work in the colonies should have become the subject of bitter dispute. All medical men know that such a school is wanted and all public-spirited citizens recognize in Mr. Chamberlain's expressed intentions of founding it the hand of an enlightened politician; but the scheme that has been published pleases no one, unless it may please the persons who advised Mr. Chamberlain in the matter. In the scheme it is proposed to place the new school at an inaccessible spot where no clinical material will be available and to ask the public for a large sum of money for wholly superfluous buildings, plant, and bacteriologic appliances. The committee to whom the management of the matter is to be temporarily consigned have no particular knowledge of tropical disease, and the advice neither of private individuals qualified to give it nor of the Royal College of Physicians of London has been sought. Under these circumstances the scheme has already become the subject of much adverse criticism, and, unless it is modified in more directions than one, runs some risk of perishing still-born.

#### CONTINENTAL EUROPE.

**Examinations in Medicine in Berlin.**—The German Minister of Education has determined that the examinations of candidates for degrees in medicine shall be extended so as to include psychiatry and bacteriology.

**The Admission of Women-physicians to the Medical Society of Buda-Pesth** was recently the subject of considerable discussion. The question coming to a vote, it was after debate determined to concede such admission.

**The Swiss Serum and Vaccine Institute** was recently organized in Berne with a capital of 450,000 francs,

and is the successor of the Bacterio-Therapeutic Institute (Haelliger & Co.) of Berne, and of the Swiss Vaccine Institute (Charles Haccius) of Lancy, Geneva. The Council of the new Institute is composed as follows: President, Dr. Albert Vogt, Berne; vice-presidents, Dr. Chas. Haccius, Geneva, Professor de Cérenville, Lausanne, and Professors E. Hess, T. Kocher, H. Sahli, and E. Tavel, all of Berne. The Director is J. Haelliger, Berne. The scientific and technical management of the Institute is in the hands of Professor E. Tavel, with the assistance of Dr. F. Krumbein and Dr. Wilhelmi.

**Infant-Mortality in Brittany.**—M. Charpentier calls attention to the deplorable state of infant sanitation in Lower Brittany. M. Hébert, of Audierne, in a memoir on the subject, condemns the practice of having children baptized immediately after their birth; in winter, many children are killed in consequence of this custom. During the summer months, mothers who suckle their children are not allowed to work in the sardine-factories; otherwise, their offspring would be, in consequence, left to the care of neighbors, who feed them on water with a little bread soaked in it, or with barley-water. This form of nourishment is thus adopted during the season when infantile diarrhea is an epidemic. — *British Medical Journal.*

**Leprosy in France.**—According to the *British Medical Journal*, leprosy still lingers on some parts of the Riviera. In 1856 the number of lepers on the Ligurian Coast was so considerable that the Sardinian Government established an asylum for their reception at San Remo. Within a few years that institution sheltered nearly 100 lepers coming from Nice, Mentone, Le Tarbie, and adjacent districts. In 1893 it had only 7 inmates, but the diminution is more apparent than real, for when Savoy was ceded to France the lepers changed their nationality, and passed from the care of Italy to that of France. According to the *Lyon Médical*, M. Perrin has recently seen 11 cases of leprosy at Marseilles, of which 3 are from San Remo, the remainder having been imported from more distant places. In Paris, as in London, there is always a certain number of lepers, who are attracted thither by the hope of deriving benefit from the skill of the dermatologists of the French capital.

**Results of Sanitation in an Italian Foundling Asylum.**—The *British Medical Journal* quotes from *Corriere di Napoli* some interesting statistics illustrative of both the sanitary enlightenment that is spreading over Italy and its gratifying results. They relate to the Foundling Hospital of the Annunciation in Naples. The number and mortality of infants from January 1st to October 31st in the years 1896, 1897, and 1898, are shown in the following table:

Total Infants	1,238	1,156	1,041
Female Infants	619	578	520
Male Infants	619	578	520

In October, 1896, the Cavaliere Pucci was given the supreme direction of the hospital as Royal Commissioner. The success of his direction, though striking, would have been even greater but for a not unusual impediment—want of money. The buildings are old and unsuitable. There is overcrowding from want of a sufficient number of externe foster-mothers. It appears that the hospital can only afford to pay wet-nurses 8 lire (about 6s. 8d.) a month, for 18 months. On the other hand, as they can obtain a better price for their commodity by supplying it to outside customers, they naturally prefer to do so.

## The Latest Literature.

## British Medical Journal.

December 3, 1898. [No. 1979.]

1. Halsted's Operation for Removal of Cancer of the Breast. HENRY T. BUTLIN.
2. The Treatment of Fracture of the Patella by the Open Method and Suture. WILLIAM STOKES.
3. The Value of Stereoscopic Photography and Skiagraphy: Records of Clinical and Pathological Appearances. JAS. MACKENZIE DAVIDSON.
4. A Case of Bullet-wound of the Leg, in which the Bullet was Located by Skiagraphy. HOWARD MARSH.
5. The Sleeping Sickness. PATRICK MANSON.
6. The Osseous System in the Insane. J. F. BRISCOE.
7. A Case of Scissors-Legs. JOHN G. COOKE.
8. Scarlatina in an Infant. A. CORDES.
9. A Specimen Showing One of the Possible Relations of Mitral to Aortic Diseases. T. WARDROP GRIFFITH.
10. A Case of Double Placenta. W. H. NEALE.
11. Gunshot-Wound of Thorax Involving Lung; Recovery. J. J. DAY.
12. Aneurysm of the Aorta Involving the Root of the Left Carotid Treated by Distal Ligature. WILLIAM ROSE and ALBERT CARLESS.

1.—The results that Butlin has obtained in his latest series of breast-cases operated upon by the Halsted method so far exceed the records in cases operated upon previously that he believes unqualifiedly in the advisability of performing the more radical operation in every instance. The researches of Heidenhain and of Stiles would seem to prove, from a careful study of the lymphatic distribution, that no operation is complete that fails to remove with the breast the pectoral muscles and fascia. Butlin has followed Halsted in every detail in the execution of his operations upon the breast, with this one exception, that he does not remove the supraclavicular glands. He is inclined to agree with Cheyne who regards as hopeless those cases in which the supraclavicular glands are affected. Of the 33 cases in which he has performed the Halsted operation, only 13 have passed the 3-years' limit, and of these 9 are alive and well, 2 dead or are living with local recurrence, 1 dead of carcinoma without local recurrence, and 1 dead from the effects of the operation. His percentage of recoveries, according to the 3-year rule is, therefore, about 70%, a percentage that far exceeds the results of any other method. Such results as these should discourage the physician and the laity from regarding operation for carcinoma of the breast purely from the palliative standpoint, and should rather encourage early submission of the patient to operative intervention. [C.H.F.]

2.—Stokes has treated 5 cases of **fracture of the patella by the open method**. He prefers to bring the fragments in apposition by one or two sutures introduced through the edges of the fragments, to either the retro-patellate, or the circumferential patellar suture. The advantages of the open method over the subcutaneous method lie chiefly in the ability to free the joint of all blood-clots and to remove any periosteum that may separate the two fragments. Stokes objects to the retro-patellar wire suture, on the ground that there is undoubtedly danger in leaving a foreign body permanently in the interior of the knee-joint. The results that he has obtained in his series of 5 cases have been all that he could have desired. [C.H.F.]

5.—Manson describes two cases of **sleeping sickness** brought to London from the hilly country on the South Bank of the Lower Congo, a notorious haunt of this disease. The first occurred in a man, aged 20 years, who had been an exceptionally bright and intelligent lad, but at the age of 19 began to be listless and vacant-minded. He would lie abed in the morning and neglect his work. He lost interest in his former occupations and amusements, and in the course of seven months he became unfit for work. His gait was tottering and uncertain and he drowsed or slept most of the time. He never had any fits or maniacal attacks. He improved somewhat during his voyage to London, but later his condition grew worse. His hair and skin became dry and lusterless. His appetite and digestion were vigorous and his bowels constipated. The stools contained numerous ova of the ascaris

lumbricoides, of ankylostoma duodenale, and a few of trichocephalus dispar. The thoracic and abdominal viscera were healthy. The urine was normal. The temperature was usually slightly subnormal. The blood-examination showed 5,300,000 red corpuscles and 60% of hemoglobin. There were no malarial parasites, but filaria perstans was present in moderate abundance, about one in every cubic millimeter. The senses appeared normally active. The eyes were normal, and the knee jerks and other deep and superficial reflexes were active. The hand grasp was markedly impaired. The man was easily fatigued and always glad to sit or lie down. The lymphatic glands, particularly those of the neck, were slightly enlarged to the size of an almond or hazel-nut, but they were not tender. The patient usually remained in bed, lying perfectly still, with his eyes shut, as though asleep. His expression was one of deep melancholy. At times he sat up, but even then he seemed to be asleep. He roused himself thoroughly when food was brought. A touch or a loud sound caused him to open his eyes, suggesting that his sleep was light. When spoken to he opened his eyes and answered questions slowly and in a few words. His eyelids often fell while he was being spoken to, as if he were overpowered by an irresistible desire to sleep. He rarely smiled and said he was very unhappy on account of his drowsiness. He grew more lethargic and lost some flesh and muscular power. The second case occurred in a boy of 11 years, who had been ill for 5 months. When he arrived in London he was greatly emaciated and very weak, barely able to stand alone. His lips were swollen and dry and saliva dribbled constantly from the corner of his mouth. His arms, abdomen, and chest were streaked with scars from incessant scratching for the relief of a pruritus associated with numerous scaly papules. The superficial lymphatic glands and trunks were universally enlarged, especially those on the back and sides of the neck, and some of them were exceedingly tender. The breath was foul. The spleen was enlarged and extended as far as the umbilicus; the liver to about a hand's breadth below the costal margin. The feces contained the same ova as were observed in the former case and the patient was markedly constipated. The temperature was at first above normal. The man slept almost constantly during the first few days following his arrival in London. At first he had to be coaxed to eat, and had to be fed by the nurse. He sometimes fell asleep during his meals. His blood-count showed 4,500,000 red corpuscles and 50% of hemoglobin. Filaria perstans was found in considerable abundance in the blood, 8 per 5 cu. mm. No malarial parasites were discovered. A course of thymol effectually rid him of his intestinal parasites. Warmth and good food, with large doses of arsenic, improved the general health rapidly. The spleen and liver diminished in size, the drowsiness grew less. The patient began to put on flesh and was able to walk about. The pruritus, however, grew worse. The lymphatics diminished in size and grew less painful. The saliva no longer dribbled and the man was able to feed himself. His temperature became subnormal. These cases give a clear idea of the symptomatology of the condition. There is another type of the disease, however, in which convulsions and maniacal outbreaks occur. The patients usually die from muscular prostration, bed-sores, diarrhea, or a convulsive or tetanic seizure. The average duration of the disease is 9 months. Its pathology is not known. Manson suggests that the pituitary body is the original seat of the disease, and that the brain becomes secondarily affected. In support of this a recent report of a postmortem examination which was communicated to him showed the pituitary body to be enlarged. There was an old clot on or in it, together with some cystic formation. The presence of the filaria perstans is supposed to have some etiologic relationship with the disease. Treatment is altogether without effect. [S.M.H.]

6.—Briscoe calls attention to the not infrequent occurrence of **fracture in the insane** and to the fact that it is often unattended by violence and due to various diseases of the bony system to which the insane seem especially liable. Osteoporosis, hyperostosis, mollities ossium and chronic abscess occur quite frequently. [S.M.H.]

7.—Cooke reports a case of **scissors-legs** occurring in a boy aged 16 years. He was said to have been normal in every way until 4 years ago, when he injured his right hip, but was not incapacitated as a result. The right lower limb was 1½ in. shorter than the left and the foot was everted to



some extent. There was no dislocation of the hip. The power of flexion and extension was perfect. The limb was constantly in a position of adduction and could not be abducted by any amount of force. The left hip could be fully flexed and extended, but could be adducted slightly, not at all in standing, and only to the extent of crossing the legs in the recumbent posture. The gait was typical. The strange position and gait seemed due to a loss of power of abduction in both limbs. The condition was growing rapidly worse. [S.M.H.]

8.—Cortes refers to a case of **scarlatina in a 2-day old babe**. Eruption and sore throat were distinct and the child died on the third day. The mother had been attending 4 other children in her family ill with scarlet fever up to within a few hours of the labor. [S.M.H.]

9.—Griffith details the following postmortem record: There were universal pleural and pericardial adhesions, while the heart was greatly hypertrophied and dilated and weighed 31 ounces. There was old-standing disease of the mitral and aortic valves. The segments of the aortic valve were shortened, puckered, and inverted at their free margins, with resultant aortic insufficiency, which would have permitted the passage of a stream of blood about  $\frac{1}{4}$  inch in diameter. The mitral valve was stenosed; its segments had indurated margins, with thickening and amalgamation of the chordæ tendineæ. There was much calcareous deposit in the substance of the valve. A special point of interest was the presence of a circumscribed necrotic ulcer on the ventricular aspect of the mitral valve. The floor of the ulcer was formed by the calcareous deposit in the substance of the valve, and the ulcer was quite cut off from some smaller ones that existed on the auricular aspect of the same segment. It was thought that the determining cause of the ulcer had been the aortic regurgitant stream of blood. During the ventricular diastole, when the mitral flaps hung down into the ventricle, they were much in the line of the regurgitant blood-stream. [S.M.H.]

10.—Neale reports a case in which one well-developed child was delivered, and later, **two distinct placentas**, one rather larger than the other, with sharply defined edges, and nowhere were they united except by membrane. [W.K.]

12.—Rose and Carless report a case of aneurysm involving the arch of the aorta and the root of the left carotid artery. After a course of treatment by the Tufnell method, without any relief, and the patient began to suffer from syncope attacks of frequent recurrence, during which her condition seemed most critical, it was decided to attempt to alleviate her condition by distal ligation of the common carotid artery. The immediate effects of the operation were a slight increase in the tension and pulsation of the sac, but this soon gradually diminished, and the patient's general condition gradually improved, the syncope attacks not recurring. Twenty-four days later the third portion of the subclavian artery was ligated, with still further improvement. Four months after the operation the pulsation at the root of the neck was still marked, but the size of the aneurysmal sac was diminished, and no bruit could be heard. The patient was able to walk about with comparative comfort, and was free from the feeling of oppression and breathlessness that was formerly so marked. The improvement has been maintained. [C.H.F.]

### Lancet.

December 6, 1898. [No. 3927.]

1. A Case of Gall-stones in the Common Duct Causing Simple Infective Cholangitis. W. HALE WHITE.
2. The Result of the Treatment of Diphtheria by Antitoxin in London Compared with that in Paris and Berlin. LOUIS COBBETT.
3. The Inoculation-theory of Malarial Infection. Account of a Successful Experiment with Mosquitos. AMICO BIGNAMI.
4. Functional Dysphagia. ST. CLAIR THOMSON.
5. The Mosquito and the Malaria "Parasite." E. LAWRIE.
6. Notes on a Case of Blackwater Fever. F. PERCIVAL MACKIE.
7. An Outbreak of Acute Dermatitis Due to Zinc-Salt and Associated with Clothing. GODFREY TAUNTON.

8. Diphtheria-bacilli in Urine. H. W. L. BARLOW.
9. The Treatment of Whooping-Cough. G. ARBOUR STEPHENS.
10. A Case of Cyst of the Great Omentum Removed by Operation. JAMES BRAITHWAITE.
11. A New Method in Shoulder-presentations. A. J. TURNER.
12. Lead-poisoning in an Infant Four Weeks Old. FREDK. W. M. STEPHENSON.
13. A Case of Cerebral Tumor; Necropsy. (Under the care of G. H. MILNES.)
14. A Case of Hemophilia; Oxygen-inhalation; Recovery. (Under the care of W. H. BROWN.)

1.—White relates the case of a married woman, aged 30 years, who complained of pain in the right side of the abdomen, with vomiting and fever. She gave a history of a number of previous attacks of a similar nature, which had latterly been increasing in frequency, and some of which were attended by jaundice. For a fortnight the stools had been clay-colored, and the patient had had profuse sweats, some chilliness, and felt very ill. She was jaundiced, and had a temperature of 103.2°. Her bowels were regular, and the stools light-colored. The liver reached nearly to the umbilicus; the enlargement was uniform, firm, tender, and smooth. There was a tender point to the right of and slightly below the umbilicus, where there was an ill-defined swelling, probably the gall-bladder. The rigors continued, and the woman suffered great pain. The urine, aside from the presence of bile, was normal. A diagnosis was made of gall-stones in the common duct, giving rise to jaundice and enlargement of the liver, with destruction of the mucous membrane, and general infection through the branches of the portal vein. Under treatment, 3 small faceted gall-stones were passed. The patient now rapidly improved, the liver lessened in size, the jaundice diminished, the pain and tenderness were less, and the temperature became normal. Twelve days later she had another chill, and the temperature rose to 102.8°. The gall-bladder was enlarged, but there was little pain or tenderness. Three days later the woman had another chill, and during the next 3 weeks she continued to exhibit an irregular temperature, normal or below the normal in the morning, and from 101° to 104° in the evening. There were also moderate chills. There was no jaundice or much tenderness, nor was the liver much enlarged. At the end of this time, 3 fair-sized gall stones were passed, after which improvement set in. During the next 6 or 7 weeks there were a number of recurrences of similar nature. After this period, improvement was persistent, and the patient eventually recovered entirely. She was given hot fomentations, injections of morphin and slight inhalations of chloroform to control the pain. Antistreptococcic serum was used, but without any beneficial effect. Operative treatment was not undertaken on the ground that, if the case had been one of portal pyemia or suppurative cholangitis, an operation would have done no good. If, on the other hand, the case was one of simple infective cholangitis it was advisable to wait to see what course the malady would take, as this disorder is chronic, and in this particular instance the patient was not losing ground. Aside from this the operation for removing a stone from the common duct is a difficult one, especially when the liver is enlarged. [S.M.H.]

2.—Cobbett presents a series of charts and tables showing the results of the **treatment of diphtheria with antitoxin in London**, as compared with those obtained in Paris and Berlin. In the two latter places and in 266 German towns included in the charts there has been a remarkable fall in the annual total number of deaths from diphtheria, which commenced abruptly with the introduction of the serum-treatment and has steadily continued since, and had no parallel in the previous 8 years. In London, on the other hand, there has been on the whole an improvement since 1893, although the number of deaths in each of the last 3 years has been greater than that of any of the 7 years that immediately preceded. The case-mortality also has fallen to a considerably lower point in Berlin than it has in London. Cobbett accounts for this first, on the grounds (1) that there was more room for improvement on the Continent than in London; (2) that the prevailing type of diphtheria has been very severe in London during the past 3 years; (3) that the serum used in England is inferior to that used on the Continent, and (4) that the remedy is more extensively used there than in England. The following measures are



suggested for the improvement of this deplorable fatality in London: (1) The isolation of convalescent patients until bacteriologic examination of the throat shows the absence of the Klebs-Löffler bacillus; (2) a more general usage of the antitoxin among general practitioners; and (3) the earlier employment of the remedy. [S.M.H.]

4.—In a rather exhaustive article Thomson first describes the physiology and innervation of deglutition, and then gives a detailed description of the etiology, diagnosis, prognosis, and treatment of **functional dysphagia**. He points out the dangers associated with the use of an esophageal bougie and the great caution necessary before deciding to employ it. Aside from the possibility of latent forms of carcinoma or the presence of an aneurysm, the simple passage of the instrument into a gullet in which it encounters no pathologic change is in itself not unattended with risk. Reference is made to 3 cases reported by Gratz in which death occurred from passing the stomach-tube, and to one case reported by Lowman, and it is suggested that the cause of death in these cases was possibly an inhibitory action of the vagus induced by the passage of a bougie along the esophagus in sensitive subjects. The use is advised of McKenzie's antero-posterior flattened sounds. The patient should sit in front of a good light with the neck freely uncovered. The upper part of the body and neck should be craned forward, while the face is thrown upward. A moderate-sized bougie is safer to begin with than a sharp-pointed one. After being softened in warm water the instrument should be slightly bent about an inch from its extremity, so that it will glide easily along the posterior wall of the pharynx. The forefinger of the left hand should be used to depress the tongue, thus revealing the margin of the epiglottis and acting as a guide to the tip of the instrument behind the larynx. The sound is then pressed gently but steadily into the gullet. As it passes the cricoid cartilage, especially in cases in which the patient spasmodically contracts the upper part of the esophagus, it is a good plan to make him bend his head forward, at the same time requesting him to make an attempt to swallow. As he does this the bougie can generally be slipped past the constriction. The use of cocaine will sometimes facilitate the passage of the sound. In functional dysphagia the bougie can always be passed. The resistance it encounters is always through the superior constrictor of the esophagus. Once this is overcome the bougie is felt to be free and easily movable. Functional dysphagia is paralytic or spasmodic or both. It is usually caused by some occurrence that attracts the patient's attention to the power of swallowing. The majority of patients are hysteric females between the ages of 19 and 30, and the disturbance is ordinarily one of the first hysteric manifestations. The prognosis as regards life is good, but as to cure unfavorable. The treatment consists in the passage of the bougie, associated with strong suggestion, and when indicated, with tonic and hygienic treatment. [S.M.H.]

5.—By reason of the marked similarity between von Beneden's account of the fertilization of the ovum and MacCallum's description of the sexual process in halteridia Lawrie assumes that the latter has borrowed his ideas from the former. He concludes, therefore, that if MacCallum's assertions are not founded on fact the whole of the mosquito-theory of malaria fails, as Ross has made it the sole basis of his verification of Manson's hypothesis that the mosquito is the liberating agent of malaria, as well as filaria. He does not believe in malarial parasitology. There has been too much unscientific speculation and conjecture in regard to malarious fevers. A commission to inquire into the true physiology of the blood-cells is recommended in order that a true conception of the pathology of malaria may be formulated. Until then speculation regarding the Laveran bodies is idle. These bodies are to be looked upon as perverted modifications of the natural cells in the blood, in which they occur as mere "sports," so to speak, of the natural blood-corpuscles and in no way as new or independent forms. The essence of this belief is that the Laveran bodies are products of the blood and the progeny of the cells already existing there, their physical peculiarities being entirely due to the altered cell-formation of natural structures. Formation in a word outstrips organization, and the offspring of the blood-corpuscles—the "sports" or Laveran bodies—fail to arrive at a precise resemblance to the parents from which they took their birth. [S.M.H.]

6.—Mackie reports a case of **blackwater-fever** occur-

ring in a returned African missionary, who had had one previous attack. The present one occurred after a bicycle-ride against a strong wind. It began with vomiting and rapid elevation of temperature to 102.6° F. There was no initial chill. On the following day there occurred a chill lasting 20 minutes, during which the temperature rose to 103°. On the third day another chill was followed by a rise of temperature to the same point. The vomiting continued at intervals and the patient's condition became serious. On the evening of this day the urine was black in color. On the fourth day the vomiting ceased, the chills did not recur, and the temperature dropped almost to normal. The discoloration of the urine gradually disappeared. Examination of the blood made 24 hours after the last chill disclosed the presence of 4,000,000 red cells and 6200 leukocytes to the cu. mm.; the differential count revealed 75% of polymorphonuclear, 18% of lymphocytes, 4% of large mononuclear cells, and 3% of coarsely granular eosinophile cells. In the fresh specimen there was little distortion of the blood-cells, an absence of rouleaux-formation, and no organisms were visible. Specimens fixed in Gulland's solution, and counter-stained with methylene-blue, showed the presence of a number of faded or phantom-like red cells, which looked as if the color had been washed out of them, presenting only a thin pink rim and center. The more nearly normal cells around these were deeply stained with eosin. These pale corpuscles were not distorted, and contained no malarial organisms. In an examination of several films, a few definite intracorpuscular malarial organisms were discovered, all of them small and spherical in shape and each containing a dot of black pigment. There was a considerable number of faintly-stained extracorpuscular bodies having delicate flagella. Examination of the urine resulted as follows: The reaction was acid, the specific gravity 1015; there was no albumin; a dirty, brown sediment was present; and the spectroscope showed a faint hemoglobin-band. Microscopically there were some reddish-brown, granular tube-casts, numbers of small, rounded cells resembling bladder-epithelium and containing some refractile spherical bodies. There were no blood-corpuscles. Scattered about the field were small clusters of oval, transparent bodies grouped together. Sometimes small individual bodies were seen radiating from the central group. These stained deeply with methylene-blue and were seen to be growing by gemmation. The urine, kept in a stoppered bottle for a few days, showed a great increase in the number of these bodies. Such bodies have been observed by a number of writers, but their origin and significance is not known. [S.M.H.]

7.—Taunton reports an outbreak of 34 cases of **acute dermatitis** occurring among a number of workmen who had just been provided with new overcoats. On the first wet day following the wearing of the coats the inflammation of the skin began to manifest itself on the back of the wrists, the only point at which the coat came in contact with the skin. In one case, in which the subject went without leggings a rash developed on the calf of the leg, where the overcoat rubbed against the trouser-leg, and the moisture penetrated to the skin. The patches were slightly depressed and had the appearance of a necrosis of the epidermis such as follows the application of a strong irritant. Tactile sensation was entirely lost in the affected areas, and the appearances were most marked in the neighborhood of existing abrasions. In 3 cases there was some inflammation of the arm, with enlargement of the axillary glands. An infusion of the cloth from which the overcoats were made yielded an acid reaction, and on analysis it was found to contain zinc chlorid, which was evidently the cause of the skin condition. [S.M.H.]

8.—Barlow reports a case of **pharyngeal diphtheria** occurring in a woman aged 19 years, in which dark-colored urine was noticed on the morning of the third day. The secretion was acid in reaction, and contained both albumin and blood as well as urates, casts and bacilli, some of the last resembling those of diphtheria. The bacillus resembling the Klebs-Löffler bacillus disappeared as the nephritis wore off. A pure culture was obtained by plate-cultivation and compared with Klebs-Löffler bacilli of the same age. The points of difference did not amount to more than those that are usually present among the 3 or 4 different types of diphtheria-bacilli in throat-swabs. Owing to an accident the pathogenicity of the organisms for guinea-pigs was not tested. [S.M.H.]



**9.**—In investigating the condition of the ears in cases of **whooping-cough**, Stephens found that in nearly every instance there existed either pain in the ears or a serous discharge which in some cases antedated the existence of the disease. The treatment of this local condition by syringing out the ears night and morning with lukewarm boric lotion and the application to the meatus and tympanum of a paint consisting of 23 grains of cocain hydrochlorate, 4 drams of glycerin, 20 minims of a solution of mercuric chlorid and water to 1 ounce resulted in benefit in every case, the pertussis rapidly disappearing. In cases complicated by bronchitis, pharyngitis, or laryngitis, these conditions did not yield for several days after the disappearance of the whoop. A series of 8 illustrative cases is given. As an explanation of their pathology, Stephens believes that there is a small local inflammation in the meatus starting independently of or succeeding upon an attack of measles (as some of the cases followed measles) and that this inflammation irritates the nerve-filaments that are connected with the root-ganglion of the vagus and so stimulates the vagus itself in some or all of its branches. Involvement of the laryngeal branches will account not only for the spasm, but also for the whoop, by producing a temporary trophic lesion of the laryngeal mucous membrane against which the cold air strikes. An attempt to cultivate bacteria from the ear-discharges was unattended with success. [S.M.H.]

**10.**—Braithwaite reports a case of **cyst of the great omentum** in a female child, aged 4 years. The cyst, which was found to be entirely in the great omentum, contained about 3½ pints of clear, watery fluid, and it was removed. The condition is rare, records of but 6 other cases having been found in the literature. [C.H.F.]

**11.**—Turner describes a method of treatment in **shoulder-presentation** that he has found of practical value. In the first stage, the arm of the fetus being protruded, it is doubled at the elbow, the fingers resting on the shoulder, forming as it were the point of a wedge which is now pushed back again into the uterus, in the interval of the pains, the upward movement being continued by the operator's bent forefinger pressed against the shoulder. In the second stage, the accoucheur's middle finger is extended and by preference is placed in the mouth of the fetus or on some firm bony point of the head. Now, with the assistance of the operator's other hand external to the mother's abdomen, the head is drawn into a better position, where, should the pains still be strong, it may be left to nature, or instruments applied if considered advisable. [W.K.]

**12.**—Stephenson reports briefly a case of **lead-poisoning** occurring in an **infant 4 weeks old**. The condition was recognized by the presence of a blue line on the gums, discovered during an attempt to see the tongue. The child had violent lead-colic. The origin of the poisoning was the accidental dusting of the neck and back of the ears with powdered white lead. The child recovered under ordinary treatment. [S.M.H.]

**13.**—Milnes reports a case of **cerebral tumor** in a man aged 28 years, who complained of failure of sight, which examination disclosed to be due to bilateral optic neuritis. It was learned that 10 weeks previously the man had developed severe pain in the head, followed by vomiting and pain in the left side of the face. There was no history of syphilis. The knee-jerks were exaggerated. The attacks of vomiting occurred without relation to food. In addition to the head-pain, there occurred pain at the root of the nose. The plantar reflex became greatly increased. About the third month of the illness there occurred enlargement and varicosity of the veins in the frontal region about the median line, which was shortly followed by some dilatation of the veins above the external occipital protuberance. At the sixth month there developed pain in the eye, especially the right. The man's condition sometimes improved, but in the main it grew worse during the next five months, when suddenly convulsions developed one day and consciousness was lost for 25 minutes. The convulsions were at first general, but toward the end of the attack the features were drawn to the left side. A month later mental changes appeared. Urine was voided involuntarily. The varicose veins became more swollen. Later on, the sense of smell was lost, the man became much weaker and wasted, and he frequently rambled and muttered, although at times he was quite rational. The lips, both sides

of the face and forehead, and the front of the tongue and hard palate were insensitive to touch. There was paralysis of the orbicularis, and the conjunctivæ were inflamed, hazy and quite insensitive to touch. The mouth was always half open and there was bilateral facial paralysis. The knee-jerks became excessive and the plantar reflexes greatly exaggerated. About 16 months from the beginning of the illness the head was noticed to be turned stiffly to the left. The left forearm was flexed and kept closely to the chest. No movement of the arm was seen. Death occurred on the following day. The autopsy showed the skull thinned in three places, in the frontal region, in one spot on each parietal bone. These spots corresponded to the prominences of the convolutions under the dura mater, which structure was somewhat adherent at these points and engorged with blood. The absorption of skull in the frontal region corresponded to a large solid mass occupying the greater part of both frontal bones, two-thirds in the right and one-third in the left. The falx cerebri in this region was involved in the growth and could not be removed; the fissure of Rolando and the ascending frontal convolution were uninvolved on either side. The other frontal convolutions could not be recognized. There was great varicosity of the veins in both frontal regions, a special prominence on each side corresponding with one of the thin spots on the parietal bones, and at these points the varicose veins inside and outside appeared to communicate. The whole of the brain-substance was hyperemic. The right lateral sinus was full of clot, the superior longitudinal sinus markedly contracted, apparently from old inflammatory thickening at about 1½ inches posterior to the tumor. The origin of the inferior longitudinal sinus was completely obliterated by the growth. The central portion of the sinus was open, and contained no blood or clots. The ventricles of the brain were normal, except the right lateral, the anterior horn of which was greatly enlarged and ran forward around the outer border and underneath the growth and even in front of it, being in close relationship with a cyst in the substance of the growth, which contained about 2 drams of fluid, and did not communicate with the ventricle. The veins of this ventricle were much enlarged. The olfactory nerves were flattened and the olfactory lobes atrophied, apparently from pressure. Microscopic examination of the tumor showed it to be composed of interlacing bundles of spindle-shaped cells, with large areas of hyaline change between the bundles, a sarcoma with a low degree of malignancy. With a high power, distinct traces of fibrous structure could be discovered in the substance between the bundles. There were several small cysts in the tumor. [S.M.H.]

**14.**—Dodd relates a case of **hemophilia** occurring in a boy aged 13 years, with 6 brothers and 7 sisters. The brothers had all bled to death. The girls were alive and well; two were married and had borne children. A maternal uncle had died from hemorrhage from the stomach and a maternal aunt had died at the age of 14 from bleeding. The patient gave a history of many swellings in his joints following slight injuries. He had bled from the gums and nose and the roof of the mouth. Slight injury to the right thigh had resulted in a large fluctuating swelling that was tender to touch, while the overlying skin was red and thin. The patient was markedly anemic. An incision was made through the skin, and a quantity of clot and some purulent fluid escaped. In spite of packing and pressure and internal administration of styptics the bleeding continued and the boy grew rapidly weaker. Bleeding from the nose and gums took place also. The stomach rejected everything. Death seemed inevitable. At this juncture inhalations of oxygen in large doses were resorted to. Within 24 hours the vomiting and bleeding stopped and the boy began to take milk freely. Recovery was eventually complete. [S.M.H.]

#### New York Medical Journal.

December 17, 1898. [Vol. lxxviii, No. 25.]

1. The Results of Open Operation in the Treatment of Recent Fracture of the Patella. CHARLES PHELPS.
2. Neuralgia of the Ano-rectal Region; Its Peculiar Characteristics, Symptomatology, Etiology, and Diagnosis. WILLIAM BODENHAMER.
3. Further Results of Operative Treatment of Chronic Frontal Sinusitis. J. H. BRYAN.



4. A Case of Disease of the Antrum and the Frontal and Ethmoidal Sinuses. JOHN W. FARLOW.
5. The Treatment of Tetanus by Means of Intracerebral Injections of Antitoxin, with a *Résumé* of Reports of Cases, and a Few Remarks on the Technic of the Injection. GEORGE G. RAMBAUD.
6. Tetanus: Treatment by Trephining and the Intracerebral Injection of Antitetanic Serum. CHARLES A. CHURCH.

1.—Phelps' experience in the treatment of 118 cases of **recent fracture of the patella** by the **open operation** speaks unqualifiedly in favor of this mode of treatment. Of the entire series osseous union was apparent in every case. Phelps is inclined to take a somewhat more favorable view of the possibility of obtaining osseous union in fracture of the patella, and believes that the majority of surgeons are altogether too skeptical in the expression of their opinion on this particular point. Osseous union will be effected without any doubt if one obtain perfect osseous contact of the fragments, ensure absolute immobility, preserve perfect asepsis in the wound, and be assured of the absence of any constitutional taint. If, after subsidence of the swelling of the soft parts and an interval of one or two months' use of the limb, no mobility at the line of fracture can be detected, osseous union may be concluded to have taken place. The superficial location of the patella renders its thorough examination an easy matter, and there should be no more doubt in the surgeon's mind as to the presence or absence of osseous union than after union in fractures of other bones. In a certain number of cases ossific union was verified by subsequent accident; in two cases, in which death occurred after recovery, osseous union was unquestioned in both. From the evidence that has been collected it should now be an undisputed fact that the results of treatment of fracture of the patella by the open method far exceed those attained by non-operative methods. The advantages of the open method may be summed as follows: Bony union is the rule rather than the exception; functional restoration of the joint is assured in the majority of cases, if the after-treatment be faithfully carried out; and the time required to complete the course of treatment is relatively much smaller. In Phelps' own cases he usually removed all retention-apparatus, began flexion, and permitted the patient to walk with the aid of a cane on the twenty-eighth day. The entire restoration of function, though dependent somewhat upon the persistence with which the patient himself carries out the details of the after-treatment, may be expected within the second month. The dangers that have most frequently been associated with the open operation, and on account of which it has met with opposition, are probably those due to infection. These are at the present time almost nil, as is evidenced in the results of 420 operations in which never a drop of pus formed in the joint-cavity. The only accidents reported have been superficial suppuration and ankylosis, which occurred in 21 in all. The method that Phelps has employed in his series of cases has been so successful as to warrant no change. He makes a free lateral incision, practises irrigation of the joint-cavity, and, after removal of the interposed fibrous tissue, brings the fragments into apposition with silver wire, and closes the joint-cavity by soft sutures. A drainage-tube is inserted in the outer and inferior angle, and is removed within 24 hours or less. The secondary or after-treatment, which is absolutely essential to the attainment of the best results, involves lateral movement of the patella at the end of the third week, and the institution of passive motion on the twenty-eighth day. If these precautions be taken restoration of flexion and extension may be expected in from one to two months after passive motion was begun. [C.H.F.]

2.—Bodenhamer divides **neuralgias of the ano-rectal region** into spontaneous, idiopathic, sympathetic and reflex; or into primary and secondary, and he enters upon a discussion of their characteristics, symptomatology, etiology, and differential diagnosis. [S.M.H.]

3.—In the operative treatment of **chronic frontal sinusitis**, Bryan prefers his own method to the so-called Ogston-Luc operation. The former obviates the median incision, which in many instances leaves a scar that is to a greater or lesser degree visible. The incision through the eyebrow, as devised by Bryan, affords just as bright a field for operation, and the resulting scar is completely hidden by

the hair of the brow. He dispenses altogether with the use of a drainage-tube, which is so frequently a source of irritation, employing only a strip of iodoform-gauze. The latter may be removed a few days after the operation, as the opening between the nose and the frontal cavity is of sufficient size to permit of free and constant drainage. [C.H.F.]

5.—Rambaud reviews the cases of **tetanus** thus far treated by **intracerebral injections of antitoxin**, according to the method of Roux and Borrel. He has been able to get detailed reports of 9 cases treated abroad. Of this number 5 died and 4 recovered. In all the fatal cases the course of the disease was extremely rapid and severe. The infecting germs were in every case exceedingly virulent and the nervous centers became rapidly involved. In 3 cases death occurred within 15 hours following the operation. In 1 case a septic vibrio was found in abundance in the wound in addition to the tetanus-bacillus. The autopsy showed that the cerebral lesions caused by the injections were trifling, and could in no way have been the source of serious cerebral symptoms. In addition to these cases reference is made to a case reported in *Lyon Médical* for November 6, 1898, in which the result was fatal, and to another French case in which recovery is said to have taken place, and also to two cases following **celiotomy** reported by Lucas-Championnière. The last two cases were fatal. In this country 3 cases have been treated by this method. One successful case (see abstract 6) and one case following **celiotomy** in which there was a total disappearance of tetanic manifestations, although death occurred from acute toxic nephritis. The third case was uninfluenced by the operation. The contractions did not disappear during anesthesia, and death really took place before the antitoxin could have produced any effect. To simplify the operative technic Rambaud has designed a syringe with a capacity of 3 cu. cm., provided with a piston-rod and cap, and a needle, the head of which is intended to fit the trephine-hole made in the skull. This head is conical in shape and is provided with a groove, the object of the latter being to afford a passage for the escape of any fluid that might otherwise cause compression. The dimensions of the cone are calculated to correspond with the size of the trephine used, and are such that it can be safely put in the trephine-hole and be fixed firmly therein. The needle can thus be firmly fixed and the injection conveniently made in from 10 to 12 minutes. [S.M.H.]

6.—Church reports a case of **tetanus, treated by the intracerebral injection of antitetanic serum**, in which the symptoms developed some two weeks after an injury had been sustained. At first 25 cu. cm. of serum were administered subcutaneously, but as the improvement that followed was only temporary, it was decided to employ the intracerebral injection. About 60 minims of the serum were introduced through a trephine opening in the frontal bone to the depth of 2 inches. The second or middle convolution of the frontal lobe was selected as the point at which to introduce the serum, in order to avoid the motor centers. The subsequent treatment of the case involved daily dressings, and the intravenous injection of antitetanic serum under anesthesia. Within a month the symptoms had entirely subsided, and the patient was well on the road to convalescence. [C.H.F.]

### Medical Record.

December 17, 1898. [Vol. liv, No. 25.]

1. The Abdominal Wound. A. C. HEFFENGER.
2. A Cheap Cure for Appendicitis. T. J. HUTTON.
3. Electricity in Deafness and Strictures of the Eustachian Tube. ROBERT NEWMAN.
4. A Case of Primary Tuberculosis of the Cervix Uteri. FRANK S. MATTHEWS.
5. Preliminary Communication on the Biochemistry of the Bacillus Tuberculosis. PHÆBUS A. LEVENE.
6. A Case of Hodgkin's Disease Terminating with Leukocytosis. HARLOW BROOKS.
7. The Etiology of General Paresis. WILLIAM STEINACH.

1.—In **abdominal surgery** the weight of evidence stands in favor of dispensing with drainage whenever possible, as it is known that the peritoneum is more capable of absorbing and destroying germs than had been previously supposed. The method of closing the abdominal wound



layer by layer has, perhaps, the greatest number of advocates, and the materials that are mostly used for sutures are catgut, chromicized catgut, silkworm-gut, and silver wire. The causes of postoperative wound-infection are unnecessary manifestations of the wound, rough retraction of its edges and prolonged pressure with metal retractors, imperfect hemostases, strangulation of large bits of tissue by ligatures, and undue tension of the sutures. [C.H.F.]

2.—Hutton has discovered that nearly all forms of **appendicitis** may be cured by the administration of calomel and sodium bicarbonate. The dose varies, according to age, from 2½ gr. of calomel for children, to be repeated every hour, to 10 gr. per hour for adults. The patients usually are not only relieved of urgent symptoms, but are able to get up and attend to work the following day. (*sic.*) [J.S.]

3.—Newman reports his experience with the use of **electrolysis** in the treatment of strictures of the **Eustachian tube**. He urges the importance of employing electrotherapeutic measures for deafness and particularly when other means fail to cure. [C.H.F.]

4.—Matthews reports a case of **primary tuberculosis of the cervix uteri** in a negress, aged 22 years. The uterus, its appendages, and the involved vaginal tissues were removed by vaginal hysterectomy. Microscopic examination showed the interior of the cervix to be the seat of a diffuse tuberculous inflammation, with tubercle-tissue, cheesy degeneration, and giant-cells. Deep in the muscular wall of the cervix were discrete miliary tubercles. The broad ligament presented edema and moderate exudative inflammation, but no tubercles. The cavity of the uterus was slightly enlarged, distended with blood and debris. No tuberculous lesions were found in the appendages. [W.K.]

5.—Levene has found that the bodies of **tubercle-bacilli**, when dried and triturated, yield three **proteids** coagulating between 50° and 64° C., between 72° and 75° C., and between 94° and 95° C. respectively. The first is precipitated by 5% magnesium sulphate, but only completely when the solution of the salt is 85%. A saturated solution precipitates the second; while the third remains in the filtrate. A saturated solution of sodium chlorid also precipitates the first. All three are precipitated by ammonium sulphate or on the addition of a 0.2% solution of hydrochloric acid. Levene was unable to separate the first and second proteids from each other. He found that together they yielded a positive biuret-reaction and contained phosphorus. The third was richer in phosphorus than the other two, but did not give the biuret-reaction. In conclusion it is stated that the body-substance of the tubercle-bacillus does not contain albuminous proteids, but nucleoproteids, one of which, in contradistinction from all other nucleoproteids, is not precipitated by magnesium sulphate and does not yield the biuret-reaction. [J.S.]

6.—Brooks reports the case of a Jewess, 31 years of age, who presented extreme cachexia, dyspnea, enlargement of the glands, great enlargement of the spleen, and increase in liver-dulness. Examination of the blood had shown that the leukocytes numbered 6700, of which 41.5% were large lymphocytes, 24.8% small lymphocytes, and 32.5% neutrophils. Death took place after 3 days, and at the autopsy the lymph-glands and liver were found enlarged. The spleen weighed 4 lbs. 10 oz. There was some diminution in the thickness of the cortex of the kidneys. Microscopically, the changes were those of pseudoleukemia. In the arteries, a considerable lymphatic leukocytosis was evident. [J.S.]

7.—Steinach states that **general paresis** is increasing in frequency, males being still more frequently affected than females. The disease appears to be more common in married men; thus, of 89 male patients, 64 were married, 17 single, 6 widowed, and 2 divorced. The disease apparently occurs almost exclusively among married women. Steinach believes that in America, about 14% of the patients have had syphilis. [J.S.]

### Medical News.

December 17, 1898. [Vol. lxxiii, No. 25.]

1. Camphorated Tincture of Opium in Cuban Malaria, Mixed Malaria, and Typhoid-Fever Infection. W. H. THOMSON.
2. The Cuban-Fever Plasmodium. ROBERT L. WATKINS.

3. Comparative Morphology of Malarial Plasmodia. JAMES EWING.

4. Ancient Full-Term Ectopic Pregnancy. J. WESLEY BOVEE.

5. A Single Test of the Virulence of Sputum Kept Many Months. IRWIN H. HANCE.

6. Some Odd Malarial Manifestations. R. A. GOODNER.

7. The Garrisoning of Our Tropical Islands. SENECA EGBERT.

1.—Thomson has treated 100 cases of **malaria**, besides a number in which this disease complicated typhoid-fever. Plasmodia were found in 60% of all cases. The patients were anemic and emaciated. Quinin, arsenic, and Warburg's tincture failed to combat the disease, and at the end of two weeks the treatment was modified by giving 15 grains of quinin with 15 grains of powdered ginger twice a day, and three doses of half an ounce of camphorated tincture of opium. Of the 47 cases treated according to this method, 22 were cured at once, 5 within 24 hours, 10 within 48 hours, and 12 of the remaining 15 at later periods; 3 were not benefited. No relapse occurred in any case. Fourteen cases were treated with Warburg's tincture alone by way of control, and 2 recovered within 24 hours, 12 within 10 days, and 7 were not benefited. The parasite found in most of these cases was of the estivo-autumnal type. Thomson states that the antiperiodic element in opium is probably narcotin, or, as it should be termed, anarcotin. In 6 cases there was mixed infection with typhoid and malaria; 4 of these got well of the malaria during the course of the typhoid, and in 2 the malaria reappeared after convalescence from the typhoid-fever. Of 33 cases of typhoid-fever, 30 recovered; the three that died persistently refusing to go to bed until completely exhausted. It was observed that cold baths with salt and carbolic acid were more efficient in lowering the temperature of fever-patients than simple cold baths. In several cases, the amount of urine was increased by the injection of 6 pints of normal salt-solution into the rectum at a temperature of 104°. [J.S.]

2.—Watkins depicts the **plasmodium of Cuban fever**. In one case suffering from irregular chills, and which had been treated with quinin, broken segments were found in the leukocytes. [J.S.]

3.—Ewing has studied stained specimens of the **tertian parasite**, and found that the earliest form is a spheroidal or irregularly shaped non-pigmented body. Later, this becomes larger, more irregularly shaped and pigmented, and the hemoglobin of the red cell is diminished. In the presegmenting stage, a reticular structure becomes evident in the stained plasmodium. In the segmenting stage the pigment is found in the center of the roset, which consists of 15 or 20 spores. The quartian parasite in the earlier stages resembles the tertian. Later, it is more highly refractive, its movements are more sluggish, and the pigment-granules are coarser. The roset is smaller than that of the tertian form, the pigment is coarse, and the spores number from 7 to 12. The estivo-autumnal parasite first appears as a minute spheroidal body, somewhat vesicular in stained specimens. The red cell shrinks, but does not decolorize rapidly. In the course of a few hours, the characteristic signet-ring appearance may be observed, and the organism contains, in addition to the thickening in one part of its circumference, a densely staining point, and occasionally one or two achromatic spots. Two parasites are sometimes found in a cell. The next stage is only found in the organs, as the blood-marrow. The organism now appears as a distinct spheroidal parasite, staining more deeply at the edges. The rosets are smaller than those of the tertian variety and contain from 12 to 18 spores. The spheroidal body may, instead of segmenting, form the typical crescent. In old cases of malaria, pigmented mononuclear leukocytes are often found. [J.S.]

4.—Bovee reports a case of **ancient full-term ectopic pregnancy** in a white woman, 30 years of age, in which when the abdomen was opened a dense mass was found lying behind the peritoneum. An attempt to reach this mass by an incision through the extraperitoneal structures in the flank was made and abandoned, as too much dissection seemed necessary and the liability to open the peritoneal cavity too great. An attempt to stitch the peritoneum covering the sac to the edges of the abdominal incision was unsuccessful, and it was decided to pack gauze about the



abdominal incision and all around the point in the sac-wall elected for the opening. The sac was then incised, and from it, after long, tedious efforts, the skeleton of a fetus was detached piecemeal and removed, together with a considerable quantity of fecal matter. No other part of a fetus was found, and no evidence whatever of a placenta was detected. The head was found near the spleen and the relation of the bones with the wall of the sac rendered great care necessary to prevent puncturing the peritoneum. The skin and the peritoneum at the edges of the abdominal incision were united with running catgut-sutures and the edges of the sac-wall were in turn stitched to the edges of the abdominal opening. The cavity was then irrigated and packed with iodoform-gauze around a rubber drainage-tube. Two quarts of standard salt-solution were run into the abdominal cavity to be absorbed. The opening or openings between the sac and the bowel were not found or searched for, and as was expected, feces came through the opening in the sac for nearly two weeks, after which time they began to come through the anus, while the fistula commenced to close. In the course of another week, there was scarcely any fecal matter coming through the opening, but quite a little pus. After ten days more the patient was gaining rapidly, taking on flesh and color, and walking about free from pain, although she had taken no form of opium since the operation. She went home a month later in better health than she had been during the previous 8 or 9 years. An interesting feature is that while in possession of the old ectopic gestation the woman had become pregnant and was delivered of a living child after an easy labor. [W.K.]

5.—Hance kept for 17 months some **tuberculous sputum**, of which the microorganisms had been capable of infecting guinea-pigs. At the end of this time, the amount was reduced about one-half, and what was left was of dark-brown color, with considerable deposit. Of this 1.5 cu. cm. and 2 cu. cm. were injected into guinea-pigs, with entirely negative results. The conclusion is reached that the tubercle-bacilli were no longer viable, and it is suggested that perhaps sputum kept for a long time develops toxins inimical to the life of the bacteria. [J.S.]

6.—Goodner reports a number of cases of **malaria** with curious manifestations. One commenced with symptoms of catarrhal dysentery without chill or variation of temperature, the symptoms exhibiting periodic exacerbation. In another case there was severe diarrhea, with two days' intermission and considerable malaise; in another diarrhea of three weeks' duration. A case of ulcerative stomatitis was cured on three occasions with quinin. Other cases presented urticaria, conjunctivitis, leg-ulcers, periodic pains in the knee, Bell's palsy with periodic fever, paralysis of the extensor muscles of the right hand, with the development ultimately of typical intermittent fever. In all of these cases but one, the malarial parasite was found in the blood, sometimes only after repeated examinations, and quinin caused prompt recovery. [J.S.]

7.—Egbert urges the importance of instructing the **soldiers detailed for tropical garrison-duty**, in hygiene, and of the preparation of suitable quarters for their reception before they reach their destination. [J.S.]

#### Boston Medical and Surgical Journal.

December 15, 1898. [Vol. cxxxix, No. 24.]

1. Habit-Neuroses as True Functional Diseases. J. MORTON PRINCE.
2. Report of Two Cases of Spina Bifida Treated by Operation. J. COLLINS WARREN.
3. New-Growths of the Bladder. EDWARD REYNOLDS.
4. Fibroma of the Vulva. MALCOLM STORER.
5. Malaria as seen at Montauk. F. J. COTTON.

1.—Prince believes that a **functional disease** must be "the consequence or concomitant of the same kind of physical changes which subserve the functioning of an organ in health, and be originated as a response to stimuli by the same laws which govern the functioning of the organs in health," meaning that the organ becomes in the habit of responding to customary stimuli by unusual so-called pathologic reactions. A functional disease is, therefore, a voluntary or involuntary education caused by the constant repetition of

phenomena that may be those of organic disease or pernicious habits, strong emotion, wear and tear of life, and poisons. These principles are the outcome of the fact that all acquired mental and physical characteristics are due to association of nervous influences. A case of hay-fever is reported in illustration, one of five in the same family. The cause of the attack was some irritation of the mucous membrane of the nose and eyelids, usually following a period of apprehension. The patient's grandmother and her brother become ill regularly on August 20. Her own attacks come on about the last of May, and for three years they were prevented by mind-cure. Attention is called to a group denominated phoboneuroses, and characterized by a curious succession of symptoms upon exposure to conditions that previously caused fear, although the sense of fear may be wholly lacking. Frequently women supposed to be suffering from gynecic disorders have nothing but a habit-neurosis which may be cured by the cessation of treatment and a placebo, or suggestion. A curious case is reported of night-palsy, characterized by complete paralysis of the hands, coming on four or five times in the course of the night, and awakening the patient from sleep. The patient was entirely cured by a placebo. Most of these conditions are readily amenable to treatment when properly diagnosed. [J.S.]

2.—Warren discusses the **operative treatment of spinabifida**, reports 2 cases, and calls attention to the importance of maintaining asepsis, not only in the operation itself, but in the after-treatment. The situation of the tumor renders it subject to contamination with the excretions. For this reason the patient should be placed in such a posture that the urine and feces will drain away from the dressing; this is best accomplished by placing the patient prone on a bed, with pillows under the pelvis. In one of the reported cases this posture was maintained for 4 weeks, and was eminently successful in preventing contamination of the wound. [C.H.F.]

3.—Reynolds reports two cases of supposed **new-growth of the bladder**. Pathologic examination showed chronic ulceration without any evidence of malignancy or tuberculosis. The tissue was removed by dissecting the bladder from the uterus up to almost the level of the peritoneal reflexion, as in making the anterior incision in vaginal hysterectomy. Until one has had occasion to do a good deal of surgery in this region, he is not likely to fully realize the amount of loose connective tissue that lies between the posterior vesical and the anterior vaginal wall, the ease with which these slide upon each other, and the extent to which the cervix uteri can be moved about by a pair of double hooks, without in the least affecting the position of the contiguous portion of the bladder. Under these anatomic conditions it is extremely easy to free the anterior vaginal wall from the bladder, and the operator can secure the advantage of having the line of union in the bladder run at one angle, and in the anterior vaginal wall behind it at another. [W.K.]

4.—Storer reports a case of **fibroma of the vulva** occurring in a multipara, aged 41 years, who upon examination was found to have a tumor hanging from the outer side of the left labium majus, just above the level of the clitoris, and attached by a pedicle 20 cm. in length and 4 cm. in circumference. The tumor itself was large, pear-shaped, and exceedingly edematous, its greatest circumference being about 28 cm. It was covered with fairly smooth non-adherent skin above, while, below, the skin was thickened and puckered in around an ulceration 2 cm. in diameter at the most dependent point. This ulcer had existed for a number of months at least, but was a source of annoyance only from the necessity of keeping it clean. The tumor was much harder below than above, but not nodular. It was not sensitive; nor was traction upon the pedicle painful. The pedicle contained no palpable vessel, nor could it be followed into the inguinal canal. Among 420 primary neoplasms of the external genitals in women, Williams found only 17 fibromas, or only about 1 in 600 of all the new-growths in women he tabulated. The fibrous and fibromyomatous tumors that are seen in this region may have their origin in two main sources: (1) the subcutaneous connective tissue, and (2) the connective tissue and terminal muscular fibers of the round ligament, and possibly in muscular fibers in the skin, while, as curiosities, may be mentioned tumors arising in (a) the pelvic fascia and periosteum of the bony pelvis, (b) the recto-vaginal septum, and (c) the uterus. [W.K.]



5.—Cotton describes the varieties of **malaria** that he observed among the soldiers at **Camp Wikoff**. The disease had usually been contracted at Santiago, and the majority were apparently infected after July 19. Most of the cases were convalescents, without parasites. Nearly all were intensely anemic. The privations of the voyage caused a number of convalescents to relapse. Nearly all the cases with large spleens were long-continued tertians. Two of the cases simulated sunstroke, but in both, parasites were found in the blood, and recovery ensued. Two patients passed into a state of profound collapse at the height of a paroxysm. Coma occurred in 8 cases, some of the patients being brought in in this condition, others developing it in the ward. The patients lay still, with quiet extremities, without muscular twitching, or paresis, or loss of muscular tone. Breathing was regular and somewhat stertorous. The eyes were open and motionless, and the pupils reactive. The reflexes and sensation were preserved. One patient was treated with vigorous doses of strychnin, and developed tetanic convulsions, but he ultimately recovered. In treatment, quinin administered by the mouth appeared to be of no value. A number of cases with irregular fever yielded the Widal reaction, and although plasmodia were not found, it is possible that some of them represented mixed infections. In all, about 300 cases were treated. [J.S.]

### Journal of the American Medical Association.

December 17, 1898. [Vol. xxxi, No. 25.]

1. The Dietery of Heart Disease. ROBERT H. BABCOCK.
2. Suggestions on the Dietetic Treatment of Gout. DANIEL R. BROWER.
3. Physiologic Principles Underlying Infant Dietery. R. O. BEARD.
4. Absorption vs. Digestion of Milk. L. DUNCAN BULKLEY.
5. What is the Food Value of Alcohol? E. STUYER.
6. Alcohol in Health and Disease. V. D. MILLER.
7. Dietetic Causes of Inebriety. T. D. CROTHERS.
8. Tuberculosis: Its Hygiene and Dietetics. A. T. CUZNER.
9. Influence of the Mind upon the Body and Its Relation to Education. RANDALL HUNT.
10. Smallpox in Cuba. R. S. WOODSON.

- 1.—See this JOURNAL, Vol. II, p. 15.
2. " " " " " " 14.
3. " " " " " " 14.
4. " " " " " " 15.
5. " " " " " " 15.
7. " " " " " " 14.
9. " " " " " " 14.

### Annals of Surgery.

November, 1898. [Vol. xxviii, No. 5.]

1. A Clinical and Histological Study of Certain Adenocarcinomata of the Breast; and a Brief Consideration of the Supraclavicular Operation and of the Results of Operations for Cancer of the Breast from 1889 to 1898 at the Johns Hopkins Hospital. WILLIAM S. HALSTED.
2. Observations Upon the Operative Treatment of Hernia at the Hospital for the Ruptured and Crippled. WILLIAM T. BULL and WILLIAM B. COLEY.
3. Posterior Thoracotomy for Foreign Body in the Right Bronchus. B. FARQUHAR CURTIS.
4. The Anatomy and Surgery of the Frontal Sinus and Anterior Ethmoidal Cells. HOWARD A. LOTHROP.
5. A Case of Complete Cross Lesion of the Spinal Cord Due to a Fractured Dislocation; the Fifth Cervical Vertebra Being Displaced Forward Upon the Sixth. GEORGE W. CRILE.

1.—Among 150 cases of **carcinoma of the breast** that have come under Halsted's observation 5 or 6 have differed in many ways from ordinary carcinoma, and are considered as undoubtedly **adenocarcinomas**. They differ macroscopically from ordinary carcinoma of the breast in that they are considerably softer, contain a peculiar serous fluid, and are usually pedunculated. Microscopically, they are composed chiefly of large tubes, lined with epithelium many

cells deep. The arrangement of these epithelial cells is quite characteristic; they seem to be so arranged as to form certain gland-like figures, circles, tubes, columns and minute papillae. The greater part of the tumor seems to correspond to the adenomatous type, but here and there typical pure carcinomatous tissue may be found. Another interesting feature of this series of tumors is the nature of the glandular involvement, the enlargement of the glands being due chiefly to endothelial proliferation, and not to carcinomatous infiltration. The method of operation now in vogue is even more radical than was practised a year or two ago. At the present time a primary operation involves not only removal of the growth itself and all the fat and glandular tissue of the axilla, but also thorough exploration of not only the infraclavicular but also the supraclavicular region. The clavicular region is explored without removal of any portion of the clavicle, as it has been found that by elevating the shoulder there is sufficient space between the clavicle and first rib to allow of thorough dissection of these regions. The incision is made near and parallel to the posterior border of the sternocleidomastoid muscle, and through this incision not only the supraclavicular and the infraclavicular, but also the subscapular region is explored. The incision for removal of the breast itself has not been modified. Of late it has been the practice to remove a large amount of skin around the growth, and in all cases the wound is strewn immediately with grafts from the patient's thigh as large as one's hand or larger. The grafts are covered with silver foil and tissue-paper, and the dressing need not be disturbed for two or more weeks. As a routine practice both the minor as well as the major pectoral muscle is removed. The result of operations in 133 cases of carcinoma of the breast at the Johns Hopkins Hospital, from June, 1889, to 1898, are as follows: There have been 13 (9%) local and 22 (16%) of regionary recurrences. Of the 76 cases operated upon 3 or more years ago, 31 (41%) are living without local recurrence or signs of metastasis; 10 died more than 3 years after the operation, and 1 as late as 5½ years thereafter; of these 10 one had a local recurrence. Forty cases (52%) lived, therefore, more than 3 years without signs of local or regionary recurrence. Some of the 10 cases that have died may have had at 3 years signs of metastasis; no positive statement as to this point can be made. Thirty-five cases (46%) died within 3 years of the operation, and 7 of these with local recurrence. [C.H.F.]

2.—Bull and Coley report the results of observations in **400 cases of hernia** operated upon since 1895, at the Hospital for the Ruptured and Crippled. The profusion of material that presents itself at this institution is such as to afford opportunities of observing and treating hernias of all varieties and at all stages; from September, 1890, to September, 1897, 34,271 cases of hernia were treated. The results obtained in the series of 400 cases may be summed up as follows: As to the duration of cure 236 were well beyond one year, and 142 beyond two years; the mortality was less than 1%. Primary union occurred in 373 cases; relapses in 6 cases. The Bassini method was employed in 342 cases, the remainder being treated by various other methods. The two most serious complications were pneumonia and wound-infection, and as for the latter, the experience of Bull and Coley seems to coincide with that of Mikulicz, who proved that the danger of infecting the wound increased with the length of the operation; that while the hands may be sterile at the beginning they seldom remain so until the end of a prolonged operation. The results speak unqualifiedly in favor of an absorbable material for the buried sutures, for which purpose chromicized kangaroo-tendon is to be preferred. In those cases in which non-absorbable material was used sinuses almost invariably developed. A careful analysis of 360 cases of relapse shows that in those cases that have remained well beyond one year, the chances of relapse are much diminished. Thus in 64.5% relapse occurred during the first six months; in 80% during the first year, and in only 20% after the first year. Therefore, if a rupture is sound at the end of one year after operation, there is a reasonable prospect of permanent cure, while if it remains well for two years, the chances of relapse are exceedingly small. As to the choice of methods the evidence is strongly in favor of the Bassini method, which has many advantages over the so-called Halsted method: The technic is less complicated, and the operation requires less time, while the published results of Halsted are inferior to those of Bassini.



Stress is laid upon the importance of performing the operation as rapidly as possible, thus permitting of the least amount of bruising of the tissues, and thereby increasing the chances of primary union. Since 1888 Bull and Coley have performed 618 Bassini operations, with only 12 relapses. [C.H.F.]

3.—Failing in an attempt to remove a foreign body from the right bronchus by low tracheotomy, Curtis decided to carry out Bryant's suggestion and perform a posterior thoracotomy. After resecting portions of the fourth, fifth, and sixth ribs, at their vertebral end, the pleura was detached from the contents of the posterior mediastinum and posterior chest-wall. By this means the bronchus was easily approached, but, owing to the exaggerated respiratory movements of the lung, subsequent to the detachment of the pleura, it was found difficult to attack the bronchus, and, as the patient's condition was not encouraging, the wound was packed and the operation suspended. On the following day under anesthesia the bronchus was opened, but the foreign body could not be detected with the forceps. An attempt was made, after locating it with the fingers, to remove it by cutting directly through the lung-tissue with a cautery-knife. Even with this incision the foreign body, which was a seed-vessel of some plant, transfixed with a pin, could not be grasped with the forceps. A draining-tube was inserted and the operation discontinued. The patient succumbed to pneumonia 48 hours later. As to the technic it is best to fashion the flap with its base toward the scapula, contrary to Bryant's own method, as the attachment of its base to the scapula allows of the flap moving with this bone and thus ensuring more room. Removal of the body through an incision in the lung-tissue, after the pleura is sutured to its surface, is preferable to too prolonged attempts to pass instruments through the bronchi. The wounds should always be drained and sufficient gauze should be packed around the tube to protect the wound from infection. [C.H.F.]

### American Journal of the Medical Sciences.

November, 1898. [Vol. cxvi, No. 5.]

1. Remarks on Resection of the Gasserian Ganglion. W. W. KEEN and WILLIAM G. SPILLER.
2. The Causes and Conditions of Pulmonary Tuberculosis, and How to Avoid Them. EDWARD O. OTIS.
3. On Nephritis of Malarial Origin. WILLIAM SYDNEY THAYER.
4. A Case of Two Isolated Carcinomatous Gastric Ulcers. D. D. STEWART.

1.—Keen has performed 11 operations for the removal of the gasserian ganglion; 6 of these cases having already been reported. With the exception of 1 case, multiple peripheral operations had been performed before the ganglion was attacked. The Hartley-Krause method was employed in each case. Of the 11 patients, 3 died, 1 from direct and avoidable infection and 2 from shock. In the last 6 cases of the series the entire ganglion was removed. The final results of the operation may be summed up, briefly, as follows: In Case 1, the patient, after 4½ years, still had pain, but not the old tic. In Case 2 the pain returned in 6 months, though not so badly as before. It still continued after 4 years. In Case 3 the patient died in a week from septic infection. In Case 4 the patient was entirely well, after 3 years. In Case 5 the patient, when last heard from, after 1½ years, was entirely well. In Case 6 the patient had not had the slightest pain after the ganglion was removed, 2½ years previous. In Case 7 the patient had no return of the tic douloureux, after 2½ years. In Case 8 the patient had no return of pain after 2½ years. In Cases 9 and 10 death took place from shock. In Case 11 the patient was entirely free from pain 16 months after the operation. Thus of the entire series of cases there was recurrence of pain in but 2, and in these, the first two of the series operated, the return of the pain is attributed to imperfect removal of the ganglion. Resection of the Gasserian ganglion is an operation that may be undertaken with perfect justifiability, but only after peripheral operations have been tried and have failed to afford relief. Peripheral operations should not be deferred longer than 3 or 4 months, for there is every reason to believe that in most cases the ganglion is secondarily in-

volved, and that if the peripheral operation be undertaken without delay the ganglion may be saved. Furthermore, peripheral operations do not endanger life and often afford relief, and for these additional reasons, resection of the ganglion should not be attempted until the less radical procedure has been given a fair trial. The most serious drawback to the operation is its high mortality (22.2%); this is the strongest argument in favor of deferring an attack on the ganglion, until peripheral intervention has proved of no avail. Keen believes that in the future, with additional experience, the mortality may be diminished. As regards the percentage of permanent cures the results are most gratifying; of 100 cases the pain has returned in but 4, and in 2 of these the ganglion was imperfectly removed. It may be concluded, Keen states, that pain will not return in 1% or 2% with any such severity as to be comparable with the original, and that it will return in any degree in not over 4% or 5%. Keen favors removal of the entire ganglion; it is impossible to save the motor root, and the improved methods of dealing with the eye make it unnecessary to attempt to save the inner third of the ganglion. As a matter of fact there is no physical or physiologic division of the ganglion into thirds, and on this account it is unreasonable to attempt removal of an arbitrary section of the ganglion. As to the technic, the Hartley-Krause, or the Doyen operation is to be preferred. Hemorrhage, the most troublesome complication, arising usually from unavoidable laceration of the middle meningeal artery and the cavernous sinus, may always be controlled by packing, so that there is no necessity for ligation of the external carotid as a preliminary procedure. As the danger of infection is considerable, if the skull be reopened every effort should be made to complete the operation at one sitting. Preservation of the eye may be reasonably hoped for, if the lids be sutured together for 4 or 5 days, allowing space at either canthus or drainage and irrigation with boric acid, and if a Buller shield be worn continuously from 10 to 30 days after the operation. Spiller's examination of the specimens removed from the last 7 cases of the series and the results of his researches as to the pathologic changes, are summed up as follows: (1) The medullary substance of the nerve-fibers within the ganglion and its branches was much swollen, atrophied, or entirely gone, depending upon the intensity of the disease; (2) the axis-cylinders similarly were markedly degenerated or entirely destroyed; (3) the cells of the ganglion itself, in at least one case, were so degenerated or atrophied that there might be doubt if the tissue in certain parts of the field were ganglionic, were it not for the occasional nerve-cells seen; (4) the vessels were distinctly sclerotic, the lumen, in some instances, being entirely obliterated; (5) there was, in at least one case, a decided amount of increase in the connective tissue of the ganglion, sufficient in degree to stamp the alteration a distinct sclerosis. [C.H.F.]

2.—In this paper, full of sound advice, Otis considers the predisposing causes of pulmonary tuberculosis and the methods of limiting and, if possible, eradicating the disease. Efforts to this end must be made in two directions: that of eliminating the bacillus, and that of establishing an immunity to it by promoting a normal standard of health. That it shall ever be possible to accomplish the first is problematical, but the wandering of the bacillus can certainly be restrained, as it gains entrance through well-known channels. Congenital tuberculosis is so rare that it can be disregarded. The chief mode of conveyance of the tubercle-bacillus is through the dried sputum, although the milk and the meat of tuberculous food-animals can be a source of infection. For the latter reason all animals exhibiting signs of the disease when tested with tuberculin should either be destroyed or kept apart under observation for a time. Milk should be sterilized, as there is no more reason why one should use raw milk any more than raw meat. The best means of limiting the spread of tuberculosis is to destroy the sputum. There are two principal ways in which this end may be accomplished: (1) by compulsory notification, isolation and disinfection; (2) by enlightenment of the public as to the dangers of the sputum and as to means for their avoidance. Compulsory notification was enjoined upon the physicians of the Kingdom of Naples 100 years ago, and they were liable to a fine of 400 ducats if they infringed the law. In the case of a tuberculous individual in the infectious stage, but who is still compelled to work in a shop or factory,



or where he is a menace to others, Otis believes the best course to pursue usually is to remove him from his place of employment and send him to a hospital, or give him a pension sufficient for his maintenance. If others are dependent upon him, provision should also be made for them. A series of simple rules are given by which communication of the disease to others may be avoided. The room occupied by the tuberculous patient, or in which such a patient has died, is to be thoroughly disinfected. Street-cars, railway-carriages and all places where many people congregate should be thoroughly cleansed and aired. Dry sweeping should be abandoned. The streets of cities should be well watered and the dust not allowed to blow about. Sweepings from shops and stores should not be thrown in the street. Regarding the favorite soil, which is prerequisite for the growth of the bacillus in the body, Otis entertains the rather uncommon view that probably not even the tendency to the disease is inherited. Descendants of tuberculous patients are frequently born with a lower vitality, poor physical development, and lack of vigor, constituting a diminished resistance-potential. This condition is still more accentuated by the mode of life followed, usually a sedentary one. If the same condition exists in one not born of tuberculous ancestry, there is as great a likelihood of his contracting the disease as in the former case. In 2,700 young men examined, Otis found that only 5.9% had lost one or the other parent through tuberculosis. Every person of imperfect muscular development and deficient respiratory capacity is a possible candidate for the bacillus. Such a person should from childhood on be carefully watched. If his mother be tuberculous, she should not nurse him. As he grows older he should live an outdoor life. Gastric troubles should be prevented or remedied; the teeth carefully watched; all exhausting discharges stopped, and all excesses avoided. The child should be guarded against such diseases as whooping-cough, measles, and scarlet fever. Strict notification, isolation, thorough disinfection, and school-inspection should bring about a state in which it should be rare for a child to contract these diseases. Hypertrophied tonsils and adenoid growths, if they exist, should be removed. Enlarged cervical glands, if few in number and accessible, should be excised. The body should be strengthened and hardened in every way. Much harm is done by heavy clothing, neck-mufflers and chest-protectors. Woolen underclothing should be worn, but should not be too thick or too heavy. For women the Flynt waist is admirable. Cold bathing is most useful. The habit of breathing full and deep should be established; particularly should deep respiration be practised in convalescence from pneumonia and pleurisy with effusion. As for the environment, climate plays but a small role. Its influence may be an indirect one, as when, for instance, on account of its severity, it compels living in-doors a large portion of the year. The dwelling should be so constructed that abundance of sun and light can enter. Ventilation should be thorough and constant all the time, day and night. Night-air is not only *not* injurious, but on the contrary is often purer than day-air. In large cities, there should be an abundance of ample air-spaces supplied by wide streets and small parks. Blind alleys should not be allowed. Many occupations predispose to tuberculosis. The only way of lessening their influence is to make the hours of labor short and the conditions under which the work is pursued as favorable as possible. [D.R.]

4.—Stewart reports a case that is interesting from many points of view. The patient, a physician, 52 years old, of nervous temperament, had suffered for a number of years from gastric distress, apparently of the nature of hyperchlorhydria. Profoundly distressed by the death of his mother, his appetite failed, gastric symptoms became more marked, and he lost weight. After sudden profuse hæmatemesis exploratory celiotomy was performed and an infiltrating growth of the stomach was discovered, extending from the cardiac end almost to the pylorus. The stomach was not opened, but two enlarged mesenteric glands were removed. The microscopist reported these as tuberculous, although the appearance of the stomach at the operation had been that of carcinoma. Further studies, however, showed the glands to be carcinomatous. Curiously, the patient improved greatly after the operation, and soon became heavier than he had ever been. After holding his maximum weight for 5 months, he began to lose strength,

his appetite to fail, and gastric symptoms reappeared. The gastric contents showed the presence of hydrochloric acid; organic acids were absent; the digestive power was good. Normal digestive leukocytosis was present. Nine months after the first operation a second was performed and a duodenal fistula established. The stomach was incised, and the mucous membrane found everywhere normal except near the esophagus, where there was a distinct thickening and a circular hard ridge could be felt. The patient died 18 days after the operation, of aseptic peritonitis. At the autopsy two carcinomatous ulcers were found—one astride the lesser curvature and adherent to the liver, and the other at the greater curvature, with adhesions to the pancreas. Microscopic examination showed these ulcers to be adenocarcinomas. There was no diffuse carcinomatous infiltration of the stomach, and the ulcers were in nowise connected. Stewart believes that the primary lesion was a gastric ulcer, which subsequently became the seat of carcinomatous change. The fact that at the first operation the stomach appeared so extensively diseased cannot be satisfactorily explained, unless it be assumed that during the exposure the wall of the stomach became tonically contracted and thrown into folds, thus stimulating organic disease. The preservation of digestive leukocytosis was but natural, as from the situation of the growths they did not materially encroach upon the secretory powers of the stomach. Considerable stress is laid on a slight increase of the polymorphonuclear leukocytes, but as only one differential count was made, and as this percentage was not very high, definite conclusions are scarcely warranted. In the diagnosis of a case of doubtful carcinomatous ulcer, it should be remembered that the loss of weight and cachexia are likely to be out of proportion to what is usual in a case of simple ulcer. The occurrence of constant oozing of blood is significant of carcinoma rather than of ulcer. Important, also, is the lack of distinct response to treatment for ulcer, which rarely fails in a case in which the lumen of the pylorus is not obstructed. [D.R.]

### Journal of Nervous and Mental Disease.

November, 1898. [Vol. xxv, No. 11.]

1. On the Etiology and Pathogenesis of the Post-Traumatic Psychoses and Neuroses. JAMES J. PUTNAM.
2. On Resection of the Gasserian Ganglion. W. W. KEEN. With a Pathological Report on Seven Ganglia Removed by Prof. Keen. WM. G. SPILLER.
3. A Case of Cerebral Ataxia Affecting Chiefly the Right Upper Extremity, with marked Involvement of the Stereognostic Sense. INGERSOLL OLMSTED.

1.—Putnam points out that the **post-traumatic psychoses** appear to occur more frequently in males, perhaps as a result of their greater exposure. He divides the patients into two general classes: those with and those without social training. The latter class includes 179 of the 206 cases that form the basis of the paper. In only 28 was there distinct neuropathic heredity. The following classification of the causes of the post-traumatic psychoses is given: (a) predisposing, of social neuropathic or toxic character; (b) post-traumatic causes, as emotional, mental strain; or disabling injuries, severe injuries, with loss of consciousness; slight injuries, such as would cause apprehension; and actual lesions in the central nervous system; (c) disorganizing causes after the accident, such as excitement, anxiety, and emotional excitement produced by memory of the danger; in this class may be included pain and internal disorders; (d) influences produced by the attempt to substitute something for the normal equilibrium disturbed during the accident, such as disturbances of innervation, vasomotor disturbances, suggestion, habit, and the influence of lawsuits. These causes are further rearranged into two groups: those associated with actual lesions, and those acting through the mind. Attention is called to the frequency of disturbances of sensation, such as hemianesthesia, after injury. Sometimes these motor and sensory disturbances are due to severe lesions, as in a case in which myelitis developed. Slight bodily injuries have a particularly serious effect upon the nervous system when "they are received under such circumstances as to render them capable of disconcerting the reason and the



will, and creating an apprehension of greater harm to come." In cases, however, in which injuries are received in the pursuit of dangerous occupations, or particularly by persons who realize that no lawsuit can possibly be brought, symptoms of injury of the central nervous system rarely arise. The same is true of injuries received by persons who have cultivated self-restraint to a high degree, and these two may be considered as an exempted class. Sufferers from injuries are more subject to neurasthenia than to hysterical manifestations. Certain racial peculiarities are also worthy of note, particularly the injurious effects of the hopelessness of the Russian Jews. In conclusion, it is stated that there are no special manifestations that deserve the name of litigation-symptoms. Patients, seeking relief at law, are, however, likely to exaggerate the symptoms that exist. [J.S.]

3.—Olmsted reports the case of a man, 27 years of age, who suffered first from diplopia, which apparently was due to errors of refraction. This was followed by numbness in the thumb, index and middle fingers of the right hand, and a prickling sensation in the right side of the face. The only point of interest in the previous history was an injury received in bicycle-riding three years before. Examination showed the presence of slight lateral nystagmus, without ataxia of movement or diminution of power in any of the limbs, and slight tactile anesthesia in the right thumb and fingers. Two months later, the condition of the patient was markedly worse. There was ataxia of the right arm and hand, with inability to write. The stereognostic sense was greatly disturbed; otherwise sensation was normal. This disturbance of the stereognostic sense seemed to apply to the whole right side of the body. There was also loss of muscular sense, and a slight tendency to propulsion. Examination now showed marked contraction of the visual fields for white and red. Olmsted refers to three similar cases reported by Wernicke, Monakow, and Burr, but refrains from localizing the lesions. [J.S.]

#### Practitioner.

November, 1898. [Vol. lxi, No. 5.]

1. A Clinical lecture on the Parasite and Pathology of Malaria. PATRICK MANSON.
2. Four Cases of Abdominal Section for Severe Injuries without External Wound. A. MARMADUKE SHEILD.
3. Sulphur-Treatment During the Winter in Egypt. W. PAGE MAY.
4. Case of Hereditary Syphilis with Nervous Symptoms. A. C. MATCHETT.
5. Ptosis: An Operation for its Relief. P. H. MULES.

1.—There are three forms of malarial parasites, the tertian, quartan and estivo-autumnal. The first is recognized by the large size of the organisms, the hypertrophied corpuscles, and pallid hemoglobin. The quartan parasite fills, when mature, the whole of the corpuscle, does not cause hypertrophy of the latter, or paling of the hemoglobin, and carries a pigment larger, and is coarser in grain than the tertian. In the estivo-autumnal, which is prone to assume an adynamic and even a pernicious form, the parasite is small and has but little pigment. The flagellated body, which was the first form observed by Laveran, represents, Manson believes, a provision instituted by nature for securing the continuance of the species of the plasmodium malarie. It appears only in blood that has been outside of the human body for a certain time, a fact that proves that it is intended to live outside the human blood-vessels. The crescentic bodies are an antecedent of the flagellated forms, and the transformation occurs only when the parasite is outside the human body. It is evident that if there were not some provision for the existence and multiplication of the plasmodium outside of the human body, it would perish and the disease would disappear. Manson believes that the mosquito, in abstracting the blood, ingests the parasites, and constitutes the intermediary host, and he goes so far as to say that probably the tertian, the quartan, and the estivo-autumnal parasite has each its special species of mosquito as its special extracorporeal host. The reason that so few malaria-organisms are found in the blood on examination is that the majority are in the blood of the viscera and not in that of the periphery. The parasites destroy the blood-corpuscles and cause a solution of the hemoglobin, probably through

the medium of some toxin or toxins that they elaborate. [D.R.]

2.—Sheild reports four cases of **abdominal section for severe injuries without external wound**. The difficulty of determining the seat or the nature of the intra-abdominal lesion before operation is such that one should make a most careful exploration of the viscera before closing up the parietal incision. Two of the cases reported terminated fatally and at the autopsy it was discovered in each case that a wound of the intestinal tract had been overlooked. The mortality of these operations must always be high, but the operations should be looked upon as merely failures to save life, not as fatal in themselves. [C.H.F.]

3.—**Sulphur-waters** are useful externally in scabies, acne, furunculosis, and hyperidrosis; internally, to stimulate the glands of the alimentary canal and to increase the biliary secretion. They are especially indicated in so-called abdominal plethora, hyperemia of the liver and chronic gout, in rheumatism, rheumatoid arthritis and chronic catarrhal conditions of the alimentary canal, the bronchi, and the throat. May speaks highly of Helouan at the border of the Egyptian desert as a health-resort. It possesses strong sulphur-springs, and is an excellent winter-resort; patients can remain there from November till March, during which period the average temperature is about 61°. Rain is an event, and the average winter rainfall is less than  $\frac{1}{4}$  inch. A good sulphur-springs is also found at Hammam R' Irha, in northern Africa. It is somewhat colder than Helouan and the place is more suitable for invalids in the spring and autumn than in winter. [D.R.]

4.—Matchett reports the case of a girl, 14½ years old, with evidences of **hereditary syphilis**, who was seized with intense pains in the head and back, vomiting everything she ingested, and having convulsive seizures on the slightest provocation; the left leg becoming rigid, the foot hyperextended. One or two weeks later she lost the power of speech, although consciousness was retained, and she wrote with the left hand and backward (mirror-writing). Being fed only by the rectum, she wasted to a living skeleton and had a few small bedsores. Eventually she recovered. In the last sentence of his article Matchett says that there was probably some hysteria in the case. [It would seem that, practically all the symptoms could be readily explained on that basis. D.R.]

5.—The principle of **Mules' operation for ptosis** is the substitution of the frontalis muscle for the paralyzed levator. To accomplish this a permanent subcutaneous wire is interposed between the frontalis and the lid-edge, the lid being sufficiently raised before tightening the wire. The tendon of the frontalis by its wire-extension is carried to the ciliary margin, raising and keeping the lid in a normal position, while the frontalis is resting, and in action raising it to a required maximum. [C.H.F.]

#### Studies from the Department of Pathology of the College of Physicians and Surgeons, Columbia University, N. Y. Volume V. Part II. For the collegiate year, 1897-1898. Reprints.

- 11.—Some Laboratory-moulds. SMITH ELY JELLIFFE.
- 12.—On a Method of Isolating and Identifying Bacillus Typhosus, Based on a Study of Bacillus Typhosus and Members of the Colon-Group in Semisolid Culture-media. PHILIP HANSON HISS, JR.
- 13.—The Bacterial Action of Lymph Taken from the Thoracic Duct of the Dog. S. J. MELTZER and C. NORRIS.
- 14.—On the Occurrence of Typhoid Fever, Without Characteristic Lesions of the Small Intestines. EUGENE HODENPYL.
- 15.—A Modification of Cullen's Method of Preparing Fresh Sections for Microscopic Work. EUGENE HODENPYL.
- 16.—Further Studies (Third Series) on the Gonococcus (Neisser). HENRY HEIMAN.
- 17.—A Case of Acute Leukemia. W. H. THOMSON and JAMES EWING.
- 18.—Suture of the Cornea After Removal of the Lens. W. H. BATES.
- 19.—Studies of the Ganglion-cells—A Preliminary Communication. JAMES EWING.
- 20.—On the Therapeutic Value of Blood-letting—An Experimental Study. ISAAC LEVIN.



11.—Jelliffe describes and pictures the more common **laboratory-moulds** that contaminate culture-media in bacteriologic studies. [D.R.]

12.—Hiss recommends the following media for the differentiation of the typhoid bacillus. The tube culture-medium is made up of 5 gm. of agar; 80 gm. of gelatin; 5 gm. of beef-extract; 5 gm. of sodium chlorid; and 10 gm. of glucose to the liter. The medium is titrated, to determine its reaction, phenolphthalein being used as the indicator. The requisite amount of HCl or NaOH solution is added to bring it to the desired reaction, that is, one indicating 1.5% of normal acid. To the clear medium one or two eggs well beaten in 25 cu. cm. of water are added, the mixture boiled for 25 minutes, and passed through a thin filter of absorbent cotton. The glucose is added after clearing. The medium used for plating consists of 10 gm. of agar; 25 gm. of gelatin; 5 gm. of beef-extract; 5 gm. of sodium chlorid; and 10 gm. of glucose. The medium should never contain less than 2% of normal acid. The typhoid bacillus alone, of all organisms, has displayed the power of giving rise both to threads in the plating medium and to uniform clouding in the tube-medium, hence these two characteristics may prove to be of great value in the identification of the organism. [D.R.]

13.—Meltzer and Norris have found that the lymph from the thoracic duct of a dog possesses marked germicidal action on the typhoid bacillus. [D.R.]

14.—Hodenpyl reports a case of **typhoid fever without the characteristic lesions in the small intestine**. Neither the intestines nor the lymphatic structure showed any distinct changes. The spleen was slightly enlarged and from it the typhoid bacillus was isolated. Clinically the case had run the typical course of typhoid fever. No reference is made to the Widal's test or to the diazo-reaction. [D.R.]

15.—Hodenpyl has devised a modification of Cullen's method, which prevents shrinkage and distortion of sections. He fixes the section to the coverglass with egg-albumin prepared by adding 50 cu. cm. of egg-albumin to 150 cu. cm. of distilled water, and using sufficient of a solution (usually about 50 cu. cm.) of salicylic acid, which has been rendered slightly alkaline with lithium carbonate, completely to dissolve the albumin. The sections are soaked in this for 2 or 3 minutes and then transferred to the coverglass. [D.R.]

16.—Heiman records the following conclusions: (1) The gonococcus can be kept alive in certain liquid culture-media as long as 32 days. It can probably be transplanted indefinitely from one culture-medium to another. (2) Heiman has not been able to find the gonococcus in the normal urethra. (3) Rectal gonorrhea can be detected by suitable examination. (4) Gonorrheal arthritis may be a sequel of ophthalmia of the newborn. Heiman found the gonococcus in two cases of gonorrheal arthritis. (5) Experiments on the inoculation of the eyes of newborn rabbits and kittens yielded negative results. [D.R.]

17.—See this JOURNAL, Vol. I, No. 11, p. 456.

19.—See this JOURNAL, Vol. I, No. 16, p. 675.

20.—Levin found that **venesection** in animals that had been injected with diphtheria-toxin, pneumococcus, or ricin did not prolong life; indeed, it seemed to hasten death. [D.R.]

### Edinburgh Medical Journal.

November, 1898. [N. S. Vol. iv, No. 5.]

1. The Physiological Action and Therapeutic Properties of Podophyllin, with Special Reference to Indian Podophyllin. HECTOR W. G. MACKENZIE and WALTER E. DIXON.
2. Paralysis of the Sixth and Seventh Cranial Nerves. G. A. GIBSON.
3. On the Innervation of Intracranial Vessels. ALEXANDER MORISON.
4. On the Microscopic Characters of Retained Products of Conception. T. W. EDEN.
5. Remarks on Dyspepsia and a Diet. A. LOCKHART GILLESPIE.
6. Remarks on the Treatment of "Difficult Stricture." A. A. WARDEN.
7. Some Rare Forms of Abdominal Tumors. JAMES OLIVER.

1.—Mackenzie and Dixon examined a large number of different preparations of Indian and American **podophyllin** and their derivatives, and studied their physiological effects on animals, verifying the more important results in a healthy man; and then they used these substances in the treatment of patients suffering from chronic constipation. As a result of this investigation the conclusion is reached that Indian podophyllin is an active purgative and a useful therapeutic agent, that it may be substituted for *P. peltatum*; but it is important that the physician should know which sample he is prescribing, as the Indian variety is nearly twice as physiologically effective as the American. The active principles contained in the crude resin are (a) crystalline podophyllo-toxin, and (b) podophyllo-resin, both of which act as excellent laxatives in small doses, without secondary constipation or other objectionable symptoms. While these substances act similarly on the alimentary tract, only the podophyllo-resin exerts a true cholagogue effect, which shows this to be due rather to a large increase of the solids secreted than to an increased quantity. Both exert their specific activity when injected hypodermically in alcoholic solution. This use is, however, not permissible in man on account of the irritation produced. [S.M.H.]

2.—Gibson reports a case of **paralysis of the sixth and seventh cranial nerves** in a woman, aged 49 years, who, when about 12 months old, was noticed to present a sudden change in her appearance. From that time there was loss of power over the right side of the face, without any affection of that side of the body. A study of the nervous system showed no change in the sensibility of any part. All of the muscles of the right side of the face were paralyzed, including the orbicularis palpebrarum and the orbicularis oris. There was greater intensity in hearing musical notes on the right side, and the retrahens aurem and the anterior part of the digastric muscle were paralyzed. The sense of taste was intact. In addition, there was paralysis of the external rectus on the right side. In the light of these phenomena it is evident that the facial lesion must have been either nuclear or infranuclear. The involvement of the orbicularis oris suggests that it was not nuclear, but lower down, after the hypoglossal twig has joined the nervous supply of the orbicularis palpebrarum. It must, on the other hand, have been situated above the origin of the nerve to the stapedius muscle. The retention of the sense of taste necessarily located the lesion above the geniculate ganglion. The paralysis of the sixth nerve, indicated by the loss of power of the external rectus, had also to be considered. Two lesions are capable of causing simultaneous paralysis of the sixth and seventh nerves. One involves the nucleus of the sixth and the fibers of the seventh as they pass around it; and the other the trunks of both nerves as they pass along the base of the brain. The pathologic diagnosis in the case reported points to a lesion of the sixth of an acute nature or to some meningeal lesion of the base of the brain. The prognosis was looked upon as hopeless and treatment as of no avail. [S.M.H.]

3.—Morison made a study of the brains of the fetuses of cats, dividing the organs into moderately small pieces and treating them by Sihler's hematoxylin-method, some portions being further stained in hematoxylin-solution for 24 hours after their first immersion. He succeeded in staining the nerves coursing with the vessels of the pia mater, twisting in some instances around them and terminating in a plexiform manner on them, a mode of termination being most visible in the large vessels. In some preparations a series of tassel-shaped bundles of nerve-fibers composed of smaller bundles were seen, and again others of still finer fibers. The bundles lay on each side of the artery, which divided into a stout circle and then proceeded as a single tube. The origin of these bundles was not determined. They had no general sheath, but the individual bundles cohered. The largest vessel in association with the nerves measured 20 $\mu$  across and the smallest about 10 $\mu$ . The nerves bore a relation in size to the vessels. The individual bundles of nerves were interrupted at intervals by nuclear bodies which were more numerous in the finer fibers, and were an adumbration of the nuclear dispersing and connecting points of the penultimate and ultimate flexes. The nerves that innervate the pia mater are similar in character to those that follow the vessels and they may occasionally be seen to take their departure from the vessel-nerves. The nerves in both the pia mater and



the vessels terminate in an excessively fine plexus. The nuclear points of dispersion vary in size, accordingly as they are penultimate or ultimate, from bodies 1.5 to 2 $\mu$ . across to fine points which cannot be accurately measured, while the finest ramifications end by a series of small refracting points. Nerve-trunks in some instances show ganglion-cells. These are unipolar and have a well-marked nucleus and nucleolus. It is believed that further research will still more extend the anatomic distribution of the cerebral vascular nerves. [S.M.H.]

4.—It is sometimes necessary to recognize or exclude pregnancy by microscopic examination of (1) matters expelled from the uterus or removed with the finger or the curet; (2) blood-clot found in the peritoneal cavity or in a dilated oviduct or broad ligament. Products of conception may be either fetal or maternal; the only fetal structure that need be considered is the chorion; the only maternal structure the decidua vera. Chorionic tissue is unmistakable when fresh and fairly well preserved. The villi are composed of (1) a covering epithelium, (2) a delicate connective tissue stroma, (3) numerous wide capillaries. Of these the epithelial covering is unique in character, and therefore of prime importance for study. The presence of budding plasmodium not only determines the existence of pregnancy, but also refers it to the earlier months of gestation. The maternal structure or decidua is the endometrium modified by certain changes excited in it by the presence of a fertilized ovum in some part of the genital tract. It is important to bear in mind that decidual formation occurs in the uterus in both uterine and ectopic pregnancy. Eden believes that error may arise in cases of tubal blood-clot by mistaking sections of the plicæ of the tubal mucosa for chorionic villi. Decidual cells are in themselves less conclusive evidence of gestation than villi, and from their resemblance to cells of malignant origin an error may be attended with disastrous consequences. [W.K.]

5.—Gillespie thinks that patients treated for symptoms of gastric disturbance oftentimes are suffering from **auto-intoxication from intestinal fermentation**. In such cases, by resting the stomach and giving small quantities of milk frequently, thereby diminishing the number of bacteria admitted or altering their species; by the use of calomel to destroy the bacterial forms in the contents of the duodenum or jejunum, creosote or guaiacol to deal with those in the ileum, and of salol to act on the microorganisms in the lower bowel; and by the restriction of malt and spirituous liquors, a rapid subsidence of the symptoms can be effected. Cheese is of benefit in intestinal fermentation, provided the stomach can bear it. It has the power of arresting or inhibiting those bacterial processes that are the actual agencies in the production of intestinal dyspepsia. This is due to the antagonistic properties of two classes of organisms. A strict, hard and fast, empiric diet is disapproved of. A rigid dietary, continued for a limited period of time, with permission to increase it as far as compatible with comfort, oftentimes does much good. [S.M.H.]

6.—In the treatment of those strictures which are not amenable to treatment by gradual dilatation, Warren employs internal urethrotomy. A small filiform bougie is tied in the urethra for 48 hours to temporarily dilate the stricture. After division with a urethrotome, subsequent dilatation will be much facilitated by using metal bougies armed with gum-elastic conductors; the latter serve as a guide to the bougie, rendering its passage much easier, and saving the patient much unnecessary pain. [C.H.F.]

7.—Oliver reports four cases of **unusual abdominal tumors**. The first was one of cyst of Gärtner's duct, occurring in a young, unmarried woman, 24 years of age, who had suffered for 4 months from severe pain in the lower abdomen, associated with menstruation, and a marked increase in the menstrual discharge. At operation a cyst was found that had developed very low down in the substance of the right broad ligament, and that towards the left side was incorporated with the anterior surface of the uterus. The inner lining of the cyst was smooth and looked like mucous membrane. The cyst-wall could not be shelled out. The cavity was drained and the patient made an excellent recovery. The second case was one of cyst of the mesentery, occurring in a married woman, aged 36 years, who had borne one child and had had one miscarriage. For 15 months the patient had complained of pain and a throbbing

sensation in the left half of the abdomen and had noticed that her abdomen was increasing in size. The abdomen was opened by a mesial incision extending from 2 in. above to 3 in. below the umbilicus. The tumor, which was of a deep-blue color, was tapped, and 3 pints of fluid removed. After the tension exerted by the fluid was relieved the vessels in the cyst-wall became apparent and enlarged greatly. The small bowel was crowded around the base of the cyst, which sprang from the spine a little to the left of the median line. The sac was stitched to the abdominal wall and was drained. For nearly three weeks after the operation the temperature varied from 100°F. in the morning to 102°F. at night; but this eventually subsided and the patient made a satisfactory recovery. The third case was one of hemorrhagic peritonitis occurring during the puerperal state. Nearly three quarts of hemorrhagic fluid were removed, the sac drained, and the patient recovered without an untoward symptom. In the fourth case the tumor was formed by the matting together of the viscera and the extravasation of feces from the ascending colon in consequence of malignant disease. The patient died of exhaustion 4 months after she had first observed the tumor. The autopsy showed that the tumor was formed by the ascending colon, ileum, vermiform appendix, gall-bladder and a small portion of the duodenum. Extravasation of fecal matter had taken place primarily into the cellular tissue behind the ascending colon and had been for a time confined by the matted structure, and secondarily into the peritoneal cavity. [C.H.F.]

#### Berliner klinische Wochenschrift.

November 14, 1898. [35. Jahrg., No. 46.]

1. The Prevention of Puerperal Fever. M. HOFMEIER.
2. The Magnet-Operation. J. HIRSCHBERG.
3. The Diagnosis of Atrophic Gastric Catarrh. N. REICHMANN.
4. A Case of Congenital Struma, with Tertiary Syphilis. MORITZ FÜRST.
5. A Case of Severe Intoxication after Injection of Mercurial Oil. R. LEDERMANN.
6. The Berlin-Brandenburg Hygienic Union for Pulmonary Invalids and its Sanatorium at Belzig. B. FRÄNKEL.

1.—Hofmeier reports 1,000 cases of delivery in the Würzburg obstetric clinic in addition to the 3,000 cases already reported, with the object of demonstrating the possibility of avoiding infection in obstetric institutions in which teaching is conducted by thorough measures of disinfection. The pulse and temperature were carefully noted in all of the cases occurring from May 26, 1896, until April 15, 1898. Of the 1000 cases about half were in primiparas. There were 7 deaths in the series, one from peritonitis following perforation of the vermiform appendix, three from tympanites of the uterus, one from eclampsia, one from rupture of the uterus and one from pulmonary tuberculosis. In all of the fatal cases death was thus the result of the most severe complications, and there was no instance of death from ordinary infection. Among the entire 4,000 cases of labor only 5 deaths from infection were discovered. One of these patients was brought into the hospital immediately before the birth of the head; another patient was undergoing surgical treatment for suppurative hip-joint disease; two patients were brought into the hospital with symptoms of peritonitis and endometritis; one patient had been treated in the hospital for gonorrhea; and one was extremely filthy and persisted in handling her genitalia before delivery. These results, covering a period of 9 years, show, in spite of the use of the material for purposes of instruction, an extremely low mortality and should be convincing proof of the utility of careful disinfection of the puerperal woman. It is believed that thorough disinfection of the hands by the usual methods is sufficient for all practical purposes, without resort to the use of gloves. Hofmeier believes that a reduction from the mortality reported in many hospitals utilized for purposes of instruction might be brought about by a more careful and thorough disinfection of the women. [W.K.]

2.—Hirschberg relates his experiences with two cases of **splinters of steel removed from the eye with the electromagnet**, in one instance 5 months having elapsed before the attempt to remove the foreign body was made.



The sideroscope was used in each instance for purposes of localization; the introduction of electric cars with trolley-wires has by some been said to have interfered with the workings of the sideroscope, but Hirschberg has not found this to be the case. He has found the large stationary electromagnet of Edelmann much more efficient than the small portable magnet usually employed. It is of service in removing small splinters from the posterior chambers to the anterior, when a small incision into the cornea will enable the object to be extracted. In many instances it does away altogether with the necessity of an incision into the sclerotic coat. [C.H.F.]

3.—The symptom that Reichmann regards as almost pathognomonic of **atrophic gastritis**, consists in moderate nausea coming on particularly after meals, persisting for considerable time, and accompanied by eructations of fluid usually to the amount of from 50 to 60 cu. cm., having a peculiar, rather salty taste, without any special odor, resembling in appearance cloudy water, and often slightly foamy upon the top. Microscopically, the fluid seems to contain only a few leukocytes, and here and there squamous or cylindric epithelia. It is alkaline in reaction, and sometimes a slight precipitate forms upon boiling; it becomes distinctly cloudy upon the addition of acetic acid. It contains neither ptyalin, nor pepsin, nor has it any digestive power upon either starches or proteids, so that it seems to be neither saliva nor neutralized gastric secretion. In conjunction with the nausea and eructation there is usually a disagreeable sensation of constriction about the body, commonly on a level between the umbilicus and the xiphoid. Entire absence of gastric secretion is not characteristic of atrophic gastritis alone, as it occurs frequently with carcinoma and in certain instances from purely nervous causes. If, however, the gastric secretion be absent continuously for a long period, particularly if this period be protracted over years, the suspicion of carcinoma or of a purely nervous difficulty must be cast aside. A further characteristic of the disease is that it usually occurs beyond middle life and is rare in the young, and its victims do not present the characteristics of gastric neurasthenics. The symptoms that have been described are not inevitable in the course of atrophic gastritis, but are usually present. [D.L.E.]

4.—Fürst reports the case of a child whose father had been infected with syphilis 5½ years before its birth. After undergoing specific treatment he married 2½ years after the infection. The wife was at that time healthy, and the first pregnancy ended in a miscarriage. She was then given specific treatment, and the husband also was again put under treatment. The second pregnancy went to term, but the child was at once seen to present a tumor larger than a walnut in the region of the thyroid. Within the first 6 weeks of life, however, this decreased in size, until the appearance was almost normal, although the thyroid was still palpable at the age of 10 months. It is believed that this thyroid enlargement was due to congenital syphilis, and that its decrease in size within the first few weeks of life was due to the fact that the mother was at that time still taking specific treatment. [D.L.E.]

5.—Ledermann divides the **mercurial salts** that are used for injections into the soluble and the insoluble. The soluble are difficult to use because injections must be made so frequently as to render the treatment burdensome for the physician, and painful and expensive for the patient. Of the soluble salts Ledermann has had good results from the salicylate and the thymol compound, unfavorable results having been so slight that he thinks their use may safely be continued. Gray oil, however, has repeatedly caused death from mercurial poisoning, probably owing to its causing changes in the tissues; perhaps it is somewhat shut off by newly formed fibrous tissue at first, and then, either from changes in the drug itself or from changes in the tissues, there is a sudden absorption. Therefore, gray oil should be discarded as far as concerns its use by injection. Treatment by inunction is considered the most satisfactory. [D.L.E.]

6.—The method of caring for cases of **pulmonary tuberculosis** that has been adopted in Berlin is one that is worthy of serving as an example for other large towns. An association with this object in view has been formed, whose benefits are applicable to residents of the city of Berlin and the province of Brandenburg. No difference is made in the treatment because of social position or religious belief. The purpose of the association is to erect and to support in-

stitutions for the treatment of its members. The association now has 523 members, each of whom pays 5 marks (\$1.25) yearly, and the number of members is growing constantly. There have been repeated bequests and gifts to the association, and it is intended that buildings should not be erected until the endowment and dues will make the institution self-supporting, and there will be no necessity for appeals to the public and restrictions in management in order to keep the institution going. The building is to consist of a central portion, on the front of which, looking toward the south, is to be a large sun-corridor. A wing is to run to each side and to project in front of the central building, in order that, so far as possible, the sunlight may penetrate every room throughout the whole time that the sun is shining. Each sleeping-room is to have at least 35 cubic meters of air-space for each bed. Back of the central building and reached by a corridor is to be the dining-room. Both men and women are to be admitted, the sexes being separated, and it is particularly intended that the institution shall provide a place in which people do not become city-charges, but are unable to pay for expensive treatment, shall be properly cared for: such people, for instance, that make a livelihood from small professional positions and the like. The financial success of this wise charity is already almost assured. [D.L.E.]

### Wiener klinische Wochenschrift.

October 20, 1898. [11. Jahrg., No. 42.]

1. A Memorial Address in memory of Leopold Ritter v. Dittel. E. ALBERT.
2. The Accommodation of Eyes in the Animal Series. THEODOR BEER.
3. Chronic Infection with Glanders. JOSEF BATKO.
4. Circumscribed Gumma of the Trachea. FRIEDRICH HANSZEL.

3.—Batko reports the case of a hostler, 30 years old, who infected himself while taking care of a number of horses suffering from **glanders**. From him the disease was conveyed to his wife and to two children. In the parents the symptoms of bronchial catarrh were marked, probably from infection of the bronchial mucous membrane with glanders. In the children the disease was mild and offered some prospect of recovery. Injections of mallein were tried, but without much benefit, and the patients, resisting treatment, they were abandoned. [D.R.]

4.—Hanszel reports a case of **gumma of the trachea** in a woman, 49 years old, without a syphilitic history. The tumor almost occluded the trachea and caused marked dyspnea. Under the use of potassium iodid it diminished in size. [The evidence upon which the diagnosis of gumma was made seems slender. D.R.]

October 27, 1898. [11. Jahrg., No. 43.]

1. The Sideroscope and the Electromagnet; their Use in Ophthalmology. M. SACHS.
2. Hemorrhage after Tracheotomy and Esophagotomy. FRITZ KERMANN.
3. The Physiology of Movements of the Gluteal Region. ZUCKERKANDL and ERBEN.

1.—Sachs reports 32 cases in which the **sideroscope** and the **electromagnet** were used for the purpose of diagnosing and removing particles of iron lodged in the eye. These instruments are especially adapted to cases in which a number of small particles are imbedded in the eye. The sideroscope should be used not only in cases that are difficult of diagnosis, but in every case in which the presence of a foreign body within the eye is suspected. [G.B.W.]

2.—There is scarcely an operation that while indicated by such dangerous conditions, is in itself of so little consequence as **tracheotomy**. Therefore **serious bleeding** following this procedure is all the more trying to the surgeon, especially as it is at times almost impossible to determine the source of the hemorrhage. The bleeding may be either so acute that the patient dies in a few moments, or in other cases there may be coughing and spitting up of blood for days and even weeks. Hemorrhage following tracheotomy may originate in any of the three following ways: (1) Through erosion of the vessel-wall by suppuration; (2)



through the spreading of new-growths into the vessel-wall, with secondary necrosis; (3) through pressure-necrosis, generally caused by the cannula. The bleeding may be classified according to the following scheme: (1) Bleeding caused by the primary disease (carcinoma, etc.) and not dependent upon the tracheotomy; (2) bleeding resulting directly from the tracheotomy; (a) at the end of the operation, from unclosed vessels, (b) from leaving the cannula too long *in situ*. To prevent hemorrhage in connection with tracheotomy the operator must be careful to ligate all bleeding vessels and to avoid ulceration and erosion by using soft-rubber cannulae in cases in which it is necessary to keep the cannula in place for some length of time. After the bleeding has once begun it is almost impossible to arrest it because of the difficulty of locating its source. If the bleeding point can be found, the part should be laid open and the hemorrhage stopped by ligation. [G.B.W.]

November 3, 1898. [11. Jahrg., No. 44.]

1. The Antisepsis and Asepsis of the Clinic at Lewberg. RYDYGIER.
2. The Anatomy of the Optic Chiasm in Man. FRIEDRICH V. SÖLDER.
3. Intestinal Hemorrhage and Stenosis after Strangulation of Herniæ. L. LUKSCH.

1.—Rydygier's technic of aseptic and antiseptic surgery possesses some points of interest. In treating infected wounds, he uses an antiseptic dressing instead of trying to remove or cleanse all infected areas and then applying a purely aseptic covering. He claims that it is possible to permeate the tissues with a solution of sufficient strength to at least check the growth of bacteria and yet not devitalize the surrounding structures. He uses wooden operating tables instead of glass, claiming that the development of pneumonia, etc., may be favored by the cold glass. The catgut is to be sterilized by dry air at a temperature of 140°. Rydygier also believes the cleansing of floors and walls with sublimate or carbolic-acid solutions to be unnecessary, and the ordinary methods of cleansing with soap and water to be sufficient. [G.B.W.]

2.—Two opinions as to the anatomy of the optic chiasm prevail among scientists. According to the one, represented chiefly by von Kölliker, there is a complete decussation of the fibers of the optic nerve in the chiasm; according to the other, mentioned by most authorities, there is only a partial decussation. v. Sölder endeavored to solve the question by estimating the number of the fibers in the optic nerve, the optic tract, and the chiasm—a very laborious process. The number of fibers divided by sagittal median section of the chiasm must vary according as the optic nerves decussate completely or only partially and a comparison of the number of fibers in the optic nerve, in the optic tract, and in the sagittal median section of the chiasm ought to reveal whether the fibers of the optic nerve cross completely or not. If the decussation is complete the sagittal section of the chiasm divides the sum of the fibers contained in the optic nerve and optic tract. If, however, the number of fibers in the chiasm is smaller than the number of the fibers of the optic nerve and the tract, it is proved that a part of the fibers of the optic nerves do not cross in the median line, but remain uncrossed and pass directly into the optic tract. By counting the fibers in a given field of a section of the nerve, the tract, and the chiasm, it has been found that the sum of the fibers in the first two was much larger than the fibers in the median section of the chiasm. Furthermore, a study of the square area of the transection of the three showed that the area of the optic nerve and tract together is much larger than the area of the chiasm, the relation of nerve to tract to chiasm being approximately as 6 to 8 to 9. It may therefore be considered as proved that not all of the fibers decussate in the chiasm, and that there is a considerable number of uncrossed fibers. [D.R.]

3.—Suksch states that complications following **strangulation of a hernia** coming on after an interval of apparent health, are comparatively little spoken of. Two such complications are **hemorrhage from the bowel and stenosis**. Hemorrhage comes on in the majority of cases within 24 hours after reposition of the hernia, though it may not take place until after 6 or 7 days, the patient in the meanwhile having normal bowel movements. The occur-

rence of early bleeding is ascribed to the congestion of the mucous membrane in those cases in which the bowel has not been incarcerated long enough to become gangrenous. The hemorrhage after an interval is due to the voiding of gangrenous areas of mucous membrane, with consequential rupture of the supplying capillaries. In a few rare cases the hemorrhage may come from the bowel leading to the hernia and not from the portion forming the rupture. The prognosis in cases of early hemorrhage is favorable, but it is not so good in those cases in which the bleeding occurs after a lapse of a few days. Stenosis of the intestine, following strangulated hernia and occurring after an interval of apparent health, may arise in two ways: either through the development of fibrous tissue at the seat of original stricture or through the formation of peritoneal adhesions, which may twist or bend the bowel so as to obstruct its lumen. The treatment of intestinal stenosis should consist in resection of the constricted portion, with end-to-end or lateral anastomosis. [G.B.W.]

November 10, 1898. [11. Jahrg., No. 45.]

1. Aneurysm of the Valves of the Heart. A. DRASCHE.
2. The Digestion of Casein. WILHELM KNOEFFELMACHER.
3. So-called Congenital Stenosis of the Pylorus and its Treatment. MEINHARD PFAUNDLER.

1.—Drasche reviews the literature of **aneurysms of the heart-valves**, which begins with a case published by Morand in 1729, although the first accurate description was given by Loewel in 1843. Drasche himself reports 3 cases, in all of which the mitral valve was affected. The first case was in a woman, 66 years old, who never had rheumatism. When she came under observation she was somnolent and cyanotic; the jugular veins were distended and pulsated; there was hydrothorax, ascites, and edema of the legs. At the apex of the heart during the systole was heard a sound, beginning softly and becoming of a groaning character, and during the diastole a short rough murmur. At the base of the heart the two sounds could be heard, and in addition a postsystolic, sharply localized, loud, rudimentary tone. The diagnosis of stenosis and insufficiency of the mitral valve was made, and in view of the groaning and at times whistling ventricular sounds the obstruction was assumed to be marked. The cause of the postsystolic murmur could not be determined. At the autopsy, the lateral leaflet of the mitral valve was bulged out, so that three contiguous aneurysms of the valve resulted. There was no marked obstruction of the left auriculoventricular orifice, but the aneurysms, by bulging into the opening, produced a considerable obstruction of the orifice. The aneurysmal pockets were separated by broad bands of cicatricial fibrous tissue, and were evidently of inflammatory origin. Considerable abnormality was also found in the chordæ tendineæ. It is probable that to the latter condition was due the occasional musical quality of the murmur. The second case was that of a young man of 19; the cardiac area was much enlarged and a strong systolic thrill was present; at the apex of the heart a rough systolic sound extending into the diastole could be heard, whose point of maximum intensity was at the insertion of the second rib of the left side, where it had a rasping character changing to a long aspirating sound; soft murmurs were heard also at theortic cartilage. The pulse was of a water-hammer type. At autopsy the anterior leaflet of the mitral valve was found to be the seat of an aneurysm projecting into the auricle. The aortic orifice was irregular, but not constricted, and the valves were large and deep. At the top of the septum was a semilunar space 1.5 cm. long and 0.5 cm. wide, through which the two ventricles communicated. The aneurysm was also due to the endocarditis and had perforated into the left auricle. It is interesting that the perforation of the septum had not during life given rise to cyanosis. The third case of aneurysm of the mitral valve was found in a woman, 58 years old, who presented physical signs of mitral stenosis and insufficiency. At the autopsy the posterior leaflet showed 4 lentil-sized depressions separated by bands. The aneurysms were probably not the result of endocarditis, but were due to the blood-pressure. Through the shortening of the chordæ tendineæ and the degeneration of the papillary muscles, the valve was more firmly fixed and more exposed to the pressure of the blood. The cause of aneurysm of the mitral



valve, as well as of that of the rarely affected tricuspid valve, is endocarditis; atheromatous processes are the cause of aneurysm of the aortic valve. Probably all the valves of the heart may be the seat of aneurysm. Valvular aneurysms are most frequently found in the mitral valve, which is but natural in view of the more frequent occurrence of endocarditis on the left side. The anterior leaflet is more frequently affected than the posterior. The effects of the aneurysms vary. They may cause narrowing of the auricle or the ventricle. Aortic valvular aneurysm may project into the aortic opening and cause obstruction. Large mitral aneurysms may cause stenosis of the left auriculo-ventricular orifice. Perforation of the aneurysm may lead to bulging and even perforation of the septum. As aneurysms are chiefly dependent on endocarditis and atheroma, the symptoms are those of these diseases, and they have no separate symptomatology; yet the auscultatory phenomena may have diagnostic significance. Aneurysm of the mitral may produce a rudimentary murmur immediately following the systole. Watson heard in a case of ruptured mitral aneurysm a systolic double murmur, and Ogle, under similar conditions, a loud murmur immediately following the systolic sound and distinguishable from the second tone of the heart. Frequently in perforated aneurysms the sounds are most peculiar—humming, blowing, groaning, hissing, piping, singing, whistling, scratching, or musical. Although musical sounds are heard frequently, for which the necropsy affords no explanation [the cause is at times probably aberrant chordæ tendinæ], they can usually be explained by the conditions found if they were heard in a case of ruptured aneurysm, and this fact renders the diagnosis of valvular aneurysm at times possible. The murmurs depend upon the existence of vibrating membranes or other structures that would be especially present after perforation of the aneurysm. A musical murmur, especially in the aorta, which was not present in an apparently healthy individual the day previously, may be looked upon as dependent on valvular aneurysm, as similar phenomena have been found only after traumatic influences, such as lifting heavy weights or excessive exercise. Musical murmurs due to aneurysms may disappear for days and then return. They may vary in time, place, and quality. They can only be properly interpreted when taken in connection with other physical signs yielded by the heart. [D.R.]

3.—Karl Stern described a short time ago a case of **congenital stenosis of the pylorus** in a young infant in which a celiotomy was performed, but eventration of nearly the entire abdominal contents occurred and the child died. Pflaundler maintains that neither in Stern's case nor in the majority of those reported was there any true congenital stenosis of the pylorus. Often a healthy stomach is found in infants at autopsy in a state of contraction, producing the appearance of an annular tumor with hyperplastic walls, and the lumen may be so contracted as to be almost absent. These conditions might during life give rise to symptoms of stenosis, but the condition is purely functional—a spasm of the pyloric muscles that has no anatomic substratum, and hence operation is entirely unjustifiable. Pflaundler recommends local anodyne applications, warm compresses, baths, and systematic lavage. [D.R.]

### Deutsche medicinische Wochenschrift.

October 27, 1898. [24. Jahrg., No. 43.]

1. The Treatment of Erysipelas with Metakresolantylol. WILHELM KOELZER.
2. The Serum-Therapy of Recurrent Fever. HUGO LOEVEN-THAL.
3. Oblique Fracture of the Patella. S. KOFMANN.
4. Gummatous Tumors of the Palm of the Hand. O. v. LEY.

1.—Metakresolantylol contains 40% of metakresol and 60% of anytin, a body that Helmers has isolated from ichthyol. Metakresolantylol was used in the strength of 1% or 3% solutions, the percentage expressing the amount of metakresol. Employed externally, it was found to be efficacious both in experimental erysipelas in animals and in natural erysipelas in human beings. It was applied by means of a brush and was painted on for from 20 to 30 minutes at the first application and then every two hours for from 10 to 20

minutes. The disease-process was usually promptly arrested. [D.R.]

2.—This article will be abstracted when concluded.

3.—Kofmann reports two cases of **oblique fracture of the patella**, in both of which there was little disturbance of function. The fracture was in each produced by direct violence, and direct osseous union did not take place. In one case the pain was severe and the swelling great, but in the other little discomfort or inconvenience was noticed. [G.B.W.]

4.—It is often difficult to diagnose **gumma of the hand** from other tumors in this region, and the surgeon often discovers that he has removed gummatous tissue when operating for what he supposed was a sarcoma or other non-syphilitic neoplasm. This accident is to be deplored because of the rapid recurrence that follows extirpation of gummata and this recurrence may finally cause the death of the patient. v. Ley reports a case from his own practice that was operated on for supposed "panaritium tendinosum." Instead of improving the condition by the incision, the tumor grew rapidly in size, though fortunately for the patient multiple lesions developed over other parts of the body, so that the real state of affairs was revealed, and the proper treatment instituted. The tumors most easily confounded with gumma are cysticercus cellulose, carcinoma, sarcoma, and fibroma, though the last has not yet been observed occurring in the palm of the hand. [G.B.W.]

November 3, 1898. [24. Jahrg., No. 44.]

1. The Place of Obesity, Gout, and Diabetes in the Nosologic System. WILHELM EBSTEIN.
2. Changes in the View Concerning Inflammation. PAUL GRAWITZ.
3. Non-Gonorrheal Conjunctivitis. TH. AXENFELD.
4. Critical Remarks Concerning Lewin's Position on the Question of Immunity. E. BEHRING.
5. A Reply to the Preceding Article. L. LEWIN.
6. Serum-Therapy in Recurrent Fever. HUGO LOEVEN-THAL.

1.—There can be no doubt that **obesity, gout, and diabetes** are closely related. Any two or all three of them may be present in the same person. They are usually classed among the constitutional diseases, but what is meant thereby is not readily determined, as writers differ widely. The diseases are hereditary, and are especially prone to descend to those children that most closely resemble their parents in external features. In obesity there is certainly a hereditary and congenital predisposition. Certain individuals in whose family obesity is hereditary, become obese despite a moderate diet and an active life. Magnus-Levy was not able to demonstrate that there is diminished combustion of tissue in the obese, as far, at least, as the respiratory gaseous exchange can indicate. There must be some abnormality of the protoplasm of the cells. Uric acid is an important factor in the etiology of gout. In view of the fact that uric acid is a derivative of the nuclei of the cells, it may be inferred that in gout also the cell-protoplasm is in some way at fault. In diabetes there is likewise some defect in the cellular elements of the body—in the protoplasm. In the diabetic glycogen is found in organs in which normally it does not exist, and from this may be inferred a disturbance of the cellular protoplasm. In those cases of diabetes in which the pancreas seems to be responsible, Ebstein believes that the defective activity of this organ gives rise to a modification of the cell-protoplasm of the same nature as that which develops under the hereditary impulse. He would class all three affections as **general diseases of protoplasm, hereditarily transmissible**. Perhaps it will be found that parasitic causes play a role in these diseases. Boerhaave considered gout contagious, and the Prussian laws still contain regulations for disinfection in cases of gout. Of course no proof exists of the contagiousness of either gout or diabetes. [D.R.]

2.—Grawitz states that despite the apparent antagonism between himself and Lubarsch, the latter agrees with him in holding that the spear-forms seen in the inflamed cornea are not leukocytes. Lubarsch had not been able to find mitotic figures in transplanted corneae, and therefore concluded that the cells could not be of corneal origin, but Grawitz contends that the corneal tissues are capable of producing wandering cells, even after they have ceased to exhibit mitosis. Lubarsch designated the cells found in the transplanted cornea,



which, as already stated, were, according to him, not leukocytes or pus cells, nor descendants of the corneal corpuscles, histiogenic wandering cells. Grawitz, however, has seen these cells develop in the cornea itself under his own eyes and does not believe that they come from the surrounding tissues. Grawitz claims that he was the first to maintain that in fibrinoid inflammation the fibrin is not the result of an exudate, but of a transformation of the fibrillar intercellular substance, a theory that is usually associated with the name of Neumann. He expresses his satisfaction with the change that has taken place in current theories of inflammation, the change being strongly in the direction indicated by him years ago, namely, that the different varieties of inflammation are not specific, but that all the phenomena of inflammation and regeneration differ only in degree and not in kind. [D.R.]

4.—Lewin (see this JOURNAL, November 26, 1898, p. 1120) has reported observations on the immunity of the hedgehog to snake-venom, and has made several statements to which Behring takes decided objection. Lewin has contended that the hedgehog is not immune, as immunity must mean absolute insusceptibility toward a poison. Behring's idea of immunity is different (see this JOURNAL, December 10, 1898, p. 1231). Lewin has also stated that the increased resistance of the hedgehog cannot be due to antitoxin, as it is not transmissible to other animals through the medium of the blood-serum. Behring replies that there is nothing new in this. It would, on the contrary, be surprising if an animal that is naturally immune should have antitoxic blood. Behring criticises Lewin's methods of experimentation as crude and lacking in skill. Lewin, on the basis of Calmette's observations, that the normal antitetanic and antirabic serums protect animals against snake-poison, came to the conclusion that antitoxins are not specific. Behring, in answer to this, quotes from Calmette's last article in which the latter emphasizes the fact that the antitoxic action toward snake-venom of the serums mentioned cannot be considered as a true antitoxic action, and that these serums have no specific relation to venoms. In conclusion, Behring expresses his belief that Lewin is not familiar with the modern literature of serum-therapy, and that he has secured his information from older publications, the statements in which their authors themselves no longer believe. [D.R.]

5.—Lewin first attacks Behring because the latter attempts to criticise his paper without having repeated his experiments. Secondly, he ridicules Behring's definition of immunity, comparing it to a Procrustes' bed. Behring considers an individual immune who is protected against the disease-producing action of a poison in doses that for other individuals in a like mode of application are deleterious. Lewin's argument against this is weak. He states that if Behring's definition is correct nearly the whole world possesses immunity to the majority of drugs, as there are some individuals that are poisoned by ordinary doses. In reply to Behring's accusations that Lewin's experiments were not performed with skill, the latter states that he is glad that they were not—they were true to nature; there has been entirely too much skill in modern experimentation on immunity. Regarding the reproach of unfamiliarity with the literature, he returns the tables on Behring and suggests that the latter has not read some of Callmette's previous papers in the *Annales de l'Institut Pasteur*, in which that author expressed the view that immunity has nothing to do with the presence of antitoxins, and that both natural and acquired immunity are the result of a special property of the cells. This, Lewin contends, destroys the doctrine of the specificity of antitoxins. While he would not go so far as Callmette in denying altogether the existence of humoral immunity, he would deny it in the cases in which he had experimented. [D.R.]

6.—Loeventhal has treated a large number of cases of **relapsing fever with antispirethetic serum** prepared by treating a horse with blood containing the spirilla. Of a total of 283 patients, 131 received the specific treatment, while 152 did not. Of 34 thoroughly treated, 1 died; a large number, 39 (47%) remained without relapse. Among the 152 not treated with the antitoxin 10 died, only 18 (12.8%) had one attack, while 46 (32.9%) had two, and 65 (46.5%) had three attacks. The thoroughly treated cases remained in the hospital on an average of 30 days, the others 36.8. The complications in the two sets of cases were, in a general way, about the same. [D.R.]

### Münchener medicinische Wochenschrift.

October 25, 1898. [45. Jahrg., No. 43.]

1. Ossification of the Hand as Shown by the X-Rays. H. v. RANKE.
2. A Case of Chronic Rheumatoid Arthritis. v. DUNGERN and SCHNEIDER.
3. A Group of Epileptoid Conditions Characterized by Their Etiology, Course and Prognosis as Alcoholic Cardiac Epilepsy. A. SMITH.
4. Exophthalmic Goiter. C. SCHWERDT.

1.—v. Ranke has succeeded in obtaining excellent **skia-graphs of the hands of children** by means of the X-ray, and he believes it possible to tell the age of a young individual approximately by means of such photographs. The method may also enable anatomists to settle the mooted question as to whether the human thumb has a metacarpus or not. von Ranke himself believes that there is no metacarpus, and that the thumb has three phalanges. [D.R.]

2.—In a case of extreme **deforming arthritis**, v. Dungen and Schneider isolated after death from the mucus of the gall-bladder, and also from the exudate in the joints, small **diplococci**, staining by Gram's method. The organisms grew in all media, but did not develop rapidly under aerobic conditions. The most active growth was obtained in glucose-bouillon, which the bacteria decomposed, with the development of an acid reaction, but without the production of gas. Similar diplococci were also isolated from the liver and, most abundantly, from the gall-bladder. They did not resemble the organisms described by Blaxall or Schüller. Injections of cultures into the knee-joint of rabbits resulted in the production of a process similar to that observed in the patient, and v. Dungen and Schneider do not hesitate to consider the organism as the cause of the joint-disease. From the abundance of germs in the gall-bladder they draw the interesting conclusion that the starting-point of the joint disease was a chronic inflammation of the gall-bladder. [D.R.]

3.—Smith believes that among the well-known diseases with **epileptic symptoms** there is a large group connected with **cardiac dilatation**. This latter is dependent upon **alcoholic abuse**, and has a tendency to subside if the indulgence in alcohol is abandoned, although even after that, there may be, at intervals, attacks of slight and transient dilatation which finally remain in abeyance. As long as dilatation is marked, a slight excess in the consumption of alcohol may incite an epileptic attack. A cure of these epileptiform convulsions is only possible with total abstinence. It is hastened by measures directed to strengthening the heart-muscle, and one of the best of these is bicycling. [D.R.]

4.—The article is to be concluded and will be abstracted when finished.

### Centralblatt für Gynäkologie.

October 29, 1898. [22. Jahrg., No. 43.]

1. A Cranioclast in four Parts. H. FEHLING.
2. The Treatment of Incarcerated Gravid Uterus with Elastic Balloons. ARTHUR MUELLER.

1.—Fehling believes that the ideal **cranioclast** has not been hitherto devised. The pelvic curve of the instruments commonly in use is not properly constructed and the lock is so far from the handles that it must often be fastened within the vagina. The arrangement for crushing the base of the skull completely is usually unnecessary. Fehling has devised and describes an instrument in which he believes the faults mentioned have been obviated. [W.K.]

2.—Mueller recommends again his method of treating **incarcerated retroverted gravid uterus** by the use of the **elastic balloon** and reports a case in which this was successful. A woman who had been pregnant 15 weeks had suffered severe pain in the abdomen and sacral region for 8 days and had been unable to pass urine spontaneously. The os was found on a level with the upper border of the symphysis and pressing firmly against it from behind, and an elastic tumor, which was continuous directly with the cervix, was adherent in the sacral region. A diagnosis of incar-



cerated retroflexed gravid uterus was made. Attempts at replacing the uterus by the bimanual method failed. A large elastic Braun's balloon was inserted into the vagina. Pressure caused severe pain after  $3\frac{1}{2}$  hours, but this lasted only  $\frac{1}{2}$  hour, when the pain suddenly ceased, and on examination the fundus of the uterus was found movable in the abdomen 2-fingers' breadth below the umbilicus. From this time on pregnancy was uninterrupted. [w.k.]

November 5, 1898. [22. Jahrg., No. 44.]

1. The Age-Changes in the Oviducts. EDWARD SCHNAPER.
2. A Case of Scarlet Fever after Celiotomy, with Remarks on Puerperal Scarlet Fever. A. SIPPEL.

1.—Schnaper has studied the **senile changes in the oviducts** in 20 women between the ages of 47 and 90. Sections from the uterine, middle and abdominal portions were hardened in alcohol, embedded in paraffin and celloidin and sectioned. The cylindric epithelium was found lower and lower with advanced age until it took on the character of endothelium and was, in some cases, wanting. There was thickening of the mucosa as a result of overgrowth of connective tissue, and at places where the tube was bare of epithelium there were outgrowths of granulation-tissue. The folds of the mucous membrane were deepened into alveoli; and on superficial observation these places resembled glands. The abdominal portion lost its labyrinthine character and the folds were flattened and nearer together. There was slight overgrowth of the muscular coats, but there seemed to be no difference between the longitudinal and circular coats. The arrangement was disturbed, however, and in places islands of muscular tissue were left. A similar process of formation of granulation-tissue and contraction occurred in the adventitia. The changes in all three coats were those of overgrowth of connective tissue so that the coats were not especially distinguishable from each other. [w.k.]

2.—Sippel reports the case of a woman, aged 22, who was attacked with **scarlet fever** the day following **celiotomy** for removal of an ovarian tumor. The process of healing seemed to be uninfluenced by the fever, however, and union occurred by first intention. The experience in this case seems to show that any urgent operation could be undertaken during the course of scarlet fever without great danger. The puerperium may also be uninfluenced by the course of scarlet fever, although the danger is considerably greater. [w.k.]

November 12, 1898. [22. Jahrg., No. 45.]

1. Operative Sterility in Women. H. ROSE
2. The Question of Tubal Menstruation. H. THOMPSON.
3. The Surgery of Large Uterine Fibromyomas. WOLFRAM.
4. Acute Yellow Atrophy of the Liver. H. THOMPSON.

1.—In such cases as it seems desirable to produce **artificial sterility in women** because of a high degree of deformity of the pelvis, Rose recommends excision of a wedge-shaped piece of the tube from the uterus as a procedure simple, certain and easily carried out, either by vaginal or abdominal operation. [w.k.]

2.—The question whether menstruation takes place in the tubes in a manner similar to that in the uterus is still undecided. Three cases have been reported in literature seeming to substantiate this view. Thompson reports a case in which an abscess broke through the abdominal wall, forming a fistula between the oviduct and the exterior. A bloody discharge occurred at the time of menstruation. In a second case a fistula resulted from the extirpation of a tubal gestation sac. There was a bloody discharge from the opening until 2 silk ligatures escaped, which had been used to tie off the oviduct. Thompson believes that the cases thus far reported seem to support the view that **tubal menstruation** occurs. [w.k.]

3.—Wolfram reports the case of a woman, 50 years of age, who had suffered from severe uterine hemorrhage for several months, and had been unable to take more than a few swallows of milk because of a large abdominal tumor extending upward almost to the ensiform cartilage. There was edema of the lower part of body. The tumor was rapidly removed by the application of large clamps, the operation lasting 40 minutes. The mass was a **fibromyoma** weighing 35 Russian pounds. [w.k.]

4.—Thompson reports the case of a woman, 35 years old, who had passed through 5 normal labors and presented a high degree of jaundice during her sixth pregnancy. The liver-dulness extended over an area only 2 or 3 fingers' breadths in extent and the urine was covered with bile; but otherwise there was no abnormal signs or symptoms. The patient sank into a state of stupor, gave birth to a macerated fetus, and died 2 days later. The diagnosis of **acute yellow atrophy** of the liver was confirmed by the necropsy. [w.k.]

November 19, 1898. [22. Jahrg., No. 46.]

1. The Treatment of Chronic Inversion of the Uterus. ESSENMOELLER.
2. Transplantation of the Ovaries. KNAUER.

1.—Essenmoller defines **chronic inversion of the uterus** as that continuing 6 weeks after confinement. He discusses the various procedures that have been made use of in the treatment of this condition and reports the case of a primipara, 30 years old, in whom attempts at manual reposition had been fruitless. A transverse incision was made in the fornix of the vagina and a long incision in the wall of the uterus. It was then possible to return the organ to its normal position. Hemorrhage was slight. The uterine wall recovery followed. [w.k.]

2.—As the result of a series of experiments in **Transplantation of the ovaries** Knauer states that the ovaries of rabbits, when transplanted into animals of the same species, and in the normal position, grow in place, are well nourished and are capable of functioning, as demonstrated by the occurrence of pregnancy. That the transplanted ovaries may retain their activity for a long time was proved by histologic examination of sections of transplanted ovaries 6 months after transplantation. [w.k.]

### Centralblatt für innere Medicin.

November 26, 1898. [19. Jahrg., No. 47.]

1. An Hitherto Unknown Toxic Effect of Biliary Acids Upon the Central Nervous-System. ARTHUR BIEDL and RUDOLF KRAUS.

1.—Biedl and Kraus have endeavored to determine the causation of the **severe nervous symptoms** that attend sometimes ordinary **jaundice** and usually **icterus gravis** and other severe pathologic processes in the liver. Previous attempts to produce such symptoms by the injection of bile-salts into the blood stream have failed. In the present investigation new methods were pursued, a few drops of bile being introduced beneath the dura, after trephining the skull. The result was astonishing; after a little dyspnea and increasing myosis, a typical poison syndrome appeared in all cases, resembling that produced by the destruction of the nodus cursorius described by Nothnagel. The animal, which had been previously quiet, began at once to run wildly about. This it continued until exhaustion prevented further running, and then, falling to the ground, the running movements still continued, although the animal was too weak to support itself upon its extremities. Convulsions followed large doses, while if the amount injected was but small, the animal soon recovered partially, and then began wildly to run once more; this being repeated several times until the secondary stage of poisoning appeared, in which also there were typical symptoms, consisting in clonic convulsions in the muscles of mastication, and, later, in the eye-muscles, and then opisthotonos, nystagmus, and rolling of the eye-balls. During this time there was free secretion of saliva. Sometimes the symptoms were recovered from after a longer or shorter time, but the animals were usually found dead within a day. The most typical symptoms were produced in rabbits, guinea-pigs and cats, only from 0.5 to 1 cu. cm. of pure bile being necessary to cause the most acute symptoms, with rapid death, in the case of rabbits. Dogs required the same amount for the production of the milder symptoms. Frogs showed similar and fairly characteristic symptoms. There was absolutely no opportunity for injury to the nodus cursorius in these cases, and the symptoms were certainly due to the bile, for various other substances, such as morphin, atropin, urea, blood-serum, and



organic extracts were tested in the same way, and none of these gave rise to typical symptoms, and neither acids nor alkalies produced symptoms identical with those described, although somewhat similar symptoms appeared. The active agents in the bile were found by further experiment to be the salts of the biliary acids, sodium taurocholate and glycocholate being the most active, the first mentioned having about double the activity of the latter, 1 mg. of sodium taurocholate causing characteristic symptoms in guinea-pigs. To determine the portion of the brain affected in the production of these symptoms the cortex was removed, without any effect upon the poisoning. If the large basal ganglia were removed, the running movements still persisted. If the cerebellum were removed, they persisted also, but were incoordinate. It was, therefore, impossible to state exactly the portion of the brain affected, though it is believed that the subcortical cells were the ones chiefly involved. The lack of results from previous experimentation with bile when injected into the circulation is attributed to the fact that it must come in direct contact with the nerve-cells, and unless it collects in large amounts in the blood this cannot take place well when injected; in the present experiments it reached the nerve-cells at once. From the fact that 1 mg. of sodium taurocholate produces the symptoms in guinea-pigs, and from 2.5 to 5 mg. cause the symptoms in rabbits, and that about 1 cu. cm. of icteric urine produces the same effect, it is concluded that each cu. cm. of icteric urine must contain from 1 to 5 mg. of this salt; a much larger amount than is usually supposed to be present in the urine. Chemic results are believed to be less reliable, because in separating the pure biliary salts, the chemic procedures are attended with the loss of large amounts. Normal urine was also used in the experiment, and it caused symptoms that resembled, but did not coincide with, those that resulted from the use of bile. This may possibly be due to the small amount of biliary acids present in physiologic urine, but this is not proved. Normal urine was entirely without effect after neutralization, while icteric urine still exerted its typical effect when entirely neutralized. This peculiar relation between the brain substance and the biliary acids seems for some reason to be due to an affinity between the two, for, after injection into the circulation, the urine contained hemoglobin and biliary acids, while this is not the case after injection into the cranial cavity. After subdural injections the blood pressure increased, and the pulse became more frequent; the contrary is true after injection into the circulation. The action of the brain is, however, not simply to antidote the poison, for when bile was rubbed with fresh brain, and the emulsion centrifugated, and, after several hours, injected beneath the dura, the same symptoms were produced as when fresh bile alone was used. [D.L.]

### Neurologisches Centralblatt.

November 15, 1898. [No. 22]

1. Premature Calcification of the Blood Vessels of the Brain as the Cause of Epilepsy. H. HOCHHAUS.
2. Disturbances of Metabolism in Neurasthenia. W. VON BECHTEREW.
3. The Electric Tricho-esthesiometer, and the So-called Hair-Sensibility of the Body. W. VON BECHTEREW.
4. What Changes has the Clinical Picture of Progressive Paralysis of the Insane Undergone in late years. E. MENDEL.

1.—Hochhaus reports the case of a brewery-workman, 28 years old, who had suffered from infrequent epileptic attacks for 1½ years before death. For 10 years there had been some disturbance of speech. The attacks were preceded by a feeling of anxiety for several hours and followed by a deep sleep. Bromids seemed to have little effect. The patient died of pneumonia. At the autopsy, the brain was congested, the blood-vessels hard, excepting at the base. There was pneumonic infiltration in the lower lobe of the left lung, and infectious changes in the liver, kidneys, and spleen. Microscopic examination of the brain disclosed calcareous infiltration of the small vessels, particularly in the cornu ammonis. This change is assumed to have been the cause of the epilepsy, but no cause is assigned for the former,

although the possibility of excessive alcoholic indulgence is suggested. [J.S.]

2.—von Bechterew calls attention to certain alterations in the urine of neurasthenics. In all cases there is a considerable diminution in urea, and increase in the uric acid. The relation of the total nitrogen to the quantity of urea indicates a marked decrease in the intensity of nitrogenous oxidation. The relation of the uric acid and disodium phosphate indicates an increased secretion of uric acid; that is to say, a more or less pronounced uric-acid diathesis. Sometimes the ratio of the total phosphates to the glycerin phosphates was increased, and the ratio of the total sulphates to the paired or ethereal sulphates was also elevated. In many cases, the condition of the patient improved coincidentally with the diminution or disappearance of the arthritic phenomena. von Bechterew believes that the changes in the urine are those characteristic of intestinal putrefaction, and suggests that the cause of neurasthenia is in the intestinal tract. [J.S.]

3.—von Bechterew describes a new tricho-esthesiometer consisting essentially of a metal staff, provided at the end with a hair-spring that can be brought in more or less frequent contact with the surface of the body by an electric magnet to which the end of the staff is attached. The force of the blow can be regulated by a small set screw. By an additional mechanical device, the apparatus can also be used for testing electro-sensibility. Tests of the sensibility of the skin by means of a hair-spring yield the following results: Hair-sensibility is most delicate on the anterior portion of the skull in the region of the glabella, on the cheeks, nose, and, particularly, on the inner surface of the nasal alæ. It is also delicate in the pubic region; then, on the face, neck, shoulder, body, back, hands, thighs, arms, etc. In the regions where there is no hair, it is, of course, absent. The sensations are entirely due to the vibration of the hair. In some pathologic cases, hair-sensibility disappears before tactile sensibility, and von Bechterew believes that the former is a peculiar sensory perception. [J.S.]

4.—Mendel discusses the changes that have appeared in the clinical picture of progressive paralysis of the insane in the last 30 years. In 1880 he found 55 typical cases and 37 of the form characterized by dementia. In 194 cases observed since, the typical form occurred in 37 cases and dementia in 70 cases. Mendel also notes the greater frequency of marked remissions, many of the patients being able to resume their occupation from time to time, even after the physical signs had been pronounced. The disease, in spite of its milder character, appears to have become much more frequent, particularly among the women; the present proportion being about 4 men to 1 woman, and in cases developing early in life, the sexes are almost equally affected. Mendel has observed the disease in 20 married couples. Children are more frequently affected than formerly, and this appears to be due to the greater frequency of hereditary syphilis. Mendel discusses the cause of the increased frequency and the change in type. The former he believes due to the greater spread of syphilis, and to the greater psychic demands made upon the individual by modern life. The latter he is at present unable to explain. [J.S.]

### Deutsches Archiv für klinische Medicin.

September 6, 1898. [Bd. 61, H. 1, 2.]

1. Contributions to the Histology and Pathology of Congenital Syphilis and to the Normal Anatomy of the Fetus and Newborn. RUDOLPH HECKER.
2. The Alternating Relation Between Albuminuria, Hydræmia, and Dropsy in Cases of Nephritis. GÉZA DIEBALLA and LADISLAUS VON KÉTLÝ.
3. A Case of Gonorrhœal Stomatitis. ALBERT JESIONEK.
4. Pathologic Anatomic Contributions to the Knowledge of Exophthalmic Goiter, with Particular Reference to Involvement of the Muscles. MAX ASKANAZY.
5. Second Contribution to the Knowledge of Inherited Nervous Diseases. ERNEST JENDRASSIK.
6. The Bodily Temperature of the Aged. A. CHELMONSKI.

1.—Hecker collected for two years the material on which his paper is based, and including altogether 100 autopsies. Of the infants, 92 were stillborn, and 8 were born alive with symptoms of syphilis. In 38 cases, microscopic examination



of the organs was made. Accepting the classification of Hutinel and Hudólo, Hecker distinguishes three forms of liver-disease: (1) hyperemia and stasis; (2) extravasation and infiltration; and (3) diffuse sclerosis. Usually the liver is increased in weight. In typically syphilitic cases, its ratio to the weight of the body was 1 to 16, in the doubtful cases 1 to 22, in the normal premature cases, 1 to 23, and in the negative cases 1 to 28. Comparing these figures with those of other observers it appears that the normal relative weight of the syphilitic liver is about 1 to 14.7, and for the normal liver 1 to 21.5. Macroscopically, few changes are to be observed. The capsule is sometimes thickened; the consistence is increased; and the color is paler. The microscopic changes consist in diffuse small-cell infiltration, sometimes throughout the tissue, sometimes around the portal vessels, or of small miliary syphilomata, or of areas of circumscribed necrosis, and here and there vascular embolism. The true connective tissue was hypertrophied in 6 cases, twice diffusely, and 4 times between the acini. In only one case was typical endarteritis observed. The other changes were not characteristic. Hecker describes two peculiar forms of cells. The first are somewhat smaller than the epithelial cells, but contain chromatin and are clear. They usually occur in groups of from four to six, and are taken to represent proliferated epithelium. The second are small round cells, with distinct nuclei and eosinophile protoplasm. These are found inside the capillaries, and occasionally are washed out of these toward the periphery. They represent blood-cells, and indicate the important hemogenetic function of the liver. In normal livers the proliferated epithelium-cells were not so common, and it appears that syphilis stimulates their activity. The weight of the kidneys compared to the total body-weight was, for the normal stillborn infant, 1 to 123; for the prematurely born infant, 1 to 185.2; for syphilitic children 1 to 86. Microscopically, the kidneys were characterized by cellular infiltration of the vessels of tie-cortex, and in children that had lived, by atrophic and degenerative processes in the epithelium of the renal tubules and the glomeruli. The blood-cells discovered in the capillaries of the liver were also found in the kidneys. The spleen was invariably found enlarged. Its ratio to the body-weight in syphilitic children was 1 to 108, whereas, in normal children it is 1 to 360. The most characteristic change was the cellular infiltration of the adventitia or the media of the vessel-walls and in some cases a thickening of them. There was also an apparent increase in the stroma. The pancreas was increased in weight; the ratio to the body being in syphilitic infants 1 to 467, as compared with the normal of 1 to 634. In one case there was cellular infiltration in the interacinous tissue; in two cases excessive proliferation of the interacinous and intra-acinous tissue; and lymphoid nodules between the acini were found both in normal and diseased cases. The lungs were invariably somewhat firmer. In one case a distinct gumma was observed. In all the others both white and interstitial pneumonia appeared to be associated. The vessels of the umbilical cord were frequently diseased, exhibiting a thick cellular infiltration limited to the media of the arteries; occasionally there was perivascular cellular infiltration. The veins were usually intact. Thickening of the walls of the vessels is apparently not pathologic. The interest in these changes lies in the fact that it may be possible by them to diagnose hereditary syphilis histologically. The adrenals were rarely involved. In one case they were enlarged and hard, and in ratio to body-weight they contained numerous necrotic areas. The thymus was decreased in size; in the syphilitic cases being 1 to 510, in normal infants, 1 to 235. Occasionally there was hyperplasia of the connective tissue, but Hecker was unable to observe any cases of Dubois' disease. The heart was involved in one case. The bones were thoroughly examined in 17 cases. Of these osteochondritis was absent from 3, and present to a greater or less degree in 14. In all the normal cases, it was completely absent. Hecker details a few clinical observations. He has found that in all the syphilitic cases, the function of the kidney is impaired and albumin may usually be found in the urine. Alimentary glycosuria is easily produced, showing that the assimilation is impaired. [J.S.]

2.—Dieballe and Kéty have investigated the mutual relations of **albuminuria, hydremia and dropsy**. This is necessarily a somewhat obscure subject, and the following

method for its elucidation was devised. In the first place, they determined the relation of the hemoglobin to the specific gravity of the blood, and found that 10% according to the Fleischl instrument corresponded very closely to 4.46 of specific gravity—according to the method of Hamerschlag. Therefore, if there was any difference between the observed and normal specific gravity of the blood for a given amount of hemoglobin, this was ascribed to the existence of an abnormal quantity or deficiency of water. In 55 case of nephritis, either chronic or subacute, with albuminuria, the hemoglobin and specific gravity of the blood and the amount of albumin excreted in the urine per day were estimated. In addition, the red blood-cells were counted in each case and the amount of globulin excreted was noted. It appears that there is a more or less constant relation between the degree of hydremia and the amount of albumin excreted. It is noted that the blood of women is on an average about 2.12 lower in specific gravity than the blood of men. Careful comparison of individual cases shows that the hydremia bears no relation to the hemoglobin, but varies inversely as the specific gravity of the blood. All cases can be classified in three groups, those with considerable, those with slight, and those with no dropsy. These groups bear an inverse relation to the amount of hemoglobin, the number of red blood-cells, and the daily quantity of urine, and a direct relation to the daily quantity of albumin excreted; but they bear no relation to the specific gravity of the urine. No definite relation appears to exist between the hydremia and the dropsy; but it seems as if there must be some etiologic relation between the albuminuria and the hydremia. [J.S.]

3.—Jesionek reports the case of a man suffering from **gonorrhea** who infected his eyes. After the conjunctival and urethral conditions had subsided severe pain developed in the temporo-maxillary articulation. Inspection of the mouth on the following day showed diffuse swelling of the tongue, upon the surface of which were a number of grayish-white, slightly elevated papules. The gums were swollen and livid. The condition continued to grow more severe, and five days later it was found that the sublingual glands were involved and contained pus. Microscopic investigation of the secretion showed the presence of numerous organisms closely resembling gonococci that upon agar smeared with blood gave rise to characteristic colonies, and were successfully transplanted for several generations. No similar organisms were found in the purulent secretion from three patients suffering from mercurial stomatitis, nor in that from three with syphilitic manifestations, in the mouth. The clinical symptoms were considerable pain and a peculiar unpleasant taste. Ultimately the patient recovered completely. [J.S.]

4.—Askazy reports two cases of **exophthalmic goiter** that terminated fatally, apparently from profound exhaustion and cardiac failure. At the autopsy, in addition to the presence of the stroma, it was noted that the voluntary muscles had everywhere undergone marked fatty degeneration. There was some necrosis of the epithelial cells in the renal tubules of the kidney. The other organs were comparatively normal, with the exception of the uterus, which was somewhat small. The changes in the thyroid gland consisted in the tubular arrangement of the acini; the cylindric appearance of the epithelial cells; their great variation in size; the comparative absence of colloid, many of the follicles and tubules being empty, and the substance that was found in some of them not staining as characteristically as usual; and the dilatation only of the larger vessels. Occasionally some of the bloodvessels showed colloid degeneration of their walls. An additional case is reported, in which death occurred as the result of an operation for partial removal of the gland. Lipomatosis musculorum was found in this instance also. The thyroid gland exhibited changes similar to those found in the other cases, with, in addition, a certain amount of proliferation of the connective tissue. In a fourth case, death resulted from acute appendicitis, and the conditions found at the autopsy were similar to those in the other three. The changes in the muscle, now described for the first time, are exceedingly interesting. All voluntary muscles are affected, but in the four cases reported the diaphragm showed the most extensive alteration. Macroscopically, the muscle was pale and permeated in all directions by streaks of fatty tissue. In some places considerable areas of the muscle were involved. Mi-



croscopically, the earliest changes are found in the nuclei of the muscles in fibers not yet affected by the fatty degeneration. The chromatin becomes swollen, and gives rise to the appearance of extraordinary figures. Then the striated muscle-substance begins to show the presence of fine granules. The transverse striations become indistinct, and the longitudinal striations more pronounced. Finally, the muscle-fiber becomes converted into a granular or homogeneous mass that may contain more or fewer nuclei than normal and occasionally vacuoles. The sarcolemma apparently is absorbed; then the muscle-fibers become converted into extraordinarily irregular clumps, and at last they seem to disappear completely in some situations, and are replaced by fatty tissue. The neuro-muscular bundles are often more affected than the corresponding muscles outside the nerve. The heart does not take part in these changes, but undergoes brown atrophy. In regard to the nature of this process, Askanazy looks upon it as an expression of the presence of a toxin carried to the muscles by the blood-current. It is not likely that it is a nervous affection, for the nerves are normal, even to their finest ramification, and it possibly bears some relation to the muscular disease noted in cretins. Clinically, it appears to be responsible for the general muscular weakness, perhaps in part for the protrusion of the eyeballs on account of the involvement of the bulbar muscles, and partly for the paresis noted by Charcot. Askanazy concludes by a discussion of the nature of the stroma and of the theories that have been suggested to explain the disease. In regard to the latter, he considers it doubtful whether the symptoms are due primarily to the toxic substances circulating in the blood, or directly to the altered condition of the thyroid gland. [J.S.]

5.—Jendrassik argues that the **inheritance of nervous diseases** other than those manifested by the ancestors is impossible; for transforming heredity can only mean the existence of an inherited predisposition for a certain group of disease, any one of which may occur. From this point of view, he excludes disseminated sclerosis, bulbar paralysis, infantile spinal paralysis, etc., from the list of hereditary diseases. Embryology teaches that only direct transmission of characteristics occurs, although sometimes these may remain latent for several generations and then develop (atavism). The diagnosis of hereditary diseases has hitherto been based solely upon the occurrence of several of them in the same family for two or more generations. Jendrassik, however, believes that they can now be characterized much more sharply. (1) All the typical hereditary diseases have a peculiar type of symptoms differing from those of diseases due to external causes. These groups of symptoms frequently resemble those of other diseases, presenting, however, such heterogeneous appearances that it is impossible to classify them sharply. As examples of these are mentioned polydactyly, hemophilia, the paroxysmal paralysis of Goldflam, Huntington's chorea, Thomsen's disease, Friedreich's ataxia, etc., and the general rule is deduced that nearly all disease-groups not clearly understood, arising from internal causes, are to be considered as hereditary. (2) The character of the diseases arising in a certain family is uniform. Sometimes different diseases may appear to be similar, but when carefully examined they are found to arise from different causes; e.g., of two children in the same family, one may have acute spinal infantile paralysis, the other cerebral hemiplegia. (3) Hereditary diseases usually have a rapid evolution at first, then progress more slowly, and finally may be arrested. (4) Certain anamnestic and etiologic characteristics are common to inherited diseases. Men seem to be far more subject to hereditary nervous diseases than women. This is true of hemophilia, pseudomuscular hypertrophy, Weil's polyuria, and even spastic paralysis, Jendrassik having collected 44 cases in men and 30 in women. Consanguinity between the parents is common. Jendrassik reports two cases of catalepsy in the children of parents who were first cousins, one of peculiar spastic paralysis of the lower extremities in a child whose father and mother were uncle and niece, one in which symptoms of hereditary ataxia developed in the child of cousins, two of microcephalus in the children of parents not related but similar in appearance and characteristics. [J.S.]

6.—As a result of the study of 111 inmates of a home for old people, Chelmonski found that between 51 and 60 years, the morning-temperature averaged 36.44° C., the evening-

temperature 36.69° C.; between 61 and 70, 36.39° C., and 36.51° C.; between 71 and 80, 36.28° C. and 36.25° C.; and between 81 and 91, 36.33° C. and 35.97° C. respectively—that is to say, the average temperature in late life gradually decreases, and in the very old it sometimes exhibits an inverted type. In 15 persons between 71 and 98 years, in which the results were verified by rectal temperatures, the inverted type was observed in 31%. Chelmonski is inclined to ascribe this to the insufficiency of the mechanism for regulating the body-heat as a result of arteriosclerosis. [J.S.]

## Selected formulas.

### For Cough of Pulmonary Tuberculosis:

Codein..... 4 grains.  
Dilute hydrochloric acid.....30 minims.  
Spirit of chloroform..... 1½ fluidrams.  
Sirup of lemon..... 1 fluidounce.  
Water sufficient to make..... 4 fluidounces  
Mix.—One teaspoonful as occasion demands

—MURRELL.

### For Infantile Diarrhea:

Bismuth salicylate .....24 grains.  
Gum-arabic..... 1 dram.  
White sugar..... 1½ drams.  
Water, to make..... 6 fluidounces.

Mix.—To be kept on ice. From one to two teaspoonfuls to be given three to six times a day.

—MIKHREVICH (*Month. Cyclop. Prac. Med.*).

Mercurous chlorid..... 2 grains.  
Zinc sulphocarbolate..... 3 grains.  
Pepsin .....30 grains.  
Bismuth subnitrate ..... 2 drams.

Mix and divide into 12 powders. To a child one year of age, one powder three times a day.

—TOMPKINS (*Month. Cyclop. Prac. Med.*).

### For Dysuria Due to Uric Acid:

Benzoic acid..... 5 grains.  
Sodium borate..... 5 grains.  
Water..... 1 fluidounce.

Mix.—To be taken every two hours. —Canada Lancet.

### For Pleuritis with Effusion:

Mercuric chlorid.....15 grains.  
Sodium chlorid.....15 grains.  
Extract of opium.....15 grains.  
Fresh breadcrumbs.....75 grains.  
Gluten.....38 grains.  
Glycerin.....30-45 grains.

Mix and divide into 100 pills. One, two or three to be taken daily.

—A. ROBIN.

### For Follicular Pharyngitis:

Iodin..... 3 grains.  
Potassium iodid..... 5 grains.  
Trichloroacetic acid..... 7 grains.  
Glycerin } of each..... ½ fluidounce.  
Water }

Mix.—To be applied locally. (The strength may be varied to meet the exigencies of the cases.)

—Tri State Medical Journal.

**For Hay-fever.**—Dr. Strangways has obtained gratifying results with resorcin in hay-fever, but stipulates that it is quite necessary to remove the diseased conditions in the nose, for by this means often the attack can be aborted and possibly cured when his proposed nasal wash is made use of. He advises frequent washing with the following solution:

Acetic acid..... 2 minims.  
Resorcin ..... 1½ grains.  
Common salt..... 4 grains.  
Water..... 1 fluidounce.

Mix.—Accompanying this frequent washing, hydrochloric acid is prescribed internally.

—Practitioner.



## Original Articles.

SOME PREVENTIVES.<sup>1</sup>By A. JACOBI, M.D., LL.D.,  
of New York.

Clinical Professor of Diseases of Children, Columbia University.

Concluded from p. 1805.

THE last evolution of life is death. Still, even death may be deferred and eased by the methods not only of hygiene and diet, but of pharmacotherapy. The latter has been blamed for its insufficient effects when applied to impossible tasks. As long as it was not founded on clinical observation and on experimentation, it was unsafe and unreliable. When, however, absence of preconceived theories, instruments of precision, and experiments on animals gave it a standing amongst the exact sciences, its claims grew. Unfortunately, the action of an internal remedy cannot be followed by a lay eye, like the knife of the operator, and the prejudices of the public, founded on its ignorance, have too often guided the very opinions of the medical man.

When the Vienna school, following the French under Broussais and others, elaborated pathological anatomy and diagnosis—I refer mainly to Rokitansky and Skoda—they declared that diagnosis and autopsy were the only quintessences of medicine. Even Wunderlich proclaimed in his early career that medicine should be science, not art. But the very accuracy of the diagnoses and of autopsies facilitated the appreciation of the effects or of the failures of medicines. The co-operator of those illustrious men—Hebra—proved every day of his life that diseases, hitherto incurable, were cured and healed by local treatment. The isolation of morphin by Magendie, and of numerous alkaloids afterward, rendered medication more accurate and controllable. Animal experiments added wonderfully to the certainty of drug-action;<sup>2</sup> it was soon learned that much of that certainty was due to the chemistry of the drugs; this was the first step in the direction of compounding new drugs by synthesis. By immunizing animals against the toxins of certain bacteria, bacteriologic research has created serumtherapy, and clinical experience has added organotherapy, with its wonderful results as far as tested. It takes all the egotism and mental limitation of the most famous modern serumtherapist to deny the great value of organotherapy. Still, Behring goes further than that. He coolly asserts that there is no such thing as experimental pharmacotherapy; as he never knew of it, it should not exist. He belongs to the class of men who are generally not bent upon underrating the signifi-

cance of their own doings; it was left to genuine medical men to be overmodest in the appreciation of their labors. There has been, for instance, an egregious amount of talk among us about the power of nature and the incompetency of man. "Natura sanat, medicus curat." Nature is the healer; the medical man just takes care of the patient, and sees to it that nature can perform its work. For instance, you are told you do not heal a chlorosis by giving iron; you simply make the diagnosis and furnish the iron, and nature's stomach and intestines and pancreas and lymph-apparatus do the healing. It is nature that saves, not you. You imagine you heal a man poisoned by plasmodia by giving him quinin; you are mistaken, it is nature that grows cinchona-trees, absorbs the quinin, circulates it and destroys the plasmodia. You think you save a man by cutting down on an appendicitis or a liver-abscess; far from it; you are only the scavenger, but nature forms exudation and adhesion and closes the wound. You keep skin and table and instruments aseptic and prevent suppuration, and think you did some praiseworthy thing in the way of prevention; you are mistaken, for nature did it by furnishing water and a healthy cell-proliferation and permitting you to compound soap and corrosive sublimate. You find a man in the gutter suffering from sunstroke kindly furnished by maternal nature; you take him away, work over him for hours with ice or stimulants and friction—no thanks to you, it is nature that empties his cerebral blood-vessels, eliminates toxins, and restores him. You jump into the river and resuscitate a drowned person; I am mistaken—not you saved him; for it is nature that sets the machinery of his heart and lungs agoing. If "nature" gave him no respiratory and circulatory centers what could *you* do? Or you find a starving man, with a loss of one-third of his weight and in the delirium of hunger, your milk and whisky and beefsteak never save him. For if nature had not given that man digestive organs and gastric juice and absorbents, poor you, where would you be! Or you are called upon to heal a fracture; you cannot heal it at all; all you can do is to adapt the ends of the bones and keep them in juxtaposition. Can you make new cells? Can you form callus? The only thing you can perhaps do is to appear in a malpractice suit. You are not responsible for his recovery; but you are made to answer for an alleged irregularity of nature's doings. You say all this is farcical? So it is, but the absurdity of it is not mine. If there is anything insipid in man's so-called reasoning, it is this unmeaning wise-acredom of the relations of "nature" and doctor to each other, and the playing with words. "Words are grown so false, I am loath to prove reason with them" (Shakespeare, "Twelfth Night," etc.).

Nature does not kill and does not heal. If there were consciousness in nature, she would feel indifferent about what she is, viz.: mere evolution. Nature is sun-

<sup>1</sup> Read before the Section on Medicine of the College of Physicians, Philadelphia, October 10, 1898.

<sup>2</sup> Experiments on man himself have always been the results of brutality or of ignorance, and do not count. Experimentation and observation are not identical.

shine that grows harvests and sunstrokes; she makes moonshine for lovers and for burglars, and rain to feed men and to drown them, and the sun warms the unjust and the just. Nature is a Mauser bullet; stand in its way, you are hit; dodge, and you are saved—it makes no difference to nature. In nature a diphtheria-bacillus has its democratic rights and duties like George Washington, and it killed him; she has no predilections, no reasoning; she is cause and effect. She can be led and doctored. The engineer heals her deformities in the interest of commerce; insurance companies correct her failures or calamities; indeed the logical mind of man and the logical necessities of “nature” are engaged in a constant strife for superiority. In matters of health and disease of homo sapiens the doctor utilizes or combats the doings of nature. By caring he cures. Curing has long ago lost its literal meaning.<sup>3</sup> It is healing.

What I mean by prevention—I may say prevention of death—in acute febrile diseases may find a brief illustration in the roborant and stimulating treatment of pneumonia. During health, the innervation and force of the heart are not easily disturbed, but every pulmonary disease taxes its powers. There is no pneumonia that may not require cardiac stimulation some time or other, for the heart is sure to suffer within a few days from dilatation, first of the right side. To what extent cannot be foreseen. The principle of waiting for symptoms to turn up is a bad one. If medication were injurious by itself, that would be an excuse for not resorting to it. When heart-failure or collapse, however, has once set in, our remedies are mostly too late. Then to busy ourselves with our subcutaneous, medicinal or rectal hot-water injections or a perfunctory dose of digitalis, not “*ut aliquid fias*,” but “*ut aliquid fieri videatur*,” is preposterous.

The weakness of the heart is by no means physical only, viz.: the result of the overexertion caused by the difficulty met by the blood in its passage through the lungs, but it is dynamic and physiologic. Like all other infectious fevers, pneumonia acts probably by its toxin on the functions of the heart-structure, and by impeded circulation the heart is certainly injured in its own nutrition. As far as the facilitation of pulmonary circulation is concerned, it is not improbable that strophanthus acts even better than digitalis; at least physiologists like Cushing tell us so. The inference is that whenever we require an improvement of the pulmonary circulation for the purposes of oxygenization and of the aortic circulation in behalf of nutrition, and of the rapidity of circulation in order to facilitate the elimination of toxins, we shall do well to use strophanthus and digitalis in combination.

Should medication begin when collapse is setting in, or has occurred? This procrastination, with its sad results, may be illustrated by some comparative procedure. It is parallel to the plan of estimating the value

of feeding by giving nourishment when inanition is complete, and not before. When the donkey of the gospel disappears in a ditch on Sunday, make haste to pull him out on Monday. Allow the child to drown in your well, and be sure to cover it up—the well, I mean, on the day of the funeral. Build earthworks quickly when the enemy is in your camp. That is the theory on which antitoxin is injected on the fifth day, instead of the first or second, alcohol is refused in cases of sepsis, digitalis in dilatation and weakening of the heart, ice in peritonitis, morphin in alcoholic delirium, or venesection in acute overdilatation of the right ventricle. These are not cases in which, as Musser says, “possibilities for good or evil cannot be estimated;” they belong to that very large class in which it is “necessary to invoke remedies directed to the removal or counteraction of a definite cause.”

Statistics are said to prove that pneumonias will get well without medication. Which pneumonia, and whose? It should be a great satisfaction to a man dying of pneumonia to learn that his neighbor got well without medication, if stimulation in time, perhaps venesection, might have saved his own individual life. It is the duty of the physician to judge of and to treat his individual case, and not the pneumonia of Louis and of Dietl. and of other statisticians. Treat the man who is sick, and not a Greek name.

Prevention by medication and other treatment can be easily demonstrated by some such instances as follow: Most of the non-congenital diseases of the heart in the young and old are rheumatic. Endocarditis is liable to start quite early in acute rheumatism; indeed, in some cases it precedes the joint-affection. The physician is either called, or arrives too late to prevent endocarditis. My order is invariably, after a single attack of rheumatism has occurred, to go to bed, for one or more days, on the slightest recurrence of pain, and to take a number of doses of sodium salicylate, which are kept ready for use. No delay should be permitted. Thus many a case of endocarditis, or return of endocarditis, is prevented.

Relapses of ulcers of the stomach are often preventable. I do not claim that all those which depend on embolisms during a chronic endocarditis, or on cirrhosis of the liver, can be greatly influenced, but the frequent form observed in young anemic persons may be prevented by antacid medication. It is self-understood that a careful and restricted diet, mostly milk, slow eating and small meals, are the *sine qua non*s of treatment.

The treatment of the intestinal tract is partly dietetic, partly mechanical, partly medicinal, as of most diseases of other organs or systems. Disorders of the bowels, which could have been removed, lead to disturbances of the temperament and the mind, to night-terrors and convulsions, to rachitis, to intestinal absorption with fever and erythema and other skin-diseases, not quite

<sup>3</sup> “Curare.”



rarely to peritonitis, to cystitis from the immigration of intestinal bacteria, and to toxic nephritis; in other not uncommon cases to visceral abscesses. I need not go into particulars before this audience. Most of what I have mentioned is preventable by medicinal and dietetic treatment; and the old physicians, with their maxim "*qui bene purgat, bene curat*," hit the nail quite frequently.

Rhachitis has a tendency to get well; that is, under favorable circumstances the softened bones grow hard. Moderate curvatures disappear, or nearly so, after years, and the flabby muscles become strong and active. Should we let it alone, and not employ air, and proper food, and cold water, and phosphorus, and iron iodid, and codliver-oil in mild as in bad cases? What we have to expect, or to fear, in every case of rhachitis, are stunted growth, deformities of the extremities, the trunk, and pressure by the chest-wall on the chest; and secondary hypertrophy of the heart, subacute and chronic bronchial catarrh, with bronchopneumonia and the possibility of tuberculosis; laryngismus stridulus, with possibly sudden death; hydrocephalus and imbecility or idiocy. These serious consequences of rhachitis may be prevented by treatment. The hyperemia of the rhachitic skull and brain tends to physiologic irritation and growth; not infrequently, formerly the rhachitic children were the best scholars, and amongst the geniuses of history there are many rhachitic heads. But, if the physiologic hyperemia is permitted to become pathologic, the result is meningitic effusion and insufficient or faulty growth. To treat rhachitis in time means to add beauty and brightness and intellectuality to the world.

Phosphorus, mentioned already in connection with rhachitis, may be utilized as a preventive in other directions.<sup>4</sup>

The structure of the blood-vessels may be very defective, their walls being thin, fragile and pervious. In such cases hemorrhage, small or copious, is a common symptom. The frequency of hemorrhages in the newly born, leading, when in the cranial cavity, to asphyxia, convulsions, idiocy, or early death, is caused besides by the lack of coagulability of the infant's blood, by the thinness of the vessel-walls, whose tissue has not yet quite evolved from its embryonal state. This or a similar condition may continue for life. This hypoplastic state, however, is not, of necessity, general; it may be local. The early nose-bleedings of some, though they have no heart-disease, and the congenital tendency to aneurysm in places where the elastic tissue, either from arrest of local development, or by microbic destruction, is either scanty or absent (mostly at the origin of branches), prove the occasional occurrence of these circumscribed and local defects. That thinness which predisposes to fatty degeneration of the intima and media, to sclerosis of the adventitia, to atheromatous

endarteritis, and to the formation of aneurysm at an early age has not been made the subject of active treatment, so far as I know, except by myself. The number of such cases is naturally small compared with the total number of a large practice or clinic; but I feel convinced that the administration of phosphorus—not phosphates of any kind—with its stimulant effect on the growth of connective tissue in general, has rendered me good service in habitual tendency to cutaneous, mucous and internal hemorrhages. Hemophilia of a moderate degree and local, as it frequently occurs, appeared to improve under its use, and the children to be safer and better developed.

Nasal catarrh is apparently one of the mildest, as it is one of the most frequent affections of infants and young children. Their narrow nares, their creeping on the floor, and poking their sweet, dirty fingers into every accessible cavity have far-reaching dangers. Nasal catarrh, with its hyperemia and soreness of the mucous membranes, predisposes to and causes chronic hypertrophy, adenoid growths, tumefaction of submental and submaxillary lymph-bodies, invasion of diphtheria and tuberculosis, and occasionally meningitis. That is so true, that adenoid growths of moderate size will get well without operation, solely by regular nasal irrigations. The latter alone will prevent and mostly heal the majority of the consequences mentioned. The hyperplastic, so-called scrofulous swellings of the neck in children, when not too old, will disappear when the original seat of the infection and irritation is attended to. Many a bacillus-hunt would not be required if other preventives of diphtheria were employed in time.

The same should be said of the mouth. Hypertrophy of the tonsils, many forms of stomatitis, diphtheria, probably also most of the rare forms of tuberculosis and neoplasms of the pharynx can and should be prevented. I have always made it a rule to keep all the integuments clean. At least once a day a physiologic solution of saltwater is poured through the nares of every infant or child over whom I have control. Big adenoids should be removed, large tonsils resected. There is more danger in a dirty nose than in an unwashed face. Only do not be satisfied with merely ordering it. I have met with many a "trained" nurse who did not know how to inject or to irrigate a nose. A mother or a child's nurse should be instructed by you personally how to do it. Here, as everywhere, when two do the same thing, it is by no means the same. There are many cases of nasal diphtheria, such as are most likely to resist the influence of antitoxin, which are still spared a fatal termination by persistent and correct irrigation of the nares and naso-pharynx.

What is our verdict in the case of a medical man who would refuse artificial respiration to a drowned person, or water to one afflicted with gravel or gallstones, or an antidote to a chemical poison, or antitoxin in bacillary diphtheria, or mercury, or potassium iodid

<sup>4</sup> See my "Therapeutics of Infancy and Childhood," 2d Ed., p. 300.

in syphilis, or quinin in malaria? That death, or long suffering, or life-long invalidism is prevented by appropriate treatment in these extreme cases is well understood; but the principle underlying all this holds good everywhere. Let me select a few more instances only. A baby with hereditary syphilis is kept under treatment for several months, gets well, and is discharged. The child grows up and develops symptoms of syphilis at about the period of puberty, or about the twentieth or even the thirtieth year. These are the cases of so-called "retarded syphilis." There are but few mothers with large families, growing old in hard work, that are endowed with a sufficient memory to recollect the illness of the baby born long years ago; and there are, in large cities where syphilis is mostly seen, but few medical men who see the same patient when a baby and when grown up. That is why, when syphilis is seen about the fifteenth or the twentieth year, it is easily believed to be its first appearance, unless there be a history of the disease. Personally I have seen but few such cases in which I could not trace this retarded syphilis back to the infant-eruption, so that the assumption of hereditary syphilis in the adolescent or adult not preceded by that of the infant, has become rather doubtful in my mind. Now, what is the lesson taught by such cases? It is in the same way that you insist upon protracted treatment of acquired syphilis in the adult, and allow, for instance, no matrimonial alliance, unless the person has been free from the last symptoms for years, that the baby with hereditary syphilis should be kept under treatment and observation for years to prevent relapses and consequences.

These relapses and consequences need not be characteristically syphilitic. They may be—as Fournier calls them—parasyphilitic, and exhibit symptoms of all sorts of dystrophy of early or late rachitis, of scrofula, or of tuberculosis. The constitution undermined by syphilis, the tainted blood, the impaired mucous membranes and slightly swelled lymph-bodies furnish ever so many inlets to invasion of different kinds. Besides, there is a peculiar class of cases with which we have a great deal to do. They occur in children of from 5 to 8 years, who are reported as having never been sick, but never well. They are not always listless, and languid, but they are anemic, thin, pale, under-weight, and easily tired. You find no organ diseased, and the blood-count is not pathognomonic. If you leave them alone, and with the consolation that the seventh or the fourteenth year will set matters all right, you leave death or life-long invalidism alone. Many of these children have syphilitic fathers in whom the disease was, or was believed to be, extinct when that child was conceived. In those cases think of syphilis. No arsenic and no iron, no country air or hydrotherapy will do them any good before they have been treated carefully and persistently with mercury. These are the cases in which mercury adds to the number of red

blood-cells in a remarkable manner. It has often appeared to me that the absolute belief amongst our predecessors in calomel, which was considered indispensable in all the diseases of infancy and childhood, was in part founded on the frequency of just such cases.

Pertussis is a self-limited disease. Nature will get through with it; but in many cases with the child also. As long as whooping-cough lasts there is danger from hemorrhages, from convulsions, bronchopneumonia, and perhaps connected with it, from tuberculosis; cases of encephalitis, spastic spinal paralysis, hemiplegia, post-hemiplegic chorea, and paralysis of the abducens have been observed. Some of these direct results are liable to occur during the height of the disease. If we shorten the duration of the illness we prevent its opportunities for mischief. One of the first convincing experiences of this kind I had when a young practitioner. An infant with whooping-cough had a severe convulsion with every attack. Three days and nights either I, or a substitute, sat by, chloroform in hand, which had to be administered dozens of times every day. There is no doubt in my mind that by this active treatment I prevented either death or cerebral hemorrhage, with idiocy or epilepsy.

In gonorrhea of the male, or female, what do we prevent by active treatment and great care? Stricture and epididymitis may not count for very much, and aspermia in the male may not be estimated a great misfortune, but there are many here who have seen gonococcal arthritis and polyarthritis, endocarditis septicopyemia, and death, or at least, ankylosis and long suffering. And the woman who is the victim of a man that was insufficiently treated over the apothecary's counter, or by his medical adviser, and perhaps thought himself freed of his gonococcal tenants! We have all seen from that cause endometritis, salpingitis, peritonitis, parametritis and perimetritis; and if not death, or lifelong invalidism, both of which do happen—at all events, sterility. Most, or all of these could have been prevented.

Fine principles, when put to the test of daily practical experience, lose sometimes much of their ornamental glitter, and much of their usefulness. We hear the saying, and pass it on, that simplicity is of the greatest value in practice, and that a compound prescription is the damnation of the practitioner. If there be one indication, or one alleged indication, there should be one remedy. Here is an example: In a case of collapse, lowering of the head is a good remedy; compression of peripheral blood-vessels another; hot-water injections into the rectum a third; salt-water infusion, either subcutaneous or intravenous a fourth; the hypodermic use of alcohol, of camphor, of strychnin, of digitalis, of caffein, a fifth, sixth, seventh, eighth and ninth, the internal use of musk a tenth, and many more. If there be any simplicity and one remedy preacher who means to live up to his own notions and teachings, let him



decide as to the single one of the indicated remedies he will select. There are only a few things that are quite simple and uncomplicated; one is a corpse, and the other a coffin.

Who is it that made the rule that a prescription must contain one drug only, not two, nor three, though they chemically be ever so compatible, if not the nihilists who preached that there is nothing in medicine but autopsies, and that medicine is a science and not an art; or, perhaps, it was only exaggerated antagonism to the yard-long theriacs of the Middle Ages. If there is in illness an uncomplicated condition, give an uncomplicated drug; but be sure that the organ to which you direct your remedy is also simple and uncomplicated. Is there such a thing? Let me again take the example of the heart. When we speak of heart-failure, or a debilitated heart, does that not mean something more than the flabbiness or overextension of an Indian-rubber bag? A heart is composed of muscular, intercellular, fatty, elastic tissues; it supplies all the organs with blood, and is itself thus supplied. Its circulation is pulmonary and nutrient. Its blood-vessels are exposed to the anomalies of all of the rest of the blood-vessels. In its nerve-supply there are sympathetic ganglia and fibers; there is the pneumogastric, there are fibers coming from the medulla, and in the medulla there is the head center of the circulation. Its normal innervation is that of the contracting muscle and of inhibition besides. If this compound body fails in its co-operative action, is it probable that a single drug will restore it in all instances? In some, certainly, for the strengthening of inhibitory power is often sufficient to gradually restore the disturbed equilibrium; but in many cases the circumstances are not so simple. Digitalis acts in many ways; according to Traube the slowing of the heart's contraction is its main effect; but aconite has a similar effect without any muscular influence. Digitalis increases arterial pressure, so does strychnin; digitalis causes diuresis by raising tension in the renal arteries; it has that effect in a lesser degree than strophanthus, which influences the arterioles less markedly. Digitalis also raises the blood-pressure, and thereby improves the nutrition of all the tissues, that of the heart included. To its action on the heart, and also of the arteries, is due the rapidity of circulation; when, however, its contracting influence on the small arteries is too intense, that rapidity is stopped. To restore it nitrates are employed.

Strychnin increases arterial pressure without an inhibitory effect. That is why when only a moderate amount of inhibition, but competent pressure is required, small doses of digitalis should be combined with good doses of strychnin. Inhibition is rather paralyzed by atropin; that is why rather large doses of digitalis are both tolerated and beneficial when combined with atropin. Spartein has little direct action on the heart-muscle and depresses the inhibiting pneumogastric;

that is why digitalis, when its muscle-effect is demanded, is borne when combined with spartein, in fair doses, for a long time in succession. Such combinations are not only permissible; they are requisite. I give such combinations, say of 4 decig. daily, of digitalis or its equivalent with half the amount of spartein for six weeks with perfect safety without going to see the patient, and with no cumulative effect; the latter cannot always be avoided when digitalis is given alone. Though I must be brief, I should not conclude however, without the remark that the combinations of so-called heart-stimulants may be much more various. Like strychnin, ergot affects the medulla and the spinal-cord centers. Caffein, camphor and ammonia stimulate both the heart and the vasomotor centers; hydrastis both the vasomotor centers and the peripheral vasomotors. Adonis appears to be almost identical with digitalis in its cardiac and arterial effects; strophanthus, with its modified action on the heart and principally on the arteries, finds its associates in convallaria and apocynum.

Fragmentary though these remarks have been, there is but one conclusion to be drawn from them, viz.: That it is sounder practice not to rely on a single remedy when the disorder is multiple, and the tissues complicated. To win battles and to render war the reverse of ridiculous, you want the cooperation of brave troops, of well informed and conscientious officers, an experienced commissariat, expert engineers, and an effective medical administration; not a single one of them only. In addition, you want to be sure of the condition of your armamentary—be they rifles or drugs. It is true, here as everywhere, that brains come in handy for guidance.

In closing, allow me to thank you for your patience in listening to the many fragmentary remarks I took this opportunity to make. The stand I take in the midwife-question from a social and a sanitarian point of view will probably be shared by many who will acquaint themselves with the ever-increasing necessities of the crowded millions of a large city or of the forced hermits of the backwoods. Nor will much objection be raised to what I presented in connection with premature senility. I am, however, not quite so certain about the universal approval of my views on therapeutic preventives in the different camps of medicine. Indeed I am quite aware that many of those to whom we are under great obligations for services rendered to the advancing medical sciences, will quickly disagree.

Anatomists, physiologists, chemists, bacteriologists—all these pillars of etiology and diagnosis—should, however, suspend judgment. What I said was in the interest of the man, woman, or child not yet on the autopsy-table. The demands of actual practice in hospitals and at the private bedside cannot dispense with the results of the labors of those mentioned; but clinical medicine requires more than the knowledge of morbid changes and their causes; it demands means to prevent, to

relieve, or to heal. That is what creates the superiority of clinical medicine over the special branches of study, and its standing as the first of all humanitarian sciences and arts. When this will be fully understood by the hosts of medical students and young practitioners, therapeutics in all its parts, diet, hygiene, and drugs, will receive greater attention.

The latter deserves it more from year to year, with the increasing results of laboratory-research, which adds to accuracy and safety. It is a queer spectacle to notice that the use and abuse of drugs is growing with the actual or pretended indifference of medical men in regard to them. More than \$200,000,000 annually are spent on proprietary medicines in this country. The pirates of the single-pill persuasion are ably seconded by the wholesale manufacturers, who supply you not only with their wares, but with the formulæ of your prescriptions. The contempt in which we are held by some of them is perhaps best shown by the way in which they show their conviction of our absolute ignorance. It is only a few days ago that I received a circular in which I was taught a prescription for subdividing a certain quantity of a synthetic drug and white sugar into twelve powders.

As our medical schools are to furnish not only scientific specialists, but the physicians and the sanitarians of the country, I trust the time will come when, like the present anatomic, physiologic, histologic, and bacteriologic instruction, a course in a pharmaceutic laboratory will be compulsory.

### EPILEPTIC INSANITY.<sup>1</sup>

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SOME 10% of all epileptics become so insane as to require supervision at home or in asylums. Hence the epileptic neurosis in an individual renders him about thirty times more liable to insanity than if he were normal. The psychoses to which the epileptic is subject vary extremely in character, and it is my aim to give here a brief review of them. I shall not consider under this heading forms of mental disorder in which epilepsy or repeated epileptiform convulsions make their appearance in conjunction with the psychic disturbance as the result of a common cause (general paralysis, chronic alcoholism, epileptic idiocy, paralytic idiocy, etc.), but shall limit myself to the class of insanities induced by the epilepsy.

It is, first of all, necessary to dwell for a moment upon some of the ordinary features of epilepsy, apart from the familiar phenomenon of muscular convulsion. The epileptic is subject to peculiar symptoms that are

looked upon as the equivalents of convulsive seizures. Among these are sudden brief losses of consciousness. Consciousness may be merely clouded or completely lost. There may be no perceptible concomitant symptom. On the other hand, the defect of consciousness may be accompanied by some pallor of the face, a fixity of the eyes, or a partial local spasm or movement (strabismus, stammering of a few words, grimaces, lifting the arm, a bowing movement of the body, turning of the head, etc.). The disorder of consciousness may be associated with an automatic dream-state, similar to somnambulism, in which complicated impulsive movements take place (automatic continuance of acts begun before the seizure, purposeless running, undressing, etc.). Vertiginous attacks may be the equivalent of convulsions. The aura of an epileptic attack may be in the form of an hallucination.

A study of the psychology of epileptics in general gives us a sort of composite picture to which all of these patients conform more or less closely. The mental attitude of the epileptic is due to a variety of circumstances. In the first place he has a consciousness of the dreadful nature of his malady. He is in a state of expectant attention as regards the sudden blackness and prostration that are to strike him unawares at any time, in any place, like the lightning from a clear sky. He can never share the social pleasures of his fellows. The schools are not open to such as he. When he becomes old enough to work, he finds that no one wishes to employ him. Every avenue of education, every trade and calling, every road to mental progress is barred. He is a social outcast, an object of commiseration, a burden to his friends, perhaps a family-blemish to be kept concealed. The physician is called in, and, taking, as a rule, a hopeless view of the case, abandons him to the mercy of the bromids, which further his mental, physical and moral degradation. In this way the epileptic character is evolved. It consists of a mixture of melancholy, hypochondriasis, emotional irritability, moroseness, distrust, misanthropy, mental apathy and dulness, often combined with morbid religious tendencies, and modified by pathologic psychic conditions incident to the ravages of the disease itself. These pathologic mental states vary from the peculiar psychic equivalents mentioned to the actual psychoses of divers forms now to be detailed.

Epileptic insanity is chiefly a progressive psychic deterioration terminating in dementia; but the progressive degeneration is frequently marked by episodic outbreaks of psychoses under various forms. Among these are transitory hallucinatory and stuporous disorders and chronic epileptic psychoses (under any form, such as mania, melancholia, circular insanity).

*Psychic Degeneration of Epileptics.*—As is well known, severe epileptic attacks are ordinarily followed by a somnolent or stuporous condition lasting from an hour or two to several days. The frequent repetition of

<sup>1</sup> Read before the Section on Neurology and Psychiatry of the New York Academy of Medicine, March, 1898.



such attacks tends to render complete recovery from the mental torpor more and more difficult. As a consequence we observe a gradual weakening of the intellectual processes. The flow of ideas is retarded, and the expression of such ideas along motor lines becomes sluggish. Speech especially has a characteristic slowness. Attention is diminished and memory impaired. The concepts and judgments are built up with ever-slackening activity. In this way the epileptic may sink gradually into a deepening simple dementia. In some cases the concepts attended with ethical feelings vanish first, and to such a striking degree that acts of violence, cruelty, brutality and crime are committed without a single inhibitory effort or shadow of remorse. These acts often have an impulsive character.

Excessive irritability of temper is a phase of epileptic psychic degeneration. The most trivial incidents may give rise to outbursts of anger and even of overwhelming fury. The natural hypochondriacal depression of many epileptics is frequently much exaggerated, giving rise to a sort of melancholia colored by mental enfeeblement, and by suspicion, distrust, misanthropy and moroseness. Occasionally in the midst of this progressive deterioration of mind, imperative ideas and acts manifest themselves, and delirious states appear, with dreadful hallucinations and delusions of persecution (paranoia-like outbreaks).

These are the marks that distinguish the psychic side of the gradually developed dementia of epileptics. The mental enfeeblement is accompanied, as in terminal dementias generally, by increase in bodily weight, hypertrophy of the subcutaneous fatty tissue, and the gradual effacement of the lines of expression in the features. We thus reach ultimately the condition of

*Epileptic Dementia.*—As already intimated, the rate of progress of epileptic dementia is in direct proportion to the number and severity of the seizures. There are cases that go on to the terminal stage without all of the peculiar manifestations of progressive epileptic degeneration just described, and others again in which some of these features are prominent. The dementia may be absolute, so that not the simplest concrete memory-picture remains in the vacant mind—the patient needs care in his person and dress and often has to be guided and assisted in taking nourishment. His sensibilities become so diminished that he is indifferent to stimulation of any sense, and has no perception of the needs of the body as regards the bowels or the bladder. He must be cared for like an infant. A persistent sexual instinct often impels him to constant masturbation.

During progress into dementia we note the intercurrent hallucinatory states, already mentioned, and the excesses of anger, with assaults and impulsive actions of various kinds. The motor memories suffer in the end to such degree that all complicated move-

ments are forgotten. This is particularly noteworthy in the use of words that are separated by considerable pauses. Often even the syllables are thus divided. Finally, the patient loses the power of speech altogether (aside from the actual aphasic attacks that are not infrequently observed in connection with severe epileptic seizures).

The course of epileptic dementia is rarely rapid; it usually extends over a period of years. The cause of death is usually accident, the status epilepticus, pneumonia, intestinal catarrh, inflammation of the bladder, or some other intercurrent affection. Epileptic demented exhibit a diminished resistance to diseases in general, and never attain any great age.

*Acute Transitory Epileptic Insanity.*—The acute insanity of epileptics develops suddenly before a convulsive seizure, after the attack, or it may occur in the interval between the epileptic convulsions, commonly in the place of a convulsion, as a so-called psychic equivalent. As a rule, both onset and termination are sudden. The duration of the insanity is ordinarily from a few hours to a few days, though the attacks are sometimes shorter and sometimes longer. The symptoms are peculiar and various. The chief characteristic is the clouding of consciousness. The patient's state may be one of complete unconsciousness, though usually consciousness is not entirely lost. It is rather a condition of subconsciousness or of subliminal consciousness with stupor. Upon this screen of clouded consciousness there is a play of multiform and bizarre psychopathic outlines—many-hued, terrible or ecstatic hallucinations, delirium, mutism, incoherence, verbiage, anxious states, delusions (often of a persecutory nature), or irresistible impulse to assault, destructiveness, homicide and suicide. Sometimes the fundamental tone of the outbreak is melancholic, more often maniacal, but the most appropriate designation of these acute epileptic psychoses is perhaps acute hallucinatory paranoia. There is no essential difference between them, whether the attack be pre-paroxysmal or the equivalent of the paroxysm.

The stupor of epileptic insanity is distinguished from that of other psychoses by marked loss of consciousness, enfeebled attention, analgesia, sudden violence and confusion.

We sometimes observe in connection with subconsciousness primary anxious states resembling precordial dread, with extremely painful sensations of oppression and suffocation; and much more rarely primordial exaltation, with acceleration of the stream of ideas.

Hallucinations are mostly limited to the visual, auditory and olfactory senses, chiefly to the first-named. The patient sees wild beasts, specters, flames, the fires of hell, wheels, gigantic threatening objects, falling walls, overwhelming waves of water, or, on the other hand, the golden gates of heaven, the jasper throne, God, and the choir of angels. He hears men-

acing voices, clamor and uproar, the thunder of cannon; or the singing of the hosts of heaven, the voice of God, etc. Disagreeable and noxious, or pleasant, odors may be perceived. A peculiarity of these hallucinations is a certain monotony of character, a general sameness, in great part due to the rather child-like constitution of the mind of epileptics. Their education and mental evolution are so often, from the nature of their malady, hampered and retarded, that they pass through life with the fancy and understanding of a child.

Incoherence of speech and lack of orientation as to surroundings are more marked in epileptic insanity than in any other psychosis.

The motor symptoms vary extremely. Sometimes we note motor inhibition attaining to complete immobility and mutism lasting for hours, days or weeks at a time. Such quiescence is often interrupted by sudden explosive acts of violence. Again, in other cases we observe agitation, restless wandering about, purposeless and impetuous running hither and thither, assaults, destructiveness, and rarely complicated acts like theft and other petty crimes. A condition of religious ecstasy is not uncommon. The patient may feel himself wafted to heaven, where he converses with God, Christ and the disciples.

In some rather rare instances epileptics are subject to dream-like states of subconsciousness, similar to somnambulism, in which complicated acts are carried out. Like the somnambulist, such patients may seem to be conscious, may comport themselves in speech and conduct in a perfectly natural manner, and in this condition, which may last for hours, days, or even weeks, they may commit offenses against the law, wander off as tramps, or do some other extraordinary thing in following the imperative, childish, silly, or fantastic ideas that control their dream-state.

The disorders of memory incident to transitory epileptic insanity are both interesting and important. There may be upon recovery absolute amnesia as regards everything that has taken place. There may be remembrance of much that has occurred immediately after the insanity has passed, with subsequent amnesia. There may be complete amnesia at first, with glimpses of remembrance afterward. There is rarely any persistent recollection of the events of the psychopathic state.

As has been stated, the rule is for these transitory epileptic insanities to exhibit a sudden onset and a sudden termination. The longer the duration the less abrupt the cessation. The majority of these patients recover, but recurrence is of course frequent. Termination in a chronic condition is rare. Occasionally death takes place from exhaustion, intercurrent maladies, or from a convulsive seizure or a series of attacks during the psychosis. Recurrences tend to hasten a psychic degeneration ending in dementia.

The epileptic nature of such insanity as is here described, when the history is not known, is determined by the following characteristics: (1) The sudden onset and the abrupt termination; (2) the terrifying or ecstatic nature of the hallucinations and delusions; (3) disturbance of consciousness and a stuporous condition; (4) impulsive acts; (5) dream states; (6) amnesia.

*Chronic Epileptic Insanity.*—Aside from epileptic dementia, the acute epileptic psychosis just described may take a chronic course, or assume a periodic form, with little improvement in the intervals between the exacerbations. There are cases that closely resemble chronic mania in their long course and others in which melancholia is the predominating feature. The epileptic attacks to which these patients are subject are naturally the distinguishing feature, and a special color is given such cases by the epileptic psychic degeneration. Occasionally a true circular insanity is presented, with its alternating maniacal and melancholy phases.

*Treatment.*—Most cases of pronounced epileptic insanity require commitment to an asylum. Their proclivity to sudden excesses of rage and fury and to impulsive acts of violence necessitates this course. When there is simply a moderate amount of psychic degeneration this course is not necessary.

The treatment should be, in the first instance, prophylactic, but after the development of the psychosis it consists in a combination of the treatment for ordinary epilepsy with that for the particular type of insanity presented.

Preventive therapy is concerned with the counteraction of the many elements that favor mental deterioration, with the mitigation of the epileptic's early sufferings, with the reconstruction of his environment. It may be called the moral and manual method. The moral part of it is the opportunity for education, regular occupation, and recreation. The manual and hygienic part of it, the acquisition of out-of-door trades or callings—muscular exercise that in itself serves to reduce the number and intensity of convulsive seizures. I may be pardoned for dwelling somewhat longer on this subject of preventive therapy, and for allowing my pen to go over the same lines that it has traveled so often in the past years, because I am convinced that this moral treatment marks the greatest stride in advance made for centuries in the therapeutics of epilepsy. For ages drugs have been exploited as helpful or curative, but after all little has been accomplished from the standpoint of *materia medica*. Only of late years has the moral treatment become prominent. As a rule the epileptic patient was dismissed by his physician with a prescription of uncertain value and possibly a few general directions as to diet. It was not known to the practitioner, or at least he did not concern himself about the matter, that the epileptic could gain admission to no hospital of any kind; that he had no associates, occupation, or recreation; that, debarred from



the schools, he grew up uneducated and with a tendency to retrogression rather than to progress; and that, without teaching, reared in idleness, suffering from a dreadful malady, neglected in body and mind, he could find shelter at last only in the almshouses and insane-asylums, these being the only institutions open to him. Yet, in by far the majority of cases of epilepsy, the attacks rob them for but brief intervals of the capacities for study, work, recreation, and social pastimes that they possess in common with their more fortunate fellow-men. Hence the adoption of a scheme of colonization for epileptic dependents as exemplified by the Craig Colony in the State of New York.

The out-of-door life in a farming community has already had wonderful results that can be learned from the annual reports of the Colony. It will suffice to say here that the average reduction in frequency of attacks among all the patients has been fully 50%, and that the mental and moral regeneration of the beneficiaries had been truly remarkable. What the effect of such change of environment must be as a prophylactic against psychic degeneration and insanity for the epileptic children that are sent there, cannot be estimated.

We may now briefly touch upon the medicinal and surgical treatment of epilepsy. The old drugs, borax, silver nitrate, belladonna, the bromids, etc., etc., have their uses. One is valuable in one case and not in another, and each patient, when the disease is idiopathic and no etiologic indication exists for the preferment of an especial agent, must be experimented upon with one drug after another for two or three months at a time, until a satisfactory remedy is discovered. Upon the whole the bromids are most effective as a general antispasmodic for all cases. While the bromids are perhaps the most useful remedy we can employ as an antispasmodic in many cases of epilepsy, their exhibition in every case is not advisable. With a considerable number of patients the bromids are entirely ineffectual; with no small number, too, very serious symptoms, such as acute bromism, increase of seizures, and even insanity, supervene upon their use. In many of the cases in which actual good is done by the bromids in reducing the frequency and the severity of the attacks, the concomitant symptoms are such that it becomes questionable whether the remedy be not after all worse than the disease. I make it a practice, therefore, to exhibit the bromids with caution, and never to employ them until the series of less harmful but often quite as efficacious remedies for epilepsy have been tried in vain.

There are some new drugs and remedial methods that have come into vogue of late that are worthy of attention. In the first place, there is simulo, a South American plant of the hyssop family, the tincture of which is given in doses of from one to two or three drams three times daily. After an experience in many cases for several years, I would say of simulo that it

deserves trial in most cases; that it is perfectly harmless, which cannot be said of the bromids, borax, belladonna, and some other drugs; that in a few cases it has been extremely beneficial in my hands, and that in many cases it has no effect at all. Simulo combined with small doses of bromid acts very well.

The so-called opium-bromid treatment of Flechsig is of use for many patients, especially in old and obstinate cases in which all other agents have proved ineffectual. This treatment consists in the administration of opium for some six weeks, beginning with  $\frac{1}{2}$  or 1 grain three times daily, and increasing gradually until from 10 to 15 grains a day are taken, when the use of opium is suddenly stopped and bromids in large and gradually reduced doses are given (30 grains four times daily to begin with). I had used codein with considerable success in certain cases of epilepsy for some years, but this combination of the opiate with bromids is still more satisfactory.

Adonis vernalis conjoined with the bromids, as suggested by Bechterew, is an efficient method of treatment, from which, in several instances, I have had gratifying results. Digitalis, which has properties similar to adonis vernalis, was formerly frequently given in epilepsy, but the new combination seems to be more efficacious.

There are a few cases of epilepsy in which careful investigation indicates self-intoxication as a factor. In these an excess of ethereal sulphates (indican) in the urine, together with periodic or constant attacks of gaseous diarrhea, are almost positive manifestations of putrefactive or fermentative changes taking place in the alimentary tract. It is remarkable how much benefit may be obtained in such patients from the regulation of the diet (milk and its modifications, koumiss, matzoon, somal, rare or raw beef, eggs, green vegetables, and special breadstuffs, like zwieback, Huntley and Palmer's breakfast biscuits, and Voebt's biscotte de legumine); from the frequent drinking of hot water, and the occasional flushing out of the large intestine with hot water; and from the use of certain intestinal antiseptics, given two hours after eating, with plenty of water (beta-naphthol, sodium salicylate, or salol).

The remarkable effect of thyroid extract upon general nutrition would naturally suggest the advisability of its administration for experimental purposes in some of the nervous diseases that we are accustomed to look upon as due to nutritional disturbances in the nervous system. With this idea in view, I have employed such an extract in a good many cases of epilepsy, in a number with very good effect. Especially noteworthy was mental improvement in several cases of epilepsy with apparently considerable dementia. The drug is worthy of more extended trial.

Aside from the remedies for the epilepsy just described, we need occasionally to employ certain other drugs for particular conditions, such as the status epi-

lepticus, maniacal outbreaks and pronounced melancholic states of terror, etc. In the status epilepticus, rectal injections of chloral, gr. xx, with an ounce of starch-water, repeated at intervals of two or three hours if needed, give the most satisfaction. In great ideomotor excitement we should use hyoscin, hyoscyamin or duboisin hypodermically in doses of from  $\frac{1}{100}$  to  $\frac{1}{40}$  grain. In anxious melancholic conditions, morphin hypodermically is perhaps the best alleviating agent to exhibit.

The question of trephining must naturally come up in certain cases of epileptic psychoses in which trauma to the head is evidently the cause of the epilepsy and psychic degeneration. The following points are to be taken into consideration as a guide in this matter: (1) In the small number of cases having injury to the head as a cause, the epileptic habit is so strong and the changes in the brain are usually so old and deep-seated that an operation, as a rule, does not cure and only seldom permanently diminishes the frequency of the attacks; (2) of miscellaneous traumatic cases in which a surgical procedure seems justifiable and is undertaken, a cure of the epilepsy may be reasonably expected in perhaps 4 of every 100 cases operated upon; (3) the removal of a cicatrix from the cortex supposed to be the epileptogenic nidus will naturally be followed by the formation of a new cicatrix in the surgical wound—the creation, therefore, of a new epileptogenic center; (4) the more recent the injury the greater will be the promise of lasting benefit; (5) in cases of traumatic epilepsy, with marked epileptic psychoses (recurrent attacks of rage, fury, violence, destructiveness, etc.), trephining would be justifiable as a possible means of diminishing the severity, danger and frequency of the maniacal attacks, even though the epilepsy itself or the psychic degeneration might not be improved.

### THE BOTTINI OPERATION FOR ENLARGEMENT OF THE PROSTATE GLAND, WITH REPORT OF A CASE.<sup>1</sup>

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THE most distressing affection incident to advanced years in the male is enlargement of the prostate gland, not in itself so much, as in its results. Until the aseptic era in surgery there were few exceptions to the rule that the prostate suffered also soon from cystitis and in not a small percentage the infection traveled up the ureters. Even to-day it is exceptional to be able to teach a man to so carefully use his catheter as to escape infection. The mortality-rate is much enhanced in old men by the secondary results of enlargement of the prostate gland.

What has surgery usually offered these cases? Prostatectomy, orchidectomy, and vasectomy. The last two, almost minor operations, easily possible of being done aseptically, have a considerable mortality-rate, with only a moderate percentage of cures of the condition for which the operation is undergone. They are not radical operations. Orchidectomy has now few advocates. Patients naturally take unkindly to it. Vasectomy is still slower and more uncertain as to after-results. At best these operations are surgical make-shifts, exceedingly well intended and apparently scientifically supported, but which have not fulfilled expectations and which, like oöphorectomy as a cure for fibroids of the uterus, will disappear in disuse. Prostatectomy has always had a high mortality. The latest radical method by the combined suprapubic and perineal incisions, with if possible complete enucleation, has lately gained many advocates, but they ask for earlier operations. Surely, if this operation is to yield good results, it must be done before the development of cystitis or before the habitual use of the catheter. How many patients will submit? Many cases as yet encountered are beyond where good judgment can allow the use of general anesthesia. These facts indicate why there has been allowed such a thing as catheter-life so called. Conscientious surgeons have become accustomed to tell prostatic patients that surgery was for them a "dernier ressort," and it might always have been so but for the galvanocautery operation of Bottini.

The aim of the Bottini operation is to burn a groove or grooves through the prostate into the prostatic urethra a determined distance and if possible a desired depth. It is desirable and possible to do this in one operation, so that within a few hours, and with only a trifling hemorrhage, the natural outflow of urine is restored.

I make no apology for hastening to report a single case. One good case, well studied, is often better than many. A more instructive case than this one may not for some time be found. It is the kind of case to prove a method.

A man 71 years old has been under my care occasionally for some years. Notwithstanding a well-compensated double heart-lesion (mitral regurgitation and aortic stenosis) he has enjoyed good health, ably in charge now and for many years of one of our largest and most important State institutions. Two years ago his urine was of normal specific gravity, acidity, color, and transparency. It contained no albumin or sugar, and microscopically presented no evidence of vesical inflammation. At this time the patient had begun to urinate too frequently at night. In November, 1897, the following record of urine was noted: Specific gravity, 1014; acid, light in color, slightly turbid, a trace of albumin; microscopically, mucus, a few pus-cells, uric acid, vesical epithelium. Micturition had for some months increasingly become too frequent and unsatisfactory in spite of strychnin and other medical attention. In January, 1898, urination became painful, the stream dribbled, the bladder never felt emptied. The man began the occasional use of a catheter without my advice, as I was rather inclined to delay its use until later. He gradually developed cystitis, with much pus, and was almost moribundly ill at one time in June, 1898, with a tem-

<sup>1</sup> Read before the Philadelphia County Medical Society, December 14, 1898.



perature of 105.5° on one occasion. Proper catheterization and vesical irrigation ended the attack. The patient then more carefully attended to his catheter, and performed self-irrigation not less often than every other day. His residual urine at this time June, was 6 oz., his bladder capacity under pressure, 10 oz.; overflow occurred when it was permitted every hour or oftener. Rectal examination revealed a large, firm, bulging mass sensitive to pressure, dumb-bell in shape on its under surface, with a large, thick, but laterally narrow isthmus between the ends. To the right the finger entered a sulcus in the rectum to the extreme right of this lobe. In the median line the finger could not reach the upper limit; nor could the large left lobe be outlined. A width of not less than 2½ inches, and an upward extension in the median line of 1½ inches would be a modest estimate for these two dimensions. The mass was an enormously large prostate.

In September, 1898, the patient took a 24-hours' railroad-journey, depending most of the time on overflow, a few times doing the best he could as to sterilization with his catheter. On his return he was worse. From this time catheterization, notwithstanding urethral and vesical sterile boric-acid irrigation, became more and more painful, often causing hemorrhage and making the man depend on overflow, which was always painful. With the bladder emptied and irrigated he could go just three hours without urinating. On November 16, 1898 (while attending court), he held his urine too long. On the evening of that day he had a chill, and on the following another, before I saw him. I found him with a temperature of 104°, and intense pain in the back. His urine contained a large amount of pus, and he appeared dangerously ill. For one week the afternoon-temperature never declined below 103°, in spite of diluents, and careful urethral and vesical irrigation. In the second week the case was under control, the morning-temperature reaching normal, the afternoon-temperature, however, never being under 100°. On December 14th, after catheterization every two hours, followed by irrigation until apparently all pus was removed from the bladder, 2 ounces of urine were allowed to accumulate and were drawn off. Examination revealed a specific gravity of 1010, acid reaction, cloudy appearance, and the presence of albumin, ¼%. Microscopically there were seen pus, mucus, a little bladder-epithelium, a few round and oblong cells from the pelvis of the kidney, a few purely hyaline casts. On December 1, 1898, the residual urine was 8 oz.

The character of the onset of this last attack of septic fever, the slowness of recovery under proper vesical irrigation, the fact that urine collected from an unquestionably cleaned bladder contained pus and cells evidently from the pelvis of the kidney and also a few hyaline casts, leads to the belief that on November 16th, the infection traveled up one or both ureters.

The growing distress and apparent increasing debility of the patient in spite of the passing over of the acute condition called for early relief from the prostatic obstruction. I had long ago advised against the usual operative procedures. A general anesthetic was positively contraindicated. I had lately, after careful study, finally appreciated the Bottini operation. I explained it to the patient, obtained his consent, sent for the instrument, and decided to operate on December 3d. I practised the necessary technic on the patient.

On December 1st the incisor was introduced into the bladder without the use of cocaine, and the beak hooked against the anterior lobe of the prostate. It was found impossible to turn the beak around either side to the rear. On December 2d the following method of using cocaine was deliberately tried. After irrigation, the catheter was brought out until the eye was in the prostatic urethra. A syringe holding ½ oz. of a 2% sterile cocaine-solution was attached, a few

drops placed in the prostatic urethra, the catheter pushed on and the remainder of the solution thrown into the bladder in order to bathe the prostatic surface and the base of the bladder. In two minutes withdrawal was begun, in four minutes completed.

I departed from the procedure of using about 1 dram of the solution, for the reason that the prostate and bladder were extremely sensitive, and I wanted the effect that volume only could give. Rapid withdrawal and immediate irrigation make the procedure safe, more so by far than when a dram is left in place and not removed. I had expected the cocaine to shrink the gland a little, and am certain it did, for before using cocaine the irrigating fluid had returned clear, while, after using it, I washed out considerable pus. What happened? The prostate shrank a little, and pus was expressed from the mucous membrane.

On introducing the incisor the beak was made to easily and painlessly encircle the prostatic orifice and the large, bulging lobes were felt against the beak by traction on the handle.

The operation was performed December 3, 1898. Everything was made sterile. The penis was washed, and the urethra and bladder irrigated until the fluid returned perfectly clear. One ounce of a 2% sterile cocaine-solution was used in the manner described, and the bladder was immediately irrigated, with the removal of considerable pus. The bladder was emptied, a sterile sheet thrown over the patient, with a small slit for the penis, the incisor was introduced and the beak turned to point to the sacrum. A current strong enough to give to the blade a bright cherry-red in 6 seconds was turned on and the posterior incision was made 3.7 cm. long, in 35 seconds more. The knife was returned to the beak with a slightly stronger current in 10 seconds. Making this cut and returning the blade occupied 45 seconds. A left lateral cut of 3 cm. was made, burning and returning the blade in 40 seconds. An anterior cut of 2.5 cm. was made and the knife returned in 30 seconds. The actual time that the knife was in use at a bright-red was 1 minute 55 seconds. The actual time from the beginning of the first incision to the end of the last cut was 3 minutes. The time for the introduction of the incisor, the attachment of the irrigating apparatus, the operation, and the removal of the incisor was 5 minutes.

A slight amount of blood escaped along the groove of the instrument during the cauterization. For 3 hours after the operation urine dribbled. It was then passed voluntarily, at first frequently, then at gradually increasing intervals. On the ninth day the bladder could hold 4 ounces and expel it with a large, forcible stream. On this day, also, an interval of 3 hours and 40 minutes elapsed between urinations. The longest interval for a year prior to operation was 3 hours, and then only after complete emptying of the bladder with a catheter and irrigation. Overflow in the same time had never occurred at greater intervals than one hour. The stream from the urethra is now wider and more forcible than for 3 years. For 3 days following the operation the temperature reached for a few hours daily 100°, which was considerably lower than it had been the few days just preceding the operation. On the third day it dropped to normal, and has since remained so. It had not been so for months. The average quantity of urine for 3 days before the operation was 30 ounces. The first 24 hours after the operation it was 29 ounces. The daily quantity for the succeeding days was, 32, 32, 36, 40, 40, 44, 45, 49 and 60 ounces, respectively. With the increase in the quantity of urine passed from the bladder the heavily coated tongue and the distaste for and distress from food passed away, as did all evidence of the effect on the kidneys of septic absorption. The urine, on December 14, had a specific gravity of 1010, was slightly acid, and cloudy, and it contained a small amount of albumin (less than ¼%)—less than the day before the operation, and about as much as in October, 1897, before beginning the use of the catheter. This albuminuria is possibly secondary to the double heart-lesion that has long existed. The patient is moving about freely in better health than for over a year, apparently

regaining rapidly the snap and vigor that he was well known to possess over 2 years ago. His bladder has not been entered since the operation. I believe it empties completely. There is perfect satisfaction after urination.

I have regretted in the interest of the patient that this method of relieving the obstruction to urination was not more commonly in use, or that I had not as good a conception of it, 6 months ago, when there had as yet been no evidence of extension of the inflammation beyond the bladder. It is remarkable that such a conservative and, as results go, wonderful operation should have so slowly gained recognition. The early excuse, the non-perfection of the instrument and the lack of proper electric appliances for obtaining a suitable current, now no longer hold. Some of the more recent results, repeated operations and dribbling for a week or more were not calculated to arouse enthusiasm. These results, if examined into carefully, will be found due to timidity in the length of the cuts or, what is much more probable, to the use of too low a degree of heat in the knife. Most of the writers on this subject have advised the use of the blade at a cherry-red; but cherry-red varies. In my opinion it should be a bright cherry-red. With such a heat the incisions will be made more quickly, as in this case, and without more than trifling hemorrhage. Too low a degree of heat brings us near to where Bottini started. He charred not deeply, with a dull cherry-red blade. There was but little immediate loss of substance—too little; swelling almost to occlusion occurred; dribbling followed; and looked-for results were delayed often as long as 30 days. A degree of heat strong enough to consume tissue will afford space enough for voluntary urination to occur within a few hours, and a wide space after a few days. Hemorrhage, too, is more easily possible from too dull a blade, owing to traction on the charred tissue.

The first operator in America to use the Bottini method was Dr. Willy Meyer, of New York. Before December 9, 1898, he had performed the operation 15 times on 13 patients,<sup>2</sup> with one death only immediately following the operation, and this result he ascribes to acute sepsis. The patient, one of his early cases, was a bad surgical risk; there is reason to believe the general anesthetic administered was an important factor in the unfortunate outcome. Certainly, results obtained after a general anesthetic should be separated from those after local anesthesia. It seems probable that the use of cocain-solution in the bladder freely but carefully, as suggested in this paper and used in this case, will remove the necessity of general anesthesia in otherwise unmanageable cases. The second operator in America, Dr. Henry H. Morton, reported 5 cases on September 17, 1898, all successful; he has now undoubtedly a larger number to his credit. Dr. Bransford Lewis, of St. Louis, and Dr. Leonard Freeman, of Denver, have been among the latest to report successful

results. Hardly less than 50 have been operated upon during this year in America, which in itself proves the great value of the method and the appreciation of it that has finally been received in the surgical world.

The indications for the operation are not yet as clearly understood as they should be. The contraindications, if there are any from the condition of the prostate itself, will probably disappear with the reports from the increasing number of cases. Freudenberg has expressed the opinion that this operation should first be performed in all cases in which the obstruction is due to the hypertrophied prostate alone, and that other procedures should be reserved for failures from the Bottini operation. A large, bulging posterior lobe, not acting as a dam, is held by some as a contraindication. It will probably be found not so. It would be well for a cystoscopic examination to precede, if possible, the operation, to determine just what is the condition of the prostate. If a large posterior bulging lobe is found, it will require deeper cauterization, and subsequent atrophy will remove enough remaining tissue. Besides, it is undoubtedly true that the collar around the urethral orifice of the bladder, and the thick tissue encircling the prostatic urethra is chiefly responsible for the obstruction. Deep multiple incisions, three at least, should accomplish desired results.

## LECTURES ON ORTHOPEDIC SURGERY.

By JOHN RIDLON, A.M., M.D.,  
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AND

ROBERT JONES, F.R.C.S.,  
of Liverpool.

(Continued from p. 510.)

### SACRO-ILIAC DISEASE.

DISEASE at the sacro-iliac articulation is of comparatively rare occurrence. Existing apart from spondylitis in the lower lumbar spine, it is of still rarer occurrence, and the diagnosis is so obscure that there are surgeons, careful observers and of extended experience in joint-diseases, who affirm that they have never met with it. For the most part, and perhaps always, the disease is tuberculous, and is governed by the same laws of pathology, symptomatology, and treatment that govern articular tuberculosis elsewhere.

Traumatism frequently appears to be the exciting cause, especially when the disease is found in young adults, but there can be no question that the disease occurs without any remembered injury, especially in those predisposed by heredity to tuberculous infection and rendered susceptible by debilitating diseases and the infectious diseases of childhood.

The disease may commence in either of the bones that go to form the joint, or in the synovial tissue within the joint. The bones more frequently appear to be the seat of the infection than the synovial tissue

<sup>2</sup> Personal communication.



—there being no true synovial sac at this joint, but on account of the peculiar relations of the bones and because of the strength and thickness of the posterior ligaments and the absence of definite subjective symptoms in an early case, the disease is rarely recognized before suppuration has occurred, and all of the structures of the joint are involved. The disease may be of the so-called moist form and show early suppuration; or of the dry form, and run its course without suppuration; or the dry form under certain circumstances may at any time become suppurative.

Van Hook, who has made a most careful study of the literature of the subject, believes that the dry, non-suppurative form rarely imperils life and that the prognosis is in every way good, but that in the suppurative form the prognosis is exceptionally bad. It appears to us, however, that the symptoms detailed of many of the non-suppurative cases hardly warrant the diagnosis of sacro-iliac tuberculosis, and by that much detract from the weight that they would otherwise give to a favorable prognosis; and that the fatal termination and

On the other hand there can be no reasonable doubt that any operative interference increases the risk of general tuberculous infection; and, unless the operation be strictly aseptic, and the prolonged subsequent dressings be kept so, the risk from septic infection of a large cavity connected with carious bone is considerable. In a word, any operation that fails to remove all tuberculous material and to close the cavity by primary union without drainage, though demanded as a last

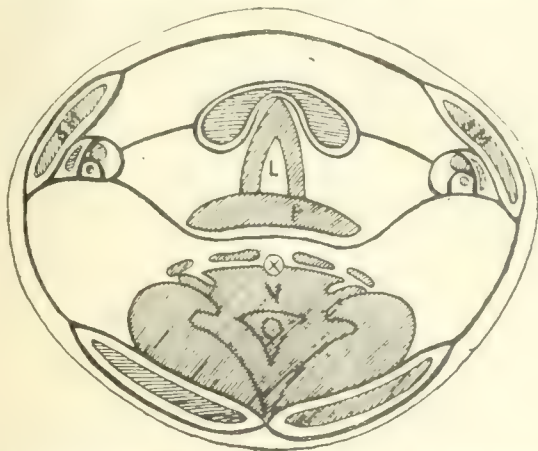


FIG. 1.—Diagrammatic section through the middle of the neck, showing the attachment of the pre-vertebral fascia laterally to the carotid sheath, thus directing pus into the posterior triangle of the neck in cervical caries. The fascia is attached above to the base of the skull; below it becomes lost in the posterior mediastinum centrally, and passing over the brachial-plexus at the root of the neck in front of the subclavian artery to be attached to the costocoracoid membrane. If pus descends, it may find its way into the axilla or the posterior mediastinum, in addition to pointing in the pharynx and the posterior triangle of the neck.

consequently unfavorable prognosis of the suppurative cases have more frequently been due to the character of the operative interference than to the nature of the affection.

There seems to us to be no good reason for believing that tuberculosis of the sacro-iliac articulation is governed in its fatalities by other laws than those governing the fatalities of tuberculosis of other joints, whilst our limited clinical experience of the disease goes to confirm this view. As in spondylitis, deaths occur from tuberculous infection of other organs quite as frequently in the dry as in the moist form of the disease, provided there be no operative interference. Death from prolonged suppuration is exceedingly rare when tuberculous abscesses are subjected to the let-alone treatment, and rarer still is death from septic infection.

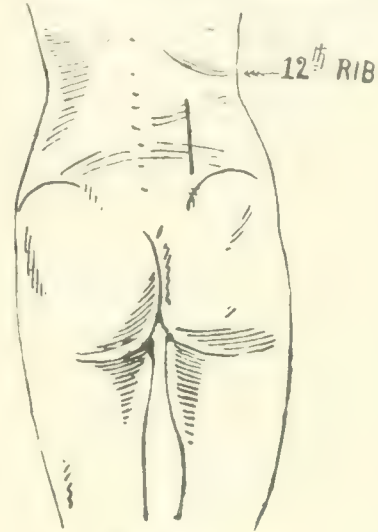


FIG. 2.—The lumbar incision.

resort, should be recognized as distinctly adding to the risks of the patient's life. The records of the cases observed show that fatal termination is usually due to septicemia, simultaneous or intercurrent tuberculosis elsewhere, or general miliary tuberculosis.

The first symptom to appear is usually a peculiar attitude, a "listing" of the trunk toward the unaffected side, or, more properly speaking, a shifting of the hips

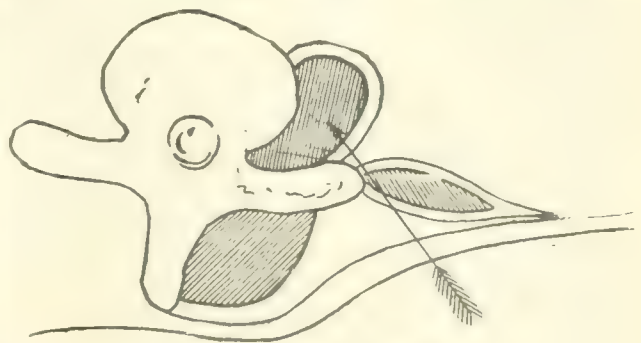


FIG. 3.—Direction of the lumbar incision.

toward the affected side; and as this progresses the spine assumes a long, sweeping curve, with the convexity to the sound side. Before the peculiar attitude has become sufficiently marked to cause comment, the patient usually finds himself fatigued on comparatively slight exertion, and has experienced difficulty in bending forward and rising up again. Ultimately, stooping is quite impossible. The gait becomes of a shuffling character, and as the disease advances the patient usu-

ally is unable to walk at all. In the early stage there is generally no flexion of the thigh, but, later on, this frequently appears and, with some degree of abduction or of adduction of the limb, simulates hip-disease or psoas-contraction of lumbar spondylitis. The abduction causes an apparent lengthening of the limb; the adduction an apparent shortening. The patient, standing, rests the heel upon the floor, but places nearly all his weight upon the sound leg.

The distant or referred pain, characteristic of tuberculous arthritis elsewhere, is usually present here, but may be absent. It is more frequently found in this affection than in disease of the hip or spine; if present, it is usually felt in the lower abdomen, but may be complained of anywhere along the front of the thigh and also along the area of distribution of the sciatic nerves.

At first the swelling of the joint-structures is more easily made out by palpation through the rectum, probably owing to the anterior sacro-iliac ligament offering much less resistance than the powerful and thick posterior ligament, and the swelling, therefore, is directed toward the interior of the pelvis. Sooner or later the external swelling appears and in most cases advances to true fluctuation, and the tuberculous abscess is present as a complication. Such an abscess may extend in any direction; upward in the multifidus spinæ, into the lumbar region, downward along the psoas muscle, or into the buttock, to the right or to the left, or directly inward, to open into the bowel.

A. E. Barker has reported cases in which he has successfully incised and flushed psoas-abscesses. He takes a case in which he presumes the bone-lesion to be stationary or healing, but in which a purulent collection is gathering. He makes a 2-inch incision through sound structures in the most dependent part of the swelling, after which a hollow gouge is inserted through the opening, and connected by piping with a reservoir of hot water at 105° to 110°. This reservoir (a three-gallon can) is raised up to 5 feet above the operating-table. The fundus of the abscess-cavity is by this means flushed, and the contents are washed away. The more solid caseous mass is dislodged by gently scraping with a scoop, until the soft lining membrane of the abscess is washed away. When the water runs out clear, the instrument is withdrawn, and all the water squeezed out. Iodoform-emulsion is then injected into the cavity, and stitches applied through the skin, the surplus iodoform-emulsion being squeezed out before the stitches are knotted; the cavity is then closed without drainage.

Laminectomy for the relief of pressure-paralysis has been advocated by Macewen, Horsley, Lane, Willard, White, Lloyd, and others.

The patient lies in a prone position, and a pillow is placed under the lower ribs to produce a curve in the vertebral column, and an incision is made over the

prominent spine long enough to admit of the free exposure of the laminae by retractors, when the erector spinæ is cleaned from them. Transverse notches in the muscle will facilitate this and do no permanent injury, owing to the ankylosis of the vertebræ; owing to the curve in the spine this muscle is often easily drawn aside. The laminae may be carefully sawed with a spinal saw, or cutters used specially for the purpose. The dura mater and cord are drawn to one side, and the tuberculous material at the back of the body gently scraped away.

The results of this operation are not such as to encourage its employment in any but the most desperate cases. It has distinct dangers of its own in its immediate effect upon the patient, and deprives the spinal column of practically its only support, when the bodies are largely eaten away by disease. It certainly should never be employed when thorough and prolonged mechanical treatment has not been tried. It is extremely rare to find Pott's paraplegia permanent, and from an experience that has been exceptionally large, we can recall only two or three such cases, although we have experience of many in which the paralysis has lasted considerably over a year, and in a few for several years. With the recently revived operation of forcibly straightening carious spines additional hope is held out in these cases, and no case should be subjected to a cutting operation until forcible straightening has been tried and proved a failure.

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## A BLOOD-STAIN.

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of Philadelphia.

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HAVING read with interest the report by Dr. H. F. Harris in the PHILADELPHIA MEDICAL JOURNAL for May 14, 1898, on some of the microchemic reactions of toluidin-blue, in which attention is called to the beautiful results obtained in tissues by means of this reagent, and methods of staining are described, it occurred to me that it would, in all probability, be an excellent stain for the white elements of the blood, inasmuch as the stain reacts so perfectly with the nuclei of the cellular elements of the tissues.

My idea of a successful blood-stain is one in which the nucleus in the finished preparation is sharply and clearly stained a color totally different from any produced by any other ingredient of a mixture. By this statement I mean that the chromatin-elements should be clearly and brightly shown. Such a result I have been unable to obtain with any of the many stains that I have tried. While fairly good results were obtained with the triple compounds, as well as with various double mixtures, they have not yielded the long-desired clearly stained nucleus. Many well-known nuclear stains were tried in combination with acid fuchsin and



orange G. and other substances, but still only a more or less pale nucleus resulted. Observations show likewise that the various stains just referred to, in the hands of students of more or less experience, do not produce the results they would so much like to obtain.

I have come to the conclusion that an excess of either of the ingredients of a mixture—the nuclear basic, the granular acid, according to the classification of Ehrlich—prevents the other from working, while at the same time overstaining itself. It is, therefore, clearly indicated that a delicate chemic balance must be obtained to insure the result desired. Accordingly, a series of experiments were undertaken to devise a mixture that would stain the nuclei of the leukocytes sharply and clearly, and at the same time the granules of the neutrophilic, eosinophilic and basophilic cells. The staining of the plasmodium malarie also was desirable, if it could be accomplished. Beginning with toluidin-blue as the nuclear stain, various other stains were added, including eosin, phloxin, Congo red, orange G., acid fuchsin, picric acid, and others, both singly and in combination. The mixture giving the best results is constituted as follows:

Saturated solution of toluidin-blue (Grübler)	. 24 parts,
" " " acid fuchsin	" . 1 part
2% " " eosin	" . 2 parts.

The solutions should be made in distilled water. They should be mixed in the order given, and the mixture agitated thoroughly for a few minutes, because the toluidin-blue is precipitated by acid aniline dyes, as noted by Harris. Only the supernatant fluid is to be employed. This mixture is ready for immediate use after agitation, and from 30 to 60 seconds are quite long enough to stain. It likewise possesses good staining qualities at the end of from 10 to 12 weeks, when it requires from 5 to 7 minutes to get a good result, the color in the nuclei tending toward a greenish hue.

The spreads should be made according to the method described by Cabot or that by Coles, and fixed in dry air at a temperature of 120° C. for at least 20 minutes. The temperature may be increased to 128° C. without disastrous results. The length of time for fixation may be extended to several hours, with a slightly beneficial effect. Plunging the spreads into a saturated solution of mercuric chlorid possesses no marked advantage over heat, but the disadvantage of soiling the preparations. Fixation with alcohol, or with a mixture of alcohol and ether, does not give nearly as good results as regards the neutrophilic granules, although the nuclei and eosinophilic granules stain very well.

It would seem, from the foregoing, that, while the granules certainly exist in some form or other in the protoplasm of the leukocyte, alcohol and ether lack, for some reason, the power of separating them from their surroundings, and thus enabling the stains to perform their selective function. The reverse is noted in heat-fixation, by which the granules are brought out prob-

ably shrunken from their matrix, or some element is removed. When it is recalled that heat intensifies chemic reaction, it seems not improbable that new compounds are formed from the albuminous principles of cells during heat-fixation, demonstrable by the aid of stains as neutrophilic granules.

The spread cover-glass is placed in a Stewart's forceps, with film-side toward the arm of the instrument containing the small ring, and enough stain is applied to cover the film. The solution is allowed to remain for from 1 to 3 minutes, when the slip is washed thoroughly but rapidly in running water, and dried quickly in air. When dry, it is passed two or three times through a Bunsen flame, and then mounted in balsam. It can now be studied with a  $\frac{1}{2}$  in. homogeneous immersion lens, with a flat mirror and an open diaphragm. The nuclei of the small lymphocytes are stained rather diffusely dark blue, with darker narrow bands of wavy outline interwoven throughout each nucleus, while the protoplasm is stained pale blue. The nuclei of the large lymphocytes stain deeply, with the same characteristics as the foregoing, the protoplasm staining faintly. There are occasionally noted granules stained intensely blue scattered in the protoplasm. The nuclei of the transitional form stain much like those of the large lymphocytes. In the polymorphonuclear cells, the nuclei stain sharply and clearly, and of a dark blue. The thread of chromatin occasionally observed connecting the nuclear fragments can be demonstrated clearly. The neutrophilic granules stain a rich pink, and are isolated from the protoplasm, which remains clear. There seems to be present a tendency to distinguish apparent degenerative changes in the cells, inasmuch as the reaction is faint in those cells that exhibit evidence of degeneration. In the eosinophiles, the nuclei stain somewhat of a greenish blue, while the granules stain a deep maroon. The erythrocytes react faintly or stain darkly a sort of brownish red, accordingly as the spreads are stained for a shorter or a longer time. Nuclei in normoblasts stain deeply, exhibiting the tendency toward karyokinesis, when that phenomenon is present.

The characteristics of leukemic blood are well shown by this stain. The myelocytes show better differentiation than with any other combination that I have ever used. The plasmodium malarie stains a turquoise-blue within the time mentioned, and is therefore sharply differentiated from the cell in which it is enclosed by the color of the organism, due to the stain, in contrast with the color of the surrounding cell-protoplasm, as well as by the pigment-granules in the parasite.

I beg to express my great obligation to Professors W. M. L. Coplin and H. F. Harris for kindly criticisms and liberality in permitting me to use the resources of the Jefferson Medical College Hospital Laboratories while studying this interesting subject, and also to Drs. R. C. Rosenberger and F. J. Kalteyer for many courtesies.

INFECTION OF THE LUNG AS AN ACCIDENT IN  
ASPIRATING THE PLEURA.

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THE subject of pulmonary abscess occurring as an accident in aspirating the pleura is one on which the textbooks are almost universally silent. The following case occurring at St. John's Hospital, Brooklyn, in the service of Dr. Henry A. Fairbairn, seems, therefore, of interest as illustrating the real nature of this danger, rare as it undoubtedly is:

D. M., a carpenter, 38 years old, with a negative family-history, had suffered previously from malarial fever and from subacute rheumatism. He indulged periodically in alcoholic excess. Sixteen days previous to admission, having suffered about a week from lassitude and depression, the patient was suddenly seized with intense inspiratory pain in the right side of the chest, with violent cough. He was obliged to go to bed, where he remained for 12 days, when he attempted to work and so continued for 4 days. He then went to a dispensary, where several exploratory punctures were made with a hypodermic needle, and from there he was sent to the hospital, where he was received July 11, 1898, with a temperature of 102°, a pulse of 118, and respirations of 28. The patient was markedly emaciated, his face flushed, his tongue coated and moist. The pulse was fairly strong, and incompressible. The heart-sounds were rather weak. There was no marked accentuation of the pulmonic second sound. Movement of the chest was limited on the right side. Below the fifth rib, in the nipple-line, there was diminution or absence of the respiratory murmur, with marked impairment of percussion-resonance and of vocal fremitus. These signs were not well defined and without exploratory puncture hardly conclusive of fluid. Other signs were those of mild bronchitis. The patient suffered from violent cough, with muco-catarrhal expectoration and intense pain in the region of the right nipple. Exploratory puncture at the angle of the scapula (after rigid disinfection of skin and needle) yielding negative results, puncture was repeated in the sixth interspace in the axillary line (near the marks of three previous punctures), a one-ounce syringe being used, and a syringe of transparent, faintly greenish fluid removed. Microscopically, this contained a few pus-cells, staphylococci and streptococci. No tubercle-bacilli were present in either exudate or sputum at any time. Milk-diet and stimulants were prescribed, the chest was strapped, and a pneumonia-jacket was applied, with marked relief.

On July 12th, at 4 P.M., the temperature was 104.4°, the pulse 115, the respirations 35. Roughened breathing with crepitant rales and impaired resonance was present in the region of the right nipple and about an inch above. During the night typical pneumonic sputum appeared, and on the morning of July 13th the physical signs were those of consolidation not extending to the apex or the median line.

On July 14th, about 8 ounces of thick, yellow, purulent material were expectorated, the expectoration ceasing rather suddenly in about 10 hours, when the temperature fell from 105.4° to 100.2°.

On July 15th, 16th and 17th, the sputum was mucoid and thick. The temperature ran from 101° to 102° in the morning, and from 103° to 104° at night. The pulse continued at about 120, and the respiration at 40.

On July 18th extremely fetid, grayish-brown material was expectorated in large quantities. The temperature fell from 103° to 99.8°. Toward evening mild delirium manifested itself and the patient seemed extremely weak.

On July 19th, under chloroform anesthesia, an incision 1½ inches long was made in the sixth interspace in the axillary line. On opening the pleura a quantity of fetid gas escaped, but no fluid. The exploring finger entered a cavity in the pleura about 4 inches in diameter. No opening in the vis-

ceral pleura could be detected. The patient did not bear the anesthetic well and it was thought best to stop at this point. A rubber drainage-tube was inserted and a gauze-dressing was applied.

On July 20th, the gangrenous material in the sputum was greatly diminished, but it was discharged from the drainage-tube in considerable quantity. A small quantity of Labarraque's solution introduced through the tube was promptly coughed up and no further attempt at irrigation was made. From this time onward the course was progressively downward. The discharge changed in about 4 days from the brown gangrenous fluid to a thick, yellow pus, while its fetor compelled the isolation of the patient. It was found possible to cleanse the abscess-cavity by injecting about 2 ounces of a 2% creolin-solution through the drainage-tube with a glass syringe and immediately removing it by withdrawing the plunger. By frequent repetition of this the fetor was much diminished, but the temperature and the general condition were not affected. The most painful symptom was violent cough, which almost prevented sleep and paroxysms of which were several times followed by attacks of pulmonary edema, from which the patient only revived on hypodermic stimulation and inhalations of oxygen. Other treatment failing, morphin in doses of ¼ gr. every two hours was found effectual. The picture now presented was the one so often seen: gradual sinking under septic poison, and quiet, painless death.

Only a partial autopsy was permitted. The right lung was so firmly adherent all over, excepting at the apex, that only with considerable laceration could it be lifted for examination, most of which was necessarily made in situ. An abscess-cavity of about 10 oz. was found, irregularly cone-shaped, its base being the costal pleura, with the center about opposite the sixth rib in the axillary line, and the apex running horizontally into the pulmonary tissue, terminating in a bronchiole, almost in contact with the mediastinal pleura. The cavity contained about 2 oz. of thick, yellow pus. Posterior to this was a second abscess-cavity about the size of a hen's egg and nearly full of pus. It is to be regretted that, owing to the softened condition of the tissues and the impossibility of drawing the lung up without laceration, the relations could not be more accurately determined. Both cavities presented evidences of a vigorous attempt on the part of nature at repair by the formation of a fibroid wall. The remainder of the lung presented evidence of marked compensatory emphysema. The left lung was edematous and presented numerous thin parietal adhesions. The heart was softened and dilated.

The explanation of this case seems to me to be about as follows: The condition present on July 11th was that of considerable pleural effusion, with a lung held in place by adhesions. The fluid, which, while scarcely purulent, was certainly not aseptic, must have been present in a thin layer at the point of some one of the several punctures made, and the needle, passing through this, must have perforated the visceral pleura and carried infection into the pulmonary tissue. The rapid development of sepsis at the point of puncture, together with the postmortem findings, seems to me to justify this view.

My apology for reporting this case at such length is its apparent rarity and its practical bearing. In 6 modern textbooks that I have consulted the subject is not mentioned.

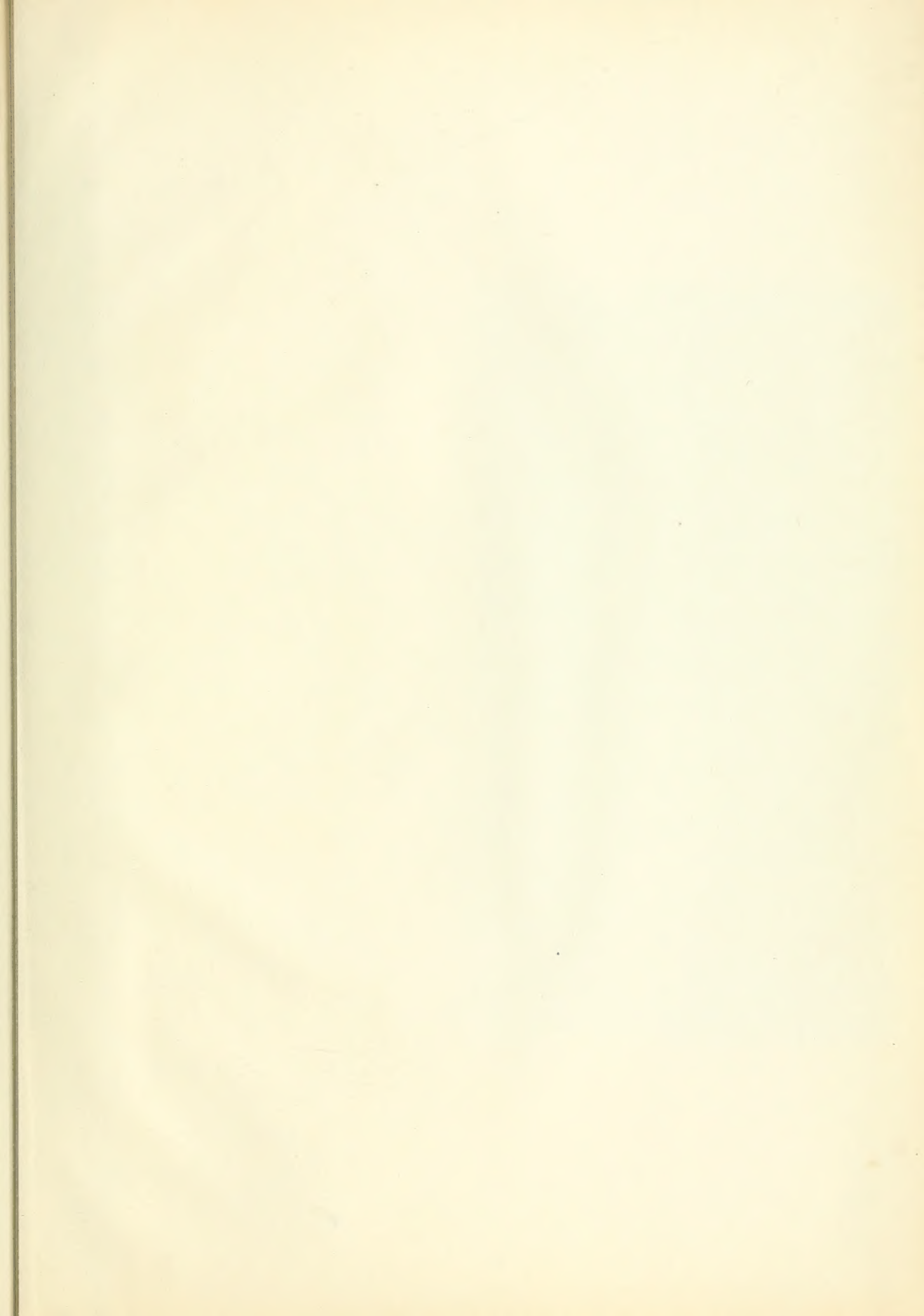
The obvious deduction seems to me to be that in pleuritic cases with a protracted history and probable adhesions the aspirating needle should be used with extraordinary care; and that in all cases the possibility of this accident should be considered an element in favor of selecting a low point of puncture in preference to a high one.















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